

Faculty of Economics and Business

Factors Influencing the Investment Decisions of the Salaried Class in Pakistan: The Roles of Saving Behavior, Consumption Patterns, Retirement Planning, and Living Standards

Waqar Munir

Doctor of Philosophy
2024

Factors Influencing the Investment Decisions of the Salaried Class in Pakistan: The Roles of Saving Behavior, Consumption Patterns, Retirement Planning, and Living Standards

Waqar Munir

A thesis submitted

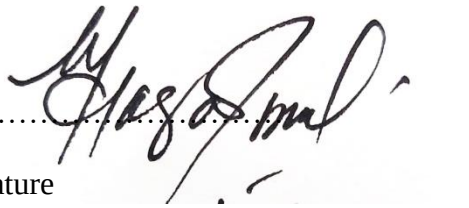
In fulfillment of the requirements for the degree of Doctor of Philosophy

(Economics)

Faculty of Economics and Business
UNIVERSITI MALAYSIA SARAWAK
2024

DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.



……

Signature

Name: Waqar Munir

Matric No.: 19010027

Faculty of Economics and Business

Universiti Malaysia Sarawak

Date: 29 August, 2024

ACKNOWLEDGEMENT

Primarily, I would want to thank ALLAH Almighty for granting me the capacity to accomplish this Ph.D. thesis. Following that, I would want to thank my parents for their financial and moral support during the study, as well as their blessings, full prayers, and support for direction.

I am grateful to respected Dr. Jerome Kueh Hue Sue, my kind supervisor, and Dr. Muhammad Asraf Bin Abdullah, my co-supervisor, for their excellent supervision, prompt advice, valuable remarks, constructive criticism, and kind support throughout my studies. The study would not have been able to reach this milestone without their efforts!

I am grateful for Dr. Muhammad Sadiq Malik's for friendly and brotherhood supportive behaviour, as well as the significant and memorable time memories I shared with him as a fellow.

Finally, I want to thank my professor Prof Dr Naveed Iqbal Ch, family, and friends for their support and prayers throughout this journey. I will continue to devote my energies to the individual of Palestine and Kashmir in their genuine quest for independence.

I care about and respect everyone**.**

ABSTRACT

According to the theories of development economics and behavioural economics, saving is important for economic growth. Life-cycle and permanent income hypotheses are important for private saving behaviour and investment. The data was collected in person or by email, using quota sampling of 459 salaried people with modified and adapted questionnaires for quantitative analysis from federal employees on scales from BPS-17 to BPS-22. The study's unique quantitative framework addresses private saving, consumption, and retirement planning with financial investment decisions. Smart-PLS v3.0 and SPSS v25.0 were used for regression analysis and the instrument's reliability and validity. The PLS-SEM results revealed that living standards do not affect saving and investment as much as consumption and investment in moderation. A strong relationship existed between saving, consumption, living standards, retirement planning, and investment decisions. Investment scams affect retirement planning, saving, and investment decisions. The moderation of retirement planning showed no effect on scams and investment decisions, as well as between consumption and investment decisions. The chi-square test showed that demographics positively affected savings and investment decisions, except for pay scale and profession. There is a need for better policies, regulations, and benefits to manage investment fraud and help employees with retirement planning. Policymakers and the government should encourage saving to boost economic growth and capital inflow, benefiting individuals, the government, and society as a whole.

Keywords: Investment Decision, Saving Behaviour, Consumption Behaviour, Retirement Planning, Investment Scams.

Kesejahteraan Persaraan Individu Melalui Simpanan, Penggunaan dan Keputusan Pelaburan sebagai Aliran Masuk Wang dengan Penipuan Pelaburan di Pakistan

ABSTRAK

Mengikut teori ekonomi pembangunan dan ekonomi tingkah laku, menabung adalah penting untuk pertumbuhan ekonomi. Hipotesis kitaran hayat dan pendapatan kekal adalah penting untuk tingkah laku menabung dan pelaburan swasta. Data dikumpul secara peribadi atau melalui e-mel, menggunakan persampelan kuota 459 orang bergaji dengan soal selidik yang diubah suai dan disesuaikan untuk analisis kuantitatif daripada pekerja persekutuan pada skala dari BPS-17 hingga BPS-22. Rangka kerja kuantitatif unik kajian itu menangani perancangan simpanan, penggunaan dan persaraan swasta dengan keputusan pelaburan kewangan. Smart-PLS v3.0 dan SPSS v25.0 telah digunakan untuk analisis regresi dan kebolehpercayaan dan kesahan instrumen. Keputusan PLS-SEM mendedahkan bahawa taraf hidup tidak menjejaskan simpanan dan pelaburan seperti penggunaan dan pelaburan secara sederhana. Hubungan kukuh wujud antara simpanan, penggunaan, taraf hidup, perancangan persaraan dan keputusan pelaburan. Penipuan pelaburan menjejaskan perancangan persaraan, simpanan dan keputusan pelaburan. Penyederhanaan perancangan persaraan tidak menunjukkan kesan ke atas penipuan dan keputusan pelaburan, serta antara keputusan penggunaan dan pelaburan. Ujian khi kuasa dua menunjukkan bahawa demografi memberi kesan positif terhadap keputusan simpanan dan pelaburan, kecuali skala gaji dan profesion. Terdapat keperluan untuk dasar, peraturan dan faedah yang lebih baik untuk mengurus penipuan pelaburan dan membantu pekerja dengan perancangan persaraan. Pembuat dasar dan kerajaan harus menggalakkan tabungan untuk meningkatkan pertumbuhan ekonomi dan aliran masuk modal, memberi manfaat kepada individu, kerajaan dan masyarakat secara keseluruhan.

Kata kunci: *Keputusan Pelaburan, Tingkah laku menabung, Tingkah Laku Penggunaan, Perancangan Persaraan, Penipuan Pelaburan.*

TABLE OF CONTENTS

		Page
DECLARATION		**i**
ACKNOWLEDGEMENT		**ii**
ABSTRACT		**iii**
ABSTRAK		**iv**
TABLE OF CONTENTS		**vi**
LIST OF TABLES		**xvii**
LIST OF FIGURES		**xix**
LIST OF ABBREVIATIONS		**xx**
CHAPTER 1	**INTRODUCTION**	**1**
1.1	Study Background	1
1.2	Savings and investment	15
1.3	Investment Avenues in Pakistan	16
1.4	Major Investment Avenues	17
1.5	Investment Scams in Pakistan	20
1.5.1	Saving and Investment in Pakistan	23
1.6	Salaried Class Individuals	30
1.7	Prevalence of Investment Scams	32
1.7.1	Characteristics of Investment Scams:	32

1.8 Living Standards 33

1.9 Retirement Planning 35

1.10 Problem Statement 39

1.11 Research Objectives 43

1.11.1 General Objective 43

1.11.2 Specific Objectives 43

1.12 Research Questions 44

1.12.1 General Question 44

1.12.2 Specific Questions 44

1.13 Scope and Significance of the Study 45

1.14 Chapter Summary 47

CHAPTER 2 LITERATURE REVIEW 48

2.1 Overview 48

2.2 Theoretical Literature 48

2.2.1 Lifecycle Hypothesis 48

2.2.2 Keynesian Income Hypothesis 52

2.3 Savings and Types 54

2.3.1 Household Lifecycle Saving and Consumption 55

2.3.2 Empirical Literature 58

2.4 Saving, Consumption and Economic Development 61

2.5 Saving, Consumption and Investment 62

2.5.1 Theoretical Literature Review 62

2.6 Investment Behaviour 65

2.6.1 Theoretical Literature 65

2.6.2 Empirical Literature 66

2.7 Investment Scams 76

2.7.1 Theoretical Literature 78

2.7.2 Empirical Literature Review 79

2.8 Demographic Variables 86

2.8.1 Demographics, Saving and Investment 86

2.9 Retirement Planning 91

2.9.1 Theoretical Literature Review 91

2.9.2 Empirical Literature 96

2.10 Living Standards 110

2.10.1 Theoretical Literature 110

2.10.2 Empirical Literature 114

2.11 Research Gap 125

2.12 Hypothesis Development 129

2.13 Chapter Summary 138

CHAPTER 3 METHODOLOGY **140**

3.1 Overview 140

3.2 Conceptual Framework 140

3.3 Regression Equations 141

3.3.1 SB, CB, IS, LS and ID Model 141

3.3.2 SB, CB and ID Model 141

3.3.3 Moderation LS Model 142

3.3.4 Mediation RP, CB and ID Model 142

3.3.5 Mediation RP, SC and IDM Model 142

3.3.6 Demographics and SB Model 143

3.3.7 Demographics and IDM Model 143

3.4 Research Methodology 143

3.4.1 Research Design 144

3.4.2 Quantitative Research Design 145

3.4.3 Research Strategy 146

3.4.4 Data Administration 146

3.4.5 Adaptation of Questionnaire 147

3.5 Operationalization of Variables 147

3.6 Population 148

3.7 Research Sampling 149

3.7.1 Sample Design 150

3.7.2 Sampling Technique 151

3.7.3 Sample Size 152

3.8 Data Collection Methods 153

3.8.1 Data Collection Procedures 153

3.8.2 Distribution of Instrument 153

3.8.3 Questionnaire Design & Development 154

3.8.4 Scales of Measurement 155

3.9 Overview of Questionnaire 155

3.10 Pilot Testing 156

3.10.1 Questionnaire Pre-Testing 156

3.10.2 Pilot Study Analysis Results 157

3.11 Final Data Collection 158

3.11.1 Response Rate 159

3.12 Data Analysis Techniques 160

3.12.1 Data Screening 160

3.12.2 Missing Data 160

3.12.3 Outliers 161

3.12.4 Normality 161

3.12.5 Linearity 161

3.12.6 Multicollinearity 161

3.12.7 Descriptive Statistics 162

3.13 Structural Equation Modelling (SEM) 162

3.13.1 Structural Model (Inner Model) 163

3.13.2 Measurement Model (Outer Model) 163

3.14 Testing of Hypotheses by PLS-SEM 164

3.14.1 Issues of Reliability and Validity 165

3.14.2 Reliability Analysis 165

3.15 Validation of Results 165

3.15.1 Construct Validity 166

3.15.2 Statistical Validity 166

3.15.3 Internal Validity 166

3.15.4 External Validity or Generalisability 166

3.16 Mediation 167

3.17 Moderation 168

3.18 Demographics Relationship 168

3.18.1 Chi-Square Test 168

3.19 Research Hypotheses 169

3.20 Ethical Consideration 171

3.21 Chapter Summary 171

CHAPTER 4 RESULTS AND ANALYSIS **173**

4.1 Chapter Overview 173

4.2 Characteristics of Study Sample 173

4.3 Descriptive Statistics of Demographics 174

4.3.1 Profile of Survey Employees 174

4.3.2 Gender 174

4.3.3 Job Type 175

4.3.4 Family Type 175

4.3.5 Province 175

4.3.6 Family Class 176

4.3.7 Job Experience 176

4.3.8 Profession 176

4.3.9 Family Size 177

4.3.10 Qualification 177

4.3.11 Age 178

4.3.12 Total Annual Income 178

4.3.13 Total Annual Savings 178

4.3.14 Job Scale 179

4.4 Preferences of Salaried Class 182

4.4.1 Saving Preferences 182

4.4.2 Consumption Preferences 183

4.5 Policy Satisfaction 184

4.6 Consumption Patterns 186

4.7 Awareness Level 190

4.8 Salaried Class Choices and Preferences for Investment 193

4.9 Barriers of Investment 195

4.10 Introduction of Hypotheses Testing 197

4.10.1 Descriptive Statistics 197

4.11 Empirical Analysis 199

4.12 Bivariate Analysis (Correlation) 199

4.13 Multiple Regression Analysis 201

4.13.1 Data Screening 202

4.13.2 Missing Data 202

4.13.3 Outlier detection 203

4.13.4 Normality 204

4.13.5 Linearity 206

4.13.6 Homoscedasticity 206

4.13.7 Multicollinearity 206

4.13.8 Data Exploration 207

4.13.9 Commonality Scores 216

4.14 Structural Equation Modelling 220

4.14.1 Measurement Model Analysis 220

4.14.1.1 Items Reliability 221

4.14.1.2 Construct Reliability 224

4.14.2 Item Validity 225

4.14.3 Construct Validity 225

4.14.4 PLS Significance 226

4.14.5 Structural Model Analysis 226

4.14.6 Path Coefficient (b) and t-Values 226

4.14.7 R^2 Value 227

4.15 Testing of Hypotheses 229

4.16 Saving Behaviour and Consumption Behaviour 230

4.17 Saving Behaviour (SB) and Investment Decision Making (IDM) 230

4.18 Consumption Behaviour (CB) and Investment Decision Making (IDM) 231

4.19 Living Standards (LS) and Investment Decision Making (IDM) 233

4.20 Living Standards (LS) Moderating Between Savings Behaviour and Investment Decision Making (IDM) 234

4.21 Living Standards Moderating Between Consumption Behaviour and Investment Decision Making 235

4.22 Consumption Behaviour, Retirement Planning, and Investment Decision Making 236

4.23 Scams, Retirement Planning and Investment Decision Making 237

4.24 Scams and Saving Behaviour 238

4.25 Scams and Investment Decision Making 239

4.26 Retirement Planning and Investment Decision Making 240

4.27 Demographics Results 241

4.28 Demographics and Savings 242

4.29 Demographics and Investment Decision 243

4.30 Research Hypothesis 246

4.31 Chapter Summary 248

CHAPTER 5 CONCLUSION AND RECOMMENDATIONS 249

5.1 Introduction 249

5.2 Summary of the Study 249

5.3 Results Conclusion 251

5.4 Theoretical Implications 260

5.5 Social Implication 262

5.6 Practical Implication 263

5.7 Conclusion 264

5.8 Recommendations 267

5.9 Limitation of the Study 269

5.10 Future Recommendations 269

REFERENCES **271**

ANNEXURES **394**

LIST OF TABLES

Page

Table 1.1: Amount and Registered Employees in Old Age Benefits 24

Table 3.1: Summary of Variables, Dimension and Total Number of Items 147

Table 3.2: Employees in Federal Government, Both Officers and Staff 149

Table 3.3: Sampling Steps and Measure 150

Table 3.4: Province Wise Share of Federal Employees 151

Table 3.5: Cronbach Alpha Coefficient 157

Table 3.6: Staff / Officers in the Federal Government 158

Table 4.1: Total Number of Federal Government Employees 173

Table 4.2: Demographics of Participants 179

Table 4.3: Consumption Preferences of the Salaried Class 183

Table 4.4: Policy Satisfaction Level of Salaried Class 185

Table 4.5: Consumption in Percentage 188

Table 4.6: Awareness Level of Investment Avenues 192

Table 4.7: Choices and Preferences for Investment 194

Table 4.8: Barriers to Investment 196

Table 4.9: Reliability Tests 198

Table 4.10: Pearson's Correlation 201

Table 4.11: Residual Statistics 204

Table 4.12: Normality Variables 205

Table 4.13: Multicollinearity Model 207

Table 4.14: Measuring Sample Adequacy 209

Table 4.15: Factor Analysis and Loading 210

Table 4.16: Communalities Scores 216

Table 4.17: Items Reliability 222

Table 4.18: Construct Validity 224

Table 4.19: Path Coefficient (b) and t- Values 229

Table 4.20: Demographic Factors and Saving & Investment 245

Table 4.21: Research Hypotheses 246

LIST OF FIGURES

Page

Figure 1.1: Savings & Investment Trend 25

Figure 1.3: Pakistan Gross Savings Rate 28

Figure 2.1: Franco Modigliani's lifecycle model of Income, Consumption, and Saving 50

Figure 2.2: Relationship between Income, Consumption, and Retirement 51

Figure 3.1: Conceptual Framework 141

Figure 3.2: Total Strength of the Federal Government Employees 149

Figure 4.1: Path Coefficient (b) and t-Values 228

LIST OF ABBREVIATIONS

DM: Decision Making

FY: Financial Year

I: Investment

LS: Living Standards

SB: Saving Behaviour

SBP: State Bank of Pakistan

SECP: Securities and Exchange Commission of Pakistan

Y: Income

CB: Consumption Behaviour

SC: Scams

RP: Retirement Planning

BPS: Basic Pay Scale

APS: Average Prosperity to Save

APC: Average Prosperity to Consume

BPS: Basic Pay Scale

CHAPTER 1

INTRODUCTION

1.1 Study Background

According to the Harrod-Domar development model, savings provide funding through investment sustainability and savings strategies contribute to enhancing economic growth in developing countries. According to Solow (1956), saving, consumption, and investment play a crucial role in economics as saving leads to the accumulation of capital and contributes to economic progress, while investment causes the acquisition of assets with the goal of generating revenue or reward. Financial depth integration increases savings more in developing nations than in high-income nations (Schmidt et al., 1996; Muradoglu & Taskin, 1996). The relative income hypothesis, the permanent income hypothesis, and the life-cycle hypothesis have identified the underlying factors that influence household saving and consumption over a long period with investment. An individual's income that is not immediately spend is known as savings, which is set aside as a financial reserve or invested for future purposes, or to settle debts. Mostly, investment options are comprised of equities, fixed-income securities, real estate, and entrepreneurial ventures. Firms use individuals' savings to acquire new equipment, technology, and human resources and investment enhances productivity and output, hence stimulating economic growth (Lusardi et al., 2014; Michaelides & Papadakis, 2023; Seginer, 2009; Sheshinski, 2021).

The Lifecycle Hypothesis of Franco Modigliani in 1957 states that money stabilizes consumption and improves living standard of individuals. The lifecycle hypothesis states that rational consumers plan their consumption throughout their lives to save and invest in controlling retirement spending. Also, individuals seek to smooth consumption throughout a

lifetime by borrowing in times of low-income and saving during periods of high income. According to the life cycle hypothesis, each age group can retain and enhance their wealth, reducing inheritances, living abroad and consuming less. Milton Friedman's permanent income hypothesis states that individuals spend generously based on their lifetime income and consumption. Consumption refers to the act of utilizing financial resources to acquire essential items such as food, clothing, shelter, amusement, and recreation creating the demand for goods and services (McArdle, Smith & Willis, 2009; Modigliani, 1986; Nivakoski, 2014; OECD,2015; O'Sullivan et al., 2014; Van et al., 2012). An interaction among saving, investment, and consumption can be briefly expressed through the following equation:

$$Y = C + I \qquad 1.1$$

Equation 1.1 links disposable income (Y), consumption (C), and investment (I). Disposable income goes to spending or investing to make better financial decisions and investment possibilities are promoted by authorities for economic growth. Equation 1.2 defines national income identity.

$$Y = C + I + G \qquad 1.2$$

This GDP equation uses Y for gross domestic output, C for consumption, I for investment, and G for government spending. According to this economic idea, GDP is the sum of consumption, investment, and government spending and by subtracting the variables C and G from both sides of the equation 1.3 , the resulting expression is

$$Y - C - G = I \qquad 1.3$$

Equation 1.3 represents the residual income that remains after the government has allocated funds for investment through private savings. It is possible to understand Equation 1.4 which implies that all savings must go toward investments because an economy's flow of funds provides an alternative perspective, banks allocate resources to firms that utilize them for the

acquisition of new machinery, technology, and workforce, hence facilitating the circulation of funds and economic growth. In equation 1.4, S represents savings, and I represents investment

$$S = I \qquad 1.4$$

Furthermore, the borrowing and lending activities of individuals and corporations have a significant impact on their savings and investment choices, which indicate progress in medical and living conditions for higher lifespan of individuals((Smith et al., 2010; Skagerlund et al., 2018; Ighodalo, 2019; Farrell et al., 2016).

In recent era, globally, the issue of longevity with a retirement age of 55–60 years is not a matter of concern in terms of social or employment aspects. However, recently, numerous countries have discontinued civil service life pensions and employee life healthcare coverage. With the commencement of nuclear society, elderly individuals no longer have the option to depend on government organizations, employers, family members, or even their children for care. Extended longevity posture challenges for both governments and individuals in terms of living with retirement financing. As a result of the growing average lifespan, governments around the world are implementing retirement savings programs. In the absence of an efficient savings strategy, even wealthy nations are inclined to financial insolvency (Van et al., 2012; Skagerlund et al.,2018; Nivakoski & Barrett, 2019). The increasing costs associated with retirement and the diversity of policies in place make it imperative for individuals to save for their retirement to ensure a comfortable future standard of living.

In emerging nations with financial constraints, urban and rural distribution systems reduced the need to save for urbanization tragedies while effective financial planning improves living conditions, welfare while, financial ignorance and unpreparedness effects livings well-being (Bailey and Turner, 1994). A dependable way to save, allow to save

proactively by reviewing spending patterns with additional money to save and affect the income and wealth of individual in developing countries (Swasdpeera and Pandey, 2012; Muradoglu & Taskin, 1996). According to financial living well-being requires money management and emphasis on individual financial retirement planning, living standards, saving and investment behaviour (Ando & Modigliani, 1963; Lusardi & Mitchell, 2011; Behrman et al., 2012; Banks & Oldfield, 2007).

Comprehensive financial planning, including contingency plans, budgets for income, living costs, savings, investments and retirement planning, provides more comfort and security after retirement life (Donoghue et al., 2018; Christelis et al., 2010; Sivaramakrishnan et al., 2017; Boumans, 2011; Carvalho et al., 2016; Cervellati, Fattori & Pattitoni, 2011; Chater & Loewenstein, 2023; Headey & Wearing, 1989). Average allocations reveal investment preferences, which can aid planning, design, and regulation with ecological and ethical asset allocation priorities (Sheth & Parvatiyar, 2021; Yakoboski & VanDerhei, 1996). Working conditions, culture, social status, ethical and sustainable consumption ability can stabilize over time living conditions within society (Crane & Matten 2004).

According to the life cycle model, as the number of children decreases, the dependency ratio and personal savings rate increase with saving intentions (Kulikov et al., 2007) and household characteristics requires microeconomic study (Henrich et al., 2010; Vinson et al., 1977). Human values affect consumer behaviour (Ball-Rokeach, 1973). People's desire to improve living standards, quality of life and excessive spending which drives economic growth (Humphery, 2010) which is relevant to sustainability in numerous economic and cultural situations (Hubacek et al., 2007).

Research on ethical, sustainable consumption in non-Western and poor nations has grown significantly in the past decade, but researchers need to pay more attention (Morren et

al., 2016; UN, 2015). Personal and ethical values and environmental and societal concerns motivate ethical consumption (Crane & Matten, 2004). Sustainable consumption is meeting present demands while protecting the life-support system for future generations (Griggs et al., 2013) and social values are behaviour, sustainable personal growth goals, ethical consumption and education (Chowdhury, 2020). To handle rising living costs and make them more meaningful for families, financial resource management and strategic investments in health, happiness, and life satisfaction are needed(; Chaudary, 2019; Giridhari & Debasish, 2011; Gomes, 2020; Goodfellow et al., 2009). The value systems prioritize values and life trajectories to promote ethics in diverse cultures and countries (Schwartz, 2010) as cultural and social values vary (Schwartz, 2003; Solomon, 2022).

Financial mindset and psychological well-being can result from information, a positive attitude, and solid finance management abilities to improve livings (Carmeli et al., 2009). Financial well-being is an individual's assessment of current and future quality of life with financial freedom (Chandra & Kumar, 2012). Based on personal beliefs and preferences, equal pay may affect financial well-being ratings for living standards. Insufficient savings and retirement financial planning worry individuals, households, societies, and nations (Brüggen et al., 2017; Chandra & Kumar, 2012). Most pensioners believe that the retirement income system should not replace their pre-retirement lives (Vosloo et al., 2014). Retirees save more since they do not consume and worry about their livings (Alonso-Garcia et al., 2017b). Working-age individuals worry about not having enough money for retirement due to financial obligations that limit their spending and ability to save while paying for daily costs (HSBC Global, 2016) while retirees use their retirement funds while keeping their non-housing assets (Daley et al., 2018).

Additionally, careless spending and no saving damage families and society as life satisfaction is vital to the quality of life and individuals improvement struggle (Parrotta & Johnson, 1998). Insufficient financial reserves cause problems in unexpected financial situations (UBS, 2014). 25-year-old Generation Y spend 15-20% of their salary on retirement (Struck, 2012). Like life satisfaction, subjective financial living well-being is the ability to meet expenses with savings, investments, and loans (Kim & Garman, 2003; Norvilitis et al., 2003). Saving and spending wisely are essential (Anderson et al., 2017; Van et al., 2015)

Household liquidity management is the ability to satisfy current and future financial needs for living expenses, healthcare, and aging (Jhamb et al., 2020). Spending and saving balance necessary and financial problems cause present and future well-being and financial stability directly affects life quality as income is quantifiable, but financial pleasure is subjective (Shim et al., 2009; Porter & Garman, 1992). Individuals with identical assets or income manage financial emergencies, financial objectives, comparisons differently (Garman et al., 2004) as risk tolerance and age affect financial behaviour (Joo & Grable, 2004).

Modern society relies on money for expenses and investments while consumption behaviour affects decision-making, demand for goods and services, and savings variables like social status, socioeconomic status, age, head of family, and number of dependents affect a household's financial strategy. Demographics, financial knowledge, behaviour management, and attitude affect financial satisfaction (Alonso-Garcia et al., 2017a). Family size, education level, income, gender, age of the household head, occupation, social group membership, marital status, dependence ratio, limited savings product options, and high transportation costs affect household financial strategy and savings behaviour (Gedela, 2012). Men choose equities, mutual funds, and provident funds, whereas women prefer gold and other metals for their stability and liquidity. Commuting costs, budgetary constraints, and a lack of spare

income prevent to save (Selhausen, 2011). Household education and policy benefits can lower costs and increase MPC and savings. Investors choose liquid options based on risk and return and prefer bank savings to stocks and mutual funds. Salaried class individuals make investment decisions and get benefit from money and knowledge, life events like marriage and employment (Luhmann et al., 2012; Juster et al., 2004). Reducing monthly expenses encourages savings (Juster et al., 2004) while motherhood affects savings and pension scheme readiness.

Ando and Modigliani's (1963) life-cycle saving approach require to keep balanced between income and consumption but many retirees waste money. Many young individual take out loans to pay for school and improve their skills while middle-aged individuals prioritize debt repayment and savings. After retirement, many individuals give back or set up funds for their children (Friedman, 1984). Feldstein and Barro (1978) proposed saving for inheritance and future generations using an inter-generational allocation model. Individuals accumulate, hold, and distribute wealth throughout their financial lives. Firstly, starting retirement planning with a contingency fund or savings and life, death, and car insurance and then financial stability, which includes buying a car or house and paying for school and lastly to retain their lifestyle through life-cycle financials optimization. The neoclassical life-cycle theory states that having restricted resources saving is less, and deferring consumption saving is more (Alsayegh, Abdul Rahman & Homayoun, 2020; Al-Tamimi, 2009; Alvarenga, et al., 2009; Amaresh et al., 2017; Amari et al., 2020; Grigion, et al., 2015; Anantanasuwong, 2023; Lahiri, 1989).

Citizens of developing nations like Pakistan, Malaysia, Indonesia, India, and Bangladesh want safe and profitable investments. Nagy & Obenberger, (1994) linked socioeconomic factors to paid households' spending and saving patterns, examines retirement

supplement sources and timing while impatience affects the choices, saving, capital accumulation, and prosperity. Misaligned policy measures can reduce savings and increase tobacco and alcohol as financial ignorance and money management mistakes reduce savings and investments (Gordon, 2008; Hall et al., 2022; Issahaku, 2011; Murugan et al., 2018; Shanmugham & Ramya, 2012; Lusardi & Mitchell, 2007). Postponing retirement can help seniors to save money and improve quality of life through financial planning assessment. Financial planning explains individuals to save and spend wisely, especially in emergencies includes investing, insurance, estate, and retirement (Akpan et al.,2011; Aldeman, & Randazzo, 2020; Alderman & Garcia, 1993; Alderman & Paxson, 1994). Saving OLOGIT model stated that the consumer loan, consumption behaviour, and social norms all have a negative effect on the saving behaviour of the salaried class (Mehmood et al., 2022).

Education campaigns may provide the working population with a safety net of retirement plan returns at a younger age (Trivedi & Soni, 2021). Individuals invest for retirement need awareness is a challenge to policymakers and promote benefits of retirement pension programs (Panakaje, 2023). Additionally, social factors, including family duties and government distrust, negatively impact retirement planning and post-retirement stress (ZOM, 2023). Political influence the pension management and administration, legal commitment to retiree savings and employer payments (Adewumi, 2024).

Sklansky (2023) pensions and mutual funds are the largest investments by retirees for wealth and welfare, so further studies are required for the analyzing pension, labour and investment. Kotian & Aithal (2024) better to motivate individuals to save and invest and investment with policymakers focus. Nevertheless, workers' savings cannot fully offset modernization effects of the inferior management of resources (Sritharan & Salawati, 2019; Zellweger, 2007; Agarwal & Mazumder, 2013; Sadik-Zada, 2023). Innovative solutions are

needed to develop sustainable financing models to ensure adequate pension and healthcare coverage for older persons to support policymakers in developing a retirement framework (Karthika et al., 2023).

Aging in the global economy trend is transforming familial, societal, national structures as raising economic concerns (Li, 2024). Policymakers and investment agencies create effective investment and economic growth strategies (Hallman & Rosenbloom, 2003; Hemalatha & Pavithra, 2018; Herrmann, 2007; Hunjra, 2019; Achar, 2012; KJ, 2017). Education, labour capability, poverty reduction, land usage, and rural development need persistent attention to revitalization policy and decision-making (Cheng et al., 2021). The critical domains consumption patterns, and social security with opportunities and challenges call for systematic research (Li, 2024).

The financial planning determinants needed for a well-planned retirement (Mustafa et al., 2023). There is income gap and inequality between urban and rural households (Li et al., (2023). Legal institutions that protect retail financial consumers affect the access of development nexus (Kriese et al., 2019). Microfinance savings help clients and community, and commercial Banks can educate the public about products towards financial behaviour (Rusdianto, 2022). A consistent level of consumption at any one time depend on wealth and income expectations and equity prices lowered household savings and reduced household net worth in economic slump (Cashell, 2009). Social learning theory dominates the finance and economic models (Agabalinda & Isoh, 2020). Younger workers find attractive for financial retirement planning and retirement goal clarity and age affect retirement product buying intentions (Yeung et al., 2023). Policy makers to come up with guidelines and policies requiring offer financial literacy courses and government should also invest resources to boost

financial literacy to enhance saving culture (Mwobobia, 2022). Thus, population aging affects savings behaviour and capital markets (Boersch-Supan & Winter, 2001).

Removing financial institution barriers helps individuals to save (Chowa et al., 2012). Investors choose an investment option that meets their long-term financial goals, such as retirement planning, tax planning, funding children's weddings, meeting future financial obligations, improving quality of life, wealth accumulation, providing for elderly family members, obtaining health insurance, and generating a stable income (Maharani & Saputra, 2021; Meulbroek, 2002). Financial literacy could play a significant role in raising the power of financial decisions (Dilshad et al., 2024).

In Pakistan, societal norms and male dominance prevent women from engaging in financial decision-making as personal preferences influence consumption and saving which impacting investment decisions. Behavioural finance highlights how cognitive biases can deviate from rational decision-making, emphasizing psychology's role in financial behaviours. Notably, retirement security involves managing pensions, transfers, and wealth against potential unforeseen events. Strategies include understanding retirement goals and spending patterns to mitigate risks associated with post-retirement life. The significance of financial planning in enhancing well-being and encouraging sophisticated investment and saving behaviours is supported by various studies pointing out the importance of financial literacy (Moridu et al., 2023; Hunjra et al., 2021). Formal jobs provide a different experience from entrepreneurship, affecting attitudes toward risk requires critical analysis, also influenced by market conditions. There is a global shift towards personal financial management, aiming to strengthen individual and economic stability (Umamaheswari & Kumar, 2014; Varlamova & Larionova 2013; Vlaev & Elliott, 2017; Gordon, 2016). The

research underscores the long-term benefits of private investment and macroeconomic policy reform, with salaried perspectives offering critical insights into economic analyses.

1.2 Introduction

Savings which are based on income employ household savings as domestic savings increases macroeconomic performance is dynamic (Rahman, 2011; Bashir, 2011) since industrialized and developing countries save differently (Domar, 1946) causing capital accumulation and long-term economic growth (Sultana, 2010). Credit availability and financial circumstances affect household savings, which is crucial for financial stability (IMF, 2001). Psychology and behaviour help low-income individual save, deposit, and invest (Moore ,2000). Individuals save and consume efficiently by keeping good records, buying food carefully, and limiting leisure goals and consider savings responsibilities and its value. Many Americans save for retirement with capital gains (Atkinson, 2015; Yakoboski, 1996).

Investment plans with attitude, subjective norms, perceived control, and historical savings are retirement savings. Seniors 60 and older should get retirement confidence benefits and invest and comfortable middle-income seniors may save for a better life (Hasan et al., 2023). Only 20% of singles and 40% of couples spend more than comfortably, but higher-income workers may diminish retirement living standards. Savers can modify the comfortable retirement budget to their lifestyle, but additional savings rates are more challenging to estimate which affects retirement savings. Subjective wellbeing and livings requires subjective or behavioural retirement adequacy assessments for retirees as Australian elderly are less financially stressed than workers (Daley et al., 2018b; Joo, 2005). Longer life expectations draining senior resources (Hogarth,1991) and attitude, subjective norms, perceived control, and historical savings variables affect savings behaviour (DeVaney, 2001)

while inflation lower social security benefits and earnings and well managed assets create income and expenditures.

In the coming decades, investment institutions must help seniors make intelligent financial decisions (Hershey et al., 1998; Wongmonta, 2023; Waheed, 2002; Waheed, & Akram, 2023; Wa¨rneryd, 1999). Discretionary income, growth, public and private saving ratios increase savings (Athukorala, 2004). Many banks offer savings programs with withdrawal controls for emergency or preplanned usage for short-term and long-term priorities. Many individuals prioritize long-term savings over short-term goals, yet their plans often need revision (Katona, 1975). Consumers prefer volatility yet lack funds for emergencies (Lusardi, 1999). Financial and retirement planning knowledge affects individuals investment (Umamaheswari & Kumar, 2014; Toyon, 2016; Stix, 2013; Spash, 2021; Smyth, Montgomery & Flavin, 1993;Cutler et al., 1992).

Saving for retirement requires knowledge of financial math, investment risk and return, income growth, and tax policy (Clark et al., 2006). Retirement age, income replacement goal and savings habit affect financial success and retirement planning. Individuals assess their financial well-being based on their ability to maintain their desired lifestyle as cognition, emotions, and behaviour affect financial well-being and investment decisions (Anderson et al., 2017).

Savings affect people, organizations, and governments (Kibet, 2009) and savings can affect budgeting, emergency funds and finances (Outcault, 2012; Prawitz et al., 2006). Occupation, household income, age and gender of the head of the family, education level, dependence ratio, service charge, transit costs, and credit availability affect household savings (Kibet, 2009). Age, child education, household commitments, and marital status affect middle-class and higher-income savings. Household income affects savings, incomes, saving behaviour,

financial pressure, and other control elements while financial exposure affects household savings, resilience, economic and financial crisis (Attanasio & Banks, 2001). Understanding saving behaviour and its causes are necessary to study as consumption smoothing hypotheses employed that households save less through resource redistribution (Skagerlund et al., 2018; O'Sullivan et al., 2014; Mosca & McCrory, 2016; Browning & Lusardi, 1996; Attanasio & Banks, 2001).

The lower-class individuals saves less (McWilliams et al., 2020; Ashraf et al., 2006; Avgoustaki & Xydis, 2020; Baiardi, Magnani & Menegatti, 2020; Beckmann & Mare, 2017;Danziger et al., 1982). Retirement savings schemes need to be reformed to accommodate longer lives and effective retirement planning is essential to avoid financial hardship (Ando & Modigliani,1963). As retirement costs rise, policy should encourage savings and investment for a secure retirement (Lusardi & Mitchell, 2007; Bucher-Koenen & Lusardi, 2011). Financial planning positively impacts health (Bailey & Turner, 1994) while better budgeting and investment can enhance the quality of life (Ando & Modigliani, 1963). Strategic planning and personal investment choices are essential for retirement security and policy makers should promote savings among low- and middle-income individuals (Beverly et al., 1999). Structural tools impact socioeconomic sustainability and effective financial management can greatly impact well-being (Ariç, 2015). Parents who encourage saving in their children may influence their saving behaviour (Bernheim et al., 2001). Saving leads to income and wealth through investments (Mischel & Ebbesen, 2005) while efficient financial planning includes money management, emergency preparedness, and estate planning (Chieffe & Rakes, 1999). Retirement planning is vital for financial success and can reduce tax burdens (Gitman & Michael, 2011) and effective savings (Lusardi & Mitchell, 2011).

This study targets employees from job scale BPS-17 to BPS-22 federal paid worker comprises doctors, engineers, accountants, and managers and have retirement age at 60 years and receives gratuity, provident, and pension as financial benefits on retirement. This study evaluates these government employees' income and savings behaviour toward scam-free investing options for living standards during and after retirement through investment. Saving can be money, property, banks, shares, mutual funds, or traditional investment funds and keep money, gold, silver, and other possessions at home (Siegel, 2021). This study explores household investment behavioural causes and constraints in Pakistan due to inadequate savings. It analyses how living standards, retirement planning, and investment scams affect savings, consumption, and investment behaviour (DeVaney, 2016; DeLiema et al., 2020).

Worldwide, retirement income regimes have varied institutional innovations. These include family or community support, employment pensions, government insurance, home or business savings, savings accounts, mutual funds, etc. In the future, experts agree to restructure institutions, limit family and government support (Marier, 2008). Financial markets should be where individuals invest their savings and in emerging markets, demographics, and economic realities are driving retirement and pension reforms in Latin America, Europe, and Asia (Holzmann, 2012).

Gender, age, education, marital status, and family structure affect finances, living standards, financial knowledge and efficacy, money and debt attitudes, materialism, and risk-taking (Swasdpeera & Pandey, 2012). Unemployment, interest rates, inflation, job loss, and scams can undermine financial literacy and well-being (O'Neill et al., 2005). Financial deregulations, government initiatives, and financial corporations required to shield disease, disability, and old age from inflation and asset pricing changes as the population ages (Ortiz et al., 2018). New opportunities allow older individuals to work part time and invest in

wealthy homes for spending money, asset accumulation and life standards. New financial offerings give retirees greater control for risk trade-offs and financial decision-making are easy for most individuals (Narayanan et al., 2021; Platt & Huettel, 2008; Mainelli, 2004).

Research shows that financial planning impacts well-being by promoting investment and savings in complex financial instruments like stocks. The Ando and Modigliani life-cycle hypothesis emphasizes the importance of comprehensive money management for improved financial well-being and health in addition market conditions and the global trend towards personal financial responsibility. Retirees must save carefully, owing to healthcare costs as retirement income schemes, cannot meet all expenses and balance is required for maintaining higher and lower retirement living standards. An individual's saving and spending behaviours might reveal their needs, wants, and preferences, which may influence their personal and financial decisions.

1.2 Savings and investment

Economics emphasizes saving, investment, and consumption. Individuals save for the future and set aside funds for a reserve, investments, or debt repayment. An "investment" is buying assets to earn future income or advantages like shares, fixed-income and assets (Bucciol & Trucchi, 2021; Bunting, 1991; Burnett et al., 2018; Burns, & Dwyer, 2007; Dees & Anderson, 2003). Consumption involves buying goods and services to meet needs which includes food, clothing, shelter, and entertainment (Clark, 2003; Holt, 1998). Saving and investing are crucial to economic success and investment boosts production and productivity and economic growth (Aschauer, 1989; Stiroh, 2001). Consumption drives product and service demand in the economy while inflation lowers consumption (Lusardi & Tufano, 2015; Fernandes et al., 2014). This equation shows how saving, investment and consumption interact dynamically.

Saving and investing are different in an open economy and benefit individuals and the economy (Pavelescu, 2009). Financially conservative countries attract foreign investment capital with high savings rates and help consumers and politicians to plan better financial decisions and economic growth. The idea that saving equals investment is fundamental to macroeconomic (Gonzalez, 2014; Villacís, 2010). An economy must invest all savings to balance savings and investment while individuals and organizations can borrow and lend. Financial resource management and consumer financial decisions affect investment decisions and financial management skills are essential as living costs rise for living comfortably (Kefela, 2010; Clarke et al., 2005). Saving is the only way to invest in an open economy, while saving and investing vary with time (Pavelescu, 2009). Saving, investing, and consumption benefit individuals and make better financial decisions through effective economic growth initiatives (Gonzalez, 2014; Villacís, 2010).

1.3 Investment Avenues in Pakistan

Investment Financials help investors build or keep wealth (Gitman & Joehnk, 2011). Investor inclusion, financial understanding, and activity risk assessment reward investors (Cruijsen et al., 2023; Tilai, et al., 2022; Cuesta-González, 2021). Unfortunately, community literacy is low in Pakistan as adults have 13% formal bank accounts, indicating low financial literacy (Rasool & Ullah, 2020; Junoh et al., 2019). Brooking's institution ranks Pakistan 16th out of 26. According to the UNDP's (2018) National Human Development Report, 64% of the population is under 30 (Taqi et al., 2021) includes financial inclusion access to formal financial services. Financial inclusion in Pakistan requires higher financial education having low savings, investments, insurance, pension, and mutual fund participation (Liu et al., 2022; Wasim, 2022). Thus, this study explores how paid individuals who lack financial literacy and

are prone to investment scams struggle to retire and maintain living standards (Shao et al., 2019; Bialowolski, 2022).

Financial fraud prevention drives raise awareness and rebuilds bank trust to increase savings and long-term investments, addressing poverty and inequality (Ahmad & Shah, 2020). Financial literacy helps budget, avoid fraud, smooth consumption and supports retiree investing and management decision for living standards (Hastings & Mitchell, 2020; Nolan & Doorley, 2019). To improve financial literacy, financial institutions are crucial because financial literacy benefits (Khan, 2023) through telecommunications and school level education is required (Caplinska & Ohotina, 2019). Economy of Pakistan needs effective financial planning and support for stability and financial management (Utkarsh et al., 2020; Bakar and Bakar, 2020). Education must include financial literacy to help students prepare, preserve, and improve their finances (Fatima, 2019).

Pakistan's economy has more potential to attract local and global investors because most individuals know only traditional investment ways (Qamruzzaman, 2023). Individuals need a variety of financial products and services for economic and social well-being (Khan, 2023). Financial literacy improves financial access, economic and social well-being, and living, social, and cultural financial engagement (Khan, 2023). Financial inclusion enhances income, life expectancy, and education (Matekenya et al., 2021; Cabeza-García et al., 2019). Policymakers in rising South Asian countries may optimize financial inclusion's human development benefits. (Chowdhury, 2023).

1.4 Major Investment Avenues

The significant investment choices and avenues available in Pakistan are as under which are holding great potential (Shabbir et al., 2020; Khan & Rehman, 2019). Many individuals are well-informed about the possibilities and advantages of this investment option, making it

a wise decision to invest in real estate (Yousaf & Ali, 2020). However, the high cost of real estate purchases makes them unsuitable for individuals or those with small initial investments, as it is not viable and practical for every investor (Imran & Ahad, 2023; Zain-ul-Abdin et al., 2019). The maturity time for national saving plans or Special Savings Certificates is three years. These programs were created on February 4th, 1990, and provide small to medium-savers with a distinctive investment alternative that enables them to meet their financial needs (Afzal et al., 2023; Ali & Khalid, 2019; Shah et al., 2016). The profit on these certificates is paid out every two years in a variety of denominations, and the National Saving Centre deals with these schemes (Munir et al., 2023). One of the most popular ways to save is through bank deposits, but only some individuals are aware of the right kind of account to open to save money and make money. Individuals have opened bank accounts to receive money for their schooling and family contributions and individuals mostly must open a savings account if they wish to earn bank money (Zainudin & Ahmad, 2023; Ahmed et al., 2022; Ali et al., 2019). To make their shares available to a wide range of investors for purchase, corporations list themselves on a stock market (Rashid et al., 2022; Khan et al., 2021). As an investor, individuals can select from a variety of stocks offered by various businesses to add to their portfolio and stock exchange's listed shares change in response to purchase and sell activities (Sabir et al., 2021). Over ten years, from January 2009 to December 2018, returns from the stock market outperformed those from other asset types like Ready Market, Futures, Tradable Bonds, ETFs, and Options (Yaqoob & Bibi, 2021).

The biggest and most liquid market is the foreign exchange market. Adding foreign currency investments to the portfolio is a massive way to diversify. Trading foreign exchange, or forex, is more difficult than trading stocks, mutual funds, bonds, or other types of local market investments (Fiaz et al., 2021; Lal et al., 2023). The State Bank of Pakistan (SBP) has

issued debt securities known as Pakistan Investment Bonds (PIBs). These bonds are offered in tenors of 3, 5, 10, and 20 years and are issued in denominations of Rs 100,000, Rs 40,000 and Rs 7500 (Iftikhar & Saba, 2020; Rabbani & Butt, 2021). These bonds' yields are fixed and paid out every two years. These bonds are paid till maturity at the coupon rate or semi-annual return. PIBs are a great approach to maintaining the security of the investment while generating competitive returns. Because the Government of Pakistan guarantees these bonds, there is virtually little likelihood of a default or other issue with the bond payments (Sadia, Bhatti, & Ahmad, 2019; Tahir, Gul, & Qazi, 2019). Mutual fund investing is easier to access than most other types of investment. Secure an investor's account with an Asset Management Company (AMC) by filling out a simple deposit form with the guidance of an advisor. When the funds are deposited, one can unwind while individual investment grows (Saleem et al., 2021; Azam, 2022; Noor, 2020). Currency investing is a very common activity, and it operates easily. An individual purchases a currency, in this case, let in US Dollars and hold it until the value increases to the point where one can sell it for a profit. To turn a profit on one's savings, one must exchange foreign currencies (Chaudhry, 2019; Asadullah et al., 2021; Muhammad et al., 2020). Commodity trading is analogous to stock market investing. Commodities, on the other hand, are things like iron ore, sugar, or grains like wheat and rice that PMEX sells. These also deal in raw materials, basic resources, and agricultural or mining products. Numerous stock brokerage businesses also deal in commodities (Shabbir, Kousar & Batool, 2020; Khan, Ali, & Aftab, 2020). Banking is vital to modern economies since it indicates financial strength. Residential buildings temporary income gains, income uncertainty, unexpected income shifts, accumulated wealth, financial vulnerability, or larger financial and non-financial assets can stimulate saving. Long-term purchases like cars deplete savings, whereas household size, composition, age, and education affect saving preferences. Consumption smoothing theories

argue that individuals with easy access to liquid assets save less since they can deposit and hold other financial assets(; Christelis et al., 2010; Cera et al., 2020; Engen, et al., 2005; Marius et al., 2014). The lifecycle hypothesis showed that younger and older households saved more than middle-aged families and income and wealth influence saving behaviour (Obagbuwa & Kwenda, 2020; Pangestu & Karnadi, 2020; Stix, 2013).

Family income, business savings, work, and asset accumulation define saving. Income and total dependency boost savings, but family size, commitments, property worth, the head's education, and children's schooling lower savings. Age, female-to-male ratio, marriage status, spouse participation, locality, household income, and reliance increase savings. Marriage, parental duties, property ownership, home value, and savings affect children's education expenses. Age squared, household head education, female-to-male ratio, family size, spouse participation, region of residence, and livestock amount had no effect (Swasdpeera & Pandey, 2012). Additionally, factors such as education, health, age, and family background influence saving and investment behaviours, highlighting the need for a broad perspective on financial literacy.

1.5 Investment Scams in Pakistan

Pakistan's economy is developing, even though investment scams are prevailing in the market (Bolton & Hand, 2002; Ullah et al., 2022). The Federal Investigation Agency (FIA) plays a vital role in safeguarding the public and exposing fraudulent schemes. FIA has already identified numerous scams taking place in Pakistan. Despite having various aliases, these scammers are solely focused on swindling innocent citizens worldwide of their tough earned investments and savings. Fraud has been uncovered within Pakistan's National Savings Schemes, a government-run organization with a massive worth of Rs3.6 trillion, causing a breach of trust for over seven million savers. Shockingly, the fraud included 10 years' worth

of missing savings certificates and transfers totaling Rs110 million to personal and familial accounts. It was also discovered that certain Special Saving Certificates and Regular Income Certificates were absent, and the data needed to match up with computer records, with indications of duplicated members. These appalling actions have had a profound impact on innocent customers, many of whom come from the needy and lower middle class. As a result, it is crucial to implement strong systems and automation to prevent future occurrences and protect the susceptible individuals relying on these schemes. [Source:(Dawn, TODAY'S PAPER | JANUARY 29, 2020]. NASDAQ issued a public warning on November 3, 2019, regarding the widespread fraudulent activities of fake calls targeting individuals worldwide. These deceitful calls aim to extract sensitive personal information such as identity details, bank account details, mobile numbers, addresses, email addresses, security codes, ATM PINs, and Internet banking credentials. These nefarious schemes are unfortunately prevalent in Pakistan, resulting in significant financial losses for many individuals. Victims often find themselves in a dire financial situation, having lost their hard-earned money, savings, and investments to unknown accounts or unauthorized investments (State Bank of Pakistan, 2021). Phone scams occur when deceptive individuals reach out through a phone call or text message with the intent of obtaining your personal or financial information for unlawful purposes. They may pose as a real person or use automated calls, but their ultimate goal remains the same. If a person is still determining the legitimacy of the call, it is always wise to request to call them back. To authenticate their identity, employ the Internet to investigate and locate the authorized telephone number of the banking institution, government agency, or any other organization that allegedly contacted the individual (Khan et al., 2021; Pervaiz et al., 2019). Reach out to them through the independently researched number to confirm the authenticity of the call (State Bank of Pakistan, 2021). Be aware of these four prevalent

banking scams that criminals use to steal money from your account. One of them is the overpayment scam, where the thief tricks a person into depositing a fake check and wiring them back some money (Pervaiz et al., 2019; Shaikh & Shah, 2012). By the time a person realizes the check is counterfeit, it is too late - your bank has reversed the deposit and charged a personal fee. So, not only the deposited cash but also the money person wired to the scammer (State Bank of Pakistan, 2021). Charity scams take advantage of good intentions to help others. These deceitful schemes involve soliciting donations for a fake charitable cause (Ullah et al., 2012; Viktoria, 2011; Steffens, 2012). Whether through phone calls, mail, or online platforms like GoFundMe, the organization behind the scam is not a genuine charity (State Bank of Pakistan, 2021). An alarming scam has recently emerged targeting unsuspecting individuals, promising to double their cash within two to three months without any documentation (Sagar, 2019; Khan, 2015). This deceitful trick specifically preys on those hoping to improve their financial status, including the average citizen, business owners, salaried workers, and even the less lucky individuals. The Federal Investigation Agency (FIA) of Pakistan has reported that a large number of individuals have already fallen victim to this fraudulent scheme (State Bank of Pakistan, 2021). The Lahore Development Authority (LDA) and the Government Development Authority (GDA) are just two examples of the many fake and unregistered housing and property schemes that are available in Pakistan (Chattha, 2012; Hasan et al., 2022). It preys on the vulnerable salaried class and poor individuals who strive to save up for their dream home. Despite reports from the Lahore Development Authority and the Punjab Housing and Building Works (PHBW) that billions have been recovered and property rights have been returned to the rightful owners and investors, individuals continue to fall victim to these fraudulent individuals (Qayyum et al., 2019). This is due to their blind trust in these culprits, despite the warning issued by authorities and the coverage of the issue

in the newspapers (State Bank of Pakistan, 2021). Based on the above prevailing scams this study has included investment scams in model to determine its effect in investment decision retirement planning and saving behaviour of salaried class.

1.5.1 Saving and Investment in Pakistan

WealthPK 2013 advised Pakistan to increase its savings to GDP ratio for investment and growth and has lowest regional saving-to-GDP ratio, limiting investment and growth (Hundie, 2014; Shahbaz, Ahmad, & Wahid, 2010; Ali & Sadiq, 2020). Inflation affects savings and investments, and an economy rises faster greater saving rate as compared to India and Sri Lanka (Umer & Alam, 2015). According to World Bank data, Pakistan's GDP savings dropped from 16.5% in 2000 to 5.7% in 2021 (Pervez, 2021). Pakistan's low saving-to-GDP rate indicates poor economic performance and little savings incentives for individuals and enterprises as inflation lowers savings and investment (Thirlwall & Barton, 1971). Also, lower interest rates give lower investment returns, making it harder for corporations to estimate expenses and revenues and discourage stock and business investments (Thirlwall, 1974; Kessel, 1956; Feldstein, 1980). Pensioners and salaried workers may have less purchasing power due to rising prices even after post and pre-retirement age (Bergh & Nilsson, 2014; Todorov & Angelova, 2023; Ray & Singh, 2014). Poor financial systems and tax systems discourage saving behaviour. To enhance productivity, growth, and savings it is necessary to lowering inflation, improving financial services, and investing the expert recommended foreign direct and domestic investment in important economic areas.

In 2019, a report by Employee Old-Age Benefits Institution (EOIB) Pakistan, which oversees federal government employee insurance and pension schemes shows 126,783 government workers contribute to old-age benefits, and 83,618 are active. Also, in 2019, individuals with 39,202 number were deregistered workers, including 3,950 and the old-age

pension was Rs. 411 million, and individual survivors were Rs. 200 million (Table 1.1). This statistic shows Pakistan's federal government employees' old-age benefits use and impact of federal retirees can invest at 60 to secure this potential investment through savings and avoid investment scams by these benefits at retirement (Raza et al., 2017; Naqvi, Rizvi, & Shahzad, 2023; ShuHong, Din, & Ranjha, 2017). In Pakistan saving and investment require public knowledge of saving and investing for sustainable economic growth and stability. Therefore, this study has used salaried class savin, consumption behaviour on the investment decisions to enhance investment through saving as inflow of money for capital formation and livelihood of retirees though retirement planning.

Table 1.1: Amount and Registered Employees in Old Age Benefits

Employers registered of employees		
Registered	126,783 (number)	Amount (Rs)
Benefits &Pension: *Rupees in million*	Old-Age	411m
	Survivor	200m

Source: EOIB, Annual Report (2019), Pakistan

New financial instruments like leasing, mortgages, credit cards, and business loans are widely available and financial sector progress requires efficient resource management and optimization (Rizvi et al., 2018; Noreen, 2022; Lusardi & Mitchell, 2014). Pakistan's inadequate savings and investment limit its economic potential, requiring domestic and foreign investment (Taguchi & Lowhachai, 2014; Qazi & Ammad, 2021). Economic growth requires increased savings and investment, with a solid financial system can also lower information gaps, reduce transaction and monitoring costs, and enhance intermediation efficiency (Goel & Novikova, 2023; Rusiadi et al., 2023). Modern financial systems identify financial promises and possibilities to gather and invest savings to improve resource allocation

in the form of human and physical capital accumulation in the economy (Rizvi et al., 2018; Taguchi & Lowhachai, 2014).

Through financial instruments, capital markets consolidate value and trade risk among economic performers. Assets with high returns, easy cash conversion, and high risk can encourage saving behavior. Pakistan needs stable inflation to encourage productive investments and savings for sustainable and inclusive economic growth (Waheed & Akram, 2023) (Figure1.1).

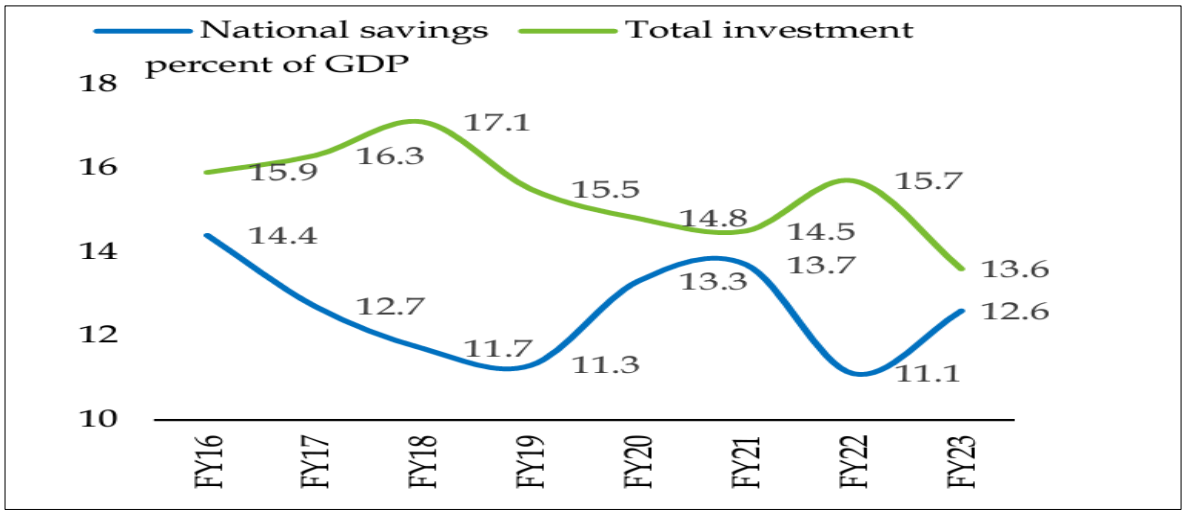


Figure 1.1: Savings & Investment Trend

Source Pakistan Bureau of Statistics

Slower economic activity restrained job opportunities, the increase in inflation and higher interest rates reduced savings (Rehman et al., 2023) and global inflation reduced the savings of Pakistani workers (Carrière-Swallow & Haksar, 2019; Nutt, 2006; Lorenc et al., 2011). The country also does not estimate income, outlay, savings, financial flows and stocks by institutional sector accounts (Pakistan Bureau of Statistics, 2020-2021).

Lack of adequate information might hamper financial and market decisions. decision-making becomes more challenging and financial situations become less predictable to individuals' behavior (Brounen and Neuteboom, 2015). The impact of fiscal policies on

economic activity has long captivated macroeconomic researchers and policymakers, stimulating both theoretical and applied research. Government spending has a more significant positive impact on economic growth as compared to taxation (Hussain et al., (2023). Both public and private investment has the potential to enhance economic growth (Ameriks and Zeldes, 2001). Individuals living in poverty can save money and be capable of successfully accumulating significant savings and its quantification is challenging due to diverse long-term objectives (Apraca, 1985).

A significant portion of women's income is allocated to family expenses, further research on women's saving habits and policy is needed, and the impact of socioeconomic factors (Hussain et al., 2023). Technical analysis employs the principles of behavioral finance, which is a field of study under behavioral economics (Lučić et al., 2023; Sunstein, 2023) and portfolio managers have acknowledged the emphasis on transaction costs and the implementation of low cost adjustments, one can simplify the process of calculating investment transaction costs (Bacchetta et al., 2023; Ikram et al., 2023). Additionally, psychological and sociological factors such as emotions and intuitions that have a significant impact on investing choices. Financial literacy enhances ability to handle finances and make informed financial decisions (Kumar et al., 2023). Research indicates that a lack of knowledge and understanding about financial matters might result in making poor choices regarding one's finances. A significant number of individuals acknowledge that they have not saved enough money (Katona, 1975). A significant number of inexperienced investors choose investing in equities and instead maintain portfolios that lack diversification. According to Ainslie (1975), individuals and organizations engage in financial projects that include risks. Investors engage

in active portfolio management with the goal of optimizing returns and minimizing risk (Almansour et al., 2023).

The impact of fiscal policies on economic activity has long fascinated macroeconomic scholars and policymakers, encouraging theoretical and applied research. Financial conditions are less predictable which lead decision-making harder (Brounen and Neuteboom, 2015). Government expenditure boosts economic growth more than taxation, public and private investment can boost economic growth (Hussain et al., 2023; Ameriks & Zeldes, 2001; Kumar et al., 2023).

Research suggests that financial ignorance can lead to poor financial decisions, and many unskilled investors avoid equities but keep undiversified portfolios (Kumar et al., 2023). Financial products are complicated and require market expertise to make decisions. Individuals and organizations take risks in financing and investing decisions and face consequences (Ainslie, 1975). Investors use active portfolio management to maximize profits and minimize risk (Almansour et al., 2023; Katona, 1975) because emergency funds are preferred but individuals have little savings (Mischel & Ebbesen, 2005; Lusardi, 1999). Economic and psychological studies show that an individual's saving and spending behavior and individuals' propensity to delay rewards affects their financial and non-financial decisions (Yu et al., 2023). Self-efficacy and self-control affect perceived scarcity and pleasure with life satisfaction (Ainslie, 1975; Strotz, 1956; Rneryd, 1999). Strategy and planning expertise vary

(Mischel & Ebbesen, 2005; Wood, 1998) and discussing children for financials has a significant impact on their financial behavior as adults (Bernheim et al., 2001).

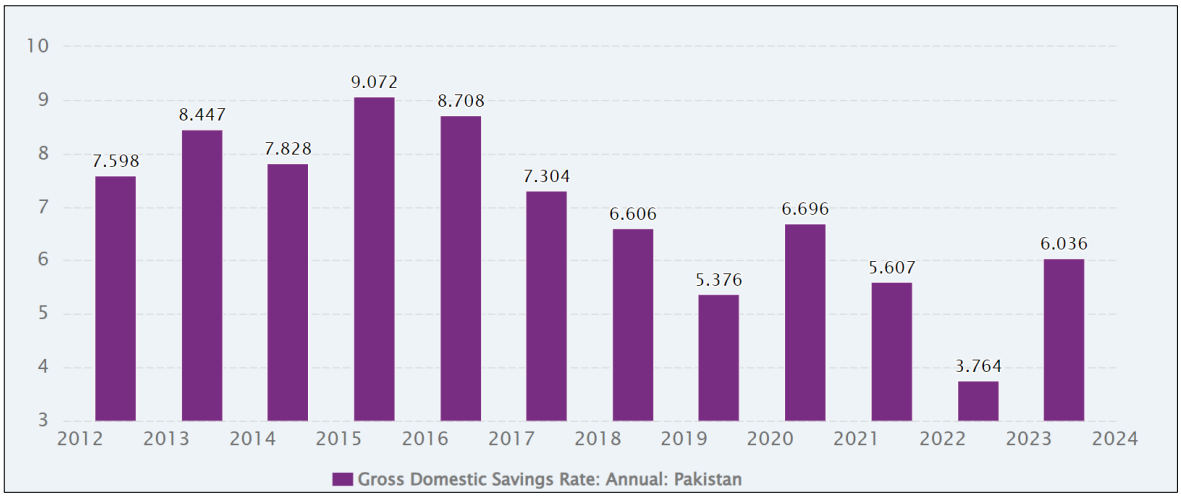


Figure 1.2: Pakistan Gross Savings Rate

Source: www.ceiddata.com

Effective financial management and incorporation of resource allocation, income distribution and identification reduce consumption and boost savings (Zaidi, 1985; Lusardi,1999). Market circumstances, social and economic factors affect people's choices and insurance is pritozed as retirement decisions by salaried class individuals (Hasan et al., 2023; Shafqat, 2023). Retirement planning must consider financial resources and uncertainties (Naqvi et al., 2023) and salaried individuals use personal savings to reduce debt and tax burdens, as finances often aid planning (Shah, 2023). Surprisingly, 30% of near-retirees still need to prepare for retirement and invest in stocks for increased returns (Habibah, 2023). This shows the understanding and usage of conventional and unconventional investments and the government's impact on savings plans through their effectiveness and security, which affect financial decisions. Since Keynes (1936) and Modigliani and Brumberg (1954), empirical research has focused on household salaried class spending and saving in relation to economic growth and policies. Pakistan’s Gross Savings Rate rose to 6.0% in June 2023 from 2022

(Figure 1.3) and fixed salary workers saved more and lived better (Jadoon et al., 2023; Lee et al., 2003). Gross savings dropped from 9.11% of GDP to 4.52% in a decade and personal savings boost economic growth and investment, improving living standards (Durr-e-Nayab, 2008). Pakistan is the sixth most populous nation, with 212.8 million people and over the past 30 years, the working-age population has grown. Pakistan has a lower savings rate than its neighbours and has declined.

Table 1.2: Share of Savings in GDP of Pakistan

Investment and Savings at Current Prices Share in GDP of Pakistan					
Item Amount (Billion Rupees)	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
Total Investment	5,141	5,235	5,919	7,536	7,930
Public Sector	475	350	417	512	472
Private Sector	4,666	4,885	5,502	7,024	7,458
Net External Resource Inflow	1,841	703	451	3,089	921
Gross National Savings	6,982	5,938	6,370	10,625	8,851
Domestic Savings	2,803	3,613	3,751	2,874	5,292
GDP (Market Prices)	43,798	47,540	55,836	66,624	84,658
Item As % of GDP	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**
Total Investment	12	11	11	11	13.63
Public Sector	1.08	0.74	0.75	0.77	0.56
Private Sector	10.65	10.28	9.85	10.54	8.81
Net External Resource Inflow	4.20	1.48	0.81	4.64	1.09
Gross National Savings	15.93	13	11	16	15

Source: *Ministry of Planning, Development and Special initiatives, (2023).*

According to Durr-e-Nayab's 2008 report, the working age population rose from 52% in the 1990s to 59% in 2006 and 61.4% of Pakistanis are in groups aged 15–49 years (Economic Survey of Pakistan, 2018-19). Saving rates rise with a country's working-age population and community well-being (Ahmad et al., 2006). The personal savings trend has dropped to 12-14% of GDP from 2003 to 2018, and Pakistan's gross savings rate fell from 5.8% to 5.2% in June 2019 (State Bank of Pakistan, 2019). Pakistan's gross savings as a

proportion of GDP rate changed from 17.4% in 2004 to 5.2% in 2019 and dropped to 10.5% in 2022, its lowest ever while same decreasing trend of investment and private saving has been shown (Table1.2).

1.6 Salaried Class Individuals

All workers in Pakistan cherish this dream of a peaceful old age. In retirement, they expect to receive financial awards either as a single payment or gradually over time so that they can cope with the pressures that come with old age without losing their quality of life after retirement (Oviomo, 2007; Garba & Mamman, 2014). This is enormous, as the salaried class primarily massed with profession for the financial, identity, and purpose needs of their life. Due to the fear of running out of money if they did not save enough for retirement and critical expenses have to manage to pay for the expenses of health, housing, and other critical expenses without a regular income. To overcome and stressed-out cause great concern about future living standards and retirement well-being (Ugwu and Sunday, 2023).

In Pakistan, about 70% of men and 20% of women are between 65 years old, and some still engage in earning a living, according to Help Age International, 2018 United Nations statistics show that 50% of the active labour force is composed of older people aged 65 and above (UN, 2017). However, in Pakistan, an employee is expected to retire after 35 years of service or attaining the age of 60, whichever comes first and are engaged into late old age in poor countries as individuals have not planned for retirement (Vera-Sanso, 2013). The unknown hardship, frustration and delay in the payment of pensions and gratuities is a worried (Denga, 1996). Basically, personnel in active service and those retiring are afraid of attaining retirement age (Abdulazeez, 2014). It became very difficult to feed, cloth, and shelter, or even take care of their medical bills and suffered because having no savings or plans for retirement

for such bad times and mostly solely depended on their monthly salary (Ugwu and Sunday, 2023).

Another reason is considering the present economic situation in this country where the prices of both goods and services are on the increase on a daily basis and uncertainty of life after retirement agenda has been ignored. In this regard, the salaried class are to be considered by policy makers and government must take more proactive steps in planning and preparation for retirement in order to alleviate anxiety and feel confident about their financial future after retirement. Only a few, particularly those in the public sector, often make the necessary preparations and provisions for retirement.

Previous studies have discussed social protection for retirees; lack of social protection for the aged and vulnerability in old age have been emphasized as well as aged labour participation, earnings and traditional safety nets for the elderly (Barrientos, 2011; Rajan, 2010; Vera-Sanso, 2012; Onyeonoru & Nweke, 2014; Nweke, 2016; Adeniyi-Ogunyakin, 2012). Many studies discussed and emphasised the importance of civil servants perception of pre-retirement counselling and low pension coverage and no support by children (Inaja & Chima, 2013; Rahman, 2010; Wahab, 2013). Similarly, root causes of deficits in retirement planning often need to be more reported or researched about the state of knowledge of retirement planning and preparedness for life after work among prospective civil servants.

Consumption and saving behaviour are alike financial economics community investigation is individual investment decisions (Varlamova, & Larionova, 2013; Virani, 2012; Zulkarnain, 2022). Generally, salaried individuals are familiar to financial security, constant wage and retirement and sensitized to lifestyle, expenditure, and standard of living because of the steady income and socio-demographic balance. This research will focus on whether retirement planning and behaviour of saving and consumption affect the investment

decision making supported by the government policy actually cater to the financial needs of a good standard of life after retirement (Kimiyagahlam et al., 2019). Salaried class gets paid at the end of every month or year and save appropriately but also plan well. This research has extracted quotas for male and female federal employees using life cycle theory and permanent income hypothesis, since the research is limited to only paid employees (Nasir et al., 2023).

1.7 Prevalence of Investment Scams

According to Kriese et al., (2019) economic development benefits from fair treatment, disclosure, conflict resolution, redress, and financial access further, financial access, enforcement, and compliance monitoring restrictions also impact economic growth. In established and developing nations scholars, researchers, and professionals are striving to discover corporate fraud susceptibilities (Sood & Bhushan, 2020; Dohmen et al., 2010; Arora & Kumari, 2015; Armour, Carman & Hung, 2019; Barak, 2015; Basu, 2014; Bernhofer, Costantini, & Kovacic, 2023; Cavezzali et al., 2012). ASIC 2020 data suggests investment scams are prevalent deception and forecasts financial losses at $113 million. The US Better Business Bureau (BBB) (2020) reported investment scams and over 10,000 investment scams cost $360 million (BBB, 2020; Esoimeme, 2021; Sirgy, 2021). Investment fraud statistics indicate their impact on society and several instances of financial fraud have shown its economic impact recently. The issue above has shocked financial institutions and the economy (Suh et al., 2019; Mohammed et al., 2023; Gupta & Gupta, 2015).

1.7.1 Characteristics of Investment Scams:

Research has identified several characteristics that are common to most investment scams (Yasir et al., 2022; Akhtar & Malik,2023; Kasim, 2023; Cristea, 2020; Du & Chen, 2023; Faff et al., 2008; Goetzmann & Ibbotson, 2006; Helden & Reichard, 2019; Knupfer et al., 2021). These include:

- Promises of high returns with little or no risk
- Pressure to invest quickly
- Limited information or details about the investment opportunity
- A complex or convoluted investment structure
- An unregulated or unregistered investment product
- A lack of transparency about the investment scheme

These characteristics make investment scams challenging to detect and prevent, and scammers often use sophisticated tactics to manipulate potential victims which are salaried class at retirement (Yasir et al., 2022; Akhtar & Malik, 2023; Kasim, 2023).

1.8 Living Standards

Brüggen et al., (2017) reported that insufficient savings and retirement planning worry individuals, families, communities, and nations about their economic future. Money management and fulfilment depend on financial mentality (O'Sullivan et al., 2014; Nivakoski & Barrett, 2019; Kenny, 2013; Yap et al., 2018). Further, financial knowledge and training boost savings (Bernheim, 1996). Kulkarni (2014) focused on individual investors' investment decisions and found that age, gender, income, education, occupation, annual income, and number of dependents greatly influenced investment and living standards (Delavande, Rohwedder & Willis, 2008; Christelis, Jappelli & Padula, 2010). Valued items succeed in less unpredictable situations because younger people avoid uncertainty. Anne et al., (2007) stated that families may struggle without life insurance if individuals acquire long-term insurance at early. Bernheim et al., (2003) stated that retirement expenditure exceeds 80% of working life spending for most respondents. Retirees want lifestyle, financial security, contentment, and luxury change (Bradbury & Mendolia, 2012; Sony et al., 2017; Atlas et al., 2019; Unity, 2014; Boyer & Glenzer, 2021). Banking services to set up small savings programmes and increase

financial inclusion with economic decisions owing to overwhelming market knowledge from diverse techniques (Dash & Mohanta, 2022). Life satisfaction depends on regular activities and life expectancy and quality of life efforts have boosted the elderly population in established and emerging countries (Aydiner & Günay, 2017). Financial planners, pension plan consultants, academics, and public policymakers utilize the last employment earnings replacement rate to assess retirement income sufficiency because it is more precise, straightforward, and consistent (MacDonald, Osberg, Moore, 2016). Monthly pensions and lump sum payouts help retirees pay for food, healthcare, education, housing, clothing, and more. Retirement payouts must rise with inflation and cover living costs, making it hard for retirees to maintain their families (Nyangarika & Bundala, 2020; Buhalis et al., 2020). For quality of life after retirement, replacement rates must be at least 10% lower than planned (Mugnel et al., 2007). Reevaluating retirement strategy and ensuring retirement ability are needed due to rising female employment (Noone, Alpass & Stephens, 2010). Employer-sponsored pensions improved retiree replacement rate measurement (Munnell & Soto, 2005). financial aptitude affects emergency savings, and that bank account holders and financially confident people are more likely to have emergency cash with objective financial knowledge. (Prast & Soest, 2016). Low-income seniors and those who retired in the last 20 years can consume thanks to Canada's retirement system (Moore et al., 2010).

Many people require retirement savings to live comfortably, but few can enhance home savings methods and apply micro-simulation models to account for health, employment, income, and life expectancy (Campara et al., 2017; Cusimano et al., 2023; Deenanath, Danes & Jang, 2019; Demirtaş & Güngör, 2004; Le, Gibson, Scobie, 2004). The savings were moderated by public perception (Rusdianto, 2022). Pension schemes need more research because indexation shortages can harm the living standards of elderly retirees, mostly women

(Schwarz et al., 2014). Reforming Social Security involves encouraging household savings and creating retirement accounts with savings (Cashell, 2009). Shah, Arooq, Rasheed (2021) suggested to guiding individuals to the effective and comprehensive right aspects for wellbeing in the investment financials market with freedom to improve financial management.

Expenditure grows by 80% before retirement while the minimal income replacement (Binswanger & Schunk, 2012). Women obtain financial satisfaction from economic position, whereas men get it from financial knowledge (Joo, 2008). Demographic changes have affected several countries' investment and current account balances over the past three decades (Uzawa, 1962). People in different countries may act differently based on their beliefs (Hanele et al., 2018). A systematic method is needed to identify, assess, and control measurable and non-quantifiable financial risks, and uncertainty management requires distinct solutions (Ganegoda & Evans, 2014).

1.9 Retirement Planning

To address demographic challenges, many governments have made major pension policy reforms or created policy organizations. Pension reform and policy thinking are updated in Old-Age Income Support in the 21st Century by the World Bank (Sexton et al., 2013; O'Sullivan et al., 2014; McArdle, Smith & Willis, 2009). The Bank has supported pension reforms in 60 countries and increasingly in demand. The World Bank agree that pension reform should prioritize poverty reduction, coverage, equity, and market risk protection. Other nations' enthusiasm for similar reforms may have been dampened by the experience and difficulties of nations that introduced individual retirement accounts (IRAs), policy changes by international financing institutions, and recent financial volatility and significant losses in the financial markets (Lusardi & Mitchell, 2007; Wahyuni, Chariri & Yuyetta, 2021; Sturr, Lynn & Lawson, 2021; Asebedo & Seay, 2015; Bandiera et al., 2000).

Academics and leaders globally stated the baby-boomer generation's retirement will temporarily challenge these wealthy nations' pension systems with the role of compulsory and optionally financed retirement plans in balancing consumption throughout life. Need to quantify patterns for men and women to provide a sound empirical basis for evaluating policy designed to address the financial pressures population ageing places on financial markets, the pros and cons of investing in developing nations, and the impact of ageing on funded and unfunded schemes (Bhutto et al., 2020; Boubaker et al., 2022; Burnett, 2018; Cusimano et al., 2023; Frederiksen et al., 2010; Gaudecker, 2015; Ghez & Becker, 1975; Ghilarducci, 2007). How long do individuals work? How often is retirement reversed? For how long have people retired? The average retirement age? How do women's patterns compare to men's? Estimate multistate working life tables to update US men and women's age-graded retirement cycles. Pension systems' uncertain future is a fiercely debated topic while discussing ageing demographic challenges. Europe and Central Asia's pension systems face unprecedented demographic upheavals. Many governments in the area have enacted reforms during economic downturns, but they usually reverse them when the economy rebounds. The extent of a nation's pension system reform depends on its labour markets, savings, and state budgets by different nations. It is necessary to ignite public discussion to help governments make sustainable, incremental decisions before facing such overwhelming difficulties of Pensioners retirement. Innovative pension designs, efficient governance, and successful pension investing and collapse risks. Pension reforms in wealthy nations raise lifespan and income risk. To prepare for retirement, people should accumulate assets with policymakers verification. Changes in actual and planned retirement decisions reduced the percentage of households without supplemental pensions from 73% to 39% in a decade (Gillion et al., 2000; Goldhaber & Holden, 2023; Gomes, 2020; Gordon, 2008; Kalamarides, 2023). This study

suggests a reform model to ensure old-age security with forced savings, a private mandatory savings plan and a voluntary savings system where workers choose an investment manager for retirement with shortcomings including high administrative costs and restrictions that distort investment decisions, and the risks retirement system participants face. Börsch-Supan and Lusardi (2003) stated that private pensions are needed to supplement post-retirement income gaps, and the Netherlands only offers a flat base pension that is paid for on a pay-as-you-go basis with a very low replacement rate for households earning more than the median income. It is tough and divisive because governments must plan long-term under short-term pressure. Fiscal and financial sustainability that is, pension payment sufficiency, pension reforms' impact on older adults' income distribution, and initiatives to reduce old age poverty has gotten less attention (Malone, et al., 2010; Mittra et al., 2005; Obaid et al., 2023; Outcault, 2012; Willmore, 2007; Zellweger, 2007; Gordon, 2016; Hall et al., 2022). Despite the fact that this criterion is necessary for saving incentives and pension schemes, its definition is disputed. A structural retirement model with consumption, savings, Social Security, health insurance, and pension plan variability reveal adults save for retirement. Men save more for this aim than women, but in developing countries, the gap is wider. Older, more educated, and banked folks save more for retirement globally. Adults with high savings rates are also more likely to save for retirement. The safety net/moral hazard index based on deposit insurance increases retirement savings. Retirement savings contribution rates are substituted in emerging nations are realizing they need to update retirement for the elderly (Toyon, 2016; Hallman & Rosenbloom, 2003). There is differences in lifetime earnings and projected average life expectancy, reduce elderly poverty, smooth consumption to give older people a steady income, and protect retirees from running out of money. A shock on top of chronic difficulties like population ageing. Personal matters are one factor in structural in many

economies as microeconomic side of ageing and saving (Helden & Reichard, 2019; Herrmann, 2007; Kawaguchi, 2003; Zulkarnain, 2022; Kawaguchi, 2004; Ketkaew, 2019; Scale Lown, 2011; Wieland et al., 2017). Life expectancies are rising, the baby-boomer generation is entering middle age (Disney, 1996). Academics benefit from pre-retirement counselling and assistance with generational differences in financial challenges, perceived indebtedness, and retirement planning. Employer-sponsored accounts had higher excessive debt perceptions than non-employer-sponsored accounts. Increase retirement confidence in financial, physical, social, and psychological planning for living and happiness. Retirement confidence only lessens depression with social planning. Financial retirement preparation boosts retirement contentment with subjective financial knowledge and retirement savings aspirations affect responsible financial behaviour. Behaviour moderates financial literacy and family education's retirement planning. The propensity score showed that financial planner-using households saved more for retirement. Financial advisors emphasize retirement planning to help retirees accomplish their financial goals when inflation matches their decisions. Financial knowledge affects confidence, especially when saving and borrowing. Workers feel salary insecurity due to political instability. Government agencies must provide competitive wages and stable salary levels to satisfy employees.

The Elder Abuse Forensic Centre evaluated 53 financial exploitation and fraud cases using law enforcement, caseworkers, victim medical data, offender demographics, and forensic health and cognitive tests. Fraud and financial exploitation victims failed cognitive and financial decision-making tests. Fraud victims without children differed greatly from financial exploitation victims. Fraud was easy for elderly people without family or friends to protect their money. To protect older persons without competent guardians against fraudsters, prevention should diminish social isolation "Caveat Emptor," meaning "let the buyer beware,"

only partially applies. To understand a transaction, consider "Caveat Venditor," meaning "let the seller beware." Fraud is common and causes consumer dissatisfaction, missing opportunities, increased pricing, and criminal activity sponsored by dishonest earnings. Piquero et al., (2022) found that identity-based financial crimes harm 26 million Americans annually, private and public identity victim services, and Estonia has successfully transitioned from communist governance to a market economy. The older population in Estonia saves more due to either a long-standing frugality or a perception of economic instability in the current economic environment. All else being equal, female-led households save less than male-led ones. Non-Estonian households save more than Estonian families. However, sample changes may make these results more robust. The various levels of significance over years and Section 5 analyses show this. Holding all other conditions fixed, household savings inversely correlate with education. This may indicate that highly-educated households expect higher income or less income uncertainty, thus they consume more. Micro econometric studies of saving patterns often find a negative link between greater education with saving behaviour, provided all other parameters remain constant (Browning and Lusardi, 1996).

1.10 Problem Statement

The policies that are implemented at the individual level are important, as households salaried class with varying incomes and saving behaviours exhibit distinct saving trends that influence the savings of households with fixed salaries (Wang et al., 2024; Fombang & Wanzala, 2024). Smith (1776) identified the economic characteristics of households' factors that influence saving motivation and the growth of capital through savings and investment. Therefore, a comprehensive analysis of the socioeconomic and demographic variables that influence the financial behaviours of households, specifically focusing on paid employees, needs to be conducted in Pakistan (Bashir et al., 2013; Asadaullah et al., 2021). Another issue

is that Pakistan has a financial institution usage rate of 20%, measuring the satisfaction level of individuals so there is a need to incorporate financial inclusion to help individuals to utilize and secure advantages from economic and family accounts (State Bank of Pakistan, 2019; Finance Division, 2018).

Prior to retiring, the majority of salaried workers own substantial amounts of gratuities, savings, and investment funds as savings and to effectively plan for retirement, researchers need to analyze the factors that influence individuals' savings habits, such as life expectancy, retirement expenses planning, and inflation (Gupta, 2023; Social Security Act of 2020; OLAWUNI et al., 2023; Pramanik, 2024; Panakaje, 2023). Prior studies have overlooked the necessity of helping in retirement planning and safeguarding living standards for individuals in paid occupations, primarily due to instances of investment fraud. In order to assess the impact of lifecycle hypothesis and permanent income theories on the saving behaviour of fixed-income workers, it is necessary to consider their financial behavioural circumstances (Trived & Soni, 2021; Shinde, 2021; ZOM, 2023; Naqvi et al., 2023; Adewumi, 2024). In addition, social and cultural environments have the potential to increase prices and decrease the quality of life for individuals in emerging nations (Hwang, 2018; Kish-Gephart et al., 2023; Bridges, 2022; Xu, 2021).

Also, instances of retirement investing fraud are frequent and there is a need to access and formulate strategies by government and policy implications to secure finance for the purpose of accumulating capital by retirement savings and investments as inflow of capital investment, which are influenced by factors such as wealth, demographics, peer pressure, and risk perceptions to maintain the living standard after retirement (Joo & Grable, 2000; Rickwood & White, 2009; Sklansky, 2023; Kotian & Aithal 2024; Samuel & Sharon, 2024; Friedberg et al., 2023; Kayarkatte, 2023; Joseph & Velavan, 2024). In order to enhance access,

utilization, and quality of financial services, financial inclusion policy requires the implementation of research on financial literacy and self-efficacy of the salaried class as well as government collaboration through policymakers for investment decision of the salaried class (Lone & Bhat, 2024; Dilshad et al., 2024; Hussain, & Pareek, 2023; Noor et al., 2020; Mehmood et al., 2022; Mulasi et al., 2022; Dilshad et al., 2024).

Insufficient financial resources, limited knowledge, and personal biases can hinder financial management, retirement planning, and preparedness. Borrowing and excessive spending can reduce savings, especially for working-age individuals. Pakistan's saving rate is positively influenced by community well-being and the working-age population, highlighting the importance of financial literacy and inclusion for economic growth (Ahmad et al., 2006; Browning & Lusardi, 1996; Fan & Lei, 2023; Shao & Li, 2023; Rahut & Destefanis, 2024; Karthika et al., 2023; JAKIT, 2023; Florea et al., 2024; Zhao, 2024).

Long-term assets reduce savings, individuals mitigate and regulate potential future risks, finance forthcoming expenditures during various stages of life and spending habits and enhance future consumption for unforeseen circumstances (Jadoon et al., in 2023). According to Durr-e-Nayab (2008), in Pakistan, personal savings contribute to economic development, investment, and improvements in living standards of the salaried class and a decline of 4.52% savings rate, reaching 9.11% of GDP therefore private saving and investment is required n respect to behaviour of Individuals. According to Lee et al., (2003), middle-aged individuals who save privately and work for wages contribute to the overall increase in national capital accumulation (Sadik-Zada, 2023; Andersen et al., 2023; Gibadullina, 2023; Gustafsson, 2023). Retirement well-being of the salaried class should consider both living standards and savings as forms of capital inflow in the presence of investment scams and barriers to

investment (Koşar et al., 2023; Mmakwena & Moses, 2022; Sutter et al., 2013; Wilber & Reynolds, 1996).

The salaried class often saves within households and contributes to a "Chit fund" for debt management and investments. However, high interest rates, fraud, and financial difficulties hinder retirement plans. In addition, more government support and incentives for retiree retirement planning are needed to improve their situation. Pakistan's salaried class faces challenges in retirement planning due to low financial literacy and uncertainty an assistance in optimizing financial assets and managing expenses through studying salaried class. Retirement planning, accurate savings computation, and assessing market incentives can help seniors retire. Specified advice and expertise by government and policy makers in finance can help select complex investments, real estate, and financial institutions with the help of the government, which needs more research on these factors.

This lack of predictability in retirement planning, particularly in Pakistan, affects saving and investing behaviour, as postponing retirement and mishandling resources can lead to decreased savings deficits. Financial literacy helps individuals to prevent fraudulent activities and make informed financial choices by analyzing their spending patterns. Government retirement programs have an impact on healthcare and education, which in turn influences the savings and consumption of individuals and need more awareness of fraudulent real estate schemes and dishonest bankers due to low levels of literacy. Kiani (2018) discusses the discovery of the largest fraud ever detected in the National Savings Schemes of Pakistan and discovered that owing to a lack of knowledge, a significant number of individuals, particularly those with stable incomes, make poor choices when it comes to local and private investments. Financial losses and unsuccessful investments are common for government personnel, often due to public scams and high-risk investments. Oversighting expenditures,

lifestyle, and retirement of these individuals can help prevent unproductive firms and high-risk investments.

Behaviour significantly improves the decision-making process about retirement savings, particularly among individuals with poor levels of financial literacy. Therefore, this study explores the impact of individual saving and consumption behaviour on investment, focusing on individual behaviour rather than market or government retirement systems. It highlights ignored importance of understanding the influence of lifestyle, culture, and social standards on individuals' expenditures on food, clothing, and travel, as well as the need for safe investment strategies and market recognition. Researchers suggested to analyze middle-income employees' savings habits to develop investment programs considering varying living standards, emphasizing safety, accessibility, and strategic planning for fixed-salary personnel by avoiding fake and fraudulent schemes for safer and enhanced inflow of capital through savings and investment.

1.11 Research Objectives

1.11.1 General Objective

To explore the factors influencing the investment decisions of the salaried class in Pakistan, with particular emphasis on saving behaviour, consumption patterns, retirement planning, living standards, and the impact of investment scams.

1.11.2 Specific Objectives

1. To evaluate the impact of saving behavior, consumption patterns, investment scams, retirement planning, and living standards on the investment decisions of the salaried class.

2. To investigate how living standards moderate the relationship between saving behavior and investment decisions, as well as between consumption behavior and investment decisions.
3. To examine the mediating role of retirement planning in the relationship between investment scams and investment decisions, as well as between consumption behavior and investment decisions.
4. To analyze the effect of demographics on saving behavior and investment decisions to understand how different population segments approach financial management.
5. To investigate the preferences of individuals regarding saving, consumption, and investment avenues, and identify barriers to effective investment among the salaried class.

1.12 Research Questions

1.12.1 General Question

What factors are influencing the investment decisions of the salaried class in Pakistan, with particular emphasis on saving behaviour, consumption patterns, retirement planning, living standards, and the impact of investment scams.?

1.12.2 Specific Questions

1. What is the impact of saving behaviours, consumption patterns, investment scams, retirement planning, and living standards on the investment decisions of the salaried class?
2. How living standards moderate the relationship between saving behaviours and investment decisions, as well as between consumption behaviour and investment decisions.

3. What is the mediating role of retirement planning in the relationship between investment scams and investment decisions, as well as between consumption behaviour and investment decisions?
4. What is the effect of demographics on saving behaviour and investment decisions to understand how different population segments approach financial management?
5. What are the preferences of individuals regarding saving, consumption, and investment avenues, and identify barriers to effective investment among the salaried class?

1.13 Scope and Significance of the Study

This study analyses relationship of retirement planning and living standards of salaried class saving, consumption behaviours and investment decisions in the presence of investment scams. Federal employees from job scale BSP-17 to BPS-22 get gratuity accounts, provident funds, and pension funds after retirement. Therefore, this study will investigate factors that will affect the salaried class investment decisions as an inflow of money in economy. The study scope is the wellbeing of the salaried class for their retirement living standards through their saving, consumption and investment behaviour. In addition, this study's scope is the effect of investment scams on the investment decisions of the salaried class. Further, the policymakers and government need to draw well-defined policies through private savings of the individual's fringe benefits and constraints identification for the government and lawmakers.

In significant aspects, this study will help the understanding of individual lifestyle and spending habits and solve investment and savings issues of the salaried class (Bashir et al., 2013). When preparing for the future, individuals assess their current and future consumption

and savings needs while facing uncertainty. The survey included federal workers in grades BPS-17 to BS-22, regardless of gender. Savings as a source of economic progress and social scammers' traps are key concerns nowadays. Government officials, authorities, and human resource planners can identify and resolve employee concerns with this research. Higher salaries, savings, and investments increase consumption, eliminating savings as values and activities determine saving and spending.

People demand in competitive environment and salaried persons want to maintain their lifestyle due to fixed retirement income and spend your savings safely to earn. To fix this, policymakers have encouraged savings and cut consumption by prioritize financial management education and protecting salaried individuals from scam investment schemes. This study examines the investment patterns and decision-making of salaried workers who only get their wages. To complete the picture, this survey comprises paid individuals from six provinces and federal districts, each with its customs, conventions, references, and saving and consumption patterns to satisfy needs. This research is crucial to understanding how employment influences saving and spending, how individuals invest for financial success and live their preferred lifestyle. Individuals may only accept proper gains or investments due to lack of consultation or misrepresentation fraud and scam investment. Personal traits, including demography, social ties, and lifestyle, determine investing potential. This research has advanced Keynesian economics, Franco Modigliani's longevity hypothesis, and Milton Friedman's perpetual income hypothesis in consumption and savings theories. This study also highlights the fundamental issues that the working class, investors, government officials, and politicians confront in implementing effective policies, plans, and strategies to boost public and business investment and savings.

The study explored how economics, human conditions, and demography affect saving and investing behaviour to understand the role of savings in the household and private sectors. Based on the Lifecycle Saving and Investing hypothesis, savings significantly impact GDP. Public wellbeing in emerging countries like Pakistan depends on effective microeconomic policies, fiscal measures, and government initiatives. This detailed analysis encourages private investment and savings to support long-term economic growth, stability, and job creation. The neoclassical approach helps fiscal policies boost savings and investment.

In light of this background, the study seeks to research empirically the saving, consumption behaviour of individuals salaried class of federal employee with their retirement planning and decision making to maintain their standards of living after retirement. Further, behavioural and scams factors combine to influence retirement planning and investment decisions. This will be a new study on these fixed-income investors and savers in various provinces and federal territories, superimposing demographic, economic, personal, and social elements brought in to arrive at some new and meaningful conclusions using this model.

1.14 Chapter Summary

The information in this chapter guides description of the study theory within the field of behavioural economics with the purpose, objectives, goals, research questions with importance of study. This study resolved the salaried class investment and saving decision with behavioural and economics factors with safer investment decision. The following chapter discusses the research environment and offers details on the saving and consumption habits that influence investment choices.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview

Before collecting data, the researcher must review previous studies and the context (Easterby-Smith et al., 2009). Thus, this chapter comprehensively literature reviews of all variables and summarizes formal review issues. Franco Modigliani's life-cycle hypothesis and Milton Friedman's permanent income hypothesis theory direct investment, saving, and consumption decisions of individuals. It concludes relevant literature and provides a concise overview to fill gaps, aid subsequent research, and review relevant studies and situations.

2.2 Theoretical Literature

2.2.1 Lifecycle Hypothesis

Bodie and Merton (1995) suggested that depending on contingent predictions improves individuals' life-cycle value, and financial intermediaries help salaried persons to design living cost annuities continuously to consume at low cost (Campbell & James, 2020; Merton & Samuelson,1990; Merton, 2006). Geography affects income and cost of living (Leonce, 2020). Aguiar and Hurst (2005) argue that retirees and seniors care about value annually and seniors' finances fluctuate frequently and cover life expenses through nonliquid annuities. Institutional financial instruments and services assist retirement income programs (Pashchenko & Porapakkarm, 2022; Achou, 2021; Bodie, 2005). Due to aging and longer life expectancies, birth rates are falling in the US, UK, Australia, Western Europe, and Japan, requiring less help from the government. In contrast, studies are required in Latin America, Eastern Europe, and Asia about financial markets, demographics, economies, and retirement

systems (Hurs & Aguiar, 2008). More financial options are available for retirees and only simple are chosen for investment by citizens (Shaddy et al., 2021; Zahariadis, 2019).

According to the Keynesian theory of absolute income, individuals expect a temporary increase in income (Bortis, 2023; Kızılarslan & Göcen, 2023), while the life cycle and permanent income theory state that individuals earn unpredictable income and adjust their consumption and investment behaviour to unexpected life events (Baddeley, 2023; Didwania & Sharma, 2022). An increase in the salary of individuals and bonuses affect salaried workers' rational and future-oriented consumption and investment decisions, while fiscal policies can boost the expenditure of individuals depending on requirements, preferences, and investment possibilities (Heeb et al., 2023; Falk, 2023). Depending on fringe perks, retirement plans, gratuity funds, health insurance, home loans, and auto loans, increases in wages and taxes affect individual employees or person’s savings and consumption behaviour.

Keynesians believe that low anticipation is needed to understand the immediate effects of tax cuts. Individuals may spend current funds, which could increase consumption and decrease savings rather than long-term income, due to borrowing or cash flow constraints expected in emerging developing countries like Pakistan, Bangladesh, and India. Werner (2023) agree that disposable income lowers taxes in developing economies and affects consumption (Carroll & Kimball, 2001; Campbell & Hercowitz, 2019). Milton Friedman's permanent income model and Franco Modigliani's lifecycle model strongly connect consumption and saving of individuals while making income (McArdle, Smith &

Willis, 2009; Modigliani, 1986; Nivakoski, 2014; OECD,2015; O'Sullivan et al., 2014; Van et al., 2012).

Assumptions of the model are;

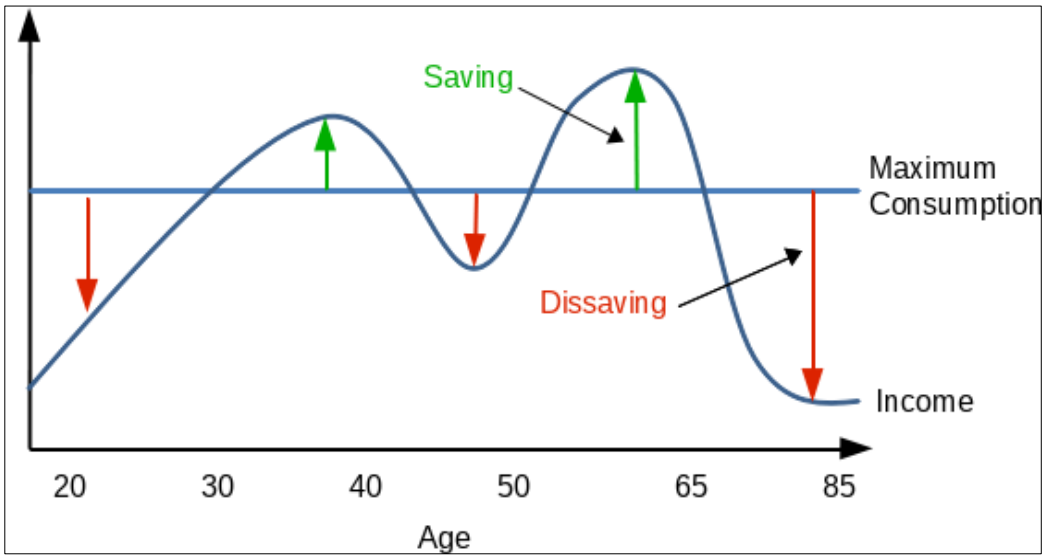


Figure 2.1: Franco Modigliani's lifecycle model of Income, Consumption, and Saving

- People have a natural disposition to evenly distribute their consumption over time, rather than going through periods of saving and limits.
- Impatience is a common trait among individuals.
- When it comes to making decisions, individuals tend to have a future-oriented mindset.

Individuals with changing salaries want constant and consistent spending irrespective of income instability; individuals value stability in their life standards (Straub, 2019; Baugh et al., 2021). Figure 2.2 illustrates dissaving when income falls below expenditure goals and individuals choose the optimum consumption options and deprive themselves of funds. Individuals carefully calculate their projected income and expenditure to estimate how much to save and spend, considering unforeseen events and uncertainties (Morgan & Long, 2020;

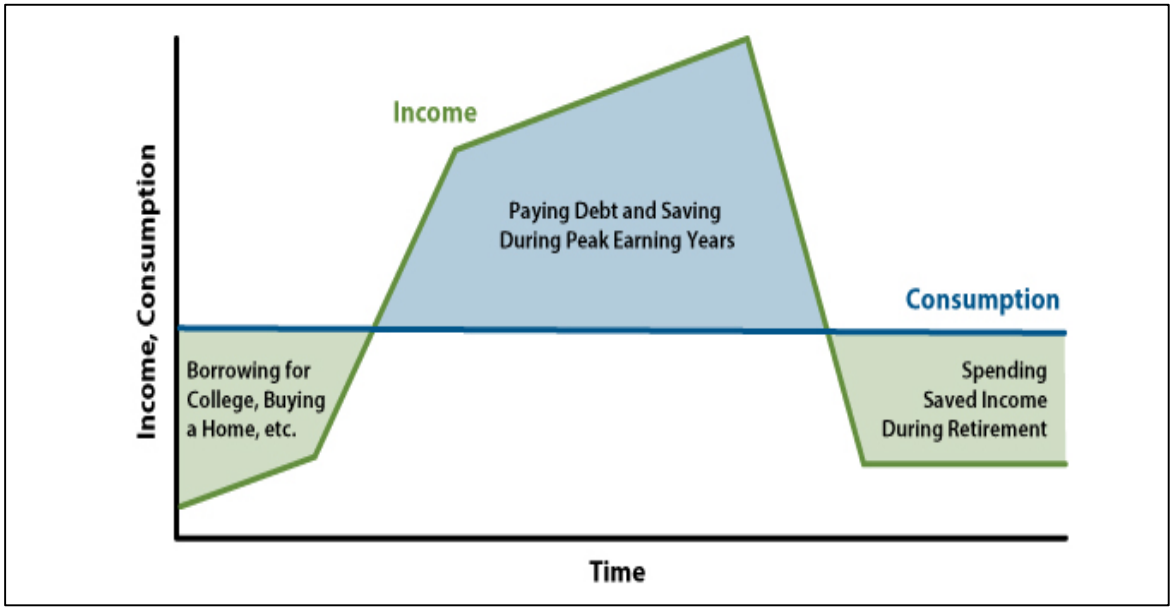


Figure 2.2: Relationship between Income, Consumption, and Retirement

Nanda & Banerjee, 2021). Middle-aged workers' incomes may drop during unemployment but usually recover by initial earnings and lower post-retirement income (Bravo & Herce, 2022). Saez and Zucman (2020) found that as predicted income rises, middle-aged individuals spend more than they earn until retirement and spend more of their lives with the improvement of finances to obtain stability in living. The study examines several aspects, like savings, consumption, fraudulent activities, living standards, retirement planning, and investment strategies.

In the permanent income theory, consumers spend based on their expected long-term income and with limited financial means and long-term vision, partially describe consumption trends because overconfidence and borrowing constraints may limit consumption. According to Ganong and Noel (2019) rational individuals expect tax rate regulations, while present tax levels affect consumption behaviour.

2.2.2 Keynesian Income Hypothesis

Keynesian Income Hypothesis states that people save for long-term assets like cars and computers, essentials like food and clothing, and services like healthcare, transportation, and education for themselves and their children, while current income strongly influences expenditure decisions (Ofwona, 2013;Thaler & Shefrin, 1981; Frank et al., 2014). Keynesian absolute income hypothesis explains consumption and current income (Drakopoulos, 2021; Ammad & Ahmed, 2020), and household consumption curves change with income growth and spending (Singh, 1972; Graham & Makridis, 2023). Household wealth is comprised of property, cars, savings bonds and cash cumulative value (Rodems & Pfeffer, 2021). Price increases lower real income and consumer expenditure (Asimakopulos, 2020; Wang et al., 2019). Marginal values of income determine related consumption and savings (Jappelli & Pistaferri, 2010; Brown & Gathergood, 2020). Interest rate fluctuations affect consumer behaviour, particularly for large credit-funded purchases (Blanchard, 2019; García-Schmidt & Woodford, 2019). expected income affects economic strength, inflation, political climate, pricing, and consumer spending (Kuchler et al., 2023), while that income increases expenditure as conventional knowledge.

Transitory income increases like overtime pay or bonuses may have a different impact than permanent income increases like salary raises or wealth (Calder-Wang, 2021; Wong, 2019). Temporary income fluctuations lower the Marginal Propensity to Consume

(MPC), but long-term income rises to enhance MPC (Hong, 2023; Bernard, 2023). Income fluctuations affect APC and APS, while income and consumption affect savings (Singh et al., 2023). Individuals save by cutting child support and spending (Webb, 2023; Baker, 2023). Battle (2019) and White (2021) found that 76% of fathers did not assist their children financially in the first year but raising children costs money now but pays off later.

Social Security affects family wealth, and its benefits gained 1.9 to 2.7 percent after 40 years, which depends on expected reserve growth and government funding. Individuals get social security benefits but earn less with lower long-term returns as compared to asset investments. (Reznik et al., 2021; Boskin & Puffert, 1987). Current pension equity, employment tenure, and theory division affect pension funds and postretirement well-being livings, while healthy individuals should save for retirement (Guptan, 2021; Atalay & Barrett, 2022). Young reduce their savings to support their families after marriage and young mothers have limited retirement and savings options (Weller & Tolson, 2020). Annuities and provident funds of low-quality benefits lose seniors money (Li et al., 2021).

Keynes' consumption theory examined disposable income, which affects spending to meet needs (Obagbuwa & Kwenda, 2020; Baylan, 2019). Higher real income boosts saving, consumption and investment (Kaplan & Violante, 2022; De-Francisco, 2023). Income expenditure limitations affect saving and investment decisions (Funom & Makama, 2009; Hasanah, 2020). Rose and Kolari (1995) claim that saving reduces spending. Zhu et al., (2023) states that income, stock wealth, interest rates, inflation projections, and other economic variables affect individuals' savings behaviour. Smooth consumption behaviour stabilizes income and prevents short-term shocks (Druedahl & Jørgensen, 2020; Christelis et al., 2019). Caroll (1992) found significantly linked rising consumption, past income, and savings ratios (Boug et al., 2021). Russian households saved more in the 1990s than in 1976.

Poor consumer goods led to significant savings in the Soviet Union, but price liberalization reduced these savings (Ahmad & Premaratna, 2019). William and Michael (2006) found that discretionary income boosts consumption and saving.

According to Hone and Marisennayya (2019), discretionary income affects consumption and saving. Loayza and Shankar (2000) found that saving increases consumer durable consumption patterns. Woytinsky (1948) discusses that spending, savings, and disposable income are found to be consistent. There are many reasons to study emerging economy household saving and consumption behaviour (Amoah & Addoah, 2021). Financial savings boost economic growth, and Household private consumption affects national savings (Deaton, 1997; Collins & Urban, 2021). Higher interest rates encourage substitution and saving (Athukorala, 1998; Sen, 2002). Income growth increases spending and decreases saving (Fagereng, 2019).

2.3 Savings and Types

By deducting costs from current revenue is called domestic savings while retained earnings refer to the profits that are not given to shareholders, taking into consideration corporate savings (Chandavakar, 1993; Servon & Kaestner, 2008). In underdeveloped nations, there is a higher level of investment as compared to saving (Scandizzo, 1991; Brandstätter, 2005). The savings of individuals who are employed and get a fixed salary should encompass several aspects such as retirement funds, social security contributions, voluntary and private life insurance, repayment of mortgage debt, and the acquisition of durable consumer goods. The savings rate in Pakistan has an impact on both household welfare and investment decisions, which complicates the assessment process (Kozel, 1987; Crane & Matten, 2004). Individuals cannot quantify unreported revenues, expenses, or savings (Visaria, 1980; Crane & Matten, 2004). Saving is a complex process that relies on

up-to-date and reliable data. Therefore, fluctuations that occur seasonally or infrequently might lead to dissaving and negative savings. Consumerism and suspicion in financial institutions lead to the avoidance of estate acquisitions and financial instruments (Quraishi, 1985) while financial technology encompasses the activities of generating, collecting, and processing money (Pischke, 1977).

2.3.1 Household Lifecycle Saving and Consumption

Kotlikoff and Summers (1981) argue that regular revenue income is necessary to cover ongoing expenses, and excess expenses undermine income and an Individual's financial security resulting from borrowing or utilizing assets. Savings decrease after the age of 60 (Flavin, 1981; Friedman, 1957). The Ando and Modigliani (1963) and Modigliani and Brumberg (1954) life-cycle models emphasized the importance of saving and postponing consumption until retirement due to declining income at the age of 60, as inadequate savings diminish retirement funds. According to King and Leape (1987), assets experience a gradual increase until the age of 40, following which they stabilize between the ages of 40 and 60 and subsequently decline. Individuals engage in reduced consumption as a means of preserving resources in anticipation of potential crises (Buiardi et al., 2020; Boar, 2021; Abel, 1985; Kotlikoff & Summers, 1981; Leland, 1968).

Kotlikoff and Skinner (1987) argue that fluctuations in income have an impact on both spending and saving. Parents may experience happiness or express encouragement toward their children's achievements following inheritance (Yaari, 1965; Bernheim et al., 1985). According to Modigliani (1988) the transfer saving encourages retirees to save 25% of their income. The motive to save predicts the tendency to delay consumption for retirement, precautionary purposes, or transfer among generations (Kolsrud et al., 2023; Friedman, 1957).

A significant number of nuclear and blended families engage in long-term savings (Gupta et al., 2021). Sathiyamoorthy and Kirshanmurthy (2015) discovered that primary concern of individuals salaried class was the preservation of investment capital rather than maximizing returns with factors such as age, education level, and absence of dependents. Bank deposits were the preferred choice for investments in marriage, education, and retirement preference (Bairoliya & McKiernan, 2021; Hervani et al., 2020). The recent Swedish tax reform has had an impact on personal savings (Ostry & Berg, 2005). According to Uslu and Bağci (2018), offering insurance coverage while employed has a significant influence on retirement. Salaried class showed preference for physical assets over financial assets, particularly new investment opportunities, due to factors such as local accessibility, ease of management and awareness level (Cardoso et al., 2022; Chalimah, Martono, & Khafid, 2019; Dhawan & Mehta, 2019; Thakur & Sharma, 2021).

Private savings are distinct from government and national savings (Andersen et al., 2023; Amaglobeli, 2019; Uslu & Bağci, 2018). According to Wagner and Walstad (2019), 40% are savings in emerging economies, both for short and long periods. Increased return expectations enhance household investment savings and engaging in financial planning experiences reduced upfront expenses and higher returns over time (Andonov & Rauh, 2022). A significant number of households in the United States do not own sufficient wealth as they approach retirement age, including retirement schemes, social security advantages, and established criteria for decision-making (Ranerup & Henriksen, 2022; Fong et al., 2021; Cuadros-Meñaca, 2020). Factors such as population growth, high family incomes, tax benefits, and attractive investment options contribute to the accumulation and investment of savings (Camilleri et al., 2019; Khidirov, 2021). Non-financial information and financial literacy aid investors in making informed investment decisions (Naveed et al., 2020; Hoang,

2023). Individuals exhibit a preference for financial institutions such as banks, insurance companies, post office savings, and other financial goods over investments in stocks and shares. Investment preferences of salaried individuals are influenced by factors such as age, gender, lifestyle, marital status, level of education, and comprehension of the financial system (Palanivelu & Chandrakumar, 2013; Udupi et al., 2012).

Varsha (2012) argued that employees choose to invest their money in secure bank accounts and government securities. According to Mathivannan and Selvakumar (2011), salaried government personnel consistently create budgets and then compare them to actual expenses. Sultana (2010) stated that payroll savers allocate their funds to chit funds and bank deposits. According to Palanivelu and Chandrakumar (2013), individuals who receive a salary make investment decisions based on their age, income, and financial situation.

Bhardwaj et al., (2013) examined that 80% of employees were aware of industrial securities, while 8% perceived them as risky. Adolescents engage in risk-taking behaviours, allocate their resources to real estate, and use distinct investment strategies (Huijsmans et al., 2021; Patel & Patel, 2012). The retirement behaviour of individuals is influenced by factors such as uncertainty, savings, and medicare (McWilliams et al., 2020; Uslu & Bağci, 2018). Middle-class individuals should be made aware of investment opportunities (Weiss, 2019; Rake, 2022). Insurance lags behind bank deposits as individuals focus on high-yield and easily convertible assets (Samudra & Burgate, 2012).

Geetha and Ramesh in 2012 found that a larger family size contributes to increased levels of saving and investing, and analytical skills aid investors in optimal investment. Consumer credit markets are necessary for households to avoid pre-save for durable goods (Blattner & Nelson, 2021; Nelson, 2010). Both temporary and permanent wage increases can have an impact on saving (Denizer et al., 2002; Ashraf et al., 2003; Feiveson et al.,

2019). Self-employed families tend to save less money (Crawford & Karjalainen, 2020; Janposri, 2021) while unemployment has no impact on saving (Bekbossinova et al., 2021; Denizer, 2002). Household savings are influenced by several factors, such as income variability, wealth indicators, credit accessibility proxies, as well as control variables, including household composition, education, and employment status (Kulikov et al., 2007).

According to Swasdpeera and Pandey (2012), future expenditure and a dependable savings mechanism have an impact on saving behaviour. Denizer et al., (2002) argued that loan interest payments should be categorized as consumption expenditure. Workers would own sufficient 401(k) assets to retire, which is a significant concern in terms of both the economy and public policy (Horneff et al., 2020; Yakoboski (1996). Public and private companies commonly favour 401(k) and defined contribution retirement plans (Cardella, Kalenkoski & Parent, 2023; Bernstein, 2021). For life balance, fixed-salary workers spend and save less due to pay cuts, future retirement and investment income, while individual savings can last for age of 80 years (Oseni et al., 2023). The permanent income theory states that long-term income determines consumption (Hong, 2023). Lower-income individual borrows more to cover their expenses and permanent income boosts consumption, but higher spending increases borrowing costs and liquidity limits, complicating repayment (Casarico et al., 2023).

2.3.2 Empirical Literature

Denizer and colleagues (2002) found that households without consumer credit markets save more for durable items, and both permanent and transient income streams boost saving. According to Ribaj and Mexhuani (2021), countries with higher saving rates enjoyed faster economic growth and micro and macroeconomic savings are essential. Guariglia and

Kim (2004) examined that income fluctuation affects single income household savings and middle-aged individuals save less.

According to Foley and Pyle (2005), Russian households proactively manage their savings to offset unexpected income shifts and define household budget differently. Household saving is defined as the difference between money income and consumption flows (Foley & Pyle, 2005; Denizer et al., 2002). Gibson and Scobie (2001) state that income and higher education influences marginal savings and consumption of both elderly and middle-aged. Parental financial literacy, attitude, or socialization does not moderate financial well-being (Ur-Rehman, 2011;Farooq et al., 2021). Cera et al., (2020) stated that understanding finance fundamentals is essential to good financial behaviour and happiness, and financial knowledge improves economic decision-making and satisfaction. According to Eurostat's 2003 data, family-owned durable goods reduce savings.

According to Saurabh (2019) financial education, socialization, and risk mentality affect financial happiness, and risk attitude mediates the beneficial relationship between financial knowledge and satisfaction. Yakoboski (1996) examined that older adults invest more in non-equity assets than younger workers and are more likely to miss their retirement deadline.

Financial planning involves conscientiousness, openness, extroversion, neuroticism, and agreeableness and a minority of individuals worry about future expenses, while five personality traits affect financial planning (Ghaffar et al., 2022). Godfred (2021) showed that financial knowledge, attitude, and managerial conduct affect financial pleasure. Tahir (2022) discovered that non-impulsive behaviour moderated financial resilience and life satisfaction, and financial stability comfort ultimately affects life pleasure and economic resilience. Richard (2018) suggested that financial well-being affects overall well-being, job

satisfaction, and physical health, and financial stress affects people's well-being differently depending on their socioeconomic background. Returning property to its original owners and transferring ownership to private individuals reduced households' savings for long-lasting goods like cars (Denizer et al., 2002; Foley & Pyle., 2005). Hsu (2016) examined sociodemographic characteristics affecting retirement planning sources, and women who received retirement planning education from family or friends saved less and it increased with financial advisors.

According to Reyers (2019), Studies show that bank account holders and financially confident individuals save more for emergency emergencies socioeconomic and demographic factors affect emergency savings while savings protect low-income households. Schmeiser and Hogarth (2013) stated that personal retirement plans are becoming more complex and require long-term financial stability, increasing the need for skilled financial advisors, happiness, consumption-income relationships, bill payment anxieties, and financial planning (Herrmann, 2007; Deshpande & Kabeer, 2024; Dhawan & Mehta, 2019; Fah, 2010). FINRA (2012) data shows financial advisors' role in personal finance management of financial advice and outcomes affect retirement and working-age individuals to improve the economic behaviour of both elderly and non-retired people.

Shim et al., (2013) stated that family influence and learning experiences affect individuals perception of their financial identities, gain information, build self-efficacy, establish financial attitudes and behaviour. Pandiyan and Aranganathan (2012) found that fixed income workers save and invest differently, and personal behaviour affects saving and investing money. Pakistan's dynamic financial markets restrict borrowing due to deceptive real estate schemes, untraceable bank accounts, hidden transactions, bogus prize bond ads, and lottery solicitations targeting innocent and inexperienced investors. Uslu and Hasim

(2018) found that most households save, and borrowing money influences their savings, preferences, occupation, and family circumstances. Geetha and Ramesh (2011) argued that behaviour affects investment decisions and individual should choose insurance, post office savings, PPF, or a safer bank, regardless of age.

Sheikh and Kalkundarikar (2011) stated that investors value regular income and returns and base their investments on their knowledge, information, and risk tolerance. According to Shaikh and Kalkundrikar (2011), economic deregulation limits private investors' risk adjustment; demographics and risk tolerance influence regular investors' investment decisions. According to Jasmeen (2009), most investors favour low risk investments, while few prefer high risk and recognize the importance of saving. Demographics, taxation, and reforms affect aggregate saving (Berg, 2005). Horioka (2004) found that employed households save the most, and efficient resource distribution across long-term strategies improve satisfaction or utility. According to Ayres and Nalebuff (2013) the stock premium did not reduce volatility. Uslu and Bağci (2018) found a link between psychological traits and bankers' investment behaviour, while representativeness bias affects rational decision-makers who evaluate returns and costs and lose money (Malviya & Pandey, 2015).

2.4 Saving, Consumption and Economic Development

In Keynesian economic theory, financial literacy, information, and counselling influence savings decisions (Abu & Karim, 2016; Lusardi & Annamaria, 2008). After retirement, employers' pre- and post-tax and saving plans enlighten investment and saving decisions (Brown et al., 2010; Ahn & Tsuchiya, 2023; McArdle, Smith & Willis, 2009; Modigliani, 1986).

Retirement savings are challenging for older adults, and individuals save and avoid spending to protect their future (Hacker & Lowentheil, 2012; Douglas, 2021). Fregert (2003) found that personality and money affect investing and are beneficial for individuals if returns exceed initial costs, as individual investors prefer bonds with security (Bergant et al., 2020). Household individuals prefer low-risk, high-return investments (Saez & Zucman, 2020; Pandey, 2015).

Rational investors choose portfolios that reflect their risk-return expectations, as weak preferences affect their investment decisions (Skagerlund et al., 2018; Mosca & McCrory, 2016; Lusardi & Tufano, 2015; Ameriks et al., 2020; Pagano, 2023). Frauds affect retirement contribution plan investments (Mitchell & Utkus, 2005). Individual investors present a stock and bond fund, giving various weights (Parker et al., 2023; Ameriks, 2020). Investors allocate assets differently across investment opportunities (Benartzi & Thaler, 2001). Resilience, cautious information, and cautious behaviour affect decision-making (IJzerman et al., 2020; Chandra & Kumar, 2011). Modigliani (1986) revealed that several life cycle factors affect decision-making. However, a young entrepreneur starts with risky human capital and no stock market or portfolio management skills (Hübel & Scholz, 2020; Kevin, 2022). By behaviour, financial products limit consumption to acceptable living standards, and without transaction, cost, justify retail investing products with inferior returns and offer better alternatives (Audretsch & Belitski, 2023; Vovk et al., 2021; Bodie & Merton, 1995).

2.5 Saving, Consumption and Investment

2.5.1 Theoretical Literature Review

Since behaviour reflects attitude, financial attitudes should be included in the personal financial subsystem, particularly in financial management practices and the

managerial subsystem (Girshina, 2019; Guest & McDonald, 2001; Gutter & Copur, 2011; Hemalatha, 2018; Eagly & Chaiken, 1993). Gender, age, social background, and marital status affect financial understanding, and individuals are financially responsible (Panos & Wilson, 2020; Lusardi, 2019). The researchers examined whether ignorance, incompetence, or motivation prevent individuals from making investment decisions, while social pressures, lifestyle, norms, indebtedness, and discretionary income affect saving and consumption (Goyal & Kumar, 2021; Prinsloo, 2001). Neoclassical economics supports saving involves choosing between current and future spending. Families value future rewards over immediate ones (Aguiar & Hurst, 2007). Luxury consumption depends on resource allocation and substitution than necessities (Jhamb et al., 2020; Yousaf, 2022). The initial income elasticity of spending is high, but inconsistency, impatience, and poor planning reduce it later in life. Financially stable enterprises rely on internal savings (Uslu & Bağci, 2018), while increased household savings reduce consumption and income, and individuals are assessing household financial incentives, savings, borrowing, and goals. The households struggle with budget planning, consumption, and expenditure, leading to borrowing when necessary (Bayer et al., 2019). Financial and behavioural economics deals with personal investment decisions (Madaan & Singh, 2019; Kartini & Nahda, 2021). Inferior behaviour and experiments impact most US retirement plans (Liviu, 2012). Lusardi and Mitchell (2012; 2007a, 2007b, 2008, 2011) found that financial knowledge enhances retirement planning also Lusardi et al., (2010) found that financial literacy is essential for economic and social well-being and financial literacy affect behaviour. Individuals use caution while financial decision making in real-world circumstances (Fernandes et al., 2014; Adil, 2022; Rahman, 2021)

Hartono and Kurniawan (2023) emphasized young individuals' financial literacy. According to Chowa and Ansong (2012), financial literacy can enhance saving and investing behaviour. Ansong and Gyensare (2012) claim that financial knowledge helps young adults avoid financial problems and dependence on others (Urban et al., 2020). Finances are important life decisions and both individuals and businesses need financial literacy and decision-making through subject expertise by governments (Zahra & Anoraga, 2021). Financial literacy is the capacity to understand and use financial principles to make logical financial decisions, and it improves decision making (Issahaku, 2011; Kaur et al., 2018; Kawaguchi, 2003; Kawaguchi, 2004; Kempson & Collard, 2005; Larsson, 2024 ;Huston, 2010).

Servon and Kaestner (2008) define financial knowledge as knowing and applying savings, insurance, budgeting, and investing ideas as individual capacity to financial assessment. According to Eagly and Chaiken (1993), attitude is a cheerful disposition, and ideas, events, and objects can explain and predict human behaviour (Paluri & Mehra, 2016). Significant attitudes change society or individual values, and their strength depends on interaction (Smith, 2023). Poor dispositions vary and are immaterial, while attitudes are the most difficult to change behaviour (Howe & Krosnick, 2017). Schwartz's theory of planned action states that environmental consciousness and attitude become important when objective and linked to the core standards of individuals. Inflation is considered in evaluating retirement and working-life incomes, also the replacement rate as benchmark retirement is required with transfer assets to children (Nyangarika & Bundala, 2020; Bandopadhyay, 2023).

Due to the unique consumption behaviour of Australian seniors, the Consumer Price Index (CPI) does not accurately reflect the rising cost of living (McCaffery et al., 2020), and

the cost-of-living index comprises pensioner and self-funded investments (Nyangarika & Budala, 2020; Nie & Gautam, 2020). Over the previous 20 years, the estimate of living costs and self-funded retirees' spending has followed the CPI for relying on personal savings for retirement (AlAzzawi, 2020; Ueda et al., 2020). Financial literacy predicted saving behaviour as an influential factor. The OECD defines financial literacy as the knowledge, understanding, abilities, mindset, and behaviours needed to make wise financial decisions and achieve financial stability and prosperity (Neelam et al., 2020) and to manage personal finances to protect assets (Sabri & McDonald's, 2013; Letkiewicz & Fox, 2014; Chen & Volpe, 1998).

2.6 Investment Behaviour

2.6.1 Theoretical Literature

Composite economic, social and personal factors affect investor decisions (Casali & Perano, 2021; Tomescu-Dumitrescu & Mihai, 2019). Salary class members from different backgrounds, cultures, and provinces have different educational, job natures and behavioural tendencies (Reeves, 2019; Goodwin-Hawkins & Dafydd Jones, 2022). Occasional circumstances can affect cognitive biases and investment behaviour (Acciarini et al., 2021; Madaan & Singh, 2019). Regret theory states that individuals postpone trades and make financial decisions to avoid wrong investments due to depression or fear of mental or emotional health. Mental accounting theory states that individuals are reluctant to lower their returns and prefer to wait for their expectations to rise, even if they can sell at the highest return. Loss aversion and prospect theory reveal that investors want to recover their losses by valuing loss over profit. The Over/Under Reacting Theory describes that investment will always rise, regardless of historical evidence, and analyzes its benefits by weighing the pros and cons of rising and declining investment. The Big Five model and other self-

independence theories on individual investment decisions attribute investing behaviour to overconfidence. Financial contracting technologies, self-care, and government or state incentives authority affect family finances (Chen & Bellavitis, 2019).

Keynesianism explains consumer spending as a lifecycle hypothesis, and the permanent income hypothesis explains liquidity constraints and myopic decision-making affect consumption patterns (Piligrimienė et al., 2020). Investment choices are crucial and challenging, and investors should weigh numerous factors and choose outcomes that help investors for better decisions and minimize losses (Josephson et al., 2021; Sharot & Sunstein, 2020). Investors must examine several perspectives, uncertainty, subjective assessments, and risks (Starr & Whipple, 2019; Yazdi et al., 2019). Private residences, financial professionals, and seasoned investors struggle financially through effective financial risk management. Investors use inaccurate or insufficient data, leading to poor data analysis or specious findings, and financial literacy includes insurance, investment, budgeting, and savings (Jennings et al., 2019; Iriani, 2021).

Boyland and Warren (2013) stated that the quality of financial information affects lifestyle. Today, individuals invest in intangible goals (Fuadah & Setiyawati, 2020). According to Shapira and Venezia (2001), in Pakistan, individual and professional investors lack independence, and investment opportunities are shared traditionally (Prameswari et al., 2023; Chaudary, 2019; Khan, 2021).

2.6.2 Empirical Literature

Fagereng et al., (2017) studied an extended life-cycle model including high-risk aversion, low per-period participation cost, and an annual probability of a significant stock affect the market loss. Pelizzon and Weber (2009) stated that the risk associated a significant

effect on the ability of households to identify their financial assets and investments accurately.

According to Lusardi (2012), managing wealth in senior homes is critical for ensuring financial security during retirement based on age and the practice of risk diversification, while few understand risk diversification. Barth et al., (2023) found that financial literacy has a significant influence on payday loans, automobile loans, tax anticipation loans, rent and financial inclusion decreases with non-effective loans. Gallipoli and Gomez (2023) examined financial matters and taking risks, and taking risks promotes the willingness to try new things and gain knowledge and early interventions effectively improve economic success by using skill creation.

Mirosea and Hajar (2023) assessed financial knowledge, behaviour and the choices affect the individuals investment with support of financial literacy. According to Ndou (2023 stated demographic influence negatively financial literacy while males consumed allocating funds for their retirement with a negative correlation between schooling and retirement savingsSkagerlundetal.,2018;Fonsecaetal.,2012;Agnew&CameronAgnew,2015Widyaninty ,2021; Sireesha & Laxmi, 2013). Jalali (2023) argues that financial principles understanding has a significant relationship with sound financial decisions, saving, investing, borrowing, and other financial behaviours such as financial resilience.

In their study, Iram, Bilal, and Ahmad (2023) examined that women's financial literacy enables an increase in confidence and positively influences investment decisions. Anindya (2023) argued that consumption decisions are influenced by factors such as interest rate, financial knowledge, and service quality. Thuraisingam, Buvanendra, and Fernando (2022) stated that decreased financial risk tolerance negatively impacts financial wellbeing, and individuals willing to take risks are less financially secure and are positively correlated.

According to Michaud and Amour (2023), annuities, long-term care insurance, and reverse mortgages have limited effectiveness in reducing the risks associated with retirement lifespan, medical expenses, and housing.

Muat and Henry (2023) investigated gender influences the relationship between financial literacy and financial wellbeing. Husna et al., (2023) examined a negative relationship between financial risk tolerance and financial literacy in terms of retirement budgets and no correlation between an individual's financial risk tolerance and retirement budget state civil servants. Uddin and Ahmar (2023) investigated that both financial behaviour and spirituality have a positive impact on one's financial living wellbeing. Tarazoodar, Ghasemi, and Mohseni (2023) identified that both emotions and rationality influence decision-making regarding finances.

Possessing financial management skills is essential and majority of educational institutions require a comprehensive and advanced economics curriculum (Lopez-Agudo & Marcenaro-Gutierrez, 2023). Stewart et al., (2023) demonstrate a decrease in financial and health literacy as individuals age and revealed a positive correlation between literacy and wellbeing. Lusardi and Mitchell (2023) employed empirical data and emphasized the effects and remedies of financial illiteracy across different countries. According to Korankye et al., (2023) financial advice has an impact on the decisions about college funds and optimize college savings by reducing the influence of self-selection bias.

Lee and Fong (2023) investigated that financial trust has a significant impact on behaviour even when obtaining advice, it is essential to prioritize the influence of financial faith also found that education increased the likelihood of obtaining financial guidance. Customer trust in financial institutions is found to be a key driver of growth in the financial services and advising industry. Baláž (2023) examines that the act of acquiring annuities as

sources of retirement income, bequest-sharing and social security pensions was positively influenced by financial and government advice. Shahvari (2023) found that women with low income with more education and elderly individuals exhibited lower levels of both subjective and objective financial literacy, and there is a role of individuals' subjective level of financial knowledge in the process of making financial decisions.

The study conducted by Lee et al., (2023) utilized regression analysis in the 2016 National Financial Wellbeing Survey to investigate a strong influences between short-sighted discounting and one's financial wellbeing decision. Yakoboski et al., (2023) found that inflation impacts the financial wellbeing of numerous Americans and individuals have experienced a seven year deficit in financial literacy. Sharma et al., (2020) examined found significant instances of fraud, scams, misappropriations, and cheating in the Indian money, stock, and capital markets. According to Wikartika et al., (2023), investment happiness has an impact on availability bias, financial literacy, and investment decision-making and is essential for achieving satisfaction with investments. Hildebrandus et al., (2023) examined that behavioural biases such as overconfidence, herding, risk aversion, and temperament are separate factors that influence investment decisions and have a moderating effect. Innocenti et al., (2023) it was discovered that individuals who faced difficulties in saving money in the year preceding the survey were less inclined to prioritize their retirement wellbeing, allocate cash towards supplementary pension schemes, and prepare for their changing housing requirements.

Oggero et al., (2023) proposed that there is a positive correlation between financial literacy and understanding of pensions, as well as the level of support for pension reform. De-Villiers et al. (2023), the hesitancy of retired individuals to safeguard themselves against the challenges posed by increased life expectancy led to extensive academic discussion.

Guntur and Soares (2022) investigated financial attitudes positively influence financial management and enhance one's ability to manage money effectively through the acquisition of financial experience. Bajtelsmit and Coats (2023) investigated the positive associations between financial literacy, risk tolerance, discount rates, investment levels, and expected returns.

Weissberger et al., (2023) indicated a strong correlation between the financial literacy, memory and vocabulary of older individuals. Parulian and Bebasari (2023) found no correlation between financial attitude and financial planning and financial behaviour alone is insufficient to moderate the relationship between financial attitude and financial planning. Lusardi and Mess (2023) financial acumen is essential for making intelligent financial choices, while financial literacy is directly correlated with improved financial well-being. Further investigated financial literacy and confirmed a strong significant relation between children's education funds and financial planning, while income significantly enhances parents' ability to organize education fund finances.

Gurung and Gautam (2023) emphasized a need to have a thorough comprehension and effective use of financial literacy, and education positively correlates with an improvement in financial literacy. Muthitacharoen and Burong (2023) examined low-risk savings factors that have an impact on working life across all income levels. Ullah (2020) stated that there is a negative correlation between financial knowledge and investor behaviour as enhancing financial literacy reduces biases among investors. Mauldin et al., (2016) examined that net worth, saving attitude, exposure to formal saving information, marital status, gender, and race all had statistically significant effects. Unemployment, perceived obstacles to saving, and lack of acquaintance with financial institutions also had

an impact on saving behaviour. Fears of loss of incentives also influenced individuals' saving behaviour.

Zhu and Chou (2018) assessed that estimating retirement saving requirements has a role in clarifying retirement goal. According to Longmont (2023) education, household income, and age are the primary factors influencing the financial competence of remote migrant labourers with limited financial capacity and knowledge. Cuccinelli and Soan (2023) revealed a positive correlation between the savings of retail investors and their financial management practices and investment decisions.

Khan et al., (2023) investigated that behavioural biases significantly influence investors' assessments through overconfidence, disposition effect, risk-aversion bias, and herding, which in turn affect the quality of their investments. Saputri et al., (2023) examined that herding and financial literacy have an impact on investing decisions, while financial literacy with no effect and risk tolerance completely mediate the relationship between financial literacy and investing decision-making. Falah and Haryono (2023) herding and disposition have a positive impact on investment choices, while personal income, anchoring, and financial literacy do not affect investment decisions.

Didenko et al., (2023) examined that age, education, employment, and family income have an impact on financial decision-making. Awais et al., (2023) found that behavioural biases have a significant impact on investment decisions. According to Sconti and Fernandez (2023) indicates that financial literacy has an impact on investing decision-making in addition to investment returns, the accumulation of long-term wealth, and overall financial wellbeing.

Fitriaty (2023) found a significant correlation between financial literacy, education, and making investment decisions. According to Herliana et al., (2023) found a significant

correlation between the Big Five personality traits and financial knowledge, risk perception, and investment choices. According to Chandra et al., (2023) there is a positive correlation between financial literacy, risk perception, and investing decisions. Anderson et al., (2017) found that financial knowledge, precautionary savings, and retirement planning are interrelated, while low-literate individuals tend to make unfavourable financial product choices and are less inclined to seek financial assistance due to their perceptions and role in the occurrence of resident fraud victimization and financial literacy.

Callis et al., (2023) found a correlation between the level of financial literacy and numeracy skills. Shafique et al., (2023) argue that to develop effective investor education and advice programs, financial institutions and market authorities need a comprehensive understanding of the behaviour of retail investors. Fitriaty (2023) revealed a negative relationship between income and investment decisions, while it demonstrated a favourable association between financial literacy and behaviour with investment decisions. According to Shaari et al., (2013) financial literacy has the potential to influence the financial choices made by young individuals and need to improve their understanding of financial matters.

Fajri and Setiawati (2023) found that securing bias and financial literacy significantly influenced investment decisions. However, the variables of overconfidence, the illusion of control, and availability did not have a significant effect. El-Khatib (2021) found a weak correlation between school performance not accurately reflecting financial skills and weak parts of financial competence related to the ability to remember, understand, and apply financial concepts.

Afifi and Setyorini (2023) found that family financial behaviour is influenced by financial literacy, experience, and income. Families exhibit improved behaviour when they possess financial expertise and a higher income. Bakır (2023) analyzed the elaborated level

of financial literacy and the necessity for financial education in order to establish effective techniques of financial education. Atkinson and Messy (2012) stated that private, public, and international surveys indicate the existence of a worldwide disparity in financial literacy and enable policymakers to assess disparities in financial literacy and determine the need of demographic groups for financial literacy assistance (Sireesha & Laxmi, 2013; Biyanwila & Anuradha, 2023; Brunton, 2009; Burks et al.,2009; Burns & Dwyer, 2007; Camara & David, 2015; Case et al., 2005; Chater & Loewenstein, 2023; Dewi et al.,2020). Lewis and Messy (2012) discovered that specific individuals had a limited understanding of concepts related to savings and investment and needed to enhance their financial decision-making abilities. Denizer, Wolf, and Ying (2002) concluded that there is a cautious savings behaviour, and education has a significant impact on the savings behaviours of individual households with a negative relation to durable items.

Kuliko, Paabu, and Staehr (2009) investigated that Estonia's exceptional macroeconomic strategy, institutional structure, and legal framework should serve as a source of inspiration for other nations. Bashir (2011) concluded that household savings are negatively influenced by factors such as education, child education expenditures, family size, liabilities, and housing value, while income and dependency rates have a favourable impact on savings.

Kapounek et al., (2016) revealed that inadequate financial knowledge and ineffective communication from government and central banking institutions have a negative effect on household saving behaviour during economic crises. Singh, Avinash, and Kumar (2016) examined that investors must possess a comprehensive understanding of the many investment possibilities, risks, quality, safety, and liquidity associated with the market. Mittal and Vyas (2008) argue that cognitive and emotional traits influence investing

decisions, and factors such as age, money, and education have an impact on the process of financial decisions. Patil and Nandawa (2014) found that 60% of individuals receiving payment are aware of investment options, whereas the remaining 40% are unaware. Kelly and Williamson (1968) described that the aging head of the household enhances revenue and wealth by influencing both the average and marginal saving rates. Shultz (2005) arrived at an identical result through an analysis of home demographics and mature structure.

Gupta (1970) analyzed that the driving force behind Indian saving is long-term financial stability, as individuals with lower incomes save to a minor range. Gallery & Gallery (2005) indicated that rational investors employ utility references to maximize both risk management and return on investment. According to Kapounek et al. (2016), a lack of knowledge about finances, poor communication strategies from central banks and governments during economic downturns, crises, and foreign currency purchases are all connected to a decrease in household saving behaviour.

Brounen and Powall (2016) discovered a negative correlation between age and both savings and financial planning. Tulia & Bolyai (2017) the specific saving and investment actions of individuals influence retirement and financial planning and found that a decrease in disposable income and a rise in the number of new households negatively impact economic savings. Fachrudin (2015) investigated the psychological effects of business, risk, and repayment, traits, rational mechanisms, literacy, and emotional intelligence that influence investment decisions .

Parimalakanthi and Kumar (2015) examined the majority of investors choose bank savings, followed by gold and silver. Fedorova et al., (2015) found that personality had a significant impact on Greek trading and performance. Kotlikoff and Summers (1981) argue that until the age of 45, individuals experience similar levels of income and tend to save very

little or spend more than they earn. Abel (1985), Flavin (1981), Friedman (1957), Kotlikoff and Summers (1981), Leland (1968), and Skinner (1987) have researched the patterns of saving and consumption. Skinner (1987) found that a significant portion, precisely 56%, of occupational savings can be attributed to life-cycle savings. Barro and Becker (1974) discovered that parents both transfer, balance debt and social security.

Sivarama et al., (2017) found that both subjective and objective financial knowledge have a positive impact on stock market investing, and financial stability improves investment behaviour. Bongomin et al., (2018) examined how financial knowledge and cognition influenced financial inclusion. Adam et al., (2018) investigated that men exhibited higher levels of financial literacy compared to women. Nagy and Obenberger in 1994, criteria of equity investors have an impact on decision-making. Kiran and Rao's 2005 survey revealed that demographic and psychographic factors influence the risk-taking behaviour of investors. Bennet et al., (2011) analyzed that risk tolerance, economic robustness, media coverage, political stability, and government policies have a beneficial impact on the investment behaviour of investors in the equity market.

Geetha and Vimala (2014) indicated that age, income, education, and occupation have a significant influence on investment preferences. Neha (2016) revealed that the majority of working women showed a preference for conventional investment options. Osondu et al., (2015) argue that households play a crucial role in enhancing economic development in developing and underdeveloped nations. Thulasipriya (2014) states that the majority of households engage in banking activities to prepare for potential future uncertainty and select banks for their security and financing for children's education, marriage, and retirement. According to Sonali and Kalpana (2014), the salaried class safety,

stability, and a high return on investments make more knowledgeable about investment choices.

2.7 Investment Scams

Research Attribution Theory and Theory of Planned Behaviour underpin investment fraud research (Nuswantara & Maulidi, 2020). Intentions drive behaviour planning and individual behaviour investors are exposed for fraud (Maulidi, 2020; Karsono and Suraji, 2020). Several factors affect behavioural intention, behaviour attitude and a person's opinion and effective fraudsters use trustworthiness (Djafarova & Foots, 2022; Ajzen, 1991; La-Barbera & Ajzen, 2020) while a favourable investment appraisal as a scam to convince investors to fund firm assets (La-Barbera & Ajzen, 2020). Fraudsters escape with investor money, and education helps spot investment scams (Wilkins et al., 2012). According to attribution theory, past accomplishments stimulate determination and encourage future efforts and financial understanding of the educated are more susceptible to fraud (Hastings, 2019; Chiapello & Knoll, 2020; Whitty, 2020; Lokanan & Liu, 2021).

Mason and Wilson (2000) describe financial literacy and investment scam awareness as the ability to find, assess, and use relevant information to make informed decisions for financial impacts (Mohd-Padil et al., 2022). Understanding financial ideas and procedures is important to avoiding fraudulent investment schemes (Buddaraju & Devaiah, 2021). Lokanan (2014) warns that unskilled investors are vulnerable to fraud and deception. Ther is needed to prevent or reduce investment non-performance (Chammas Hernandez, 2019; Tversky & Kahneman, 1979). Subjective risk indicators help individuals to understand financial risk (Nagel & Xu 2023; Sorgente & Lanz, 2019; Klos et al., 2005). Uncertainty about financial investment and health safety can affect the risk perceptions of individuals (Ainia & Lutfi, 2019; Weber et al., 2002). Small investors value high returns, minimal risk,

security, and liquidity in mutual funds (Blankespoor et al., 2020; Cumming et al., 2019; Rathnamani, 2013).

Many elderly financial manipulatives are at risk, and elderly fraud and identity theft victims have health and mental issues (Watson et al., 2019; DeLiema, 2021). Financial stress and social support decreased with financial coaching (Ryu & Fan, 2023). After scams or identity theft, participants received credit reporting and collections advice programs, and financial mentoring reduced the adverse effects of financial inaccessibility.

Lichtenberg's (2019) found financial coaching programs are beneficial. Ponzi schemes promise high returns but are fraudulent (Hidajat et al., 2020; Lou, 2020). Fraud affects families and society, and scammers use the internet and social media to commit investment fraud (Chergarova et al., 2022; Knüpfer, 2021). Fraud awareness and data-driven savings and investment decisions are important for the safety of the individual investor (Woods & Wason, 2023; Shao et al., 2019). Fama and French (1993) found that company size, market conditions, bond market features, and book value to market value equity ratio help investors evaluate and compare investment risk and returns.

According to prospect theory, individuals consider possible rewards and expenses rather than ultimate results (Evstigneev et al., 2013; Gao et al., 2021) and prioritize weights over the probability of investment decisions (Huang et al., 2021). Barber and Odean (2000) recommended assessing cognitive factors that affect investing decisions (Metawa et al., 2019) and if investors lack confidence in investment, there may be a loss (Shahid & Abbas, 2019; Kartini & Nahda, 2021). Furthermore, understanding and reducing these biases could improve investor decision-making (Kartini & Nahda, 2021). Both population-based and clinical research shows that elderly financial mishandling as elderly fraud and identity theft, affects physical and mental health. Individuals must consider stock and bond return risk

factors, risk assessment, and psychological biases while saving and investing (Metawa, 2019; Shahid & Abbas, 2019; Kartini & Nahda, 2021). Planning and researching these factors can help individuals avoid fraud and common investment scams and maximize their savings and investment returns (DeLiema et al., 2020; Wang, Stuart & Li, 2021).

2.7.1 Theoretical Literature

The dictionary defines fraud as a deceitful impression with the goal of deception, including illegal deception for gain (Özkul and Pamukçu, 2012). According to the Institute of Turkish History (1998), "fraud" is a deception, swindling, game, artifice, cabal or something unneeded for an advantage. Fraud can also be defined as intentionally creating a false impression to compel a contract (Arzova, 2003). Mostly, individuals understand conventional crimes against societies and property (Gottschalk, 2010; Aigbovo, 2019). Government authorities do not track or report on significant and prosperous individuals, groups, and nation-states, which are fraudulent to individuals and property and are present widely (Gottschalk, 2010). Organized offenses are more likely to harm individuals than lonely offenses of fraud and scams (Wangechi & Ndung'u, 2019; Gottschalk, 2010; Aigbovo, 2019).

Investment scams and frauds harm communities and their profit-making capital allocation and, in return, damage finances, mental health, and careers (Deliema et al., 2020). Cao et al., (2020) observed that investment fraud victims suffer from despair, anxiety, concern and stress (Ullah, 2021) while towards companies, investment frauds also affect banks and the economy (Buddaraju & Devaiah, 2021). Due to their financial ignorance, older adults are more vulnerable to fraud (Lusardi, 2012). James et al., (2014) claimed that financial illiteracy, cognitive impairment, and poor financial planning lead to unstructured financial fraud. Investment firms that promise big profits are scammers, and pyramid

marketing promises high commissions as frauds (Bosley et al., 2019). Investors can recommend others, making word of mouth marketing the best promotional method to gain verbal trust, which grows networks but is not real and cannot be reimbursed to investors (Nghiem, 2021). It is recommended that individuals avoid unregulated Ponzi schemes (Bhadra & Singh, 2023; Raghuram & Dubey, 2021). Most individuals believe financial literacy is crucial and that everyone should understand saving and investing so operators of the Ponzi scheme ensure significant (Bohra et al., 2022; Satwika & Swardhana, 2023).

Susceptible paid professionals are running unlicensed companies and organizing fraudulent financial industries. Investment scammers always find and come up with new ways to mislead investors despite their financial skills (Ali, 2019; Carter, 2021). To protect oneself and one's family from financial losses and fraud, an exercise of learning vigilance about investment scams is necessary (Mueller, 2020). Mahdzan and Tabiani (2013) claim that in economic shock, insurance improves living well-being, and primary and secondary financial education is beneficial for individuals.

2.7.2 Empirical Literature Review

According to Betz-Hamilton (2022), identified theft victims experienced financial, emotional, and physical suffering and indicated that among family and non-family identity theft victims, younger worry more but same physical effects and financial losses. Bierstaker et al., (2006) explored that firms avoid Fraud with firewalls, virus and password protection, internal control evaluation and upgrading but underutilized fraud prevention and detection tools. James et al., (2014) examined that susceptibility increased with age but decreased with income, cognition, psychological well-being, social support, and literacy. Further, older persons may be more exposed to financial exploitation due to weakening cognitive

capacities, psychological well-being, and reading skills. Frank, Singh, and Bai (2023) studied employees retirement savings affect retirement planning and satisfaction.

Al-Hashedi and Magalingam (2021), a 2009–2019 review of financial fraud detection, reported data and identified fraud in 34 bank, insurance, financial statement, and cryptocurrency cases. Extensive investigation shows that bank and insurance fraud uses most data mining approaches with data mining methods and financial Fraud. Reurink (2019) examined financial market fraud and categorized deceptive as financial scams, fraudulent financial and financial disclosures, and wrong selling. Bitenc (2016) stated that fraud vulnerability or resilience affects investment and financial Fraud, especially investment fraud.

Engels et al., (2021) revealed that financial individuals recognize fraud better, and also a reduction in subjective well-being stops fraud detection with growing complexity. Smith (2000) stated that seniors worry about financial exploitation and Fraud, including individual doctors, nursing facilities, and families affecting seniors' money. New technology fraud is a growing threat against financial literacy and scammer traps by persuasion and social engineering and overconfidence in investment knowledge may raise fraud risk (Drew & Cross, 2013). Abdallah et al., (2016) asset evaluation may include secretly depreciating an asset for personal advantage and fraudulent users use electronic commerce systems. DeLiema (2018) stated that routine activity theory implies that motivated offenders and adequate targets easy for seniors without family or friends to protect their finances and fraud and financial exploitation victims managed poorly. Santosha Mallick (2016) examined that investors' lack of financial expertise makes them more susceptible to chit-fund organizations' unique traits. Baidawi (2017), few studies have analyzed the safety of senior prisoners and

victimization. Murray (2004) stated that education and knowledge are investors' best defence against Fraud.

Shichor, Sechrest, and Doocy (2000) reported that online Fraud has become a significant issue in various countries, putting many individuals at risk. A wide range of fraudulent activities, the pursuit of small sums of money, scammers' authority and legitimacy, emotional appeals, pressure and coercion grooming, remote Fraud, embarrassing Fraud, and multiple techniques are present. Wilhelm (2004) stated that Fraud is common and costs society consumer discomfort, missing opportunities, increased pricing, and criminal activity. Piquero et al., (2022) stated that law enforcement might avoid pointless technology guarantees that fail to safeguard victims by learning from experience.

Deliema, Shadel, and Pak (2020) stated that investment scams cost billions of dollars and target male, married, and higher-socioeconomic effects and Americans older males cannot handle their retirement money, and dishonest brokers may offer inflated investment returns. Administrators (2007) stated that professional scammers seek wealthy neighborhoods and render investors susceptible, and trust-based frauds succeed mostly about retirement finances. Indarto and Ghozali (2016) revealed that fraud and addressing financial inefficiencies, monitoring, and rationalization may take time to affect fraudulent financial reporting. Peter (2019) stated that saving involves setting aside income and warns investors about digital investment frauds during savings month and individuals want investments with fast, huge returns. Kasim et al., (2023) concluded to enhance retiree financial literacy to lessen fraud risk and warn retirees about investment scams. Hall et al., (2022) stated that financial exploitation of older individuals affects victims' health and finances. Mugarura (2017) analyzed Ponzi and other misleading investment schemes' to show fraudsters' tactics for drawing investors into false opportunities. Watson (2015) states that in economic

downturns, fraudulent investment schemes promise significant returns to persuade individuals regardless of market conditions.

According to Kratcoski and Edelbacher (2016), The elderly are disproportionately criminal victims, including stealing, deception, and injury. Gurun, Stoffman, and Yonker (2018) found significant results with trust in financial intermediation and personal fraud victimization. Beals et al., (2017) studied that self-reported fraud victimization was most affected by gender and age. Shao et al., (2019) reported increased worry about the quantity of fraud targeting the elderly using cognitive and emotional regulation, motivation, and comprehensive aspects affecting senior fraud victimization. Fischer & Evan (2013) investigated the global prevalence of responding to fraudulent offers with differences were reactions to lucrative incentives, positive emotional response to obtaining a considerable prize, dependence on authoritative status cues, and their self-confidence. Older individuals are a unique demographic and more vulnerable to fraud is debatable and specified age-related fraud require little cognitive ability (Burnes et al., 2017; Lachs & Han, 2015).

Many well-informed seniors could not recognize these dishonest, unproductive sales practices exposed to fraud with no awareness of scams and behavioural safety (Fischer et al., 2013 & Ross, 2014). SiuSiu and Hutchings (2023) stated that Bitcoin scam advertisements may target seniors using strategies. DeLiema and Deevy (2016) report increased elder financial victimization in the US aging population and retirement-focused individuals statistically significant increase in Bitcoin investment scam advertisements.

Gupta (2023) found that misrepresentation affects investors and the financial market. Several retail and small investors self-injured after bankruptcy. Betz-Hamilton (2022) found that family and non-relative identity theft victims may face differently, and younger identity theft victims worried more. Bierstaker, Brody, and Pacini (2006) examined digital analysis,

and data mining software need to be made active in fraud prevention and detection systems. James, Boyle, and Bennett (2014) assessed that risk increases with age but decreases with income, cognition, psychological well-being, social support, and literacy. Franklin, Singh, and Bai (2023) examine employees' retirement savings attitudes affect retirement planning and satisfaction.

According to Al-Hashedi and Magalingam (2021) data mining methods detected Fraud in 34 bank, insurance, financial statement, and cryptocurrency cases and bank and insurance fraud uses most data mining methods. Reurink (2019) explores understanding financial fraud and organizing survey requires precise data and interpretation to assess the issuer's current and future performance and a financial instrument's perceived value. Bitenc (2016) context affects investment fraud vulnerability or resilience and financial fraud, especially investment fraud, damages society and individuals. Few sources and research exist for investment fraud and other financial crime victims since criminologists and the public focus on "violent" crimes.

Engels, Kumar, and Philip (2021) that financially aware individuals spot fraud better and fraud strategies are becoming more complex, and that identifying fraud requires strong financial skills rather than money management. Smith (2000) argued that seniors worry about financial exploitation and fraud affect seniors' finances due to vulnerable to new technology fraud and training leads investors to financial fraud. Drew and Cross (2013) suggested that financial literacy may not reduce Fraud. Criminals persuade and social engineer investors to buy fraudulent schemes and overconfidence in investment knowledge may increase fraud risk. Fraud is also providing a misleading impression to force a deal (Arzova, 2003).

According to Abdallah, Maarof, and Zainal (2016), Electronic commerce networks are insecure with current fraud prevention systems (FPSs) and FDSs need help with large data sets, skewed real-time detection, and idea drift. DeLiema (2018) trusted individuals with elder Fraud by predatory strangers targeting vulnerable older adults and motivated offenders and suitable targets without capable guardians create criminal opportunities. Santosha Mallick (2016) suggested that investors' lack of financial competence makes them more receptive to chit-fund companies' unique qualities. Chit-funds attracted investors with high returns, commissions, and revenues and many participants thought the agents played them. Baidawi (2017), few studies have examined senior prisoner safety and mistreatment and revealed that inmate psychological, property, physical, and sexual victimization and younger prisoners victimize seniors.

According to Murray (2004) believes investors may best avoid Fraud with education and understanding and criminals use personal computers to swindle many individuals quickly and cheaply. According to Shichor, Sechrest, and Doocy (2000) online Fraud has become a big issue in many nations, placing many individuals at risk. Wilhelm (2004) says all businesses lose money to fraud, including the pursuit of small sums of money, scammers' authority and legitimacy, emotional appeals, pressure and coercion grooming, remote Fraud, embarrassing frauds, and multiple techniques. Deliema, Shadel, and Pak (2020) investment scams cost billions and target male, Caucasian, married, and higher-socioeconomic victims, mostly older males, were more materialistic than the average investor, exchanged equities more often, and bought assets from unsolicited calls, emails, TV commercials, or "free lunch" seminars. As more retirees manage their money, unscrupulous brokers may offer inflated investment returns.

According to Indarto and Ghozali (2016) show that external pressure, financial stability, and capability affect financial reporting fraud and addressing financial inefficiencies, monitoring, and rationalization may not instantly prevent financial reporting fraud. Kasim et al. (2023) showed that financial literacy impacts awareness and suggested improving retiree financial literacy to reduce fraud. Hall et al., (2022) noted that the financial misuse of older individuals impacts people's financial, neurocognitive, physical, and emotional well-being.

Mugarura (2017) demonstrated fraudsters' methods for deceiving investors and anti-money laundering laws may safeguard investors from deception. Kratcoski and Edelbacher (2016) the elderly are disproportionately criminal victims. Gurun, Stoffman, and Yonker (2018) stated that fraud victims increased bank deposits and withdrew investment adviser assets and emphasize financial intermediary trust and personal fraud victimization. Beals et al., (2017) examined fraud polls resembled those regarding fraud affects 25–34-year-olds and 65+-year-olds but not 35–64-year-olds. Recent research by Shao et al., (2019) raised concerns about the disproportionate number of elderly fraud victims. This anxiety has cost money and mental anguish. Senior Fraud is underreported despite its prevalence. More profound research has shown older adult victimization methods. A comprehensive theoretical framework for fraud victimization may benefit future research after a literature review. Understanding the physiological underpinnings of elderly Fraud and enhancing prevention and response are crucial.

Although unique, older adults may not be more vulnerable to Fraud (Burnes et al., 2017; Ross et al., 2014). Specific age-related fraud issues (Burnes et al., 2017; Lachs & Han, 2015). Most unexpected is that these frauds require little cognitive skill (Fischer et al., 2013; Ross, 2014). Realize these deals are too good to be accurate and shout, "Uh-oh." Thus,

scholars have investigated why many well-informed seniors need to spot dishonest, inefficient sales methods that may be fraudulent. Thus, many experts have explored why many well-informed seniors need help to recognize these dishonest, worthless sales practices that may be fraudulent. According to the research, scam awareness and safe behaviour still need to be improved. y. Further, the scams are influencing this saving and investment behaviour and retirement planning as supported by permanent income hypotheses and recommendations of the studies to test with other variables and frameworks.

2.8 Demographic Variables

2.8.1 Demographics, Saving and Investment

Modigliani and Brumberg (1954) described John Maynard Keynes stated many hypotheses to study the relation between income and consumption. Based on the psychological law, confidence in the prior knowledge and fact experiences of human nature depends upon an increase in income and consumption but not as much as the increase in income level (Friedman, 2018; Barnett, 2003; Palley, 2010). Achar (2012) stated that quality of life and living standards are important, and consumption, savings and investment levels are the affecting factors. The attitude of consumption, saving, and investment defines the economic behavior that influences the quality of life as well as, in return, affects the profession and education.

KJ (2017) stated that demographics are an essential element of the economy, as salaried class professions are ignored but get attention by the economics to discover the potential income. The demographics are found to have positive meaningful results on saving and investment if individuals. Bhatt and Bhatt (2013) discovered the significant relationship between the features and investors' requirement for investment avenues based on occupation and education level, preference level of individuals towards various investment avenues,

frequency and the investments and risk ability. Most investors preferred the bank as a safer investment. Those who are less educated and with low income preferred bank deposit, post office deposit and insurance being easy and riskless. Geetha and Ramesh (2011) Investors choose the appropriate one as per their choice various avenues and choices for planning the investment decision to meet the objectives of life. Perceptions are different due to changes in social life, living patterns, income level etc. most of the individuals preferred to invest in Insurance, NSC, PPF and bank deposits as per income level, while lower-income preferred insurance, NSC, PPF and bank deposit rather than any other investment avenues. Most respondents were aware of aware about various investment avenues like Insurance, PPF, bank deposits, and small savings like post office savings. However, most of the respondents were unaware of the stock exchange market. Demographics Avenues preferences, knowledge reference

Graff, Tang and Zhang (2008) examined the impact of demographic factors on saving and investment with significant impact. Hira (2006) studied gender Differences in Investment Behavior. Identified the personal as well environmental factors influencing the investment behavior of individuals and a difference in the patterns and preferences by the gender of investors (Klapper et al., 2015; Christiansen et al., 2008; Christelis et al., 2010; Tufail & Batool, 2013). Further, there is a role of socioeconomic behavioral factors in gender differences in investment behavior. Jamshidinavid, Chavoshani and Amiri (2012) studied the personality traits and demographic effect on financial behavior biases, and the results revealed that investment prejudices in individual investigators are positively linked with personal traits and demographics. Jain and Mandot (2012) argued that markets vary in risk. In various demographics. Bank deposits, government/private bonds, shares and stocks, ETFs, mutual funds, insurance, derivatives, gold, silver, currencies, real estate, etc., are

increasing depending on risk exposure. Even with knowledge and risk ability, individual investors generate regular income and return from investing in trait and person variation.

Jain and Mandot (2012) The outcome of the study revealed a negative correlation between marital status, gender, age, educational qualification and occupation of the investors and a positive correlation between cities, income level and knowledge of the investors. Odoemenem, Ezihe and Akerele (2013) discussed the saving and consumption patterns of individuals and stated that most of the farmers invested in non-farmer activities though the saving volume, and only a few re-invested in farming. Oyejide (1999) reviewed the research evaluates external resource inflows' impact and efficacy and makes policy recommendations and long-term finance drives regional investment and growth and include poor income, weak financial institutions and markets that limit savings, and substantial capital flight.

Oyejide (1999)) found that gender, age and friends are positively significant in the investment decisions of the individual's salaried class. Bloom et al., (2007) stated that from the theoretical perspective of life, life expectancy has increased the average age of retirement and has little effect on saving rates andretirement incentives in social security programs prevent and keep changes in life expectancy, causing life cycle savings. Also, there is an increase in the total savings rates with pension coverage and retirement incentives. Kibet (2009) found that factors that significantly influence household savings are occupation type, household income, age and gender of the household head, level of education, dependency ratio, service charges, transport costs, and access to credit. Uddin, Alam, and Gow (2016) indicated a negative correlation between dependency ratios and savings.

Athukorala and Tsai (2003) The saving rate is adversely impacted by the presence of both adults and children below the age of 15 within a household. The increased number of household members places a strain on available resources, resulting in a reduction in savings.

According to Orbeta (2006) revealed that age variables exhibit a significant relationship between age and saving while younger household heads exhibit the lowest rate of savings. According to Browning and Lusardi (1996), one explanation for the higher savings rates among the elderly compared to younger households is the presence of a bequest motive.

The predominant factors influencing consumption choices in Pakistan are religiosity and frugality. While there is a shared concern for health and environmental conservation between WEIRD countries, it is important to note that there are underlying differences in values, specifically related to conformity and tradition. The findings underscore the importance of comprehending the factors that influence developing societies and adapting our marketing strategies to enhance societal welfare and promote environmental conservation. Khalek et al., (2009) indicated that both the income variable and the interaction term between gender and income have a statistically significant positive impact on savings. Swasdpeera and Pandey (2012) income, age, marital status, number of children, and education increased average savings.

Conversely, the impact of household size, the number of unemployed individuals, and gender alone have a negative effect on savings in both rural and urban areas. The study conducted by Kibet et al. (2009) examined the several factors that have an impact on the savings behavior of individuals in different professions, including teachers, entrepreneurs, and farmers. The decision of teachers to save is influenced by an inverse relationship between their age and transportation costs. There exists a negative correlation between the age of businesspeople and their savings and the provision of credit to farmers was found to have a diminishing effect on their levels of savings.

Alessie et al., (2004) found significant positive effects of a child's income share on the household saving rate and the level of dependency within a family and the corresponding

saving rate. Bendig et al., (2009) indicated that several factors, such as household size, level of education, assets, remittances, experience of a death in the family, and other unexpected events, had a notable positive impact on savings. Conversely, being a female head of the household, being self-employed or unemployed, engaging in risk assessment and residing have an inverse relationship with savings. Sabri (2010) evaluated that factors that contribute to savings, namely financial literacy, childhood consumer experience, gender (specifically females), and being an only child. Bernheim and Garrett (1996) stated that there is evidence to suggest that there is a positive correlation between levels of education and saving rates.

Rehman et al., (2010) determined that variables such as age squared, level of education, educational expenses for children, family size, liabilities of the household head, marital status and the value of the house were found to have a negative impact on monthly household savings. The household savings experienced an upward trend because of various factors, including the age of the household head, the ratio of females to males within the household, the level of spouse participation, the urban location of residence, the overall dependency rate, the total income of the household, the size of land holdings, and the number of livestock present. According to Ahmad et al., (2006), it was also determined that there is a negative correlation between the overall dependency ratio and household savings.

The literature review indicates that a limited number of studies have quantitatively examined the demographics and gross savings of Pakistan's economy. Most research studies have employed various demographic variables, such as the total population, working age population, young and old age dependency ratios, life expectancy at birth, and population density, as indicators to examine their impact on savings. The study conducted by Jadoon et al., (2023). The study conducted in 2023, is distinguished by its approach of disaggregating the working population into distinct age cohorts, allowing for an examination of the

influence exerted by these age groups on savings behavior within the context of Pakistan. There is an anticipated negative correlation between an individual's age (AGE) and their propensity to save, whereby older individuals tend to save less while younger individuals tend to save more. The inclusion of the observation that younger individuals with low or no income tend to save minimal or no funds, often relying on borrowing, suggests that the association between age and saving exhibits a non-linear pattern.

Financial knowledge improves financial ability. According to Batty et al., (2015), no literature supports financial knowledge improving future financial capacities. Hence, this research gap offers new opportunities; therefore, another relationship to consider with retirement planning investment decisions and saving behaviour.

2.9 Retirement Planning

2.9.1 Theoretical Literature Review

Future orientation includes expectations, goals, standards, strategies, and techniques for achieving financial goals and financial awareness and future orientation affect retirement planning (Howlett, Kees, & Kemp, 2008). Saving attitude mediates future orientation and financial literacy in family retirement planning and a significant relationship (Sekar and Gowri, 2015; Rothman, 2021). future orientation affects retirement planning, especially saving and future-oriented individuals plan retirement more (Hershey & Jacobs-Lawson, 2002; Ansong et al., 2013; Talan, 2015). Resource-efficient financial decisions improve an individual and family's finances (Sekar & Gowri, 2015). Ansong et al., (2013) stated that in consumer financial resource management and decision-making with today's high cost of living, money management is essential. Retirement planning makes families financially stable (Bucciol & Trucchi, 2021; Tahir et al., 2021).

Retirement attitude impacts retirement plans and behaviour (Hassan et al., 2016; Mutran, 2017). Organized strategies boost confidence, and proactive retirement planning may help individuals enjoy retirement standards (Deyalage & Kulathunga, 2019). Retirement planning should start 20 years before retirement (Moorthy et al., 2022). Studies on savings behaviour distinguish savers from non-savers regardless of saving motive (Qaralleh et al., 2023). The "life-cycle model" suggests financial, and retirement decisions affect retirement, personal savings help retirement planning, and positive savings aid family retirement planning organizations (Achmad et al., 2023). Saving habits strongly affect retirement planning, and savers save some of their income (Brandstätter, 2005). Financial attitudes, especially saving, affect retirement planning (Payne et al., 2014).

Juen and Sabri (2014) found that saving improved Malaysian women's retirement planning for future orientation, and financial knowledge (Safari & Mansori, 2019). Early retirement preparation is essential and longer life expectancies raise living costs and make health maintenance harder. consultants recommend careful planning within timelines to build financial reserves (Ramsey, 2007; Stanley & Danko, 1998). "Retirement" means job loss, task completion, or retirement and retirement worries employees, especially those in key positions with power, resources, or advantages. Buchdadi and Ulupui (2022) stated that retirement impacts finances and health, and financial literacy affects economic wellbeing, decision-making, and behaviour with retirement planning and financial literacy.

Financial literacy predicts investor behaviour, particularly retirement planning, financial literacy and decision-making and financial security requires practical financial decision-making. (Adams & Rau, 2011; Van, Rooij, Lusardi & Alessie, 2011). Retirement mobilities expand theoretical and empirical retirement topics (Hayward et al., 1998; Xu & Wang, 2021). This argument states that transnational aging must include migrant and non-

migrant populations and cross-border human and non-human circulations (Xu & Wang, 2021). Older adults, with and without migratory backgrounds, are globally mobile and prefer transnational lifestyles and global financial flows, especially retirement pensions, affect later-life mobility and a retirement mobilities framework allows international aging research beyond aging migration (Nedelcu et al., 2023).

Pakistani middle-aged individuals save more, and a stable post-retirement lifestyle requires financial planning and must save for themselves and future generations (Riaz et al., 2023). New transnational aging frameworks emerged from the mobilities paradigm (Sheller & Urry, 2006) and intercontinental studies (Levitt & Khagram, 2008). Foreign pensions and financial flows enable elderly mobility, and government-funded education boosts savings and increases secondary, tertiary, and adult education funding (Jadoon et al., 2023). Countries with more youth than seniors grow faster, and Pakistan has a large 14–59-year-old workforce and saving by workers may help the economy. Modigliani's 1970 life-cycle hypothesis organized consumption and saving together, and retirement means spending more using savings, while middle-aged individuals save more and spend less during work, and retirement planning leads to planning behaviour. Deaton and Paxson (1997) found that 40-65-year-olds save a lot due to lower child finance responsibilities and post-retirement focus, while skills and work ethic improve in middle-age planning. The government must offer young workers diverse savings plans to work harder and save more for retirement (Jadoon et al., 2023).

Behrman et al., (1999) linked sample countries' mean population ages to economic performance, trade, financial, and macroeconomic policies impact economies, while demographics affect spending and saving. Modigliani and Brumberg's 1954 life-cycle theory emphasizes age structure and consumption-saving. Mason (1987), Horioka (1989), Berg

(1996), and Browning and Crossley (2001) tested the life cycle theory and found a strong correlation between age and savings. Attanasio and Székely (2000) confirmed the life-cycle strategy and found labour force age to household savings in these countries. All age groups save more(Deaton,1992). Financial literacy strongly affects retirement planning, and workshops, seminars, letters, and other retirement savings education for employees impact post-retirement planning (Frank et al., 2023). Finances require retirement planning and designing one's retirement reduces stress and gives life standard in old age by rearranging daily and social life. Minor to severe psychological disorders may require professional treatment (Webley & Nyhus, 2006).

So, workers must plan for retirement and poor retirement financial planning causes a large income gap between active working years and retirement (Buchdadi & Ulupui, 2022). Loke et al., (2015) define financial capability as knowledge and services, and financial literacy and inclusion are financial competence. Today, policy needs to prioritize financial capability (Batty et al., 2015). Scholars linked financial knowledge to management and to saving more for decision-making as financially savvy individuals behave better (Hilgert et al., 2003; Mitchell & Lusardi, 2011; Nguyen & Rozsa, 2019). Policymakers must create financial education programs that improve financial skills and wellbeing, and financial behaviour can indicate financial competence (Mitchell & Lusardi, 2011).

Financial conduct impacts financial competence, and financial capacity improves economic wellbeing, consumption and attitudes through financial knowledge and behaviour (Chen et al., 2014). Consumers' financial goals and money management attitudes influence their economic behaviour (Potocki & Cierpiał-Wolan, 2019; Xiao & Chen et al., 2014; Çera et al., 2021). Financial literacy may affect superannuation planning and early retirement preparation is crucial for workers (Shih & Ke, 2014; Henchoz et al., 2019; Frank et al., 2023).

Economic and non-economic behaviour output ideas influence financial attitudes and influence personal choices (Ajzen,1991; Patrick et al., 2015). Financial behaviour significantly impacts financial aptitude (Potocki et al., 2019; Xiao et al., 2014). Decision-makers suggest encouraging individual to save and setting a goal (Thaler & Benartzi, 2004). Other studies have found savings behaviour differences (Erskine et al., 2006; Zimbardo & Boyd, 1999). Financial management attitudes and behaviour significantly impact financial decision-making (Yap et al., 2018). Sen's capability theory (1993), Bandura's self-efficacy theory (1977) and Berzonsky's (1989) define financial capability as enough money to avoid economic instability and achieve financial independence capacity deals with individual functioning and talents through financial judgment and literacy. Financial abilities are decisions with general self-efficacy (Dietz et al., 2003; Clark, 2005). Investors with high financial self-efficacy save more and have less debt stress (Lapp, 2010) and some investors try to weigh investment risks and rewards (Kahneman & Tversky, 1979).

Financial effectiveness is personal financial management behaviour, attitudes, and experiences to save for retirement and credit dependent individual save for intangible goals (Ajzen, 2013) like individuals save for retirement, not vacations or fancy items (Ngaowichai & Sripongpun, 2019; Hajam, 2020; Rokhman, 2021). Lower financial savings behaviour and negative information about finance are emerging issues among adults (OECD, 2020). Planning and financial awareness throughout life are essential for retirement (Alexander, 2011; Alexander & Cumming 2022). Most retirees can donate more but only sometimes save and invest and only a few focus on retirement and savings (Orton, 2007). Many retirees use their savings rather than on investments (Pak, 2020; Thompson, 1983; Orszag & Stiglitz, 2001). Social scientists and policymakers worry about retirement planning's impact on government policies, especially Social Security reform like Social Security, employer-

sponsored pensions, and personal savings retirement funds (Orszag & Stiglitz, 2001). Rising retirements are a burden on Social Security policies.

Medical advances that extend life expectancies and a drop in births reduce system revenue (Palacios & Robalino, 2020). According to the Social Security Administration (2017), 62% of older households receiving Social Security payments relied on it for at least half their income in 2015. Personal goals make financial wellbeing relative to former classmates, neighbours, friends, and coworkers. Financial health is a personal goal while living standards and resources vary from individual to individual. All Financial knowledge affects retirement planning affects financial health., asset growth, and wellbeing (Chowa et al., 2012). Future orientation's stability and behaviour influence retirement planning (Kimiyagahlam et al., 2019; Tomar, 2021; Zimbardo & Boyd, 1999). Financial literacy improves wellbeing and living standards; retirement, education, and wealth decisions affect retirement wellbeing (Kimiyagahlam et al., 2019; Tomar, 2021).

2.9.2 Empirical Literature

Financial knowledge improves economic behaviour and financial management decisions and improves goal setting regardless of income. The managerial plans, implementation and evaluation of investments, credit, insurance, and cash improve retirement (Godwin & Koonce, 1992). Financial happiness requires responsible money management and smart saving and investing (Ozili, 2020). Saving, investing, and retirement planning are essential for financial happiness to gain the required living standards (Mahendru et al., 2022; Widjaja, 2020). Good financial management reduces financial risk, encourages disciplined spending, and boosts financial satisfaction (Grant-Smith & de Zwaan, 2019; Kappes et al., 2021). Binswanger and Schunk (2012) stated that economists

described households do not saving much to maintain the standards of living during retirement, and expenditure increases by 80% of the working life spending.

Harahap et al., (2022) found that financial literacy on retirement planning is serial mediated by financial risk tolerance and saving behaviour while herding behaviour can strengthen financial literacy's influence on retirement planning and further saving behaviour as a mediator does not influence the relationship between financial literacy and retirement planning and confirmed the financial risk tolerance and herding behaviour bridge a positive relationship between financial literacy and retirement planning.

Yeung et al., (2023) showed that retirement goal clarity affects financial literacy, social norms, and social support purchasing savings. Additional moderated mediation analyses revealed a stronger mediating effect of retirement goal clarity on the relationship between social norms and annuity products in younger workers than in older workers.

سعید احمد &غده سعید احمد (2023) Found that FDI has a significant positive effect on FI directly without any moderator. Additionally, FI has a significant impact on FDI in the existence of the moderator FD. Mwobobia (2022) stated that to improve the saving rate is increasing the financial literacy and showed that significant for predicting saving culture based on financial literacy practices. Individually, financial planning practices, debt management practices and education level were found to be significant determinants of saving culture. Amaglobeli et al., (2019) explored that demographic changes have affected public and private sector savings, pension systems, labour markets, and demographic variables.

Boersch-Supan and Winter (2001) revealed that population aging has impacted the capital market with full force and young workers are aware that retirement income must be generated through private savings and pension and policy reforms for pre-retirement

funding. Mostly, population aging changes households' savings behaviour with portfolio composition and investment in the market with financial assets. Capital markets can be grown with active investors through pension funds and savings, which will improve capital efficiency, total factor productivity, and growth. Turner (2006) stated that it is crucial to remember that switching to a funded private pension system in which employees set aside a portion of their pay and then use the assets they have accrued offers a partial and guaranteed solution to the demographic dilemma. Greater savings rates will typically result in a greater capital-output ratio and, thus, lower returns on capital if people try to use them to finance a longer retirement.

Holzmann (2005) stated that depending on demands a growing understanding of the significance of pension systems for a country's economic stability and the security of its aging population.

According to Calvo, Bertranou and Bertranou (2010), individual retirement accounts (IRAs) are becoming less common and find that, while provocative, the idea of "moving away from IRAs" is insufficient to adequately capture the nature of the new politics surrounding pension reform. Holzmann (2009) Although population aging is a global phenomenon, highly industrialized northern countries are seeing a particularly advanced level. Warner, Hayward, and Hardy (2010) stated that the number of U.S. retirees and population estimates of the employment, withdrawal and re-entry behaviours of older Americans still need to be increased. find that at age 50, men can expect to spend half of remaining lives working for pay, while women can expect to spend just one-third. Half of all men and women have left the labour force by ages 63 and 61, respectively. Although the majority of retirement exits are final, variation in the nature and duration of the retirement process is substantial, as about a third of men’s and women’s exits are reversed.

Börsch-Supan, Härtl and Leite (2016) the burden of parametric or systemic pension reform is greatly reduced when market responses to population aging occur. basic accounting constraints that aging populations place on people's behaviour and the decisions made about labor supply and saving.

Schwarz et al., (2014) The region's demographic issues necessitate a persistent effort to modify the pension system in order to create something that offers sufficient and long-lasting benefits. It will make improvements to savings plans, labour market reforms, and possibly more public funding to transition to a more sustainable economy. Ambachtsheer (2016) stated that a practical examination of the ongoing pension revolution With the use of real case studies from all across the world, The Future of Pension Management provides an update on developments in the industry. In light of recent pension scandals and the global financial crisis, individuals are understandably concerned about the security of their retirement. Mattel (2006) discussed old-age incomes and their distribution, along with future public pension expenditure predictions and demographic trends, enable the identification of several reform possibilities for each pension system to enhance its financial or distributional outcomes.

Börsch–Supan et al., (2016) Once abundant public pension benefits are progressively being cut, significant incentives are given to private and occupational savings plans However, low-income, low-education households did not enrol in additional pension plans or modify their retirement behaviour. As a result, they are likely to encounter challenges in closing the pension income gap in the future. James (1998) reevaluating institutional programs that support older adults with income maintenance is becoming necessary for many nations due to the rising expenses of traditional social security systems and had a

positive and potentially significant impact on the development of the financial market and national savings, as well as economic growth.

Mitchell (1998) discussed that the financial, regulatory, and labour market organizations that are most in favour of and in dire need of retirement system reforms in emerging nations. Numerous developing countries are being forced to modify and even reconstruct their national old-age plans due to budgetary constraints.

Whitehouse (2007) stated that pension reform is a crucial area of policy for both industrialized and developing nations The pension systems and retirement-income reform experiences of other nations can teach us important lessons. pension promises given to today's workers will be sustainable in the future has tended to be the centre of attention when comparing retirement income regimes across international borders. Binswanger and Schunk (2012) discussed that a prevalent contention among economists and policymakers is that households fail to save sufficiently to sustain a satisfactory level of life in retirement. adequate retirement expenditure levels surpass 80% of spending during their working years. Bairoliya (2019) after adjusting for variations in the population's age distribution and health insurance plans across time, modifications to the makeup of pension plans matters for work force.

Wise (2007) examines the effects of both public and private personal retirement plans, with a focus on how 401(k) programs affect asset accumulation, annuitization, and retirement strategies in the context of possible social security reform. Following, despite the fact that older populations' health has improved, the widely documented association between wealth and health is examined from two distinct angles and connected with startling rises in healthcare spending over the previous 20 years.

Demirgüç-Kunt, Klapper and Panos (2016) The research indicates that roughly 25% of adults globally save aside money for their retirement, with rates as high as 35% in high-income economies within the Organization for Economic Cooperation and Development and the East Asia and Pacific region. retirement savings patterns are a vital part of the safety net for the elderly, policymakers are therefore becoming more and more interested in learning about them.

Bloom, and McKinnon (2013) growing proportion of senior citizens in every nation makes it harder and more necessary to develop sustainable pension systems. When designing a pension system, planners must take into account a wide range of options and select the set of policies that will best optimize coverage, benefits, and financing in light of a nation's demographics, history, traditions surrounding family care for the elderly, political structure, level of informal labour, and financial circumstances.Zaidi et al., (2012) argued that shock and uncertainty are the results of unexpected events like population aging, and these feelings prompt reflection on past actions and potential future trends decisions made about spending during the boom years and partially as a result of executing the necessary and, for the most part, successful measures. Disney (1996) stated two different aspects of the aging and saving problem Of course, there are connections between the macroeconomic and microeconomic aspects of aging. a potential reduction in the social security benefit could lead individuals to reevaluate their retirement plans and individual or household savings plans.

Baryła-Matejczuk et al., (2020) found a significant relationship between financial management practices to financial happiness (Qamar et al., 2016; Robb & Woodyard, 2011). Work and output may continue because individuals are more active after retirement and financial guidance improves economic decision-making (Moorthy et al., 2012; Kim, 2018).

Many want to maintain a certain lifestyle in retirement (HSBC 2017). Cooper and Minney (2018) found that high-income individuals spend the least due to the retirement and working-age income differences. According to bank records, aged households spend less, and even 85-year-old wealthy retirees spend below the Pension (Gebler, 2018; Daley et al., 2018b. Mirrlees (2011) believed savings-derived income taxes discourage saving because saving a dollar costs more with income taxes and reduces consumption, so taxing savings changes consumption.

Banks and Diamond (2010) argue that earning potential boosts lifelong savings and consumption while low earners face more lifetime earnings uncertainty. Older and wealthier savers prefer lower-tax vehicles (Rice & Warner, 2019; Daley et al., (2015), retirement incomes adjust for inflation and individuals at working-age income use wages. Lifetime replacement rates complicate retirement adequacy assessments by comparing retirement living standards to high spending and successful retirement in productive years requires early planning (Humaidi et al., 2020; Crawford & O'Dea, 2020). Life expectancy as age and health decline will increase retirement living standards costs (Weber & Loichinger, 2022; Crowe et al., 2021).

Moorthy et al., (2022) found that age, education, and income affect employed people's retirement planning and workers planning behaviour and worker' retirement preparation secure their retirement finances with conflict, attitude, and objective clarity affect retirement. Çera et al., (2021) examined financial capability improvement with financial knowledge, economic behaviour, and financial service sector access and knowledge and attitude indirectly affect financial competence and potential. Mulasi and Mathew (2021) suggested that financial concepts and principles affect investors' decisions and self-efficacy affects financial literacy behaviour helps investors make smart choices.

Setiawan and Ardison (2021) examined potential victims who may fall for promising investment schemes that promise financial gain and security because collaborative business proposals are illogical, unethical, and illegal. Sharma et al., (2020) investigated low financial literacy in India causes market fraud and corruption, and investors must monitor annual reports, financial statements, quarterly reports, current events, corporate events, company websites, research analysts, brokers, insider trading, institutional investment, company presentations, news/press releases, and other sources. Lai et al., (2009) found that position, age, and education significantly impact the academic salaried class, and female academics and public university staff were more positive about retiring.

Akhtar and Das (2019) found that attitude partially mediates financial knowledge and investing intention, while financial self-efficacy affects investing and personality with minimal but positive effects of subjective norms on investing intentions. Topa and Herrador-Alcaide (2016) stated that clear financial retirement goals influence retirement savings and investing and financial retirement goals influence retirement knowledge, saving, and investment also delay moderates financial retirement knowledge, objectives, and saving.

She et al., (2021) examined subjective financial knowledge, attitude, and psychological beliefs that affect financial living wellbeing and found that financial behaviour mediates psychological beliefs and financial wellbeing of employed individuals and emphasizing the importance of a healthy financial attitude and sense of control for financial and personal success.

Tomar et al., (2021) examined financial literacy, retirement goal clarity, future time perspective, retirement attitude, risk tolerance, and social group support affect women's retirement planning and retirement goals shape savings and time.Hershey et al., (2007) acknowledged to ignorance of retirement financial planning psychology, financial planning

and investment research predicted by age, gender, and income savings by retirement goal clarity, future time perspective, and self-rated financial expertise. Akben-Selcuk and Aydin (2021) stated that retirement planning knowledge attitude mediated financial readiness, and parental influence increased retirement savings and life satisfaction, but negative economic forecasts affected retirement planning. Zhu and Chou (2018) found that retirement goal clarity affected retirement savings needs calculation and saving behaviour and mediated retirement goal clarity and private savings. Dulebohn and Murray (2007) argued that employer-sponsored defined contribution retirement plans, attitude and individual difference factors affected risky decision-making. Risk preference and opportunity perception affect employees' retirement savings attitudes, with a strong link between investment expertise and risk-taking.

According to Ghadwan, Ahmad, and Hanifa (2022), examined that employees' financial literacy, risk tolerance, and culture. Culture mediates retirement financial planning and individual interactions and culture. Shanmugam and Zainal Abidin (2013) stated that personal retirement planning ensures individuals can meet their basic needs and save some of their income for retirement and plan for retirement. A proactive retirement planning for working people, financial security needs more confidence and prepared for challenges. Fan, Stebbins, and Kim (2022) examined a positive correlation between major financial issues and retirement planning activities like assessing retirement needs and having a non-employer retirement plan. Liu, Bai, and Knapp (2021) argued that population aging, and longer retirement years make future health and wellbeing more important and can improve with retirement preparation and confidence. Retirement planning affected depression, physical health, and life satisfaction variables directly and indirectly.

Ali and Marwat (2021) stated that financial literacy affects self-efficacy and saving behaviour; according to the results, financial literacy increases saving behaviour. Preacher and Hayes (2008)'s mediation effect. Financial literacy increases self-efficacy, confidence, and savings, and self-efficacy promotes financial literacy savings. Rameli and Marimuthu (2018) Planning affects savings and investing and increases wealth and financial literacy near retirement with individual advice on saving more for retirement. Fan, Stebbins, and Kim (2022) examined major financial issues prefer to calculate their retirement needs and have unsponsored plans. Financial instability leads to retirement planning, including needs assessment and account opening and differences in financial challenges, debt, and retirement planning. Payne, Yorgason, and Dew (2014) stated that many motivations come from family socialization, materialism, religion, and the need for essentials, financial distress, and retirement savings.

Munisamy, Sahid, and Hussin (2022) state that family knowledge, attitudes, and behaviours affect low-income families' financial stability and wise decision-making. Financial literacy, behaviour, knowledge, and attitudes correlated with low-income households' socioeconomic status and financial living wellbeing. Soman and Zhao (2011) examined single savings goal can increase saving intention, actual savings, and behaviour change. Mohammadi (2014) stated that usability has a mediating role, as do subjective norms, self-efficacy, personal innovativeness, and perceived image affect users' perceptions. Silva and Dias (2022) found that financial position affects financial wellbeing, which affects overall wellbeing, and financial wellbeing mediates the financial status, living standards and wellbeing relationship.

Holik (2022) stated that financial literacy education is crucial for older adults because they often have financial issues while financial fraud causes huge financial losses due to

financial illiteracy. According to Twumasi et al., (2022), financial literacy indirectly affects household income, and the growing relationship between financial literacy and household income further suggests household welfare programs and financial education and inclusion.

Ahmed et al., (2021) investment decisions affect investors' financial progress, investing decisions and risk tolerance and influences financial literacy and investment decisions. Nguyen et al., (2022) stated that subjective financial literacy can reduce retirement savings intentions and behaviours, and financial risk tolerance and perception mediate subjective financial literacy decreases into retirement savings. Jamal et al., (2015) determined that different mindsets, behaviours, knowledge, and social environments affect behaviour and attitude as a mediator between financial literacy and savings behaviour. Noor, Batool, and Rehman (2022) stated that financial inclusion includes savings accounts, loans, insurance, and remittances. Khan et al., (2021) found that risk perception and investment attitude affect financial knowledge and investment intention and the significant relationship between learning, decision-making, risk, and attitude.

Bohra, Sethi, and Kothari (2022) say financial literacy is essential and needed for public saving and investment, education and the widespread effects of financial illiteracy, especially fraudulent, unregulated schemes promoted by unlicensed organizations, offer investments. Ulupui and Buchdadi (2022) stated that employees have a large income gap between active working years and retirement due to poor retirement financial planning. Financial education and family education increase savings, while saving, financial literacy, and family education affect retirement planning. Pillai and Rajasekar (2020) found that the Big Five model's personality traits affect financial literacy's investment choices and financial literacy did not affect investment choices when agreeableness, conscientiousness, and

extraversion mediated. Financial literacy affects investing decisions positively through neuroticism and negatively through openness to experience.

Widyaningtya and Suhartono (2021) examined how income, family education, and financial literacy affect retirement planning and saving behaviour. They found that income and family education affect retirement planning, while saving and financial literacy affect retirement planning, family financial literacy and retirement planning. Folk, Beh, and Baranovich (2012) found that financial education affects retirees' financial planning readiness and Understanding finances affects financial management, which varies with age.

Ghazali et al., (2022) found a strong correlation between subjective financial knowledge, financial behaviour, and financial wellbeing, while subjective financial knowledge and wellbeing depend on financial behaviour. Financial behaviour mediates the subjective financial knowledge-financial wellbeing relationship, positively affecting it indirectly. Guo, Yang, and Mu (2023) suggest that confidence affects decision-making, and past and present behaviors affect future expectations. Nandy (2020) examined that one-month unitized monthly savings estimates were much higher than those for subsequent months or years and decision-makers and resource loss and temporal understanding affect savings estimates. Islamoğlu, Apan, and Ayval (2015) examined factors affecting investor behaviour, and individual investor variables were statistically associated with conscious investor behaviour and banking and payment behaviour. Frank, Singh, and Bai (2023) found that financial literacy is crucial to post-retirement planning. Ruefenacht et al. (2015) showed that subjective norms and relationship quality affect savings anxiety. Tiwari, Yadav, and Vadgama (2021) financial retirement planning requires financial literacy, which involves learning about products and concepts and using math to make financial decisions. However,

only some empirical studies have examined how financial knowledge, attitude, and behaviour affect retirement planning.

Tiwari, Yadav, and Vadgama (2021) showed a strong correlation between financial literacy and savings behaviour, while intention mediation improved the relationship. Padil et al., (2020) say financial literacy protects university students from prank investment schemes that promise high returns with low risk. According to Amari, Salhi, and Jarboui (2020) financial literacy moderated the effect of risk aversion on demographic factors and saving behavior. Tan and Singaravelloo (2020) found the need for high financial literacy, good financial behavior, and retirement planning, and only education and income positively correlated with retirement planning.

In 2018 National Financial Capability Study found that higher-income individuals prepared more for retirement, and financial self-efficacy affected income-retirement preparation. Asadov (2021), IGI Global studied financial literacy, financial sector development, and Ponzi schemes in CIS countries. A comprehensive overview of early Ponzi schemes in CIS countries and their conditions of success in the early years of independence examined member state conditions over the following years and found no improvement. Yeung and Zhou (2017) suggested that a positive retirement transition for physical and mental health and pre-retirement planning may affect retiree resources after retirement.

According to Schuabb, França, and Amorim (2019), retirement is a major issue due to population aging, rising social disparities, and long-term economic planning challenges of workers' retirement financial planning attitudes. Found goal clarity mediated parental influence retirement savings. Retirement activity impacted savings and complicated

retirement financial planning while childhood parental guidance affected retirement goal clarity.

Hershey and Mowen (2000) state that education and parental guidance can help retirees to save and become financially stable. Sabri et al., (2022) financial knowledge, locus of control (LOC), and perceived economic wellbeing (FWB) affect financial behaviour in young adults from low-income households. Chen, Lu, and Wang (2022) show that informal financial education improves consumer financial capability, and financial knowledge partially mediates. Stawski, Hershey, and Jacobs-Lawson (2007) examined goal clarity, financial planning, and retirement savings and concluded that a clear retirement goal predicts retirement planning. Wu and Chao (2023) suggested that older adults must be satisfied with retirement planning to stay healthy. Rothman (2021) found that more individuals are planning for retirement. Kimiyagahlam, Safari, and Mansori (2019) found that financial literacy, planning propensity, and future orientation affect retirement planning, while saving attitude partially mediates the relationships.

Nga (2018) stated that Malaysians' lack of retirement savings leaving children and taxpayers to care for retirees, their retirement savings, financial knowledge, adviser quality, health perception, and social influence. Silva and Dias (2022) examined how financial status, behaviour, knowledge, and attitudes people's wellbeing and found a strong correlation between financial status, financial wellbeing, and overall living wellbeing. Moses (2019) stated that corruption raises operational costs and business failure risk, and thus, reducing institutional corruption will greatly impact business survival and growth.

2.10 Living Standards

2.10.1 Theoretical Literature

The "living standard" includes personal and cultural characteristics, wealth, services, comfort, and survival necessities, and ideal quality of life refers to an individual or family's preferred living standards (Fah, 2010). However, Zemtsov et al. (2015) define living well-being as objective and subjective, and individual well-being depends on external and internal living situations. However, subjective well-being emphasizes individual aspects. Personal emotional well-being includes physical, mental, social, and economic variables. Good financial and mental health depend on knowledge, attitude, and management. The results found that financial attitude, management, knowledge, and behaviour affect financial happiness.

Retirees can live well and suffering from unemployment and poor income among working-age individuals should neglect the new healthy living and housing criteria (Saunders & Bedford, 2017; Saunders et al., (1998). Saving a large amount of from income to wealth improve quality of life (Gokhale, 2000). Munnell et al., (2017) found that developing countries plans retirement and control savings. Munnell, Hou, and Sanzenbacher (2018) found that 50% of working households lose living standards in retirement despite saving and retirement planning requires financial goals while long-term financial satisfaction increases with efficient financial management (Kerkmann et al., 2000; Davis & Weber, 1990). Cude et al., (2006) found that income, employment, age, and marital status affect financial satisfaction and divorce impacts finances immediately, including funding a separate home, dividing assets, and distributing retirement benefits in the long term (Joo & Grable, 2004; Kalra Sahi, 2013; Fan & Babiarz, 2019).

Current lifestyles affect behaviour and financial goals, and individuals spend money on homes, cars, and education to improve their quality of life, sometimes neglecting retirement planning (Meyer, 1996). A "comfortable" retirement requires suffering since the average household's pre-retirement living standards are low. Henry (2009) emphasizes the importance of the age pension to retirement living standards, financial adviser applications and retirement savings were correlated to retirement living standards. Also, found a significant relationship between expert advice and retirement savings goals to reduce choice differences.

Financial satisfaction is a mediator, and demographics and societal factors affect individual salaried classes and also affect finances and women are more risk-averse than men (Finucane, 2000; Flynn, 1994; Slovic,1987; Weber, 2002). Lusardi and Mitchell (2006, 2007a, 2007b) found that women are less financially knowledgeable than men in most evaluations; even intelligent women feel more uneasy than males while making financial decisions (Feather, 2005; Feiveson et al., 2019; Gaudecker, 2015; Gorgievski-Duijvesteijn et al., 2005; Bucher-Koenen & Lusardi, 2011). Gerrans et al., (2014) state that male financial satisfaction increases with financial knowledge, but women's depends on economic status and age affects wealth accumulation (Binswanger & Carman, 2012). Financial illiteracy obstructs young individuals from making financial decisions (Lusardi, Mitchell, & Curto 2010). Income increases savings and interest (Donkers & van Soest, 1999). The lack of low-income savings methods, financial education, and appealing savings incentives may affect investment decisions (Beverly & Sherraden, 1999) and peer pressure affects Malaysian youth's money management like financial experts (Kourtidis, Chatzoglou & Sevic, 2017; Nam, & Loibl, 2021; Duflo & Saez, 2001).

Age, gender, social class, and marital status in financial satisfaction (Pararotta & Johnson,1998; Xiao & Porto, 2017; Joo & Grable, 2004). Binswanger and Carman (2012) found that college graduates save more and examined racing and culture affect economic living and well-being. O'Neill et al., (2005) define economic living well-being as free from financial stress. Prawitz et al., (2006) argued that economic well-being and financial distress are opposite ends. Income, employment, age, and marriage affect financial satisfaction of living standards (Kalr, 2013; Fan & Babiarz, 2019; Joo & Grable, 2004). Economic success, financial adversity, and delayed payments drain funds (Kim & Garman, 2003). Economic well-being includes financial happiness, present and future material comfort, and quality of life (Panjali & Kasilingam, 2015; Smeeding, & Thompson, 2010; Umamaheswari & Kumar, 2014; Vlaev & Elliott, 2017; Shim et al., 2010).

The globally, individual wants happiness, pleasure and satisfaction and living standards are significantly linked with financial well-being to happiness and life satisfaction (Ingrid et al., 2009). Age and marital status did not affect financial satisfaction, but age has little effect on financial satisfaction (Ferrer-i-Carbonell & Frijters, 2004; Ryff, 1995) and older individuals should regulate social interaction and set realistic financial goals (Parrotta & Johnson, 1998; Joo & Grable, 2004). Marriage does not affect financial happiness, and there is no correlation between marital status and financial satisfaction (Fan & Babiarz, 2019; Yamokoski & Keister, 2006).Ajzen (1991) stated that individuals act intentionally, and motivation, subjective norms, and behaviour affect the choice of individuals and perceived behaviour control measures self-confidence, and as per subjective norms so students should save. Franzoi (2006) suggested that social power affects behaviour of socialization and social consequences. Numerous studies show parental financial

socialization (Agnew & Cameron-Agnew, 2015; Kourtidis et al., 2011; Cude et al., 2006; Sam, 2012).

Webly and Nyhus (2006) found that economic socialization, like talking about money with parents and family relationships help children predict the future and be financially responsible. Shim et al., (2010) found that parental influence affects young adults more in financial education, and parents' economic decisions affect children and young individuals. Norvitilis and Maclean (2010) found a strong relationship between parenting styles and US college students' credit card debt and issues. Actively teaching youngsters about money management, including allowances and bank accounts, reduces the risk. Adult behaviour and attitude affect childhood and influence children's money management (Norvitilis & Maclean, 2010) while fellows strongly affect US university faculty retirement savings (Spash, 2021; Zulkarnain, 2022; Kubicek et al., 2011; Duflo & Saez 2002).

Decision-making delays affect monetary expenditure decisions (Laibson, 1997). and individuals react to their surroundings (Frederick et al., 2003) and delayed rewards are less successful (Elizabeth & Minton, 2013). Garrett and Bernheim (2003) found that financial product information might not influence investors' decisions but in social interactions, personal experiences, and external media helps individuals to learn financials (Bernheim & Garrett, 2003). Optimistic individuals save more in the long term and future confidence overestimates expenses (Peetz and Buehler, 2009). Personal, cultural, and financial factors affect retirement planning (Szinovacz, 2003) and affect retirement outlook, quality of life, and well-being (Reitzes & Mutran, 2006). Research shows that financial literacy includes insurance, investing, budgeting, and savings and financial data promotes a healthy financial lifestyle (Boyland & Warren, 2013).

2.10.2 Empirical Literature

Gertler et al., (2012) found that households that invested part of the cash received from the Oportunidades program in assets and cash transfers can achieve long-term increases in consumption and investment through productive activities and can attain higher levels of living standards and a sustainable life. Gertler et al., (2012) results suggest that cash transfers can achieve long-term increases in consumption through investment in productive activities, thereby permitting beneficiary households to attain higher living standards that are sustained even after transitioning off the program.

Raworth (2017) states that the structure of the economy has reduced the living standards and, wealth concentration, and resources with the increasing cost of living, under-consumption, the well-being of the individuals due to ecological and climate crises for improvement of quality of life for the lower consumption level. Angelucci, Attanasio and Di Maro (2012) stated that increased savings dropped in the value of loans and transfers; the conditional cash transfer programs are beneficial in short and long-term livings standards effects to crowd out private savings. Martinez (2004) found positive effects of the program on household consumption and children's human capital and liquidity constrained households facilitate productive investments, which boost consumption. households' ability to invest and cash transfers may effective way to reduce extreme poverty.

Maluccio (2020) stated that conditional cash transfer programs measure the expenditures and investment, and estimated marginal propensity to consume has a direct effect on the investment, while human capital investment has a long-term increase in consumption, resulting in limiting the other forms of investment. Handa et al., (2018) studied cash transfer programs to raise living standards and found long-term effects on food consumption as well as productive outcomes. Also, household spending increased more than

the value of transfers received and increased the living standards. Haushofer and Shapiro (2016) stated that transfer recipients experience large increases in psychological wellbeing and found no effect on levels of stress as households face savings and credit constraints. Therefore, unconditional cash transfers proved to have a significant impact on economic outcome and psychological wellbeing.

Mpaata, Saina and Koskei (2021) found a significant impact of self-control and social influence on saving behaviour also the social influence impact saving actions and self-control. Mustafa et al., (2023) Financial planning makes sure that individuals have money to survive and keep living standards as desired and individuals plan for retirement financials. The results revealed that financial attitude and financial literacy significantly impact retirement planning. Moreover, the role of financial advisors moderates the relationship between financial attitude financial retirement planning and financial literacy financial retirement planning. Li et al., (2023) stated that social endowment insurance is positively related to the possibility of holding risky financial assets and the ratio of risky financial assets. Also moderating role of financial literacy has been found between social endowment insurance and household portfolios, which affects the decision of portfolio in a positive direction.

Alam and Siddiqui (2021) advocated financial self-efficacy positively moderates the effects of financial knowledge and personal saving orientation on money management stress and financial security. Also, materialism moderates the effect of personal saving orientation on both financial wellness dimensions. Elliott (2021) The four financial capabilities like making ends meet, keeping track, planning, and staying informed behavioural dimensional The inability of working classes to sustain a quality of life gained importance. Income is significantly related to the quality of life, and financial capability moderates the income and

quality of life. While financial capabilities as well as decent work produced non-significant findings.

Schwarz et al., (2014) stated that maintaining adequate pension levels is continued challenge in the retirement as most public pension schemes in OECD (Organisation for Economic Co-operation and Development) countries. Mainly pension was driven by cost containment ideas, whereas now shifted to adequacy-oriented interventions consider the increasing duration of retirement and corresponding pension erosion. Cashell (2009) household saving is important as one is financing the investment domestically and accumulation of wealth of the workers to maintain the living standards. There is consumption to minimize the downturn; it has increased saving and growth of the economy, and practical persons are expected to save enough to decline in their living standard on retirement.

Arshed et al., (2022) studied the long and short-run impact of debt on living standards. The results revealed that debts are harming the living standards, while a debt-based policy is recommended. Farooq, Shah, and Rasheed (2021) explored that parental financial socialization, financial attitude, and financial literacy have a significant and positive relationship with prudent financial management practices. However, financial well-being does not have a significant moderating effect on Parental Financial Socialization, Financial literacy, and financial attitude. Asumah (2021) found that financial inclusion significantly reduces poverty incidence for financial activities; savings had the greatest impact on poverty incidence, followed by loans and insurance. Poverty has a negative effect on purchasing insurance. Other factors like the gender of the household head, the location of the household head, and the size of the household significantly moderate the effects of financial inclusion on poverty incidence.

Agabalinda and Isoh (2020) state that formal financial services have been associated with financial well-being and economic growth and increasing formal training and education increases the financial behaviour of individuals and motivation through social effects. further, a positive significance proved between financial literacy and usage of formal financial services and a moderating effect of social learning between financial literacy and financial services with the peer effect of socializing agents. Binswanger & Schunk (2012) Economics and policymakers believe that an individual's household does not save enough to maintain the living standards during retirement but has no commitment to the standards of living needed by saving and pension systems.

Graafland (2020) For life satisfaction economic freedom is linked, but life satisfaction cannot fully be explained with well-being as subjective nature. The relationship between free market institutions, as measured by economic freedom and wellbeing, is moderated by the cultural dimension of long-term orientation. Dimensions of wellbeing: income, community, health, life satisfaction, safety, and work-life balance. looking at interdependencies between culture and formal institutions can increase the explanatory power of internationally comparative research into wellbeing. Binti et al., (2020) Living with a salary is affording necessities like food, shelter and clothes but also interacting respectably in society. The results revealed that variables cost of food, cost of housing, and cost of other essential needs (healthcare, transportation, education, and clothing and footwear) affect the living wage for workers.

Muñoz et al., (2022) stated that social class depends on the source of income, wages and profits and the interpretation of the functional distribution of income in terms of social classes is less relevant than in the past.Camagni (2023) discussed Adam Smith (1723–1790): Smith's legacy involves more than just his contributions to regional science challenges. His

examination of individual behavior—based on self-interest and "self-love" (not selfishness!), "sympathy" for others' joy or sorrow, relationality, and reciprocity—showed a wider, individual, and social objective beyond "opulence": public happiness.

Naranjo and Grimaldos (2022) stated that a state of economic growth is based on population growth, banking expansion and commercial and agricultural. The modern era economic growth analysis is built on six arguments: law and natural order, income, the value of work, trade, demography, and freedom in the eighteenth century, as the foundation of modernity characterized by economic growth based on the free market. Brüggen et al. (2017). Financial success depends upon an individual's current and future goals for quality of life and economic independence. Owusu (2021) found that demographic characteristics, including gender, age, income, marital status, and employment, affect responsible management, attitude, and financial understanding affect financial contentment. Financial management behaviour, attitude, and knowledge affect financial contentment.

Kim et al., (2018) found that financial guidance improves financial results, and decision-making with financial planners helps to understand retirement savings. Individuals who received financial planning assistance saved more for retirement. Financial planners prioritize retirement planning to assist individuals in reaching their long-term financial goals. Yap et al., (2018) stated that family finances are essential for individual financial and living wellbeing and development; both parents must manage and grow their family's resources to be financially safe. Bernheim (1996) reviewed financial wellbeing research and emphasized financial planning with intelligent financial decisions and that individuals need financial expertise, specialized knowledge, and trusted direction to succeed financially. Nedelcu et al., (2023) suggested that senior people prefer international living standards and pensions, and other global financial flows affect older retirees mobility.

Tahir et al., (2022) examined that financial satisfaction ultimately affects financial resilience and life satisfaction, while economic stability and non-impulsivity improve quality of life and finances. Financial satisfaction strongly influences consumer happiness, while impulsive purchases and financial happiness affect life satisfaction and resource allocation.

Anne et al., (2007) argued that uncertainty avoidance in products and culture affects quality perception and behaviour. Hong and Jensen (2004) argued that retirees could continue their lifestyle using New Zealand Superannuation with minimum acceptable retirement living standards. Income and other factors affected the older population's living standards and found a difference of behaviour and quality of life. Barrett and Kecmanovic (2013) examined that retirement improves or maintains subjective wellbeing (SWB), and early job loss or illness has a significant difference in expected and actual retirement income and subjective wellbeing.

Bernheim et al., (2000) stated that individual must save nearing retirement, and financial planning assumes households save enough to get full Social Security benefits and recommends high savings rates and most benefits may decline significantly after retirement. Bernheim et al., (2003) examined life insurance and financial risks among retiring couples and suggested a weak relationship between life insurance and economic openness. According to Binswanger and Schunk (2012), economists and policymakers believe households need more savings for retirement for living standards and influence saving incentives and pension schemes. Bradbury and Mendolia (2012) examined retiree spending and choices and retirees' needs to maintain income for pre-retirement lifestyle, retirement expectancies and quality of life.

According to Woodyard and Robb (2016), financial happiness predicts consumer life satisfaction and living well-being. An individual's behaviour is in accordance with

recommended practices, and subjective knowledge may affect satisfaction and be more related to objective knowledge. Mohanta and Dash (2022) that financial knowledge should include advisors to help a rural individual improve their personal and economic wellbeing. Aydiner and GÜNAY (2017) stated that determined a strong relationship between life satisfaction and quality of life while daily activities moderated life satisfaction and quality with significant impact on retiree quality of life. e. life satisfaction improves older adults's quality of life. Noor et al., (2020) examined a relationship between financial literacy and account ownership. Confidence in financial ability does not increase account ownership and, in Pakistan, depends on gender, marital status, education, occupation, and income, and financial literacy is necessary for economic satisfaction.

Nguyen and Rozsa (2019) examined 314 employed Vietnamese workers' financial literacy and retirement investment advice seeking and found that fundamental and advanced financial knowledge improves retirement investing recommendations. Çera et al., (2021) stated that understanding financial concepts and principles may boost financial happiness and found a significant relationship between financial literacy, economic behaviour, and satisfaction while economic behaviour also mediates financial literacy and satisfaction but has no effect on self-esteem. Hanele et al., (2018) studied participants to detect country-specific behavioural differences in expressing financial values, and they were diverse, but individuals are linked to their values. Gerrans et al., (2014) studied women have higher emotional wellbeing, but men have more financial pride and expertise. Joo (2008) studies a causal model with subcomponents that improve financial wellness and living standards while gender inequality affects all elements of wellbeing, including finances.

Greenberg and Hershfield (2019) claim that financial decisions can affect consumer wellbeing and other financial choices, highlight unresolved challenges, and suggest future

research on financial practices that improve economic, psychosocial, and environmental wellbeing. Hasan (2020) examined fundamental consumption factors like religion and prudence shape consumption behaviour; while adherence and tradition are essential, Yu, Lee, Sirgy, and Bosnjak (2020) examined satisfaction with life improves subjective wellbeing, while happiness and consumption affect the relationship between income and quality of life. MacDonald, Osberg and Moore (2016) examined 70% of a worker's annual wages fund retirement to evaluate retiree living standards. Chen et al., (2023) examined families' retirement planning expectations and situations are essential to understanding households' self-evaluated retirement readiness, as families may lose the quality of life before retirement without retirement income security. Harahap et al., (2022) examined financial risk tolerance, saving behaviour, and herding behaviour as mediators and moderators. Financial risk tolerance and saving behaviour affect financial literacy and retirement planning, while Herding may improve financial literacy and retirement planning. Behaviour as a mediator has minimal effect on financial knowledge and retirement planning; further, retirement planning affects financial risk tolerance and herding behaviour.

Xu et al., (2023) examined direct financial market participation that affects retirement income and participation in the financial market after retirement and boosts retirees' net wealth, excluding government pensions. Çera et al., (2021) financial literacy and inclusion impact financial competence, with economic behaviour as a mediator and stated that financial capability requires financial knowledge, economic behaviour change, and financial services, while Financial skill and attitude affect financial capability and economic behaviour. Nyangarika Bundala (2020) evaluated retirement benefits, gifts, and policies/regulations that affect retirees' socioeconomic development, and pensioners rely on tiny retirement perks like pensions.

Joo and Grable (2004) tested financial behaviours, income stress, knowledge, risk tolerance, solvency, and education affect economic pleasure. Kreiser et al., (2010) found that high uncertainty avoidance and power distance reduced risk-taking. Institutional frameworks affect risk-taking and creativity across countries, while cultural norms and institutions affect entrepreneurial risk-taking and proactiveness. Austen et al., (2022) examined age Pension provides a safety net, retirees with more responsibility and the Superannuation Guarantee, a government-mandated retirement savings scheme, is enhancing the lives of some older Australians.

Lusardi (2007) stated that economic researchers are finding financial illiteracy to understand the reason individuals enter retirement with little or no savings, and households need more economic information to make intelligent savings and investment decisions. Knowledge of saving, retirement, mortgages, and other financial issues is needed to ensure financial decision-making. Munnel et al., (2007) found that 50% of households may not be able to maintain their desired lifestyle after retirement, even if they work until 65 and invest all their funds in annuities, including reverse mortgages. Campana, Vieira, and Potrich (2017) studied that individuals have strong objective financial literacy but low subjective financial wellbeing. Outstanding payments, low credit, and financial restrictions limit savings and spending behaviour. Noone, Alpass, and Stephens (2010) described socioeconomic work engagement status and retirement attitudes affect female retirement planning, and strong association between retirement attitudes and economic living standards, suggesting they may affect financial preparation.

Oishi et al., (2009) found a more significant relationship between financial well-being, and happiness, and culture specifically predicts life happiness. An empirical study shows

that cultural requirements and values as moderators paradigm affect subjective living decisions and wellbeing.

Munnell and Soto (2005) argued that today's retirees' income covers their necessities, and retiree replacement rates correlate with Social Security as the primary source of retirement income. Malrout and Xiao (1995) examined socio-demographic, human capital, work-related, and objective factors that affect retirement income perception and demographic and socioeconomic characteristics lower retirement income. Subjective considerations showed a positive association between pre-retirees' five-year savings plans and retirement income. Prast and Soest (2016) investigated aging population issues and provided policy solutions, including the age at which individuals can receive state pensions, early retirement, and guaranteed excellent retirement to families. Reyers (2019) examined Financial self-efficacy may influence practical financial decisions more accurately. Socioeconomic and demographic factors affect emergency savings for individuals above and below the poverty Henchoz, Coste, and Wernli (2019) financial behaviour depends on economic activity and money attitudes with cultural variables shape people's views on money and debt, making financial literacy efforts more effective.

Schofield et al., (2012) examined that early retirement reduces income and wealth. To maintain the same living levels as an individual without back problems, those with difficulties must stay working or keep their health from worsening. Smith et al., (2002) examined cultural value dimensions to predict whether management direction and advice are accurate while evaluating cultural and values habits. According to Moore et al., (2010), Canadian pension discussions center on seniors' lives, and policy reforms prevent severe living standards from decreasing. If current behaviours and economic conditions continue, more Canadians may require help maintaining their intended spending goals in retirement.

Schmeiser and Hogarth (2013) examined that financial coaching improves non-retired people's economic behaviours and living wellbeing by examining financial advising costs, investment performance, and portfolio allocation. Alshebami and Aldhyani (2022) examined financial knowledge and self-control affect saving practices in the same group while parental and peer influences to improve financial literacy to encourage youth to save. Mustafa et al., (2023) explored that financial literacy and opinions affect retirement planning as advisors monitor financial literacy, perspective, and retirement planning. Ungerer and Strashei (2011) studied that at the individual level, culture affects life satisfaction from varied socioeconomic and found that more significant living standards affect cultural sophistication and life satisfaction. The study indicated that living standards moderate allocentric life satisfaction and life happiness and biocentrism are slightly higher than lower living standards.

Sklansk (2023) noted that senior adults are increasingly dependent on asset managers and caregivers, causing financial and health issues so pension and mutual funds must retain strong trust due to their fiduciary responsibilities. Scobie, Gibson, and Le (2004) boost retirement assets, especially for older people. Mostly individuals do not have retirement savings because they prioritize lifelong spending, and individuals do not save for retirement. Individuals prioritize income over savings and attempt to improve low-income retirees' living standards beyond pre-retirement. Guiso et al., (2006) found that individual cannot change their ethnicity, race, family history, country of origin, or religion, limiting their cultural influence compared to other social capital. Most individuals view culture as permanent and resistant to change because cultural standards shift gradually. Based on cultural factors, decision defines cultural values and affect resource redistribution. Xiao and O'Neill (2018) Strategic planning improves financial stability and consumer wellbeing, and socioeconomic factors affect financial planning as wealthy individuals plan more. The

positive connection between planning and financial ability features suggested that financial planning benefited economic behaviour and living standards.

2.11 Research Gap

Mehmood et al., (2022) and Mulasi et al., (2022) studied the financial behaviour of salaried class. Kish-Gephart et al., (2023) studied the people's preferences in investment behaviour (Adewumi, 2024; Sklansky ,2023; Rahut & Destefanis, 2024; Bhatt & Bhatt, 2013; Geetha ; Ramesh, 2011; Odoemenem, Ezihe & Akerele, 2013; Haushofer & Shapiro, 2016). Active retirement financial market participation affects retirement income. Policymakers and government require to discover factors affecting financial strength and to create schemes to manage individuals money (Kreiser et al., 2010). Further, additional cultural values and institutional factors influence risk-taking and proactive behaviour.

Austen et al., (2022) discovered Australian retirees' retirement income system risks and non-government financial institutions' retirement fund management strategies, influencing the financial system (Munnell et al., 2007). It is estimated that 45% of households may not be able to maintain their preferred quality of life after retirement, even if they work until 65 and convert their financial assets into annuities, including reverse mortgage income. Understanding people's financial management strategies is crucial, given the expected global economic decline. Factors like psychological factors and financial management practices affect financial well-being of individuals (Van et al., 2012; Nivakoski & Barrett, 2019).

Emergency savings protects low-income households from financial emergencies and help to alleviate economic hardship, but many households still need emergency assistance (Shinde, 2021; ZOM, 2023; Naqvi et al., 2023; Friedberg et al., 2023; Handa et al., 2018).

Individual financial capability affects economic behaviour and personal finance management by professional financial advisors (Schmeiser & Hogart, 2013).

Retirement planning is complicated because it involves transferring longevity risk and using many financial products. Numerous studies have examined financial advice affects investment performance and effects on financial behaviour and economic well-being which need further study (Nivakoski, 2014; Lusardi & Mitchell, 2007; Li et al., 2019). Mustafa (2023) states that a comprehensive retirement financial plan ensures retirees have enough money to live comfortably even self-employed individual in developed countries plan for retirement (Trivedi & Soni, 2021; Naqvi et al., 2023; Destefanis 2024; Jakit et al., 2023; Geetha & Ramesh, 2011). Fewer self-employed individual worry about financial retirement planning than in other countries. According to Ungerer and Strasheim (2011) culture shapes personality and motivation, which affect consumer behaviour and life satisfaction, its necessary to consider the link between life pleasure and material goods in multicultural and national studies (Mehmood et al., 2022; Kish-Gephart et al., 2023). Friedberg et al., (2023) studies and recommended health savings accounts and life-cycle saving and implications for retirement preparedness with preferences of individuals (Shukla, 2016; Cera et al., 2020; Carranza & Niles 2019; Harder et al., 2003; Adewumi, 2024; Sklansky, 2023). A study on people's preferences in investment behaviour (KJ, 2017; Bhatt and Bhatt, 2013; Geetha and Ramesh, 2011; Heeb et al., 2023; Falk, 2023; Shaddy et al., 2021; Zahariadis, 2019; Gupta et al., 2021). Scobi, Gibson, and Le (2004) discussed the savings and distribution.

Main macroeconomic issue is household savings the reservation fee , therefore this study used household savings behaviour though survey data to for retirement wealth accumulation though investment. Uncertainty and estimation of retirement wealth, full survivor benefits, and assuming that spending remain at the same level as before retirement.

But it is against the usual pattern of decreasing spending as individual age. The lack of data on individual savings rates makes it difficult to estimate and as expenditures affect consumption definition and accuracy. Savings rates often exceed retirement costs and salaried class may adapt to economic conditions, religious practices rarely change over centuries or ages (Botticini & Eckstein, 2005; Tabellini, 2005). The lifecycle and permanent income hypotheses support to test saving, consumption, and living standards as moderators and their effects on investment decisions in one model to fill the gaps. Most Pakistani research has examined stock exchange investors or household individual but only few has discussed the salaried class therefore, fixed-salary workers' behaviour and choices need further study. The income and savings of Pakistani salaried individual limit their savings, consumption, and investment options as they use personal savings as most popular investment. Thakur's (2018) stated that individual invest rationally and salaried investors value Security, liquidity, tax benefits, and retirement plans, and individual choose cash and bank deposits to protect themselves and take precautions. Dilshad et al., (2024) studied and recommended financial literacy and financial information influence financial decision mediated by financial behaviour of salaried class (Kish-Gephart et al., 2023; ZOM, 2023; Adewumi, 2024; Sklansky, 2023) while Naqvi et al., (2023) studied selection of retirement saving plan for a private-sector employee in Pakistan. Friedberg et al., (2023) studied health savings accounts and life-cycle saving and implications for retirement preparedness (Joseph & Velavan, 2024; Bhatt & Bhatt, 2013; Jain & Mandot, 2012; Heeb et al., 2023; Falk, 2023). Joseph and Velavan (2024) Sadik-Zada (2023) studied resource rents, savings behaviour, and scenarios of economic development (Li, 2024; Rahut & Destefanis, 2024; Achar, 2012). Bloom et al., (2007) studied demographic change, social security systems, and savings recommended by Maluccio (2020) (Cheng et al., 2021; Arshed et al., 2022; Binswanger &

Schunk, 2012; Amaglobeli et al., 2019. Barriers of investment were also discussed and recommend (Jain & Mandot, 2012; Martinez, 2004; Alam & Siddiqui, 2021). Mulasi et al., (2022) needed a study for financial behaviour (Dilshad et al., 2024; Kish-Gephart et al., 2023; Bridges et al., 2022; Bridges, 2022; Xu, 2021 Gupta, 2023; Olawuni et al., 2023; Naqvi et al., 2023; KJ, 2017; Baddeley, 2023; Didwania & Sharma, 2022; Shaddy et al., 2021; Zahariadis, 2019). Also, prospect theory stated that individuals consider possible rewards and expenses (Evstigneev et al., 2013; Gao et al., 2021)

Individual and societal conditions, as well as government policies, economic stability, income levels, and experience, shape investors' investing tastes and knowledge. Salaried class must carefully evaluate their investment options to make portfolio decisions. In Pakistan investment landscape needs more support and visibility from official media outlets and newspapers. Thus, market instruments and stock market operations must understand economic investment options, influenced by growth and return, affect savings. The ability to mobilize and invest resources in a sophisticated and well-structured financial system with many financial institutions and intermediaries affects family savings and investment. Family size, education, life cycle, and post-retirement wage affect savings and investment. A large salaried class is driving economic growth therefore, this study has discussed need of the salaried class with the support of studies recommendation and predicting the financial behaviour of salaried-class individuals life-cycle saving, consumption and retirement planning with investment decision (Gustafsson, 2023; Rahut & Destefanis, 2024; KJ, 2017). The demographics of Pakistan's middle class have a significant impact on the economy and multiple national and international reports stated to save more. In Pakistan individual must know about high-risk or unprofitable investment opportunities as financial ignorance is the issue in Pakistan, while well informed investors make intelligent investment decisions and

use their earned assets efficiently, maximizing earnings and turning a country of savers into investors. Financial literacy protects consumers and investors and improves markets, and financial awakenings help individual to understand and evaluate. Therefore, the salaried class individual with fixed income has been selected on the base of the above discussion with their saving consumption investment and reinterment planning with maintaining their living standards and prevailing investment scams in Pakistan for safer investment inflow in the economy.

2.12 Hypothesis Development

Wang et al., (2024) and Friedberg et al., (2023) studied and recommended the further importance of lifecycle consumption, lifecycle saving, and its implications for retirement preparedness (Baddeley, 2023; Didwania & Sharma, 2022). Mehmood et al., (2023) emphasized the importance of financial factors and the saving behaviour of salaried class with planned behavioural theories like retirement planning. While financial stress for retirement and savings and well-being gap are discussed by Lone and Bhat (2024) with a mediational role of financial self-efficacy. Mulasi et al., (2022) predict the behaviour of the salaried class, and Bridges et al., (2022) recommend studying the social and cultural impact on investment decisions and saving. Naqvi, Rizvi and Shahzad (2023) emphasize studying retirement and saving for the salaried class. Kayarkatte (2023) discussed savings and investment behaviour, while Sadik-Zada (2023) further emphasized the study of savings behavior as economic development. Modigliani and Brumberg (1954) emphasized the theoretical importance of the Theory of the consumption function with the life cycle hypothesis of saving and investment (Friedman, 2018; Barnett, 2003; Palley, 2010) while Barnett (2003) gave importance to study as an ordinal approach of consumption and saving behaviour. Further, the relative and permanent income theory of consumption by Keynes,

Duesenberry and Friedman models the life cycle hypothesis of saving, which needed to be discussed with saving, wealth, supply and investing cash (Oyejide, 1999; Gertler et al., 2012; Buiardi et al., 2020). Millán et al., (2019) stated consumption, savings and transfers as investments, while Harahap et al., (2022) elaborated on financial literacy and saving behavior (Yeung et al., 2023; Banerjee, Niehaus & Suri, 2019; Haushofer & Shapiro, 2016; Raworth, 2017; Binti et al., 2020; Angelucci, Attanasio & Di Maro, 2012). Therefore, from the above studies, gaps, importance and recommendations following the hypothesis are drawn.

H1: *There is an effect of saving behaviour on consumption behaviour of the salaried class.*

Life cycle consumption theory and its importance by Mehmood et al., (2023) and financial factors and affecting the saving behavior of salaried class by Lone and Bhat (2024) with the impact of financial literacy on financial wellbeing as mediating effects (Buiardi et al., 2020; Baddeley, 2023; Didwania & Sharma, 2022; Wang et al., 2024). Dilshad et al., (2024) discussed financial information and financial decisions, while Mehmood et al., (2022) and Mulasi et al., (2022) discussed the importance and need for financial behaviour of salaried-class individuals. Retirement saving and private savings of employees in Pakistan with health savings accounts and life cycle saving with retirement (Dilshad et al., 2024; Trivedi & Soni, 2021; ZOM, 2023; Naqvi, Rizvi & Shahzad, 2023). Friedberg et al., (2023) and Kayarkatte (2023) stated savings and investment behaviour and recommended ABCD Analysis. Sadik-Zada (2023) gives the vital role of savings behaviour and economic development, and the life cycle hypothesis of saving, wealth and capital gives gap between salaried class saving and investment and consumption behaviour and gives the importance and need for utility analysis and consumption (Hira, 2006; Modigliani & Brumberg, 1954;

Friedman, 2018; Barnett, 2003; Palley, 2010; Oyejide, 1999) while Gertler et al., (2012) give importance to consumption behaviour to raise long-term living standards." Harahap et al., (2022) discussed financial literacy and retirement planning with saving and risk tolerance (Yeung et al., 2023; Millán et al., 2019; Banerjee, Niehaus & Suri, 2019; Binti et al., 2020), while others discussed the opportunities on consumption, savings and transfers (Raworth, 2017; Angelucci, Attanasio & Di Maro, 2012).

H2: *There is an effect of saving behaviour on the investment decision of the salaried class.*

Wang et al., (2024) studied life cycle consumption, and Mehmood et al., (2023) discussed the financial factors and saving behavior of the salaried class, while Lone and Bhat (2024) studied the impact of financial literacy investment financial wellbeing and savings (Werner, 2023). Dilshad et al., (2024) found that financial literacy, financial information and savings influence financial decisions Kayarkatte (2023) discusses savings and investment behavior, while Modigliani and Brumberg (1954) examine the life cycle hypothesis of saving, consumption, wealth and capital utility analysis and consumption (Friedman, 2018; Barnett, 2003; Palley, 2010). The theory of the consumption function discussed the need for a modern theory of consumer behavior with an ordinal or cardinal approach, while the relative and permanent income theory of consumption (Barnett, 2003) uses Keynes, Duesenberry, and Friedman models. Therefore, there is a need to discuss salaried class consumption behaviour with investment decisions, and the following hypothesis is drawn (Oyejide, 1999; Haushofer & Shapiro, 2016).

H3:*There is an effect of consumption behaviour on the investment decision of the salaried class.*

Wang et al., (2024) and Mehmood et al., (2023) discussed the importance of financial factors and saving behaviour of a salaried class, while Hussain and Pareek (2023) with life satisfaction living, Dilshad et al., (2024) with financial behaviour. Bridges et al., (2022) discuss the role of social, cultural and capital. Kayarkatte (2023) argued savings and investment behaviour with living standards; other studies gave importance to ongoing gap to study demographic change, social security systems, and savings (Werner 2023; Fan & Lei, 2023; Karthika et al., 2023; Bloom et al., 2007) while Handa et al., (2018) stated unconditional cash transfers raise long-term living standards. Mustafa et al., (2023) and Schwarz et al., (2014) discussed the social challenges of investment and pension, while Cashell (2009) called for the fall and rise of household savings (Binti et al., 2020; Campbell & Hercowitz, 2019; Patel & Patel, 2012). Therefore, from the above-cited literature, gaps and recommendations, the following hypothesis is drawn.

H4: *There is an effect of the living standards on the investment decision of the salaried class.*

Lone and Bhat (2024), Hussain and Pareek (2023) and Dilshad et al., (2024) discussed the importance of financial literacy and financial information mediated by financial behaviour on investment decisions, while Bridges et al., (2022) recommended the role of social and cultural capital on financial success another study by gave the importance of pension level, subjective wellbeing, and preference of care model among older adults with living standards (Xu, 2021; Fan & Lei, 2023; Shao & Li, 2023) moderating role of living standards by (Karthika et al., 2023; Jakit et al., 2023; Achar, 2012). Modigliani and Brumberg (1954) gave the idea of the life cycle hypothesis of saving, wealth, capital and living standards with investment decisions (Friedman, 2018; Barnett, 2003; Palley, 2010). Bloom et al., (2007), Gertler et al., (2012), Millán et al., (2019) and Graafland (2020) ensure

the economic freedom to promote financial wellbeing as moderating and further discussed the importance by Banerjee, Niehaus, and Suri's (2019) and Mustafa et al., (2023) while Elliott (2021) Examined the moderating role of financial capability. Cashell (2009) studied the challenges of the fall and rise of household savings. Agabalinda and Isoh (2020) and Harahap et al., (2022) discussed the mediation of financial risk tolerance and saving behaviour and also spoke Oportunidades for consumption, savings and transfers (Mwobobia, 2022; Yeung et al., 2023; Raworth, 2017; Alam & Siddiqui, 2021; Angelucci, Attanasio & Di Maro, 2012) while other studies the use the self-control moderate the relationship between social influence and savings while supporting studies give the following hypothesis (Li et al., 2023; Mpaata, Saina & Koskei, 2021; Binti et al., 2020).

H5: *There is a moderating role of living standards on the savings behaviour of the salaried class and the investment decision.*

Lone and Bhat (2024) and Straub (2019) discussed the moderating role of self-efficacy on financial literacy on financial wellbeing, while others discussed the social and cultural capital of Hussain (Pareek, 2023; Dilshad et al., 2024; Bridges et al., 2022). Shao and Li (2023) gave the importance of pension level, subjective wellbeing, and preference among older adults (Xu, 2021; Panakaje, 2023; Fan & Lei, 2023; Jakit et al., 2023; Achar,2012). Modigliani and Brumberg (1954) discussed the life cycle hypothesis of saving, wealth, capital and the consumption function of the salaried class (Schwarz et al., 2014; Harahap et al., 2022; Yeung et al., 2023) while Mwobobia (2022) used theory of the consumption function (Friedman, 2018; Barnett, 2003; Palley, 2010) and modern theory of consumer behaviour both ordinal and cardinal approach by (Barnett, 2003) the relative and permanent income theory of consumption Keynes, Duesenberry and Friedman model. Bloom et al., (2007) gave the importance of demographic change, social security systems,

savings (Gertler et al., (2012) and investing and long-term living standards (Millán et al., 2019). Also, Mpaata, Saina and Koskei (2021) used self-control moderators between social influence and savings behaviour. Mustafa et al., (2023) and Cashell (2009) gave importance to the challenges of fall and the rise of household savings. The impact of opportunities on consumption, savings, transfers and living standards (Banerjee, Niehaus, & Suri 2019; Raworth 2017; Handa et al., 2018) discussed the unconditional cash transfers raising long-term living standards while the importance of economic freedom to promote well-being with the mediation of long term goals (Alam & Siddiqui, 2021; Elliott, 2021; Angelucci, Attanasio & Di Maro, 2012; Li et al., 2023; Agabalinda & Isoh, 2020; Graafland, 2020) therefore, the following hypothesis is drawn with gap, importance and recommendation of the studies (Binti et al., (2020; Audretsch & Belitski, 2023; Vovk et al., 2021; Bodie & Merton, 1995).

H6: *There is a moderating role of living standards on the consumption behaviour of the salaried class and investment decisions.*

Mehmood et al., (2023) and Straub (2019) discussed and recommended studying financial factors and saving behaviour of salaried class planned behaviour. Lone and Bhat (2024) recommended financial literacy and the impact of financial literacy on financial wellbeing (Yasin et al., 2024; Nausher et al., 2024; Trivedi & Soni, 2021; Panakaje, 2023; ZOM, 2023). Naqvi, Rizvi and Shahzad (2023) discussed the selection of retirement saving plans for investment of employees of employee in Pakistan, while Olawuni et al., (2023) showed the importance and need of pension level, subjective wellbeing, and preference of older adults (Shao &Li, 2023; ; Doorley & Nolan, 2019; Clark Lusardi & Mitchell, 2017; Blake, 2004). Karthika et al., (2023) and Bloom et al., (2007) argued the importance and role of demographic change, social security systems, and savings. Also, Alam and Siddiqui

(2021) and Elliott (2021) discussed the concept of moderating the role of financial capability (Farooq, Shah & Rasheed, 2021; Bairoliya, 2019; Audretsch & Belitski, 2023; Vovk et al., 2021; Bodie & Merton, 1995).

H7:*There is a mediating role of retirement planning between consumption behaviour on the investment decision of the salaried class.*

Mehmood et al., (2023) discussed the financial factors and saving behaviour of the salaried classes with planned behaviour and financial stress after retirement (Yasin et al., 2024; Nausher et al., 2024). Lone and Bhat (2024) discussed the need for financial literacy on financial wellbeing and the moderating role of financial self-efficacy (Trivedi & Soni, 2021; ZOM, 2023; Karthika et al., 2023). Bloom et al., (2007) gave importance to demographic change, social security systems, and savings for retirement planning (Bravo & Herce, 2022; Saez & Zucman, 2020; Alam & Siddiqui, 2021; Elliott, 2021; Kriese et al., 2019; Rusdianto, 2022; Farooq, Shah & Rasheed, 2021; Mwobobia, 2022; Bairoliya, 2019; Wise, 2007). Demirgüç-Kunt and Klapper (2016) discuss saving for old age as retirement planning in old age, while Bloom and McKinnon (2013) studied demographic change, social security systems, and savings (Zaidi et al., 2012; Deyalage & Kulathunga, 2019; Safari & Mansori, 2019).

H8:*There is a mediating role of retirement planning between scams and the investment decision of the salaried class.*

Kriese et al., (2019) discussed the Selection of a Retirement Savings Plan for a Private-sector Employee in Pakistan (Bravo & Herce, 2022; Saez & Zucman, 2020; Deyalage & Kulathunga, 2019; Safari & Mansori, 2019). Russian (2022) discussed the perception of the need for investment. Wise (2007), Demirgüç-Kunt, Klapper, and Panos (2016) stressed the importance of savings investment for retirees (Morgan & Long, 2020;

Nanda & Banerjee, 2021). Also, prospect theory stated that individuals consider possible rewards and expenses (Evstigneev et al., 2013; Gao et al., 2021) an increase in age and behavioural aspects of individuals (Betz-Hamilton, 2022; James et al., 2014).

H9: There is a relationship between investment scams and the saving behaviour of the salaried class.

Kayarkatte (2023) discussed savings and Investment Behaviour, and Kriese et al. (2019) discussed the importance of safer financial access and investment for the economy (Rusdianto, 2022; Wise, 2007; Demirgüç-Kunt, Klapper & Panos, 2016). Bloom and McKinnon (2013) discussed demographic change, social security systems, savings and safer investment challenges. Zaidi et al., (2012) found the role of aging and its savings for financials (Ameriks et al., 2020; Pagano, 2023; Nuswantara & Maulidi, 2020).

H10:*There is an effect of investment scams on the investment decisions of the salaried class.*

Yasin et al., (2024), Nausher et al., (2024), Nuswantara and Maulidi, (2020), Mehmood et al., (2023), Lone and Bhat (2024), Mohd-Padil et al., (2022) and Schwarz et al., (2014) discussed the importance of pension and retirement and demographic challenges in Asia. Bridges et al., (2022) argued the demographics importance, social and cultural retirement investment (Trivedi & Soni, 2021; Panakaje, 2023). Naqvi, Rizvi and Shahzad (2023) with retirement savings and investment of employees in Pakistan. Olawuni et al., (2023) and Kayarkatte (2023) discussed savings and investment behaviour. Sadik-Zada (2023) recommended studying the importance of saving investment and economic development. Shao and Li (2023) Elderly wellbeing and investment decision pension level, subjective wellbeing, and preference of care model among older adults. Karthika et al., (2023) and a study on people's preferences in investment behaviour (Geetha & Ramesh,

2011). Modigliani and Brumberg (1954) gave the salaried class the life cycle hypothesis of saving, consumption, wealth and capital investment of individuals (Friedman, 2018; Barnett, 2003; Palley, 2010) while the modern theory of saving behaviour both in and the relative permanent income theory of saving, consumption and retirement by Keynes, Duesenberry, Friedman model by Oyejide (1999) and Bairoliya (2019) based and support the following hypothesis. Also, prospect theory stated that individuals consider possible rewards and expenses (Evstigneev et al., 2013; Gao et al., 2021) an increase in age and behavioural aspects of individuals have scams results (Betz-Hamilton, 2022; James et al., 2014).

H11: *There is an effect of retirement planning on investment decisions of the salaried class.*

Fombang and Wanzala (2024), Nausher et al., (2024), Mehmood et al., (2023) discussed the planned behaviour and financial stress and economic, financial factors and saving behaviour of salaried class (Morgan & Long, 2020; Nanda & Banerjee, 2021; Bashir, 2011; Lone & Bhat, 2024; Hussain & Pareek, 2023; Noor et al., 2020; Mehmood et al., 2022; Deyalage & Kulathunga, 2019; Safari & Mansori, 2019). Bridges et al., (2022) role of social, cultural, and financial stress, while others studied and emphasized the preferences and demographics in investment behaviour (Shinde, 2021; ZOM, 2023; Kotian & Aithal, 2024; Samuel & Sharon, 2024; Geetha & Ramesh,2011; Gupta et al., 2021). Also, prospect theory stated that individuals consider possible rewards and expenses (Evstigneev et al., 2013; Gao et al., 2021). Therefore, the following hypotheses are drawn from the above literature.

H12:*There is a relationship between demographics, saving behaviour and investment decisions of the salaried class.*

a. *There is a relationship between demographics on saving Behaviour.*

(Mehmood et al., 2023; Graff, Tang & Zhang, 2008; Hira, 2006; Jamshidinavid, Chavoshani & Amiri, 2012; Jain & Mandot, 2012; Jain & Mandot, 2012; Oyejide, 1999; Elliott, 2021; Asumah, 2021).

b. *There is a relationship between demographics on investment decision.*

(Mehmood et al., 2023; Bridges et al., 2022; Jamshidinavid, Chavoshani & Amiri, 2012; Jain & Mandot, 2012; Jain & Mandot, 2012; Oyejide, 1999; Elliott, 2021; Asumah, 2021).

2.13 Chapter Summary

The domain of investment decisions demonstrates a robust correlation between an individual's savings and spending patterns as a means of generating money. This section has comprehensively analyzed the quantitative and qualitative challenges and concerns that occur when making such decisions. Furthermore, it illuminates the influence of investment scams and societal expectations on an individual's financial situation, leading to poor financial management. The current evaluation of the literature has provided substantial theoretical and empirical backing for contingency theory, which serves as the theoretical foundation for this research. To summarize, this literature study has offered extensive support in three ways: firstly, by examining the backdrop of behavioural economics and its impact on investment decisions as part of an economics review.

Furthermore, this financial flow depiction encompasses the core concepts, theories, and empirical findings related to saving and investing. It can provide valuable insights to individuals, government entities, and policymakers who have a vested interest in this subject matter. Ultimately, this framework offers a fundamental comprehension that can assist individuals and governments in assessing their investment options and prospects for generating economic capital, as well as their influence on individuals' investment choices.

The subsequent chapter addresses the development of the conceptual framework and the formulation of the research hypothesis.

CHAPTER 3

METHODOLOGY

3.1 Overview

This chapter describes a detailed methodology of research, data components with collection criteria, research design, population and participants, sample design, sampling techniques, data collection methods, tools, and tests applied to check the hypotheses to achieve the objective. The present research is based on objectivism and positivism and uses a deductive process to test the study's hypothesis and conclude the theory. It was necessary to collect and analyze empirical data to make sure that the questionnaire, its items, and its constructs were reliable and valid. Finally, a detailed explanation of each step in creating the study's theoretical framework was given.

3.2 Conceptual Framework

The next part is the conceptual framework of the study, including the dependent, independent, moderating, and meditation variables with demographic effects (Figure 3.1). Regression equations are described with an explanation of the variables and their relationship.

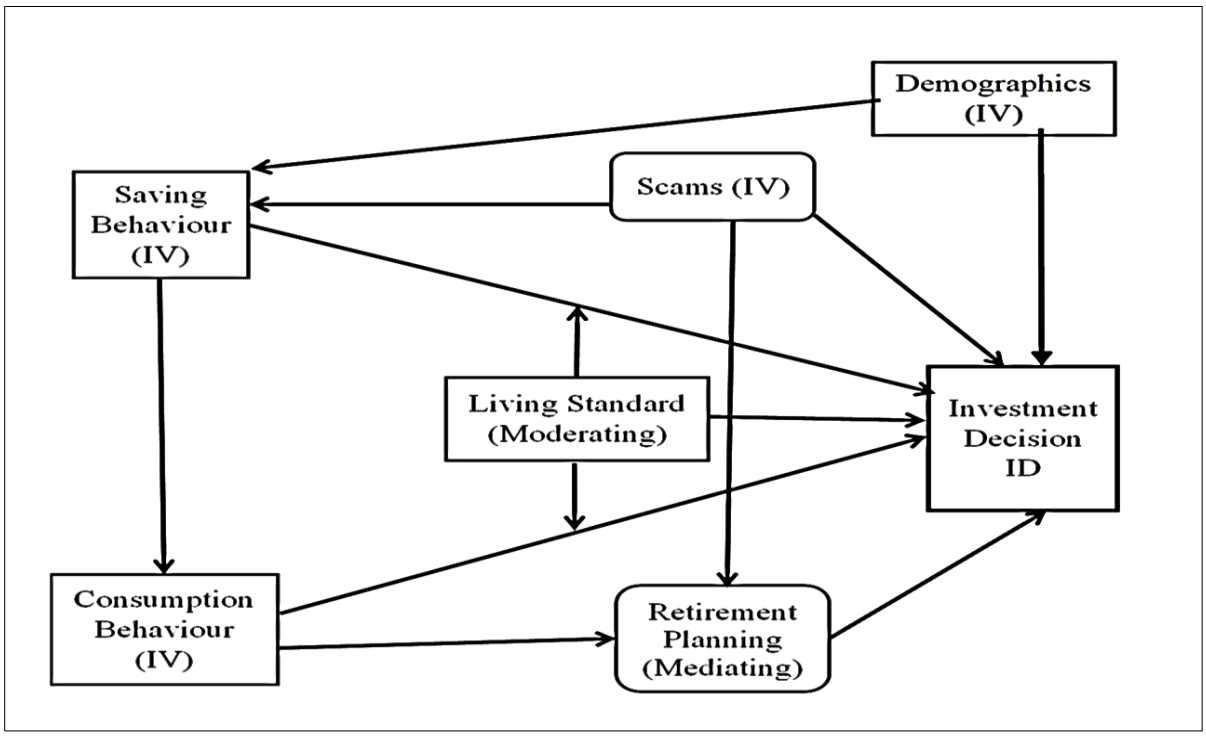


Figure 3.1: Conceptual Framework

3.3 Regression Equations

The following are direct, moderating and mediating models of regression equations used in this study.

3.3.1 SB, CB, IS, LS and ID Model

Investment Decision = Consumption and Saving

$$\text{Investment Decision(ID)} = \beta + \text{Saving(S)} + \text{consumption(C)} +$$

$$Retirement\ planning(RP) + Investment\ Scams(IS) + Living\ Standrds(LS) + \epsilon$$

$$\text{ID} = \beta + \beta_s X_s + \beta_c X_c + \beta_{RP} X_{\text{RP}} + \beta_{IS} X_{\text{IS}} + \beta_{LS} X_{\text{LS}} + \epsilon \qquad \text{Equation 3.1}$$

Where $\underline{Xs}$ = Saving Behaviour, $\underline{Xc}$= Consumption Behaviour, X_{RP}= Retirement Planning, X_{IS}= Investment Scams, X_{LS}= Living Standards, ϵ = Error Term.

3.3.2 SB, CB and ID Model

$$ID = \beta + \beta_s X_s + \beta_c X_c + \epsilon \qquad \text{Equation 3.2}$$

Where $\underline{Xs}$ = Saving Behaviour, $\underline{Xc}$= Consumption Behaviour, ID= Investment Decision, ϵ = Error Term.

3.3.3 Moderation LS Model

Decision-Making Investment = Consumption, Saving and Living Standards

Where moderation of Living Standards is shown as:

$$ID = \beta + \beta_s X_s + \beta_M \mathrm{M}_{LS} + \epsilon \qquad \text{Equation 3.3}$$

$$ID = \beta + \beta_c X_c + \beta_M \mathrm{M}_{LS} + \epsilon \qquad \text{Equation 3.4}$$

Where, $\mathrm{M_{LS}}$ moderator Living Standards between saving and investment $=$ LS x S,

$\mathrm{M_{LS}}$ moderator Living Standards between Consumption and investment $=$ LS x C

$\mathrm{M_{LS}}$ moderator LS $=$ Living Standards,

$X_s =$ Savings Behaviours, $X_c =$ Consumption patterns, ϵ = Error Term.

3.3.4 Mediation RP, CB and ID Model

Investment Decision = Consumption, Retirement Planning, and investment Decision

Where mediation of retirement planning is shown as:

$$ID = \beta + \beta_c X_c + \beta_{RP} X_{\mathrm{RP}} + \beta_M \mathrm{M}_{RP} + \epsilon \qquad \text{Equation 3.5}$$

Were, $\mathrm{M_{RP}}$ mediator $=$ RP, Retirement Planning, $\beta_c \mathrm{C} =$ Consumption Patters, $\beta_{ID}\mathrm{ID} =$ Investment Decision

3.3.5 Mediation RP, SC and IDM Model

Investment Decision = Investment Scams, Retirement Planning, and investment Decision

Where mediation of retirement planning is shown as:

$$\mathrm{ID} = \beta + \beta_{IS} X_{IS} + \beta_{RP} X_{\mathrm{RP}} + \beta_M \mathrm{M}_{RP} + \epsilon \qquad \text{Equation 3.6}$$

Were, M_{RP} mediator = RP, Retirement Planning, β_{sc} SC = Investment Scams, β_{ID} ID = Investment Decision

3.3.6 Demographics and SB Model

SB = SCL+AI+ AGE+GEN+MS+EDU+ FZ+ PRO+ JT+ EXP+ FT+FC+ PRO

is shown as:

$$SB = \beta + \beta_{SCL}X_{SCL} + \beta_{AI}X_{AI} + +\beta_{AGE}X_{AGE} + \beta_{GEN}X_{AGE} + \beta_{MS}X_{MS} + \beta_{EDU}X_{EDU} + \beta_{FZ}X_{FZ} + \beta_{PRO}X_{PRO} + \beta_{JT}X_{JT} + \beta_{EXP}X_{EXP} + \beta_{FT}X_{FT}\epsilon + \beta_{FC}X_{FC} + \beta_{PRO}X_{PRO} + \epsilon$$

Equation 3.7

Where, (SCL)= Pay Scale, (AI)= Annual Income, (AGE) =Age, (GEN)= Gender, (MS)= Marital Status, (EDU)= Education, (FZ)= family size, (PRO)= Profession, (JT) =Job Type, (EXP)= Experience, (FT) =Family Type, (FC) =Family Class, (PRO)= Province, SB = Saving Behaviour

3.3.7 Demographics and IDM Model

ID = SCL+AI+ AGE+GEN+MS+EDU+ FZ+ PRO+ JT+ EXP+ FT+FC+ PRO is shown as:

$$ID = \beta + \beta_{SCL}X_{SCL} + \beta_{AI}X_{AI} + +\beta_{AGE}X_{AGE} + \beta_{GEN}X_{AGE} + \beta_{MS}X_{MS} + \beta_{EDU}X_{EDU} + \beta_{FZ}X_{FZ} + \beta_{PRO}X_{PRO} + \beta_{JT}X_{JT} + \beta_{EXP}X_{EXP} + \beta_{FT}X_{FT}\epsilon + \beta_{FC}X_{FC} + \beta_{PRO}X_{PRO} + \epsilon$$

Equation 3.8

Where, (SCL)= Pay Scale, (AI)= Annual Income, (AGE) =Age, (GEN)= Gender, (MS)= Marital Status, (EDU)= Education, (FZ)= family size, (PRO)= Profession, (JT) =Job Type, (EXP)= Experience, (FT) =Family Type, (FC) =Family Class, (PRO)= Province, ID = Investment Decision

3.4 Research Methodology

As part of this study's methodology, variables were operationalized and measured, a questionnaire was made, data collection methods were used, samples were chosen, and the

quantitative research design was used for analysis (Hussey & Hussey, 2003; Saunders et al., 2009; Van-Maanen, 1983; Easterby-Smith et al., 2009). Myers (2000) argues that qualitative research, unlike quantitative research, provides empirical evidence (Kelle, 2006).

The next part is about the research methods used.

3.4.1 Research Design

Parahoo (2006), Malhotra and Dash (2009), Kothari (2017), and Agarwal (2009) use research designs to collect and analyze data (Agarwal & Mannil, 2023). A study design helps researchers to decide what data to collect, why with the cost and the topics to analyze, assess observe, explain and direction of study (Nachmias & Nachmias, 1996; Churchill, 1995; Sekaran & Bougie, 2010; Cooper & Schindler, 1998, 2006; Sekaran, 2003). This study is exploratory since Pakistan has not examined how saving, consumption and investing behaviour affect decision-making, living standards, and retirement planning with investment fraud. This exploratory study examines salaried employees' savings and investing options and challenges. Cross-sectional studies describe group characteristics (Saunders et al., 2009; Sekaran & Bougie, 2010). This study collected cross-sectional data over three to four months due to time, money, and difficulty accessing a big, spread population (Sekaran & Bougie, 2010). Exploratory research requires greater context and the descriptive research needs more data (Sekaran, 2013; Zikmund, 2013). It also defines phenomena performed when little is known about a situation (Creswell, 2014; Yin, 2003). A causal study examines the variables' cause-and-effect relationship (Bryman & Bell, 2007; Bryman, 1988, 2004; Saunders et al., 2009; Bagozzi & Yi, 2012; Damodaran, 2012; Molenberghs, 2010; Shiau et al., 2019; Ball-Rokeach, 1973).

3.4.2 Quantitative Research Design

This study examined saving and consuming behaviours in the presence of living standards, investment scams, and retirement planning using the investment decisions of salaried federal government employees using life cycle hypotheses. This is quantitative explanatory research as per the research objectives (Hair, Bush, & Ortinau, 2009). This quantitative study used a self-administered questionnaire for government employees from six provinces and one federal state in Pakistan and obtain survey data from a wide range of respondents to ensure a representative sample from each state/province (Zikmund, 2003). Sekaran (2013) found that the sample represented the study population. Analyzing the data with descriptive and inferential statistics helped find correlations between study variables. Hair et al., (2010) defined quantitative research as data collected from formal questions and prescribed responses for analysis which allows for a high number of respondents, population generalizability, connection evaluation, and group comparisons. Numerous quantitative studies on retirement savings and well-being have used questionnaires (Chuanet et al., 2014; Clarke et al., 2012; DeVaney, 2008; Hershey, 2010; Joo & Powels, 2002; Lim, 2002; Malhotra & Witt, 2010). Critical research issues in this study are investment scams and a lack of retirement planning, including saving and spending to sustain worker living standards and examine the relationship between dependent and independent factors with moderating and mediating variables. This study used a quantitative method using self-administered a customized adapted questionnaire to working class of federal government in Pakistan.

The strategy the researcher employed to gather data is summarised in the following section.

3.4.3 Research Strategy

After choosing the strategy and technique, the researcher must plan and construct the study to answer questions, fulfill objectives, improve plan execution, and critically examine its goal (Yin, 2009; Saunders, 2009). Bell (1993) states that pros, disadvantages, and surroundings define a strategy while Wilson (1996) says it relies on the issue and fulfills research goals utilizing data and empirical analysis, whereas Cooper and Schindler (2006) argue that strategy is situational understanding. Depending upon study objective, topic, and design-determined research paradigms, subject, issue, data sources, and aims (Bryman & Bell, 2003; Bryman, 2004; Fink, 1995). Descriptive surveys describe the existing situation, while analytical surveys examine the relationship between two or more variables (Collis & Hussey, 2009). Behavioural economics literature and researchers found that most studies used survey research on investment choices, saving and consuming behaviour, traditional and non-traditional investment trends, living standards, retirement planning, and investment decisions. An analytical survey examined investment decision-making as an inflow of investment and well-being after retirement to sustain living standards. Finally, this study used survey data from a customized questionnaire. In conclusion, this study used survey data, which was collected from an adapted questionnaire.

3.4.4 Data Administration

The researcher can collect data via personal administration, courier, postal, and electronic means (Churchill, 1995). 2010 (Sekaran, Bougie). Saunders et al. (2009). Due to demographic diversity, this study used postal and personal questionnaires surveys being simple, rapid, and affordable (Sekaran & Bougie 2010; Cooper & Schindler, 2006).

3.4.5 Adaptation of Questionnaire

Creating a questionnaire requires extensive validity and reliability testing. Researchers modify surveys to match their goals to save time and money and are easier to understand, Accurate data requires efficient item flow administration and a pilot test to assess preliminary questions to eliminate errors (Sousa et al., 2017). This study has adapted and transformed variables and their items of related constructs from previous studies without compromising the context or concept (Gunawan et al., 2021; Gray, 2021; Kleinetal.,2021; Gleckler, 2021; Epstein et al., 2015; Ferrer et al., 1996; Vallejo-Medina et al., 2017).

The following part is the definition of the variables used in this study.

3.5 Operationalization of Variables

The operational definition gives variables a concrete meaning. Definitions of each session. Operational variables, also known as operationalizing definitions, are how a variable will be defined and quantified in the research under consideration. They are vital to showing reliability because they assure consistency in the results. Table 3.1 shows the variables and constructs with adapted and transformed item numbers from this study questionnaire..

Table 3.1: Summary of Variables, Dimension and Total Number of Items

Summary of Variables, Dimension and Total Number of Items Adapted			
Variables	**Dimensions**	**Adapt and Transformed from (source/author)**	**Number of Items**
Living Standards	*Living Social Cost*	Zabri et al., (2016).	8
	Culture Saving	Zabri et al., (2016).	6
Saving Behaviour	*Inflation*	Gill et al., (2018)	4
	Financial Knowledge	Shanmugam, et al., (2013)	8
	Behaviour of Saving Patterns	Hamza & Arif, (2019)	7
Consumption Behaviour	*Behaviour of Consumption Patterns*	Hamza, & Arif, (2019).	5

Table 3.1: Continued

	Inflation	Gill et al., (2018)	4
Retirement Planning	*Goal Clarity*	Shanmugam & Abidin, (2019)	5
	Personal Needs	Shanmugam & Abidin, (2019)	4
Investment Decision	*Personal Behaviour of Investors*	Islamoğlu, et al., (2015)	9
	Preferences and Knowledge Level	Islamoğlu, et al., (2015)	8
	General Factor	Islamoğlu, et al., (2015)	7
Investment Scams	*Return on Investment*	Chariri, et al,. (2018).	3
	Marketing of Investment	Chariri, et al,. (2018).	4
	Procedure of Investment	Chariri, et al,. (2018).	4
	Investment Management Information	Chariri, et al,. (2018)	4

The following part describes the details of the study population, sampling, and sample size.

3.6 Population

This study examines Pakistani federal government employees on both BPS-17 and BPS-22 scales, both men and women. Table 3.8 shows 397,487 federal government personnel across 203 autonomous, semiautonomous entities, businesses, and authorities from the 2017-2018 report of establishment. Females are 5.05% of this workforce, 20,084. Further study shows that 33.62% are female employees work in BPS 17-22, while 66.38% work in BPS 1-16.

This research includes federal government employees, both men and women, from BPS-17 to BPS-22, autonomous bodies, and corporate personnel. The provinces Punjab had 222,839 employees, Sindh 86,131, Khyber Pakhtunkhwa 58,925, Baluchistan 17,245, the federally administered tribal areas 3499, Gilgit Baltistan 3090, and Azad Jammu & Kashmir 5758 in 2017-18 (Figure 3.2).

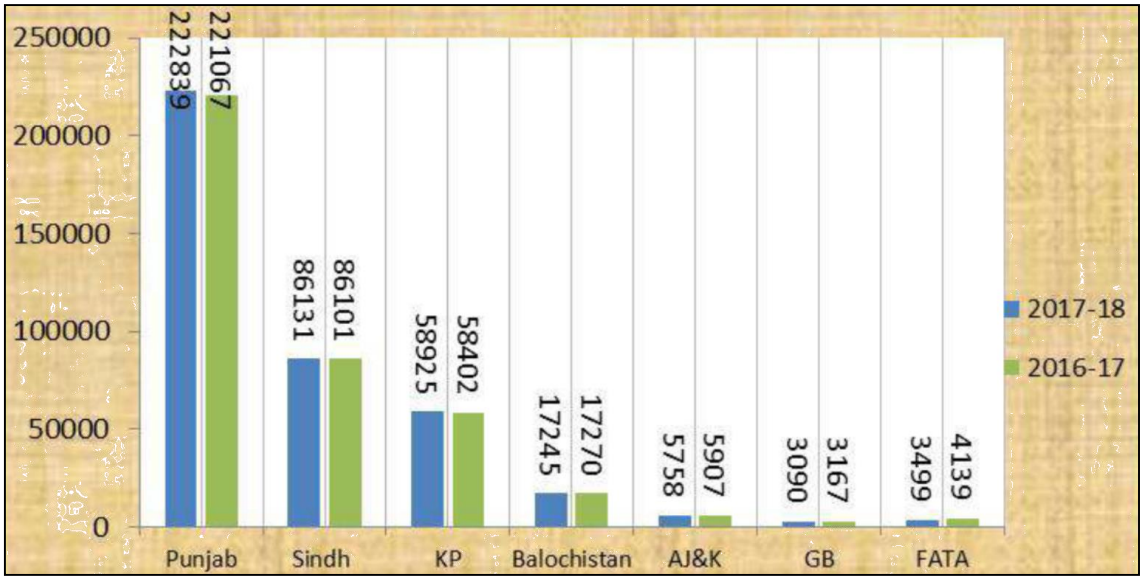


Figure 3.2: Total Strength of the Federal Government Employees
Source: Annual Employee Bulletin 2018, Planning Commission, Pakistan

Table 3.2: Employees in Federal Government, Both Officers and Staff

	Total	**Male Employees**	**Female Employees**
Officer, BS 17-22	67842	61089	6753
Staff, BS 01-16	329645	316314	13331
Subtotal		***377403***	***20084***
Total	***397487***		

Source: Annual Employee Bulletin 2018, Planning Commission, Pakistan

3.7 Research Sampling

In quantitative research, sampling is essential, and the researcher needs to analyze statistical data through a unit of analysis with a good sample in order to conclude the

population (Saunders et al., 2009). Sekaran and Bougie (2013) also explained that sampling is the process of finding sufficient elements to represent the population of the study.

3.7.1 Sample Design

The sample is a group of participants represents the population (Cavana et al., 2001). After several theoretical and practical considerations, the current study's participants were selected using a non-probability sampling method, quota sampling at the first stage, and convenience sampling at the second stage, which considers costs, effort, and time (Cooper & Schindler, 2006). Saunders et al., (2007) describe non-random sampling as dividing the population into two or more quotas with different characteristics. These are defined by the ability of each sample to gather and generalize data to the population. This study analyzed federal government employees as a group. This study examines federal government workers in 6 provinces, 1 state, and 1 federal area of Pakistan on a job scale BPS-17 to BPS-22. The sampling frame represents the Pakistani federal government employees in the BPS-17 to BPS-22 both men and women in public organizations. This research examines how an individual's spending and saving behaviour affect their finances, investment decisions, living standards and retirement planning (Table 3.3).

Table 3.3: Sampling Steps and Measure

Sampling Steps		Measure
1.	Define the population	Government Employees
2.	Determine the sampling frame	BPS-17-BPS-22
3.	Finalize the sampling design	Provincial/State, Federal Area
4.	Select the appropriate sample size	384
5.	Execute the sampling process.	Data collection

3.7.2 Sampling Technique

This Quota sampling, a non-probability sampling method, divided the population into set quotas based on population characteristics in the first stage of this investigation. The sample was divided into quotas for the above Pakistani regions and compared (Tables 3.4). This study used quota sampling to ensure representation from six Pakistani provinces: Islamabad, Punjab, Sindh, Khyber Pakhtunkhwa (KPK), Baluchistan, Azad Jammu & Kashmir (AJK), Gilgit Baltistan (GB), and Federally Administered Tribal Areas. This method provides a complete picture of these regions' governments and public entities (Table 3.4). The researcher picked the population by province quota and then used a convenience sample to collect data. Controlled quota sampling restricts the researcher's sample selection, while uncontrolled quota sampling does not. Therefore, this study used uncontrolled quota sampling with following steps.

a. Divide the population into quotas based on their province, state, and federal area.
b. Divide the sample population into subgroups of the scale of working employees, which is BPS-17 to BPS-22.
c. The weights of each group are calculated.
d. The sample size was calculated as follows.
e. Conducted the data collection in the predefined quotas through second stage convenience sampling.

Table 3.4: Province Wise Share of Federal Employees

Domicile Quota	***BS 17 – 22***	***% Share***
Islamabad	949	*(1.40)*
Punjab	32057	*(47.25)*
Sindh	21330	*(31.44)*
Khyber Pakhtunkhwa	8161	*(12.03)*

Table 3.4: Continued

Baluchistan	3123	*(4.60)*
Azad Jammu &Kashmir	1086	*(1.60)*
Gilgit Baltistan	527	*(0.78)*
FATA	609	*(0.90)*
Total	***67842***	***(100)***

3.7.3 Sample Size

According to Krejie and Morgan's (1970) Table, a sample size of 384 will be enough if the population is above 1,000,000, which is a simple sample size approach. Therefore, a sample size of 385 was picked from the population, estimated using Cochran (1963). Chuan (2006) recommended a sample of 30 to 500 for behavioural sizes since this sample produces 95% accuracy (Hashim, 2010). Due to volatility and sample size, Saunders et al., (2009) advise careful sample selection. Selecting the correct sample size is much more crucial for a homogeneous population without variance (Sekaran, 2003; Hussey, 2009). Cochran's (1963) formula rules for sample and population sizes and population representation, this study has to account for a range of sampling mistakes with a +5% margin. Research on a broader, more diversified population demands a larger sample size and greater precision. Cochran (1963) specifically designed this formula to calculate the ideal population size as below;

$$no = Z^2\ p\frac{q}{e^2}$$

No = Sample Size

Z2 = Desired confidence interval that is 95%. =1.96

P = Estimated proportion of the population. =.5

Q = 1-p = 1-.5 =0.5

E = level of precision. =0.05x1

$$No = (1.96)^2 \frac{(0.5)(0.5)}{(0.5)^2} = \mathbf{385\ Employees}$$

3.8 Data Collection Methods

This study has adopted following data collection method.

3.8.1 Data Collection Procedures

Data collection is also crucial to research design and the researcher collects primary data for the first time (Ghauri & Garinagu, 2010; Fisher, 1995). This study collected data using a modified, structured, self-administered adapted questionnaire (Modell, 2005; Brace, 2008; Lusardi & Mitchell, 2011). The researcher carefully selected a broad group of salaried federal government employees to assure fairness and equitable participation. All federal government entities have headquarters in Lahore, Islamabad, Rawalpindi, Gujranwala, and Multan, making them ideal for data collection and target population contact (Hanjra et al., 2015).

3.8.2 Distribution of Instrument

The researcher first informed organizations of the survey's importance and solicited employee input through the Human Resources Division or Personnel head. The request included a cover letter, UNIMAS authorization letter, and questionnaire. The department/organization approved the survey time and date for personal visits. Respondents received the research brief and sent the questionnaire and permission letter, then distributed and returned them to the researcher. To receive completed responses, the researcher issued

[1]A 05% precision of an estimate in a 90% confidence interval means that the study can guarantee that the population parameter is within the 05% range of the observed sample estimate, except in 10% of the cases.

self-addressed stamped envelopes. The cover letter and questionnaire ensured data privacy, confidentiality, and academic usage with no identification from responders for data secrecy. (Appendix 1).

The next section contains a summary of the questionnaire design, used, and developed.

3.8.3 Questionnaire Design & Development

A questionnaire is a research tool that asks respondents preformatted written questions with closed-ended choices to collect data about the research variables (De Vaus, 1996). Data collecting is easier and faster with a systematic method (Wilson, 1996; Saunders et al., 2009; Sekaran & Bougie, 2010; Ghauri & Grqnhaug, 2010). The questionnaire measures attitudes, specifically beliefs, using the Likert scale, a reliable positivist framework (Bryman & Bell, 2007; Saunders et al., 2009). To reduce biases and improve reliability and validity, the researcher suggested a quantitative study employing a questionnaire and a more manageable data collection method (Cooper & Schindler, 2006).

Thus, significant studies on saving behaviour, spending patterns, investment fraud, retirement preparations, quality of life, and investment choices used the questionnaire. There were no translation issues because the questionnaire was in English, Pakistan's official language and brief was included about research components. It was short enough, so respondents had no time constraints (Cooper & Schindler, 2006; Bella, 1993). Churchill (1995) also considered ambiguously, double, leading, presumptive, offensive, sensitive, hypothetical words and statements in the survey. This study used structured (closed-ended) questions, which are easy to answer and make data analysis and comparison easier by yielding a variety of responses (Alreck & Settle, 1995; Oppenheim, 1996) also has minimal time and cost requirements (Sekaran, 2003; Sekaran & Bougie, 2010). Behavioural ,attitudinal and demographic questions like age, socioeconomic class, etc., are in

questionnaires and the respondents read, understood, and wrote answers accordingly (Kumar, 2011).

3.8.4 Scales of Measurement

Ordinal, nominal, and interval or ratio scales are the most common. The researchers mostly used a five-point Likert scale and evaluation helps establish numerical outcomes for statistical analysis (Cooper & Emory, 1995). Five points Likert scale, ranging from 1 for strongly disagree to 5 for strongly agreeing (Malhotra, 2009).

3.9 Overview of Questionnaire

This study's questionnaire minimize bias and accurately fulfill its goals. The study examined the association between including living standards, savings, consumption, retirement planning, scams, and investment decision to achieve its objectives. The continuous variable scale is 5 points Likert scale for component variable statements: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 A=Agree, and 5 SA=Strongly Agree. The questionnaire undertook a pilot test to strengthen validity, decrease bias, and address ethical issues. The questionnaire covers in four sections; demographics, preferences, investment barriers, saving, consumption, investment scams, retirement planning, living standards, and decision-making.

Part A.

The first element demographics of the salaried class are collected..

Part B.

The second part of the questionnaire consists of the individual salaried preferences regarding investment barriers and savings, consumption, and investment decisions.

Part C.

The final component of the questionnaire covers living standards, saving habits, consumption patterns, investment scams, retirement planning, and investment decisions. The questionnaire appendix includes dimensions and items studied.

Pilot testing is covered in the following section.

3.10 Pilot Testing

Survey research requires a pilot study to find questionnaire flaws in survey question sequencing, appropriateness, respondent understanding and response (Kothari, 2017). The pilot study confirmed that the survey questions met the study's scope and objectives after respondent input (Saunders et al., 2009). A later section discusses pilot testing for the instrument validity part.

3.10.1 Questionnaire Pre-Testing

The researcher contacted respondents from different federal organizations, provinces and states. The pre-test result accepted the questionnaire's wording, premise, and format. Respondents completed the questionnaire in 10–15 minutes. Survey respondents completed 30 questionnaires for the pilot project by male and female federal government employees in scale BPS-17 to BPS-22 via quota sampling. Thus, this study advances behavioural economics, personal savings, investment, and retiree well-being in varied populations. Finally, comments improved the text and as advised, both researchers' supervisors frequently discussed the questionnaire's original draft with other researchers and adjusted accordingly. After receiving comments and suggestions, the researcher edited and altered the questions. The parent organization's consent, cover letter, and permission were added with questionnaire.

3.10.2 Pilot Study Analysis Results

After pilot data collection, reliability analysis checked variable internal consistency (Saunders et al., 2009). A common way for measuring internal consistency is Cronbach's alpha coefficients, which represent the average correlation of scale items zero represents inconsistency, while 1 indicates complete consistency (Pallant, 2007; Sekaran, 2013; Zikmund et al., 2013). Scales from 0.80 to 0.95 are very reliable, 0.60 to 0.70 are fair, and 0.60 or less are bad (Zikmund et al., 2013). Cronbach's alpha coefficients above 0.6 are generally suitable (Sekaran, 2013), while 0.50 to 0.70 are moderately dependable (Hinton, 2014). The pilot study showed the questionnaire's internal consistency and reliability with a Cronbach's alpha coefficient of over 0.70 (Table 3.5).

Table 3.5: Cronbach Alpha Coefficient

Reliability Coefficient for Multiple Items in Pilot Study (n = 30)	
Variables	**Variable alpha α (items)**
LSSCS	.928 (8)
LSCS	.931 (6)
INFS	.922 (4)
FKS	.946 (8)
BSP	.930 (7)
BCP	.912 (5)
INFC	.913 (4)
GCRP	.914 (5)
PNRP	.913 (4)
PBID	.940 (5)
PKIDM	.928 (9)
GFDM	.863 (8)

3.11 Final Data Collection

Personal and professional sources are less effective at gathering data in Pakistan than personal and social ties. In-person surveys are convenient (Sekaran, 2003). The Malaysia Sarawak Campus gave the researcher a support letter (Appendix II) which endorses the study and researcher. The questionnaire accompanied with a cover letter containing instructions, data confidentiality promises, and researcher information assuring honest responses. Before starting the primary survey, the researcher constructed a database of Pakistani federal government bodies with head offices, provincial, area offices, and regional and zonal offices in various cities.(Table 3.6). The researcher provided a consent form and questionnaire (Appendix I) to collect study data and the researcher visited federal agencies that had approved survey data collection. Finally, the researcher polled from November 2021 to January 2022.

Table 3.6: Staff / Officers in the Federal Government

Strength of Officers and Staff Division Corporation / Body Officers in the Federal Government	**BPS-17 to BPS-22 (2017-2018)**
Aviation	5675
Cabinet	966
Capital Administration & Development	1972
Commerce	1791
Communications & Postal Services	301
Climate Change	68
Defence Production	829
Establishment	178
Federal Education and Professional Training	422
Finance	20109
Foreign Affairs	36
Housing & Works	123
Human Rights	22

Table 3.6: Continued

Industries & Production	4475
Information & Broadcasting	2842
Information Technology and Telecommunications	1069
Inter Provincial Coordinator	265
Interior	541
Kashmir Affairs & Gilgit Baltistan	30
Law And Justice	74
Maritime Affairs	655
National Food Security and Research	959
National Health Services Regulations & Coordination	424
National History & Literary Heritage	60
Overseas Pakistanis and Human Resource Development	609
Petroleum & Natural Resources	9028
Planning Development & Reform	114
Power	6932
Privatization	10
Religious Affairs and Inter-Faith Harmony	45
Science And Technology	5100
States And Frontier Regions	35
Textile Industry	206
Water Resources	1877
Grand Total	***67842***
Total Population	**67842**
Sample Size	**385**

3.11.1 Response Rate

Sekaran and Bougie (2010) individually administered questionnaires, response rate is a problem, although 70% or above is acceptable (Babbie, 1991). The researcher personally collected 550 questionnaires from 30-plus federal institutions, including data-collection sites. After the survey, the researcher handled black replies and incomplete questions and rejected 77 incomplete, blank, and useless questionnaires out of 550. The remaining 459 questionnaires had an 83 percent response rate.

3.12 Data Analysis Techniques

Scale confirmatory factor analysis (CFA) validates structural equation modeling (SEM) in the second phase and hypothesis testing concluded with PLS-SEM in chapter 4 results. Cronbach's alpha values confirmed pilot study reliability (Field, 2006; Tabachnick & Fidell, 2007). Confirmatory factor analysis examined the primary survey's validity (Hair et al., 2006). Confirmatory analysis verifies construct validity and selects a collection of measured items that match the items they test (Hair et al., 2006; Hair et al., 2010; Lee & Wang 2003; Sekaran, 2013). Using SPSS-25, the researcher searched for data entry errors and tested the data for statistical assumptions like missing data, outliers, normality, linearity, multicollinearity, descriptive statistics, and reliability. To validate our assumptions, the study used Smart-PLS 3.3.0 to do confirmatory component analysis by PLS-SEM on measurement and path models.

3.12.1 Data Screening

Data screening is essential to ensure the data may not impact the outcome of the study analysis, which involves cleaning the data for analysis to make it usable, reliable, and valid for results.

3.12.2 Missing Data

According to Hair et al. (2006) and Pallant (2007) before the final analysis, the researcher must manage missing data. More data is necessary to improve analytical generalizability. Missing data involves two phases first, researchers must first determine the overall missing value and secondly the researcher must identify the trend of missing values, which may be random or related to an item (Tabachinick & Fidell, 2007).. Missing data is a standard survey research issue since it involves no values or missing values in another variable response and deletion and imputation can handle missing data (Hair et al., 2006).

supports list-wise deletion exclusion and imputation, which replaces values with means, is the most prevalent method. Missing numbers under 10% can be overlooked unless show no random pattern (Hair et al., 2006).

3.12.3 Outliers

Outliers are drawn from the data screening, and they show the major difference between one observation point and other observations present due to the variability of measurement. Scatter plots and box plots display the outliers. There are two different kinds of outliers, namely univariate and multivariate outliers, showing the extreme values.

3.12.4 Normality

Normality refers to the shape of the shape of the data distribution; it is also the first assumption of multiple regression, which shows that the data is usually distributed. Skewness and kurtosis are both techniques used to explain the data distribution..

3.12.5 Linearity

Linearity is referred to as the description of the relationship between independent variables. According to Hair et al., (2010) and Pallant (2005), P-P plots can be used to test the relationship among variables, and the relationship is significant when the plots are near the diagonal line.

3.12.6 Multicollinearity

If there is a correlation between the dependent variables, then multicollinearity exists in the data. Pallant (2005) mostly has a correlation value of 0.80; less is considered normal and otherwise considered multicollinear. Tolerance (R) and variance inflation factor (VIF) measure the multicollinearity in research..

3.12.7 Descriptive Statistics

Descriptive statistics describes details of participants characteristics in the study using data, tables, charts, and graphs. Descriptive statistics includes mean, mode, median, standard deviation, variance, range of data, kurtosis, and skewness (Hair et al., 2010; Sekaran, 2013).

3.13 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) was applied to perform quantitative analysis which allows for studying the relationship between dependent and independent variables with casual modeling, path analysis, or confirmatory analysis (Tabachnick & Fidell, 2007; Becker et al., 2023; Ramayah et al., 2016; Sarstedt et al., 2017a).

Hair et al., (2006) set SEM as the most appropriate and efficient estimation technique for separate multiple regression equations, estimated simultaneously with two models one the structural model denotes the path model that connects independent variables with dependent variables (Tabachnick and Fidell, 2007; Hair et al., 2013; Chin, 1998; Hair et al., 2006). SEM helps to identify the two aspects: causation between dependent and independent constructs and loadings of measurement with respective constructs, factor analysis and hypotheses (Hair et al., 2006; Hair et al., 2013). SEM is extremely applied in behavioural science to determine the casual modeling of complex, multivariate datasets having compound measures of proposed constructs (Hair, 2006; Hair et al., 2013). PLS-SEM deals with statistical modeling without the restriction of sample size, strong underlying theory, and normally distributed data and predict complex and low theoretical information (Kline, 2005; Hair et al., 2013).

3.13.1 Structural Model (Inner Model)

The Structural Model (Inner Model) determines the correlation between the latent constructs in the structural model, path coefficients between the exogenous and endogenous constructs, and R^2, coefficient determination and the strength of the first and higher-order construct is measured by the path coefficient (Chin & Gopal, 1995; Gefen et al., 2000; Anderson & Gerbing 1988; Segars, 1997; Chin, 1998; Hair et al., 2005; ;Straub, 1989; Hair et al., 1998; Shmueli, 2016; Baron & Kenny, 1986; Hair et al., 2017a; Hair et al., 2006; Nitzl et al., 2016 Hair et al., 1998; 2017a; Nunnally, 1967; Rigdon et al., 2019; Nunnally, 1978 Thompson et al., 1995; Jöreskog & Sörbom, 1989 ; Hair et al., 2019; Henseler & Sarstedt, 2013).

3.13.2 Measurement Model (Outer Model)

The measurement model examines the convergent validity, internal consistency reliability, discriminant validity, and model fit indices. To achieve Convergent validity, the value of the scale items loads the construct intended in the study and compares the validity across constructs in the model. Internal reliability deals with only one construct and is different from the reliability (internal consistency) (Gefen & Straub, 2005; Boudreau et al., 2004). The minimum average extracted (AVE) is 0.5, the factor loading of the indicator on the construct is 0.5 (Hair et al., 2017a; Straub & Gefen, 2005; Boudreau, 2004; Barclay et al., 1995; Chin, 1998) and the minimum reliability of the construct is 0.7 (Chin, 1998; Fornell & Larcker, 1981). Reliability "concerns the degree to which the scores are free from random measurement error" in smart PLS, composite reliability is used instead of Cronbach Alpha, and the minimum requirement of the reliability of construct of 0.7 (Diamantopoulos et al., 2012; Drolet & Morrison , 2001; Chin, 1998; Fornell & Larcker, 1981; Hair et al., 2005). Discriminant validity tests whether the latent constructs differ (Chin et al., 2003;

Fornell & Larcker, 1981). Discriminant validity requires that the correlation between indicators and their construction be higher than between indicators and other constructs (MacKenzie et al., 2005). The scale items load has strongly on the intended construct and weak on the unintended construct (Gefen & Straub, 2005) and it can be measured using the cross-loading and square root of AVE's. Scale items of the latent construct must construct the across diagonal weakly (Chin et al., 2003; Fornell Larcker, 1981; Voorhees et al., 2016; Straub & Gefen, 2005; Straub et al., 2004). The square root of average variance extracted (AVEs) is measured by the diagonal with other values on each column, and the latent construct is more significant than each value showing that the discriminant validity of the latent construct is satisfactory (Chin, 1998; Fornell & Larcker, 1981; Gefen & Straub, 2005). The model fit indices have the following measures average path coefficient (APC), average R-squared (ARS), and average variance factor (AVF) are absolute values of the path coefficient, ARS index represents the absolute value of the model's path coefficient Hair et al. 2005; Kline, 2005; Kock, 2012; Danks & Ray, 2018; Tabachnick & Fidell, 2007). The AVF is the multicollinearity of the model. The acceptable value for APC and ARS is 0.05 level, and the AVIF is lower than 5 (Hair et al., 2005; Kline, 2005; Kock, 2012).

3.14 Testing of Hypotheses by PLS-SEM

This PLS-SEM investigation investigated hypotheses. SEM analyzes variable strength and the link between dependent and independent variables in psychology, managerial economics, and the social sciences due to its robust statistical theory. Standardized estimates and t-values per PLS-SEM assumptions evaluated study hypotheses. The final data analysis excluded missing and outlier data. Normality, linearity, homoscedasticity, and multicollinearity verified PLS regression. The scale underwent confirmatory factor analysis (CFA) after exploratory factor analysis (Hair et al., 2017a). In

459 cases, Smart-PLS software verified the study's measurement and structural models. Pre-inference reliability and validity tests ensured that all measurement scales were satisfactory. After making assumptions, the researcher presented the results and evaluated the projected values. Chapter 4 presents the study results. Chapter 4 covers the study's findings.

3.14.1 Issues of Reliability and Validity

It is critical to assess both reliability and validity thoroughly to ensure an adequate level of research (Pallant, 2007). Thus, this study has diligently conducted statistical analyses to address any potential concerns related to reliability and validity..

3.14.2 Reliability Analysis

According to documentation and studies, dependable instruments produce consistent results. Cronbach Alpha values over 0.7 are acceptable. The uniformity of repeated measurements under the same conditions is called reliability. Testing and dependability minimize discrimination (Rigdon et al., 2019; Cooper & Emory, 1995). A pilot analysis showed that numerous statistical methods processed the primary survey questions reliably (Cooper & Schindler, 2006). The study assessed the internal consistency of the Likert scale item using Cronbach's alpha. Items should have higher construct internal consistency for a relevant scale (Aguirre-Urreta and Rönkkö, 2018). Thus, a higher alpha implies item association with other questions. Scale value from 0 to 1 enhances Cronbach's alpha. A valid Cronbach's alpha is 0.6 (Pallant 2007), and construct measures are valid at 0.70–0.90.validity.

3.15 Validation of Results

Validity measures what is supposed to be measured, and the conclusions are precise (Saunders et al., 2009). Validation is done through different methods, and this study has used the following validity used by the researcher.

3.15.1 Construct Validity

Measurement presents the concept and connection (Rigdon et al., 2019; Chin, 1998; Hair et al., 2006). Each concept was carefully selected after pilot testing. Next, Cronbach's alpha was used to examine the constructs' convergent validity, which means they all meet the uni-dimensionality requirement..

3.15.2 Statistical Validity

Statistical validity recognizes that statistical tests were used to reach the result (Saunders et al., 2009; Hair, 2013). Reading literature and consulting experts gives it confidence in data analysis. Missing values and outliers are used for data screening. Multicollinearity, homoscedasticity, normality, and linearity were tested against the data. (Aguirre-Urreta & Rönkkö, 2018).

3.15.3 Internal Validity

To achieve internal validity, it is crucial for researchers to carefully control and manipulate extraneous variables while conducting their study (Saunders et al., 2009). Furthermore, relationships between the key variables of the study should be drawn from existing literature and controlled for across multiple selected variables (Hair et al., 2017a; Cook & Olive, 2008).

3.15.4 External Validity or Generalisability

They generalize the findings to a larger group, resulting in external validity (Chin, 1998; Cook & Olive, 2008; Saunders et al., 2009). Although generalizing the study is complex, the researcher's decision to choose a non-random sample of the population due to time constraints helped generalizability. The sample and selection sizes were adequate for precise results. Replicating the study is the best way to assure generalizability..

3.16 Mediation

A mediator is a construct that affects the relationship of independent and dependent constructs, producing an indirect effect in between (Baron & Kenny, 1986) and the indirect effect is consistent with mediation (Hair et al., 2006). Mediation is the term of psychological literature, while an indirect effect comes from sociology. This study used to determine the indirect effect of one construct on the other variable with the effect of a mediator constructs interchangeably called mediation. An indirect effect refers to the effect of a construct on another that is mediated by an intervening construct in a model (Pituch & Stapleton, 2008).

Innervation of a third variable between two variables mediates. More The PLS path model shows that exogenous mediator changes affect endogenous construct changes. The mediator controls the mechanism process between two constructs (Svensson et al., 2018). The strength of mediator variable correlations shows cause-and-effect links between constructs (Nitzl et al., 2016). One simple mediator is a simple mediator, but the path model may accommodate multi-mediator variables (multiple mediator analysis). Retirement planning mediates consumption and investment decisions, investment scams, and retirement planning in this study. According to Baron and Kenny (1986), a mediator links independent and dependent conceptions, indirectly affecting their relationship. Psychology literature calls this indirect effect mediation. However, sociology calls it an indirect influence (MacKinnon et al., 2002). Smart-PLS 3.0 estimates mediating effects using Baron and Kenny's (1986) criteria (Kock, 2011). See also Nitzl et al., (2016) and Cepeda et al., (2017) for further information on PLS-SEM systematic mediator analysis. In SmartPLS, the PLS-SEM algorithm and bootstrap technique provide direct, total indirect, particular indirect, and overall effects. Mediation analysis is possible with SmartPLS findings and reports (Hair et al., 2017).

3.17 Moderation

Moderation strengthens the link between two variables by introducing a third variable. A moderator shapes the link between a dependent and an independent construct (Hair et al., 2006; 2022). This moderator can change the direction and intensity of the link, showing that data heterogeneity is crucial to comprehending these two components. An accurate examination of a variable's moderating influence in the model requires other dependent variables (Kock, 2011). Living standards moderated saving and investment decisions in this study. Also, living standards moderate spending and investment decisions. Chapter 04 reports the Smartpls-3.0 moderation results. The conceptual model in Figure 3.1 shows the moderating path (Hair et al., 2022; Becker et al., 2018; Ringle et al., 2022).

3.18 Demographics Relationship

This study has compared the effect of demographics with the saving behaviours and investment decisions of the salaried class by Pay Scale (SCL), Annual Income (AI), Age (AGE), Gender(GEN), Marital Status (MS), Education (EDU), family size (FZ), Profession (PRO), Job Type (JT), Experience (EXP), Family Type (FT), Family Class (FC), Province (PRO). This result has been determined by converting the continuous variable of the saving behaviour and investment decision into a categorical variable through the Chi-Square Test.

3.18.1 Chi-Square Test

The chi-square test is essential for determining correlation and comparing observed and expected findings. This test determines if the observed mismatch between actual and expected data is due to random variation or a causal relationship between variables. Thus, the chi-square test is helpful in understanding and analyzing the relationship between these two category variables. A robust statistical method, the chi-square test, shows how much a randomly picked sample differs from the study's expectations. This helps with categorical

variables. The goal is to assess the data's fit to the expected distribution. The Chi-squared test can determine whether data matches a theoretical probability distribution like the normal or abnormal distribution. The Chi-squared test evaluates regression model fit on validation and test datasets. In order to reject a null hypothesis, the tests use degrees of freedom and the number of observations made during the experiments. As the sample size grows, dependability increases. Use the chi-square statistic to measure a variable at the nominal (categorical) level with mutually incompatible categories. Mumba and Kraemer (2019) employed a chi-square statistic to determine if self-reporting users were more likely to revert than non-self-reporters. At the nominal level, self-reporting is either true or false. This statistic compares proportions for statistical significance. Test the null hypothesis by comparing observed proportions to what they would be if the groups were identical (Mumba & Kraemer, 2019; Judge, 2017; Gray et al., 2017). Chi-square tests fall into two groups. Independence means two or more variables are unrelated. Statistics uses the Chi-Square Test of independence, which is based on inferential statistics, assuming independence. It determines the likelihood of a link between two variables. There are counts of values for two nominal or categorical variables in this non-parametric test. This test requires a significant sample size and independent observations. The Chi-Square Test compares observed results to anticipated values. When examining a randomly selected sample with a categorical variable, the Chi-Square test is best. Data analysis often uses the Chi-square test. Survey response data researchers benefit from this analysis. Research might include political science, economics, and consumer and marketing research.

3.19 Research Hypotheses

- H1:There is an effect of saving behaviour on consumption behaviour of the salaried class.

- H2:There is an effect of the saving behaviour on the investment decision of the salaried class.
- H3:There is an effect of the consumption behaviour on the investment decision of the salaried class.
- H4:There is an effect of the living standards on the investment decision of the salaried class.
- H5:There is a moderating role of living standards on the savings behaviour of the salaried class and the investment decision.
- H6:There is a moderating role of living standards on consumption behaviour of the salaried class and the investment decision.
- H7:There is mediating role of retirement planning between consumption behaviour on the investment decision of the salaried class.
- H8:There is a mediating role of retirement planning between scams and the investment decision of the salaried class.
- H9:There is a relationship between investment scams on saving behaviour of the salaried class.
- H10:There is an effect of investment scams on the investment decision of the salaried class.
- H11:There is an effect of retirement planning on investment decisions of the salaried class.
- H12:There is a relationship between demographics, saving behaviour and investment decision of the salaried class.
    a. There is a relationship between demographics on saving Behaviour.
    b. There is a relationship between demographics on investment decision.

The study's primary ethical concerns are covered in the next section.

3.20 Ethical Consideration

Every Ethics is considered throughout the study process to ensure that the final report accurately depicts all data and relevant findings (Sekaran & Bougie, 2010). No research participants—respondents, researcher, or UNIMAS—experienced damage, discomfort, suffering, shame, or privacy violation due to strict process ethics. Following all ethical criteria protected the researcher's, institution's, organizations, and study participants' interests (Easterby-Smith et al., 2009). Before data collection, respondents briefed participants about the research's title and purpose (Appendix III). The questionnaire included the researcher's name and contact information to enhance respondents' confidence, encourage genuine responses, and ensure they knew who they were dealing with (Easterby-Smith et al., 2009). Participants were not named to ensure confidentiality during the research process. The researcher pledged to keep respondents' information confidential and use it just for this study (Zikmund, 2003). Therefore, the report solely uses aggregate results. Respondents consented to the questionnaire's research goal-related questions (Sekaran & Bougie, 2010). To reduce data biases, the researcher personally surveyed and interacted with government personnel on a scale according to the study population. In summary, the researcher administered the survey ethically and with integrity. Every step of survey research requires a competent approach to data collection and applicable conditions.

3.21 Chapter Summary

This chapter explains the research objective and all research philosophy and paradigm assumptions. It also explains the data collecting and methodological approaches used to achieve the research goals. The final research plan was briefed to address research questions. All the reasons, pros, and cons of different methods and strategies are in this

chapter. In conclusion, objectivism underpins this study's methodology. Determinism, realism, positivism, and nomothetic underpin the study. The functionalist perspective dominated this study. Quantitative approaches employ surveys and questionnaires tested on probability sample methods using the deductive approach. This study is exploratory and cross-sectional. This chapter also discusses hypothesis testing statistics and study ethics.

The following chapters of this research project include the empirical findings.

CHAPTER 4

RESULTS AND ANALYSIS

4.1 Chapter Overview

This chapter investigates descriptive statistics and regression analysis to analyze hypothesis testing and the relationship between dependent and independent variables and utilize statistics to achieve goals and answer research questions. In addition, this chapter covers descriptive statistics, variables, demographics, hypothesis testing, and the outcome of the main findings.

4.2 Characteristics of Study Sample

The sections will provide the characteristics of government organization employees as respective participants with their titles and describe the types of individuals who participated in the survey.

Table 4.1: Total Number of Federal Government Employees

Domicile	***Officers in Scale BS 17 – 22***	***% Share***
Islamabad	949	*(1.40)*
Punjab	32057	*(47.25)*
Sindh (R+U)	21330	*(31.44)*
Khyber Pakhtunkhwa	8161	*(12.03)*
Baluchistan	3123	*(4.60)*
Azad Jammu &Kashmir	1086	*(1.60)*
Gilgit Baltistan	527	*(0.78)*
FATA	609	*(0.90)*
TOTAL	67842	***(100)***

Source: Annual Statistical Bulletin of Federal Government Employees 2017-18

Table 4.1 describes the number of federal government employees working in different job scales from BPS-17–to BPS-22 and their share with respect to their six provinces and one federal area. The details of the population and sample are described in Chapter 3.

4.3 Descriptive Statistics of Demographics

Demographic and descriptive factors describe survey participants' physical traits and characteristics like age, job scale, annual income, annual savings, gender, number of children, job experience, and job nature etc., The results and details of the salaried class demographic variable are given below (Table 4.2).

The characteristics of survey federal government employees are summarized below.

4.3.1 Profile of Survey Employees

This study has calculated the number of government employees working in federal government organizations in Pakistan, irrespective of gender. The participants' demographic factors, namely gender, job type, family type, province, family class, job experience, profession, family size, qualification age, total annual savings, and total annual income job scale, were collected. These results are summarized in Table 4.2. (Part 1 of Annexure-1).

4.3.2 Gender

The gender of the participants in the survey is male and female and most of the participants were male with number 352 (76.7%), and females were 107 (23.3%). The reason behind this may be the possibility of a small number of women working and social constraints of household responsibilities, low wages, extended working hours, etc., for women in organizations. These findings indicate that males are dominant in society, but females also play roles in different Federal government organizations (Table 4.2).

4.3.3 Job Type

Job type means the duration of the job, whether it is contractual for some years or permanent until 60 years of age, called permanent and contract. The permanent employees were 297 (64.7%), and the contract employees were only 162 (35.3%) as participants. This means that there are more permanent employees than contract employees having long-term goals than contract employees (Table 4.2).

4.3.4 Family Type

Family type means that a salaried person is living in a single-family system (separate family system) or a combined family system with more families in one place. The results showed no considerable difference between the types of respondents' families, as there are single families (216) 47% and joint family participants 243 (52.9%) of people, as described in Table 4.2. Therefore, there may be differences in saving and consumption options and behavior depending on the family type, single or joint family system.

4.3.5 Province

A country is divided into provinces based on different social, cultural, and geographical areas with different populations. Federal government employees belong to six different provinces of Pakistan, namely, Punjab, Sindh (rural and urban), KPK, Baluchistan, Gilgit Baltistan + FATA and AJK, including the Federal Area (Islamabad). Table 4.2 shows that the number of government employees is higher in Punjab province 126 (27.45). The lowest number of employees was from AJK 14(3.05), followed Gilgit Baltistan and FATA 34(7.41). Baluchistan province has employees 43 (9.37) working in federal organizations, while Sindh province is leading with 82 (17.86%) of the total participants, while Islamabad has 89(19.39) participants. This means that the participants were from different areas, cultures, geographical areas, and societies in Pakistan.

4.3.6 Family Class

There has been a difference in the provinces of participants with distinct cultural, consumption, and income patterns. Therefore, family class means having an income level and asset ownership from lower to higher (PSLSM, survey 2021). The family class is divided into five major categories: upper-class(rich), upper-middle-class, middle-class, lower-middle-class, and lower-class(poor). Table 4.2 indicates 163 (35.5%) upper-middle-class families; in contrast, the lower class had 81 (17.6%) and the middle-class had 75 (16.3%) individuals among the participants. Only 96 (20.9%) of the upper class and 75 (16.3%) of the middle class participated. The findings revealed that the upper-middle class has more job opportunities, while the lower-middle class has the lowest opportunities in government organizations.

4.3.7 Job Experience

Job experience is the number of years a person has been doing a job in an organization or sector. The participants' job experience results indicate that participants with experience higher in number 121 (26.4%) from 16 to 20 years and 21-year-olds are 111 (24.2%) in number. In contrast, the age above 26 was only 57 (12.4%). Only 11 (2.4%) had 1–5 years of experience. The findings point out that the participants' 16 to 25 years of experience were higher among the 223 survey participants (Table 4.2).

4.3.8 Profession

There have been different positions of salaried class employees of the federal government playing different roles and numbers of employees with respect to their profession. The results of the professions of survey participants given in Table 4-2 reveal that the engineering profession was 100 (21.8%), medical were 69(15), and the legislative department was the highest at 113 (24.6%) participants and 71(15.5) participants were in

business, accounts and admin profession. The lowest number of employees is in the law-and-order profession, 9(2%), with other professions having 24 (5.2%), the second lowest of participants professions, while academics profession was 73(15.9). The difference in profession may be due to different choices of education, job opportunities, and the number of degrees available in Pakistan for these jobs. Additionally, the professionals who work for this organization have announced a difference in pay: basic pay plus a special professional allowance.

4.3.9 Family Size

The family size means the number of family members the participants have. Table 4.2 shows that participants with four members were 144 (30.7%), and the lowest number was above five members, which is 9 (2%). The family size of one member was 21 (4.6%) of the overall participants, with three and two members being 108 (23.5%) and 62(13.5%), respectively, while five members were 118 (25.7%) participants. It means that employees of higher member sizes will spend more than their income on different expenses, such as day-to-day household maintenance, education about their children's health, etc.

4.3.10 Qualification

The qualification of the participants is also considered a descriptive variable used in this study, as the number of years of study. The highest number of qualified persons are master's degree holders, 202(44), bachelor's degrees were 102 (22.2%), M.Phil. were 151(32.9%), and only 4 (0.9%) were Ph.D. while The highest score was for master's degree-holder employees, 202 (44%). The difference in qualifications is due to job requirements and attitudes toward qualifying education before or after the job. The qualification affected his savings and investment behaviour, even though he could manage the resources better.

4.3.11 Age

It is a significant factor in the demographic variables as there is diversity in actions, practices, and possessions about retirement after 60 years. The highest aged participants, 136 (29.6%), were 41 to 50 years old, and the lowest was 67 (14.6%) for those 31 to 40 years old. Only 94 (20.5%) and 89 (19.4%) were aged 51–60 years and 61 years and older, respectively. The youngest employees, 73 (15%), were only 21–30 years old.

4.3.12 Total Annual Income

The income of the respondents has been defined in this research at five levels in Pakistani rupees (PKR) annually. An individual's income also matters for his savings and investments, and they get income up to 60 years after retirement need for their day-to-day expenditure. The results of total annual income reveal that 195 (42.5%) were at a higher level of 1260000–1500000, and the second highest was 145 (31.6%) between levels Rs. 750001–1000000, 1000001–1250000 were 92(20%), and the lowest was 3 (0.7%) Rs. 100000–750000. The highest income level, 1500001 above, was about 24 (5.2%). Therefore, there is a difference in the incomes of the participants, which defines the saving and consumption behaviour.

4.3.13 Total Annual Savings

The respondents' savings were defined annually in six levels, from 0 to 500001 above. Only 93 (20.3%) of the participants have annual savings equal to zero; in comparison, the highest savings rate was 108 (23.5%) from 50000 to 100000, and only 42 (9.2%) were saving more than 500001 and above, which is the highest savings in Pakistani rupees among the participants. While 66 (14.4) and 58(12.6) participants had 100001-200000 and 20001-300000 annual savings, respectively. The reason may be a difference in income level, other sources of income, consumption behaviour, and expenditure patterns.

4.3.14 Job Scale

There are applicable job scales from the Basic Pay Scale (BPS-01 to BPS-22) for lower and higher staff. This study has used only scales from BPS-17 to BPS-22. The results reveal that the BPS-17 133 (29%), BPS-18 147 (32%) and BPS-19 149 (32.5%) participants were higher in number scales with almost equal percentages among other levels. The second lowest was BPS-17 133 (29%), and only 6 (1.3%) and 7 (1.5%) were the lowest BPS-22 and BPS-21 respectively. BPS 18 and 19 had the highest number of participants, and the lowest number of participants was only in BPS-21 and BPS-22, which is about the higher middle-level management. The scale of the employees is different due to their entry into that job scale and their time scale promotion from a lower to a larger scale with job experience and qualifications.

Table 4.2: Demographics of Participants

Demographics		**No *(Percent)***
Gender	Male	352 *(76.7)*
	Female	107 *(23.3)*
Job Type	Permanent (P)	297 *(64.7)*
	Contract (C)	162 *(35.3)*
Family Type	Single	216 *(47.1)*
	Joint	243 *(52.9)*
Province	Islamabad	89 *(19.39)*
	Punjab	126 *(27.45)*
	Sindh	82 *(17.86)*
	KPK	71 *(15.47)*
	Baluchistan	43 *(9.37)*

Table 4.2: Continued

	Gilgit Baltistan+FATA	34 *(7.41)*
	AJK	14 *(3.05)*
Family Class	Upper-Class	96 *(20.9)*
	Upper Middle-Class	163 *(35.5)*
	Middle-Class	75 *(16.3)*
	Lower Middle-Class	44 *(9.6)*
	Lower Class	81 *(17.6)*
Job Experience	1 to 5 years	11 *(2.4)*
	6 to 10 years	70 *(15.3)*
	11 to 15 years	89 *(19.4)*
	16 to 20 years	121 *(26.4)*
	21-25 year	111 *(24.2)*
	26 years and above	57 *(12.4)*
Profession	Engineering	100 *(21.8)*
	Medical	69 *(15)*
	Business & Accounts & Admin	71 *(15.5)*
	Legislative	113 *(24.6)*
	Academics	73 *(15.9)*
	Law and Order	9 *(2)*
	Others	24 *(5.2)*
Family Size	1	21*(4.6)*
	2	62 *(13.5)*
	3	108 *(23.5)*
	4	141 *(30.7)*

Table 4.2: Continued

	5	118 *(25.7)*
	above 5	9 *(2)*
Qualification	Bachelor	102 *(22.2)*
	Master	202 *(44)*
	M.Phil.	151 *(32.9)*
	Ph.D.	4 *(0.9)*
Age	21-30 years	73 *(15.9)*
	31-40 years	67 *(14.6)*
	41-50 years	136 *(29.6)*
	51-60 years	94 *(20.5)*
	61 years & above	89 *(19.4)*
Total Annual Savings	0	92 *(20)*
	50000-100000	108 *(23.5)*
	100001-200000	66 *(14.4)*
	200001-300000	58 *(12.6)*
	300001-500000	93 *(20.3)*
	500001 & above	42 *(9.2)*
Total Annual Income	100000-750000	3 *(0.7)*
	750001-1000000	145 *(31.6)*
	1000001-1250000	92 *(20)*
	1260000-1500000	195 *(42.5)*
	1500001 & above	24 *(5.2)*
Job Scale	BPS-17	133 *(29)*
	BPS-18	147 *(32)*

Table 4.2: Continued

	BPS-19	149 *(32.5)*
	BPS-20	17 *(3.7)*
	BPS-21	7 *(1.5)*
	BPS-22	6 *(1.3)*

4.4 Preferences of Salaried Class

This section will discuss the salaried class's preferences for savings and consumption as one of the study objectives, as shown in Table 4.3. The participants are from different provinces with different cultural societies and living ethics and belong to different rural, urban, and suburban areas. Therefore, it was necessary to determine the preferences of these individuals working in federal organizations which provided a sound knowledge of the behaviour and needs of the participants related to investment, saving, and consumption preferences (Herrmann, 2007; Karthikeyan, 2001; Kochi, 2018; Masson et al., 1998; McCormick, 2018; McWilliams et al., 2020; Outcault, 2012; Stix, 2013; Virani, 2012).

4.4.1 Saving Preferences

The objective of the study was to conclude the saving preferences of the salaried class as a source of income, education of children, the marriage of children, health expenses and buying property in old age. The results showed that 110 (24%) participants prefer to save as a source of income in the future for worse financial conditions. In contrast, the highest number, only 68(14.8%) participants, prefer education as a saving preference, while 146 (31.8%) participants preferred to save for the marriage of their children. Participants with 111 (24.2) prefer to save for unexpected or expected health expenses. Only 24 (5.2%) prefer to save for buying property in the future (Table 4.3). The results revealed that the highest number of participants' preferences were for the marriage of children, health and a

source of income; in contrast, the lowest preferences were for the education of children and buying some property. Meaning that there is diversification in preferences of the salaried class and with different saving objectives after retirement needs.

4.4.2 Consumption Preferences

As another objective, it was essential to know about the consumption preferences of individuals and the way they consume income. This study used preferences such as meeting basic needs, children's education, clothes, fashion, fitness and health, and technology. The results showed that basic needs and fitness and health were the highest preferences for consumption, at 136 (29.5%) and 130 (28%) respectively. Only 75 (16.3) preferred consumption of the education of children, 66 (14.4%) of clothing and fashion, and the lowest 52 (11.3%) preferred technology (Table 4.3). The highest consumption was foe basic needs and fitness and fashion, while the lowest preference was for clothes and fashion by the participants. The results revealed that there is diversification in preference of the salaried class for their consumption behaviour after retirement, which can help the policymakers to draw the policies and benefits as per their preferences.

Table 4.3: Consumption Preferences of the Salaried Class

Preferences of the Salaried Class		
Choices	**Preferences**	**No (*Percent)***
Saving	Source of Income	110 *(24.0)*
	Education of Children	68 *(14.8)*
	Marriage of Children	146 *(31.8)*
	Health Expenses	111*(24.2)*
	Buy Property	24 *(5.2)*
Consumption	Meet the Basic Needs	136 *(29.6)*

Table 4.3: Continued

	Education of Children	75 *(16.3)*
	Clothes and Fashion	66 *(14.4)*
	Fitness and Health	130 *(28.3)*
	Technology	52 *(11.3)*

4.5 Policy Satisfaction

The government of Pakistan lays out different policies for salaried workers, such as health, education, training, transport facilities, etc. This study has used federal government employees from six different provinces with different consumption and saving preferences. Government employees working at different scales and organizations with different educational backgrounds have different policy satisfaction levels provided by the government. Some may be satisfied; some are not satisfied with the facilities provided by the government, and they must consume or save to cover these expenses. This policy satisfaction level includes health, education and training, housing finances, transport and communication, and others (insurance, job support, etc.) with three levels of policy satisfaction: satisfied, neutral and not satisfied.

The results show that in the case of health policy satisfaction, the highest number was 285 (62.1%) employees with not satisfied. Only 56 (12.2%) employees were satisfied, and 118 (25.7%) were satisfied with the health policy of the government. This means that most employees are consuming on health expenses, and the policy about health needs to be more satisfactory by the policy maker and government,. Hence, the procedure for health policy needs to be better. Education and training with 236 (51.4) was highest for the highest neutral satisfaction level. At the same time, 172 (37.5) were not satisfied and only 51 (37.5%) employees were satisfied with the education and training facility provided by the government through its policy. So, results reveal that a higher number is 172(37.5) for not

satisfied and natural, so government and policymakers need attention to education and training of the salaried class through the policy.

In the case of housing finance, only 91 (19.8%) participants were satisfied. The highest number of 221 (48.1%) were not satisfied, while neutrals 147 (32%) with housing finance facilities provided by the government, so the salaried class has to manage it by itself during or after retirement for better living standards. So, the government or policymakers need to address this issue with deeper concern.

In the case of transport and communication facilities, the highest number of employees, 115(25.1%), were satisfied, and only 65 (14.2%) were unsatisfied with the government's transport and communication facility policy. In contrast, the highest number was natural 279(60.8) (Table 4.4). The outcome states that employees are satisfied with the transport and communication facility provided by the government. Insurance and job as other support are also considered essential factors for satisfaction. The results showed that 207 (44.9%) were not satisfied, only 64 (14.1%) were satisfied, and 188 (41%) were neutral about this policy (Table 4.4). Therefore, the policy makers and government must consider it by taking care of life and health insurance and better work environment facility.

Most employees consume health, education, housing, and other insurance. The results (Table 4.4) indicate that employees consume these facilities from their income and make expenditures based on the results so savings can be enhanced with higher effective policy satisfaction at the time of retirement and savings during working age.

Table 4.4: Policy Satisfaction Level of Salaried Class

Policy satisfaction level of Salaried Class		
Categories	**Satisfaction Level**	**No (*Percent)***
Health	Satisfied	56 *(12.2)*

Table 4.4: Continued

	Neutral	118 *(25.7)*
	Not Satisfied	285 *(62.1)*
Education and Training	Satisfied	51 *(11.1)*
	Neutral	236 *(51.4)*
	Not Satisfied	172 *(37.5)*
Housing Finances	Satisfied	91*(19.8)*
	Neutral	147 *(32.0)*
	Not Satisfied	221 *(48.1)*
Transport and Communication	Satisfied	115 *(25.1)*
	Neutral	279 *(60.8)*
	Not Satisfied	65 *(14.2)*
Other (insurance, job support, etc.	Satisfied	64 *(14.1)*
	Neutral	188 *(41.0)*
	Not Satisfied	207 *(44.9)*

4.6 Consumption Patterns

This study has estimated the monthly consumption in the percentage of the salaried class. Moreover, estimated consumption behaviour in different categories. The results are described in percentage terms for each category ranging from 10%, 20%, 30%, 40%, 50%,60%,70%,80%,905 and 100%. The objective of this information was to know about the consumption in percentages terms they consume on a monthly basis. Table 4.5 shows the categories, from basic needs to modern needs.

The result shows that 197 (42.9) and 196 (42.7) participants consume 30% to 40% of their monthly expenses on education, and only 2(0.4) and 10(2.2) participants consume 10% and 50% of expenses on education, respectively. The results show that the participants

spend more than 80% of their income on education. The reason may be the lack of opportunity for education, the lack of government support, or the participants' interest in gaining an education. The case of clothes and shoes follows the same pattern observed, which is that about 70% of the participants consume 30 to 40% of their income on clothes and shoes, while only 10 (2.2%) participants spend more than 50% of their income on clothes and shoes.

In the case of consumption of energy, 40% of the monthly expenditure is by 247 (53.8%) participants, only 38 (8.3%) participants consume 50% of their income on energy, and only 10% is made by 18(3.9) individuals. In comparison, 60(13.1) individuals spend 20% of their income. The highest, 264 (57.5%) participants, spend 40% on household keeping, and 74 (16.1%) participants spend 20% on monthly expenses, while the lowest, 28(6.1) and 93(20.3) participants consume 50% and 30% of income, respectively on housekeeping. For news and services, the highest number is 232 (50.5). Participants spend 30% of their consumption on news and services, and only 2% spend 10% on news and services, while 20(4.4) participants consume 50% income.

In the case of body grooming, body care accounts for 60% of the monthly consumption, participants only 8 (1.7%) and the highest 40% spending by 242(52.7) participants, lowest 10% is consumed by 18(3.9) participants on body care. In the case of entertainment's highest number, 221 (48.1%) participants, had the highest monthly consumption at 40%, only 62 (13.5%) participants were spending 50%, while the lowest, 36(7.8), spent 20% of their income on entertainment. 215 (46.8%) participants spent 40% on buying personal equipment, and 112(24.4) spent 20 percent, while the lowest 62(13.5) and 70(15.3) participants spent 50% and 30% percent of income on personal equipment, receptively.

The highest number of participants, 275 (60%), consumed 40% of their income on savings for building, 120 (26.1%) participants made 30% consumption, while 54 (11.8%) participants made 50% consumption. Regarding security deposits, the highest number of participants, 195(42.5) and 164(35.1), consume 20% and 10% of income, while the lowest was 30(6.5). Participants consume 30% of their income on society deposits, and 70(15.3) consume 40%.Bond loans have the highest number of participants, 209 (45.5%) with 10% spending and 155 (12.8%) participants consume bond loans. Only 59 (12.8) and 36(7.8) were on 30% and 50% consumption on bonds and loans (Table 4.5).

Table 4.5: Consumption in Percentage

Consumption Behaviour in %age		
Categories	**Percentage Consumption Monthly**	**No *(Percent)***
Education	10%	2 *(0.4)*
	20%	54 *(11.8)*
	30%	197 *(42.9)*
	40%	196 *(42.7)*
	50%	10 *(2.2)*
Clothes Shoes	20%	84 *(18.3)*
	30%	161 *(35.1)*
	40%	204 *(44.4)*
	50%	10 *(2.2)*
Energy	10%	18 *(3.9)*
	20%	60 *(13.1)*
	30%	96 *(20.9)*
	40%	247 *(53.8)*

Table 4.5: Continued

	50%	38 *(8.3)*
Housekeeping	20%	74 *(16.1)*
	30%	93 *(20.3)*
	40%	264 *(57.5)*
	50%	28 *(6.1)*
News services	10%	2 *(0.4)*
	20%	30 *(6.5)*
	30%	232 *(50.5)*
	40%	175 *(38.1)*
	50%	20 *(4.4)*
Care Body	10%	18 *(3.9)*
	20%	8 *(1.7)*
	30%	106 *(23.1)*
	40%	242 *(52.7)*
	50%	77 *(16.8)*
	60%	8 *(1.7)*
Entertainment	20%	36 *(7.8)*
	30%	140 *(30.5)*
	40%	221 *(48.1)*
	50%	62 *(13.5)*
Personal Equipment's	20%	112 *(24.4)*
	30%	70 *(15.3)*
	40%	215 *(46.8)*
	50%	62 *(13.5)*

Table 4.5: Continued

Others	20%	36 *(7.8)*
	30%	70 *(15.3)*
	40%	295 *(64.3)*
	50%	58 *(12.6)*
Savings for buildings	20%	10 *(2.2)*
	30%	120 *(26.1)*
	40%	275 *(59.9)*
	50%	54 *(11.8)*
Society Deposits	10%	164 *(35.7)*
	20%	195 *(42.5)*
	30%	30 *(6.5)*
	40%	70 *(15.3)*
Bonds and Loans	10%	209 *(45.5)*
	20%	155 *(33.7)*
	30%	59 *(12.8)*
	50%	36 *(7.8)*

4.7 Awareness Level

In this study, another objective was to determine the awareness level of the salaried class about the investment avenues prevailing in the market in Pakistan, and it was divided into three level categories: Unaware, Moderately-Aware and Completely-Aware. Table 4.6 shows that only 53(11.5) participants did not know about private savings schemes and chit-funds; 271(59) individuals were completely aware, while 135(29.4) individuals were moderately aware. About 89% of the participants showed the highest awareness ratio and were interested in investing in private saving schemes like chit funds. In the case of Bank

and FD Investment Avenue, the highest number of participants, 234 (51%), were unaware; only 64 (13.9%) were fully aware, while 161(35.1) were moderately aware.

The case of equity shares is also the same, as 205 (44.7%) were unaware, and only 83 (8.1%) of the participants were fully aware of the equity markets, while 171(37.3) were moderately aware.

The case of government bonds and derivatives markets follows the same pattern; about 223 (48%) and 219(47.7) are unaware, respectively, but the complete awareness level is higher for government bonds at 140 (30.5) and 83(18.1) for equity shares. In the case of mutual funds, 226 (49.2%) were unaware, 166 (36.2%), and 67 (14.6%) of the participants were wholly and moderately aware, respectively. Provident and pension funds were opposite the mutual funds; only 184(40) were fully aware; only 89 (19.4%) of the individuals were not aware, while 186(40.5) were moderately aware.

The post office savings and money market bills have an awareness level of 131(28.5) and 67 (15.6%), respectively, while 226(49.2) and 230(50.1) were completely unaware of these investment avenues. In the case of life insurance, 160 (34.9) individuals were fully aware, 82 (17.9) were moderately aware, and only 82(17.9) participants were unaware. Only 98 (21.4) were fully aware of tax-saving schemes by the government, and the highest 191(41.6) and 170(37) of the participants needed to be made aware of the tax-saving schemes.

Real estate investment and non-traditional gold and silver investment were very different; only 75 (16.3%) and 128(27.9) individuals needed to learn about real estate investment and gold and silver no conventional avenue, respectively. In comparison, 268 (58.4%) were moderately aware, and 116 (25.3%) were fully aware of real estate. The highest investment avenue was the gold and silver non-conventional as unaware 272

(59.3%); however, only 128 (27%) were unaware, and 59 (12.9%) were moderately aware (Table 4.6).

Table 4.6: Awareness Level of Investment Avenues

Investment Avenues	Unaware.	Moderately Aware	Completely Aware
Private Saving Schemes / Chit funds	53 *(11.5)*	135 *(29.4)*	271 *(59)*
Bank/ FD	234 *(51)*	161 *(35.1)*	64 *(13.9)*
Equity Shares	205 *(44.7)*	171 *(37.3)*	83 *(18.1)*
Government Bonds	223 *(48.6)*	96 *(20.9)*	140 *(30.5)*
Derivative market	219 *(47.7)*	161 *(35.1)*	79 *(17.2)*
Mutual Fund	226 *(49.2)*	166 *(36.2)*	67 *(14.6)*
Provident / Pension Fund	89 *(19.4)*	186 *(40.5)*	184 *(40.1)*
Post office Savings	226 *(49.2)*	102 *(22.2)*	131 *(28.5)*
Life Insurance	82 *(17.9)*	217 *(47.3)*	160 *(34.9)*
Money Market Bills	230 *(50.1)*	162 *(35.3)*	67 *(14.6)*
Tax Saving Schemes	191 *(41.6)*	170 *(37)*	98 *(21.4)*
Real Estate	75 *(16.3)*	268 *(58.4)*	116 *(25.3)*
Non-Conventional Gold/Silver	128 *(27.9)*	59 *(12.9)*	272*(59.3)*

(Italic) is the percentage of the value

4.8 Salaried Class Choices and Preferences for Investment

Choices and preferences of the salaried class for investment to determine the level (first, second, and third) preferences were another objective of this study.

The results (Table 4.7) reveal that only 57 (12.4%) preferred the first choice to the unexpected event, and the highest was 278 (60%) as the third choice, while the second choice was 124(27) by participants. Further, in the case of pension and retirement, 234 (51%) marked second, and the lowest was for the first 51 (11.1%), while 174(37.9) marked it as third choice.

218 (47.5%) marked children's education as third, while 146 (31.8%) categorized it as second, and only 146(31.8) marked it as second choice. Family support is the second choice, highest by 267 (58.2%) and as first choice by 118(25.7), while only 74 (16.1%) are categorized as a third investment practice. To pay off the debt, the highest number of 267 (58.2%) is at the first preference for investment, meaning that most participants have a debt to perform their day-to-day expenditures to meet their basic needs and as second choice is 132(28.8) participants, while only 60(13.1) were at third level.

The same case is observed with housing 219 (47%) of the participants' first choice, while the second highest was 149 (32.5%), and the lowest third level was 91 (19.8%) by the participants. For vacations, 54 (11.8%) of the participants preferred first, and the highest level marked second, 237 (51.6%) by the participants, while 168(36.6) preferred third level. Purchases for a vehicle are at the second highest level with 250 (55.5%) participants, and the first level, 117 (25.5%) of the participants, while only 92(20) participants chose as third preference. In the case of durable goods, the highest choice was as a third level by 266 (58%), participants and 63 (13.7%) took it as the first choice for investment, and 130(28.3) marked it as a second choice (Table 4.7).

Table 4.7: Choices and Preferences for Investment

Salaried Class Choices and Preferences for Investment **First=1st , Second=2nd, Third=3rd**		
Categories	**Level**	**No (Percent)**
Unexpected Event	*1st.*	57 *(12.4)*
	2nd	124 *(27)*
	3rd	278 *(60.6)*
Pension/ Retirement	*1st.*	51 *(11.1)*
	2nd	234 *(51)*
	3rd	174 *(37.9)*
Children Education	*1st.*	95 *(20.7)*
	2nd	146 *(31.8)*
	3rd	218 *(47.5)*
Family support	*1st.*	118 *(25.7)*
	2nd	267 *(58.2)*
	3rd	74 *(16.1)*
Pay off Debt	*1st.*	267 *(58.2)*
	2nd	132 *(28.8)*
	3rd	60 *(13.1)*
Housing	*1st.*	219 *(47.7)*
	2nd	149 *(32.5)*
	3rd	91 *(19.8)*
Vacations	*1st.*	54 *(11.8)*
	2nd	237 *(51.6)*

Table 4.7: Continued

	3rd	168 *(36.6)*
Vehicles	*1st.*	117 *(25.5)*
	2nd	250 *(54.5)*
	3rd	92 *(20)*
Durable Goods	*1st.*	63 *(13.7)*
	2nd	130 *(28.3)*
	3rd	266 *(58)*

4.9 Barriers of Investment

One objective of the study was to ascertain the barriers to investment that the salaried class faces, and their level as categorized as choice (first, second, third) (Skagerlund et al., 2018; Mosca & McCrory, 2016; Emmons. 2005; Gillion, et al., 2000; Kalamarides, 2023; Mayer, 2021; Varlamova, & Larionova, 2013; Wellalage et al., 2019; Klapper et al., 2015) Perceived risk as a barrier to investment is not very important, as 55 (12%) marked first, while the highest number was 241 (52.5%) as second, and it was the third preference of 163 (35.5%) of the participants. Investments and financial scandals as the first barrier, highest by the 218 (47.5%)participants and third by 91 (19.8%), while as a second barrier, the 150(32.7).The risk of financial intermediates is highest as the first 23,3 (50.8%) and 52 (11.35) marked it as 3rd level, and second, it has been marked by 174(37.9) participants.

Most participants perceive the economic crisis as the third barrier, with most participants 264 (57.5%) and the second 132 (28.8%) while at the first level by 63(13.7) participants. In the case of a lower return, 221 (48.1%) participants marked it as first, 91 (19.8%) as second, and 91 (19.8%) marked it as a third-level barrier. Risk diversification and reduction came third level with 58 (12.6%) of the participants and as the first barrier

with 118(25.7) while 283 (61.7%) marked second the participants. The payless tax has been highest at the second level, 188 (41%), as a barrier to investment, and at the first level, it has 106 (23.1%) participants, while at the third, it has been ranked 165 (35.9%) by the participants (Table 4.8).

Table 4.8: Barriers to Investment

Barriers of Investment **First=1st , Second=2nd, Third=3rd**		
Categories	**level**	**No *(Percent)***
Perceived Risk	*1st.*	55 *(12)*
	2nd	241 *(52.5)*
	3rd	163 *(35.5)*
Investment Financial Scandals	*1st.*	218 *(47.5)*
	2nd	150 *(32.7)*
	3rd	91 *(19.8)*
Economics Crisis	*1st.*	63 *(13.7)*
	2nd	132 *(28.8)*
	3rd	264 *(57.5)*
Risk of financial intermediates	*1st.*	233 *(50.8)*
	2nd	174 *(37.9)*
	3rd	52 *(11.3)*
lower returns	*1st.*	221 *(48.1)*
	2nd	91 *(19.8)*
	3rd	147 *(32)*
Risk diversification and reduction	*1st.*	118 *(25.7)*

Table 4.8: Continued

	2nd	283 *(61.7)*
	3rd	58 *(12.6)*
Payless Tax	*1st.*	106 *(23.1)*
	2nd	188 *(41)*
	3rd	165 *(35.9)*

4.10 Introduction of Hypotheses Testing

This section describes questionnaire survey descriptive and hypothesis testing outcomes about dependent and independent factors using statistical methods and statistical techniques. The survey instrument helped to meet the objectives and answer the research questions and correlation outcome. According to earlier chapters, this study relates savings and consumption behaviour, retirement planning of federal government employees in Pakistan and their living standards to minimize the impact of investment scams on their investment decision.

4.10.1 Descriptive Statistics

Descriptive statistics includes mean, mode, median, standard deviation, variance, range of data, Kurtosis, and skewness (Table 4.9) (Hair et al., 2010; Sekaran, 2013). The mean is an arithmetic average that constantly measures central tendency (Hair et al., 2010). In contrast, the standard deviation measures data dispersion or variability distribution (Hair et al., 2006, 2010).

Descriptive statistics are summarized below.

As shown in Table 4.9, the mean values for the variables are all between the maximum and minimum range, indicating that there are no outliers or extreme values in the data. The data's standard deviation and skewness statistics indicate that it is normal and

positive results for data normality, with 459 observations collected from salaried classes. A central tendency measure focuses on the middle values and dispersion of data sets and their distribution around the mean. Usually researcher examine data sets by the frequency of each data point in the distribution and describe them using the mean, median, or mode to measure their behaviour. The variable mean value (Table 4.9) represents the average of all observation data, and the sum of all values by total variable values yields the mean value. Skewness is ideally generally distributed if it is zero, positively distributed if it is more significant than zero, and negatively distributed if it is less than zero. The negative number exceeds the distribution's left tail, which is greater than the right, and skewness affects the mean and median. Kurtosis, which explains the distribution's heavy or light tail and data sets with greater values have thicker tails than those with lower values, and zero is perfect kurtosis. Like skewness, it incorporates distribution tails. Kurtosis indicates whether data points are heavy or light-tailed relative to a normal distribution; higher Kurtosis datasets have heavier tails, and perfect normal distributions have zero kurtosis (Table 4.9).

Table 4.9: Reliability Tests

Variables	**Mean Statistic**				**Skewness**		**Kurtosis**	
	Min	**Max**	**Mean**	**SD**	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
LSSCS	1.00	5.00	3.4532	1.22541	-.581	.114	-.693	.227
LSCS	1.00	5.00	3.5425	1.19490	-.672	.114	-.602	.227
INFS	1.00	5.00	3.5425	1.18204	-.640	.114	-.623	.227
FKS	1.00	5.00	3.5142	1.20648	-.685	.114	-.515	.227
BSP	1.00	5.00	3.6950	1.16283	-.617	.114	-.609	.227
BCP	1.00	5.00	3.6187	1.17867	-.793	.114	-.333	.227

Table 4.9: Continued

GCRP	1.00	5.00	3.5425	1.19490	-.672	.114	-.602	.227
PNRP	1.00	5.00	3.5185	1.18818	-.625	.114	-.675	.227
PBID	1.00	5.00	3.5163	1.20645	-.690	.114	-.485	.227
PKIDM	1.00	5.00	3.6950	1.16283	-.617	.114	-.609	.227
GFDM	1.00	5.00	3.6209	1.18030	-.799	.114	-.335	.227
GFDM	1.00	5.00	3.4532	1.22541	-.581	.114	-.693	.227
SCIRI	1.00	5.00	3.5316	1.20615	-.659	.114	-.629	.227
SCIMI	1.00	5.00	3.5490	1.20375	-.685	.114	-.604	.227
SCIPI	1.00	5.00	3.5643	1.17363	-.672	.114	-.563	.227
SCIIMI	1.00	5.00	3.5163	1.20645	-.690	.114	-.485	.227

Notes: *N=459 is the number of responses from all organization's surveys. Abbreviation of all variables is used here.

4.11 Empirical Analysis

The core focus of this study is to establish a link between and conclude the relationship between other variables and investment decision-making. This study has applied numerous statistical techniques for bivariate and multivariate analysis. The SPSS-25.0 package and Smart PLS 3.3.0 were used for this study's descriptive scores, Pearson's correlation between variables, and data screening.

4.12 Bivariate Analysis (Correlation)

The strength of the association between the independent and dependent variables in this study was examined using the Pearson correlation coefficient. The Pearson correlation result showed that there was a positive or native relationship between the two variables, which were dependent and independent (Field, 2006). A positive correlation means that either variable increases or decreases at the same time, while a negative correlation means that one decreases and the other increases (Norusis, 1998, 2004; Pallant, 2007; Hair et al.,

1998). The correlation will either be positive or negative, or it will be the opposite for a negative correlation, with the correlation coefficient's value falling between -1 and +1, respectively, a negative and positive correlation. The correlation matrix (Pearson correlation) between investment decision-making and independent variables (IDM with SP, CP, LS, RP, and ISC) is described in Table 4.10. Pearson's Correlation coefficient results show that the value of results (r =.768, P<0.05 level) between SP and CP has a positive, strong association. The finding supports the hypothesis, which states that consumption behavior strongly impacts saving patterns. The same calculation was made to confirm the significance of LS and IDM, and the results (r =.739, P<0.05) support the hypothesis that LS positively correlates with IDM. The same significant impact was present between RP and ISC (r = 0.845, P< 0.05 level). Therefore, the findings show that ISC exhibits a significant positive association with RP. The correlation results show a negative association (r =.807, P<0.05 level) between ISC and IDM. Therefore, hypothesis H9 is accepted with the negative association of ISC and IDM. RP and IDM (r =.733, P<0.05 level) showed a positive association. Hypothesis H3 is accepted because of the positive association of the variables CP and IDM has a positive association (r =.768, P<0.05 level). Therefore, the H3 hypothesis is accepted (Table 4.11). Pearson correlation describes the strength of variables, including testing the hypothesis of the relationship between study variables. It does not include the measurement of the predictive effect of the variables. The effect of the independent and dependent variables is determined through multiple regression analysis. The following part will describe multiple regression analysis outcomes.

Table 4.10: Pearson's Correlation

Pearson's Correlation						
	SB	**CB**	**LS**	**RP**	**IS**	**ID**
SB	1					
	.000					
CB	.768	1				
	.000					
LS	.735	.825	1			
	.000	.000				
RP	.694	.743	-.847	1		
	.000	.000	.000			
IS	.712	.725	.770	.845	1	
	.000	.000	.000	.000		
ID	.768	.705	.739	.733	-.807	1
	.000	.000	.000	.000	.000	

SB=Saving Behaviour, CB=Consumption Behaviour, LS= Living Standards, RP=Retirement Planning, S=Scams, ID=Investment Decision

4.13 Multiple Regression Analysis

Multiple regression analysis identified the independent variables effect on the dependent variables and validate correlation analysis (Field, 2006). Statisticians and social researchers employ regression analysis widely. Therefore, this study used moderator and mediator variables and independent and dependent variables, which require multiple

regression analysis (Cooke, 1998; Kline, 2005; Hair et al., 2006; Hair et al., 1998). Structural Equation Modeling (SEM) is used for multiple regression when there is one dependent variable, several independent variables and the dependent variable changes with an independent variable (Kline, 2005). A popular multiple regression analysis method is partial least squares (PLS-SEM), and the software is Smart-PLS v3.3 used in management, economics, and finance in a multivariate analysis called structural equation modeling (SEM) (Lee et al., 2011; Tenenhaus et al., 2005) and Abdi (2010) used PLS-SEM to confirm the theory and model complexity.

4.13.1 Data Screening

Data Screening data is vital and takes numerous processes to avoid affecting analysis results to make sure that data is usable, reliable, and valid to examine variable relationships for statistical analysis. Thus, data accuracy and error checks begin with screening (Hair et al., 2006). Research data screening ensures that the data set is error-free (Hair et al., 2013) and involves finding and resolving data files free from errors (Pallant, 2007). According affectsr et al. (2013), missing data, outliers, normality, homoscedasticity, multicollinearity, and linearity affect dependent and independent variable relationships. Therefore, it is necessary to fix the above concerns before significant data analysis (Hair et al., 2006; Tabachnick & Fidell, 2007).

4.13.2 Missing Data

While entering the values of data management, economics, and other qualitative studies employing survey instruments can have issues (Pallant, 2007; Hair et al., 2006) and need to assess the quantity and trend of missing data (Tabachnick & Fidell, 2007). Multiple missing data resolutions are used, such as mean score variance, eliminating responses that were not responded and resolving the 5% or less missing pattern (Hair et al., 1998; Hair et

al., 2006). Using SPSS 25, researchers substituted missing data with the mean score in all situations where complete data sets were 5% less, not affecting the impact of the data pattern, which can influence the analytical generalizability of data (Tabachnick & Fidell, 2007; Hair et al., 2006; Pallant, 2007). The solution to missing data involves two phases, first accessing the missing values and identification and then randomly selecting related item responses (Tabachinick & Fidell (2007). One or more variables may need more data in survey-based research, and ambiguous questionnaire items may induce respondents to refrain from answering or leaving out items (Hair et al., 2006). Imputation is the most used procedure for missing data; four imputation strategies are case substitution, mean substitution, regression, and multiple (Hair et al., 2006; Roth, 1994).

4.13.3 Outlier detection

Outliers are unique and distinct forms of data (Kline, 2005) and score combinations can alter the analysis (Tabachnick & Fidell, 2007). Outliers are typically high, low, or exceptional values that affect data observations normality (Hair et al., 2006). Procedure errors, observations, ordinary range, coding and data input problems may cause outliers (Hair et al., 2006, 2013). This study used SPSS v25 to detect outliers using univariate, bivariate, and multivariate approaches (Field (2000; Hair et al., 2006). This study used the Mahalanobis approach to detect outliers depending on the number of variables using SPSS 25. In Table 4.12, all variables were in the Mahal Distance range of 25.734, showing no multivariate outliers and graphs are shown in appendices. Each variable's graph, SPSS scatter plots, and box plots can spot outliers.

Table 4.11: Residual Statistics

Residual Statistics	Minimum	Maximum	Mean	S. D	N
Predicted Value	48.86	121.47	79.00	14.31	459
S Predicted value	-2.21	3.34	.001	1.01	459
S.E of Predicted value	7.476	18.94	12.42	2.77	459
Adjusted Predicted value	46.35	127.41	89.42	13.12	459
Residual	-95.44	104.20	.00	48.34	459
Standard Residual	-2.81	1.14	.01	.968	459
Stud. Residual	-2.831	3.147	.001	1.002	459
Deleted Residual	-98.92	113.36	.0587	53.21	459
Stud. Residual	-2.85	3.146	.0001	1.006	459
Mahal. Distance	1.975	25.734	9.129	4.74	459
Cook's Distance	.000	.031	.005	.006	459
Centred Leverage value	.011	.124	.062	.031	459

4.13.4 Normality

Multivariate Normality refers to the degree of sample distribution corresponding to the normal distribution of data sets and is normally distributed or computes the normality of underlying variables (Velilla, 1993; Kline, 2005; Field, 2006). Two popular normality tests, the density estimation and histogram for the Q-Q plot and the P-P plot, for biased in the mean score (Filliben, 1975; Kline, 2005). The Q-Q plot displays each variable's normal distribution. However, the P-P plot shows a normalized normal probability plot with standard deviation, while the histogram depicts the variable distribution as skewed or oval-shaped. Density estimates are used to check the normality of the data (Norusis, 1998; Field, 2006) (see Appendix III). The most often used tests for normality distribution are the Kolmogorov-Smirnov test and the Shapiro-Wilk test (Gujarati, 2003). According to Shapiro and Wilk (1965), the null hypothesis of the population is normally distributed. A p-value

less than the alpha level rejection of null hypothesis, and pollution is not normally distributed. The null hypothesis is accepted if the p-value is greater than the alpha values and shows that the data are distributed normally. The Kolmogorov-Smirnov and Shapiro-Wilk tests, as well as skewness and Kurtosis, were utilized in this study to investigate the normality and validate the results. Table 4.12 displays a P-value greater than 0.05, which accepts the null hypothesis and reveals that the population is distributed normally. By skewness and Kurtosis, the results demonstrate that the population is normally distributed.

Table 4.12: Normality Variables

Tests of Normality						
	Kolmogorov-Smirnova			**Shapiro-Wilk**		
	statistics	**df**	**sig**	**statistics**	**df**	**sig**
LSSCS	0.056	459	0.072	0.881	459	0.354
LSCS	0.065	459	0.074	0.993	459	0.535
INFS	0.054	459	0.067	0.893	459	0.578
FKS	0.027	459	0.064	0.797	459	0.645
BSP	0.038	459	0.071	0.892	459	0.689
BCP	0.028	459	0.077	0.687	459	0.614
INFC	0.052	459	0.068	0.893	459	0.145
GCRP	0.064	459	0.072	0.843	459	0.402
PNRP	0.041	459	0.076	0.895	459	0.499
PBID	0.029	459	0.068	0.987	459	0.406
PKIDM	0.028	459	0.072	0.961	459	0.604
GFDM	0.053	459	0.063	0.893	459	0.263
SCROI	0.052	459	0.064	0.892	459	0.375
SCMI	0.027	459	0.045	0.997	459	0.574
SCPI	0.051	459	0.056	0.995	459	0.409
SCIMI	0.026	459	0.043	0.987	459	0.688

4.13.5 Linearity

Linearity means just a description of a straight-line relationship between variables or a combination of other variables, P-P plots can be used to test the relationship among variables. Based on the P-P plots, when plots are near the diagonal line, the relationship is significant (Hair et al., 2010; Pallant, 2005). The graph of independent and dependent variables, along with a regression line demonstrating their relationship, is frequently used to test for linearity (Filliben, 1975; Norusis, 1998, 2004; Pallant, 2007). All variables have a linear direction of association also. Pearson's Correlation fulfilled the linearity requirements of the data set.

4.13.6 Homoscedasticity

Homoscedasticity describes an error term disturbance in the relationship between the independent variables, and the dependent variable is the same across all values of the independent variable in an equal level of variations. Homoscedasticity was calculated through graphical representations, and variables were plotted against standardized residuals, showing the linear pattern of higher homoscedasticity so the model is well-defined, meaning that the predictor variable adequately defines the dependent variable. (Appendix-III)

4.13.7 Multicollinearity

Pallant (2005) mentioned that multicollinearity exists if the dependent variables are correlated. Generally, in any research, the correlation value should be less than 0.80, and anything higher than that is considered multicollinear with values of Tolerance (R) and variance 141 inflation factor (VIF). Multicollinearity exists if independent variables predict the other independent (Tabachnick & Fidell, 2007). The most preferred ways to check multicollinearity detection are Correlation Coefficient and variance inflation factor (VIF) with a tolerance value of VIF and tolerance coefficients over variables given in Table 2.5

(Hair et al., 1998). The value of VIF is less than 10 and 5, so the VIF is between 2.571 and 1.74, and the lowest TOL coefficient is 0.692, indicating that there is no multicollinearity among the variables (Table 4.14)

Table 4.13: Multicollinearity Model

	Collinearity Statistics	
	TOL	**VIF**
(Constant)	1.00	-
LSSCS	0.699	2.471
LSCS	0.692	1.437
INFS	0.749	1.338
FKS	0.845	1.179
BSP	0.739	1.359
BCP	0.875	1.131
INFC	0.715	1.391
GCRP	0.743	1.623
PNRP	0.86	1.385
PBID	0.733	1.358
PKIDM	0.714	1.390
GFDM	0.642	1.747
SCROI	0.84	1.382
SCMI	0.731	1.357
SCPI	0.712	1.389
SCIMI	0.746	1.743

4.13.8 Data Exploration

Exploratory data analysis is a statistical technique used to analyze raw data sets in search of their broad characteristics. In this research, the multicollinearity of the multi-item

questionnaires was examined through exploratory factor analysis. Principal component analysis (PCA) of Kaiser Varimax Rotation Normalization and eigenvalues were determined for study constructs. The Value of KMO was 0.745, and the minimum is 0.65 in the range as recommended (Pallant, 2007). Bartlett's test value must be 0.05, which is a smaller factor analysis. The multivariate normality of the data is shown by a significance value of 0.05 (Hair et al., 2006; Pallant, 2007) (Table 4.15). Multiple studies suggest factor loadings should surpass 0.5 for optimal results (Truong & McColl, 2011; Hulland, 1999). Chen & Tsai (2007) also considered 0.5 a good loading for tourism. In their confirmatory factor analysis Ertz, Karakas & Sarigollu (2016) explored factor loadings of 0.4 and above. This study choose this criterion because it exceeds prior factor loading cut-offs and has a greater value of 0.6. All elements have factor loading above 0.6 (Chin, Gopal & Salisbury, 1997; Hair et al., 2006; Hair et al., 2009). Most recommend factor loadings over 0.70 (Vinzi, Chin, Henseler, & Wang, 2010). However, social science investigations typically reveal lower outer loadings (<0.70), however, items with loading less than 0.70 should not be deleted. Instead, the scholar(s) should assess if eliminating an item would significantly affect Composite Reliability and Average Variance Extracted. Along with Factor Loading, the measurement model should examine Reliability (Cronbach's Alpha and Composite Reliability) and Validity (Convergent and Discriminant Validity). Therefore, the results of the factor analysis are suitable for the data collected by the questionnaire. Items loading greater than 0.40 is significant (Hair et al., 1998, 2006; Floyd & Widman, 1995). The value of loadings of 0.05 or higher is significant, according to Hair et al. (1998) and (2006). Table 4.16 explains the significant principal component analysis (PCA) analysis, the list of subsequent confirmatory factor analysis as extracted, and the details of factor analysis and loading (Table 4.15).

Table 4.14: Measuring Sample Adequacy

KMO and Bartlett's Tests of Measuring Sample Adequacy		
KMO measure	0.784	
Bartlett. Test of Sphericity	Approx. Chi-square	3235.427
DF	459	
Sig.	0.000	

Table 4.15: Factor Analysis and Loading

	Items	BCP	SCPI	SCIMI	FKS	BSP	LSSCS	SCROI	GCRP	INFC	PBID	PKIDM	LSCS	PNRP	SCMI	GFDM	INFS
LSSCS	LSSCS1						0.84										
	LSSCS2						0.77										
	LSSCS3						0.83										
	LSSCS4						0.84										
	LSSCS5						0.72										
	LSSCS6						0.68										
	LSSCS7						0.69										
	LSSCS8						0.79										
LSLC	LSLC1												0.74				
	LSLC2												0.84				
	LSLC3												0.91				
	LSLC4												0.69				
	LSLC5												0.87				
	LSLC6												0.74				

Table 4.15: Continued

INFS	INFS1																0.69
	INFS2																0.68
	INFS3																0.70
	INFS4																0.68
FKS	FKS1				0.80												
	FKS2				0.82												
	FKS3				0.82												
	FKS4				0.73												
	FKS5				0.70												
	FKS6				0.82												
	FKS7				0.82												
	FKS8				0.63												
BSP	BSP1					0.74											
	BSP2					0.84											
	BSP3					0.91											
	BSP4					0.69											

Table 4.15: Continued

	BSP5					0.87											
	BSP6					0.78											
BCP	BCP1	0.79															
	BCP2	0.69															
	BCP3	0.70															
	BCP4	0.67															
	BCP5	0.69															
INFC	INFC1									0.74							
	INFC2									0.84							
	INFC3									0.91							
	INFC4									0.69							
	INFC5									0.87							
GCRP	GCRP1								0.92								
	GCRP2								0.88								
	GCRP3								0.94								
	GCRP4								0.92								

Table 4.15: Continued

PNRP	PNRP1													0.84			
	PNRP2													0.83			
	PNRP3													0.86			
	PNRP4													0.71			
	PNRP5													0.65			
PBID	PBID1										0.72						
	PBID2										0.80						
	PBID3										0.82						
	PBID4										0.82						
	PBID5										0.73						
	PBID6										0.70						
	PBID7										0.82						
	PBID8										0.82						
	PBID9										0.72						
PKIDM	PKIDM1											0.80					
	PKIDM2											0.82					

Table 4.15: Continued

	PKIDM3											0.82					
	PKIDM4											0.73					
	PKIDM5											0.70					
	PKIDM6											0.82					
	PKIDM7											0.82					
	PKIDM8											0.71					
GFDM	GFDM1															0.72	
	GFDM2															0.80	
	GFDM3															0.82	
	GFDM4															0.82	
	GFDM5															0.73	
	GFDM6															0.70	
	GFDM7															0.82	
SCRO	SCROI1							0.95									
	SCROI2							0.94									
	SCROI3							0.83									

Table 4.15: Continued

SCIMI	SCIMI1			0.68													
	SCIMI2			0.70													
	SCIMI3			0.78													
	SCIMI4			0.78													
SCPI	SCPI1		0.58														
	SCPI2		0.68														
	SCPI3		0.70														
	SCPI4		0.78														
SCIM	SCIM1														0.65		
	SCIM2														0.68		
	SCIM3														0.70		
	SCIM4														0.78		

4.13.9 Commonality Scores

The commonality is that the dynamic factors present the common or shared variance between variables if the total variance shared with all other variables matches with high values (Field, 2006). There is no explicit parameter for lower and higher communities, and as a standard, the value of 0.50 is admitted being significant for commonalities scores (Hair et al., 2006). Variable commonality with a zero value is not shared with other variables, and variables having no variance have a commonality score of 1. The researcher considers all items of score communities higher than 0.50 as standard (Table 4.17).

Table 4.16: Communalities Scores

Communalities		
	Initial	Extraction
1. Living Standard LSSCS1	1.000	.897
2. Living Standard LSSCS2	1.000	.886
3. Living Standard LSSCS3	1.000	.927
4. Living Standard LSSCS4	1.000	.926
5. Living Standard LSSCS5	1.000	.885
6. Living Standard LSSCS6	1.000	.873
7. Living Standard LSSCS7	1.000	.851
8. Living Standard LSSCS8	1.000	.876
9. Living Standard Cost 1	1.000	.883
10. Living Standard Cost 2	1.000	.913
11. Living Standard Cost 3	1.000	.927
12. Living Standard Cost 4	1.000	.921
13. Living Standard Cost 5	1.000	.870

Table 4.16: Continued

14. Living Standard Cost 6	1.000	.923
15. Inflation INFS	1.000	.926
16. Inflation INFS	1.000	.888
17. Inflation INFS	1.000	.921
18. Inflation INFS	1.000	.956
19. Financial knowledge FKS	1.000	.941
20. Financial knowledge FKS	1.000	.941
21. Financial knowledge FKS	1.000	.949
22. Financial knowledge FKS	1.000	.959
23. Financial knowledge FKS	1.000	.935
24. Financial knowledge FKS	1.000	.930
25. Financial knowledge FKS	1.000	.916
26. Financial knowledge FKS	1.000	.947
27. Behaviour of Saving Behaviour BSP	1.000	.953
28. Behaviour of Saving Behaviour BSP	1.000	.953
29. Behaviour of Saving Behaviour BSP	1.000	.910
30. Behaviour of Saving Behaviour BSP	1.000	.929
31. Behaviour of Saving Behaviour BSP	1.000	.919
32. Behaviour of Saving Behaviour BSP	1.000	.900
33. Behaviour of Saving Behaviour BSP	1.000	.902
34. Behaviour of Consumption Behaviour BCP	1.000	.883
35. Behaviour of Consumption Behaviour BCP	1.000	.878
36. Behaviour of Consumption Behaviour BCP	1.000	.897
37. Behaviour of Consumption Behaviour BCP	1.000	.886

Table 4.16: Continued

38. Behaviour of Consumption Behaviour BCP	1.000	.927
39. Inflation Consumption Behaviour INFC	1.000	.926
40. Inflation Consumption Behaviour INFC	1.000	.885
41. Inflation Consumption Behaviour INFC	1.000	.873
42. Inflation Consumption Behaviour INFC	1.000	.850
43. Inflation Consumption Behaviour INFC	1.000	.876
44. Goal Clarity GCRP	1.000	.881
45. Goal Clarity GCRP	1.000	.913
46. Goal Clarity GCRP	1.000	.927
47. Goal Clarity GCRP	1.000	.921
48. Personal Needs PNRP	1.000	.870
49. Personal Needs PNRP	1.000	.923
50. Personal Needs PNRP	1.000	.926
51. Personal Needs PNRP	1.000	.888
52. Personal Needs PNRP	1.000	.921
53. Personal behaviour of Investors PBID	1.000	.956
54. Personal behaviour of Investors PBID	1.000	.941
55. Personal behaviour of Investors PBID	1.000	.941
56. Personal behaviour of Investors PBID	1.000	.949
57. Personal behaviour of Investors PBID	1.000	.959
58. Personal behaviour of Investors PBID	1.000	.935
59. Personal behaviour of Investors PBID	1.000	.930
60. Personal behaviour of Investors PBID	1.000	.916
61. Personal behaviour of Investors PBID	1.000	.947

Table 4.16: Continued

62. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.953
63. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.953
64. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.910
65. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.929
66. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.919
67. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.900
68. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.902
69. Preferences and Knowledge Level of Investors (PKIDM)	1.000	.883
70. General Factor Affecting Investment Decisions (GFDM)	1.000	.878
71. General Factor Affecting Investment Decisions (GFDM)	1.000	.897
72. General Factor Affecting Investment Decisions (GFDM)	1.000	.886
73. General Factor Affecting Investment Decisions (GFDM)	1.000	.927
74. General Factor Affecting Investment Decisions (GFDM)	1.000	.926
75. General Factor Affecting Investment Decisions (GFDM)	1.000	.885
76. General Factor Affecting Investment Decisions (GFDM)	1.000	.873
77. Scams Investment Return on Investment	1.000	.851
78. Scams Investment Return on Investment	1.000	.876
79. Scams Investment Return on Investment	1.000	.883
80. Scams Investment Marketing of Investment	1.000	.913
81. Scams Investment Marketing of Investment	1.000	.927
82. Scams Investment Marketing of Investment	1.000	.921
83. Scams Investment Marketing of Investment	1.000	.870
84. Scams Investment Procedure of Investment	1.000	.923
85. Scams Investment Procedure of Investment	1.000	.926

Table 4.16: Continued

86. Scams Investment Procedure of Investment	1.000	.888
87. Scams Investment Procedure of Investment	1.000	.921
88. Scams Investment Management Information	1.000	.956
89. Scams Investment Management Information	1.000	.941
90. Scams Investment Management Information	1.000	.941
91. Scams Investment Management Information	1.000	.959
Extraction Method: Principal Component Analysis.		

4.14 Structural Equation Modelling

Structural Equation Modelling (SEM) has been applied in this study which is used for hypothesis testing and determining the relationship between endogenous and exogenous variables. Existing literature has suggested that the PLS method is commonly favored in social science research due to its ability to capture more realistic settings (Kline, 2005; Tenenhaus et al., 2005) and aids in validating the measurement model and route for creating reasonable exemption expectations (Abdi, 2010; Hair et al., 2013). The PLS approach is the best fit for the study's objectives, as it aims to accurately predict the dependent variable and provide insight into the endogenous factors.

The following part discusses the outcome of the PLS-SEM analysis..

4.14.1 Measurement Model Analysis

The measurement Model includes an assessment of the Quality of the Constructs, including Reliability and Validity. Validity measures the definition and understanding of the concepts, while reliability verifies the consistent measurement of the constructs. Convergent and discriminant validity tests are used to verify the measurement model. The association of two different scales measuring the same construct and determining the liability of the item and construct is called concurrent validity (Pallant, 2007). In contrast, discriminated validity

indicates that the scale differs from other scales measuring other constructs (Hair et al., 2006). The AVE method assesses discriminant validity and is sensitive to convergent validity (Hair et al., 1998). Average variance extracted (AVE) is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. An alternative approach is to determine the value of factor loadings for each indicator used (Floyd & Widman, 1995). Then, every indicator factor has more loading on the construct as compared to other variables (Abdi, 2010).

4.14.1.1 Items Reliability

Scales must be stable and constant to be considered reliable and results consistency accurately reflects the over and real-time portion of the population under investigation (Saunders et al., 2009). Cronbach (1951) stated that the reliability measures the same or near the same answer every time the respondent asks a similar set of questions. All items have reliable scores (Cooper & Schindler, 2006), which are extracted from the literature and different relevant studies. The loading value of the construct and the association between an item and its associated constructs both supported the PLS scale's reliability. The loadings of the items and their correlation score are acceptable; if the value of the score is 0.60, higher, or 0.50, some cases are also acceptable (Chin, 1998; Hair et al., 2006; Abdi, 2010; Hair et al., 2013). The values of loadings of this study and item construct correlation scores were in an acceptable range of PLS model measurement analysis. All the items meet the requirement of reliability and convergent validity (Table 4.17).

Table 4.17: Items Reliability

Items Reliability							
Construct	**Item**	**Item Loading**	**Itsem construct correlation**	**Construct**	**Item**	**Item Loading**	**Item construct correlation**
LSSCS	LSSCS1	0.825	0.836	**INFC**	INFC1	0.866	0.743
	LSSCS2	0.796	0.774		INFC2	0.855	0.844
	LSSCS3	0.762	0.833		INFC3	0.803	0.907
	LSSCS4	0.721	0.841		INFC4	0.710	0.690
	LSSCS5	0.659	0.716		INFC5	0.670	0.874
	LSSCS6	0.584	0.633				
	LSSCS7	0.576	0.593				
	LSSCS8	0.566	0.794				
LSLC	LSLC1	0.866	0.743	**GCRP**	GCRP1	0.794	0.916
	LSLC2	0.855	0.844		GCRP2	0.663	0.884
	LSLC3	0.803	0.907		GCRP3	0.661	0.936
	LSLC4	0.710	0.690		GCRP4	0.781	0.917
	LSLC5	0.670	0.874				
	LSLC6	0.718	0.741				
INFS	INFS1	0.729	0.630	**PNRP**	PNRP1	0.815	0.844
	INFS2	0.889	0.638		PNRP2	0.811	0.828
	INFS3	0.851	0.700		PNRP3	0.805	0.861
	INFS4	0.839	0.639		PNRP4	0.871	0.510
					PNRP5	0.805	0.653
FKS	FKS1	0.848	0.796	**PBID**	PBID1	0.848	0.716

Table 4.17: Continued

	FKS2	0.828	0.819		PBID2	0.828	0.796
	FKS3	0.805	0.823		PBID3	0.805	0.819
	FKS4	0.759	0.726		PBID4	0.759	0.823
	FKS5	0.709	0.696		PBID5	0.709	0.726
	FKS6	0.630	0.818		PBID6	0.630	0.696
	FKS7	0.598	0.818		PBID7	0.598	0.818
	FKS8	0.578	0.625		PBID8	0.578	0.818
					PBID9	0.576	0.715
					PKIDM1	0.848	0.796
	BSP1	0.866	0.743		PKIDM2	0.828	0.819
	BSP2	0.855	0.844		PKIDM3	0.805	0.823
	BSP3	0.803	0.907		PKIDM4	0.759	0.726
BSP	BSP4	0.710	0.690	**PKIDM**	PKIDM5	0.709	0.696
	BSP5	0.670	0.874		PKIDM6	0.630	0.818
	BSP6	0.724	0.475		PKIDM7	0.598	0.818
					PKIDM8	0.578	0.714
					GFDM1	0.848	0.716
	BCP1	0.729	0.630		GFDM2	0.828	0.796
	BCP2	0.889	0.638		GFDM3	0.805	0.819
BCP	BCP3	0.851	0.700	**GFDM**	GFDM4	0.759	0.823
	BCP4	0.839	0.639		GFDM5	0.709	0.726
	BCP5	0.805	0.653		GFDM6	0.630	0.696
					GFDM7	0.598	0.818
SCROI	SCROI1	0.721	0.951	**SCIMI**	SCIMI1	0.605	0.675
	SCROI2	0.662	0.942		SCIMI2	0.666	0.695

Table 4.17: Continued

	SCROI3	0.586	0.826		SCIMI3 SCIMI4	0.715 0.766	0.783 0.776
SCPI	SCPI1 SCPI2 SCPI3 SCPI4	0.605 0.666 0.715 0.766	0.576 0.675 0.695 0.776	**SCIM**	SCIM1 SCIM2 SCIM3 SCIM4	0.605 0.666 0.715 0.766	0.654 0.675 0.695 0.776

4.14.1.2 Construct Reliability

It determines whether the items measuring a construct are similar in their scores (i.e., if the correlations between items are strong (Hair et al., 1998; Hair et al., 2006). A value of 0.70 or higher is a rule of thumb for a reliable construct, and if model constructs follow the same points, 0.60 or higher is also acceptable. Therefore, a value of 0.70 or higher specified the convergence of internal consistency (Hair et al., 2006)(Table 4.19). The Average variance extracted measures latent construct convergence (Hair et al., 2006) using the average loading factor squared value to determine AVE (Hair et al., 2006). AVE indicator scores of 0.50 or higher indicate convergent validity of the construct (Chin, 1998; Hair et al., 2006.). Table 4-18 shows the composite reliability of all constructions with values > 0.70, and AVE > 0.50, and Cronbach's Alpha exceeds 0.70, proving all construct's reliability.

Table 4.18: Construct Validity

Construct Validity			
Constructs	**Composite Reliability**	**AVE**	**Cronbach Alpha(α)**
LSSCS	0.8423	0.5485	.958
LSCS	0.9384	0.6612	.931

Table 4.18: Continued

INFS	0.8374	0.5207	.942
FKS	0.8425	0.5732	.916
BSP	0.9023	0.7515	.960
BCP	0.8412	0.5045	.912
GCRP	0.9258	0.6336	.914
PNRP	0.8186	0.6041	.973
PBID	0.9284	0.8147	.940
PKIDM	0.8415	0.6211	.968
GFDM	0.8945	0.8149	.963
GFDM	0.7624	0.5873	.963
SCIRI	0.8741	0.5746	.946
SCIMI	0.9054	0.7543	.973
SCIPI	0.8297	0.5071	.924
SCIIMI	0.9094	0.7341	.946

4.14.2 Item Validity

Each item correlates with the other items that measure the same construct as the other construct's components is called the construct's discriminant validity (Hair et al., 2006). Validity was shown to be higher for each item loading in the construct for Confirmatory Factor Analysis (CFA) as opposed to other constructs (Abdi, 2010). This means that all items were more dependent on their respective constructs than on each other, so the finding indicates that discriminant reliability has been achieved (Floyd & Widman, 1995).

4.14.3 Construct Validity

Validity means measurements of precisely what they are supposed to measure in terms of the characteristics of the concept. Validity of measures holds that measurement has

no systematic or non-random errors (Hair et al., 2006). It supports the core analysis of construct validity (Chin, 1998; Saunders et al., 2009). The study is well-defined and adapted from established literature (Chin, 1998). By comparing the Pearson Correlation Coefficient, each variable and its component are checked using the correlation coefficient (Hair et al., 2006). Tests show that all the variables have a significant correlation with the associated items and approves the convergent validity of the constructs used in this study model.

4.14.4 PLS Significance

The PLS-SEM method is used based on variance and inadequate sample data may be biased for high estimates of measurement models and lower coefficient estimates (Chin, 1998). The number of independent variables influencing the dependent construct under research is ten times greater than the sample size, and a sample size of 459 people is sufficient, which helps to reduce biases in the structure model(Chin, 1998; Hair et al., 2006; Abdi, 2010). In most studies, the significance level is 5% 0.05, which increases any real or imagined adverse effect (Hair et al., 1998). The degree to which the two variables are related to one another is shown by the status of statistical significance (Hair et al., 2006). Therefore, the searcher in this study used a significance level of 0.05.

4.14.5 Structural Model Analysis

The Smart PLS-v 3.3.0 has been used for the model of the study and the structure of the model; the R2 value has observed the explanatory power of the model significant path coefficients, and the t-values in PLS express the measurement and latent variables relationship.

4.14.6 Path Coefficient (b) and t-Values

The t-values for each path of the structural model used to define the hypothesis path were measured using the PLS Bootstrap method. The t-values indicated the relationships

between the variables (Chin, 1998). Every hypothesis was assessed for statistical significance of the corresponding path by the t-value. The standard t-value of 1.96 with a 0.05 level of significance determines whether the study's hypotheses are accepted or rejected (Hair et al., 2006)

The PLS model for the outcomes of hypothesis testing is shown in Figure 4.1

4.14.7 R^2 Value

The R2-value gives a percentage explanation of the variance of the dependent variables caused by independent variables (Abidi, 2010). The R2 value depends on the discipline of the study, and in social sciences, the R2 value is both too high and too low (Hair et al., 2011). In this study, the outcome value of R2 of endogenous dependent variables is 0.732 (Table 4.19). The present value demonstrates that independent constructs account for more than 50% of the explanation of the dependent construct, and empirical results reveal that 73% of decisions are affected by the other variables (SP, CP, LS, RP, and SCM) (Table 4.19).

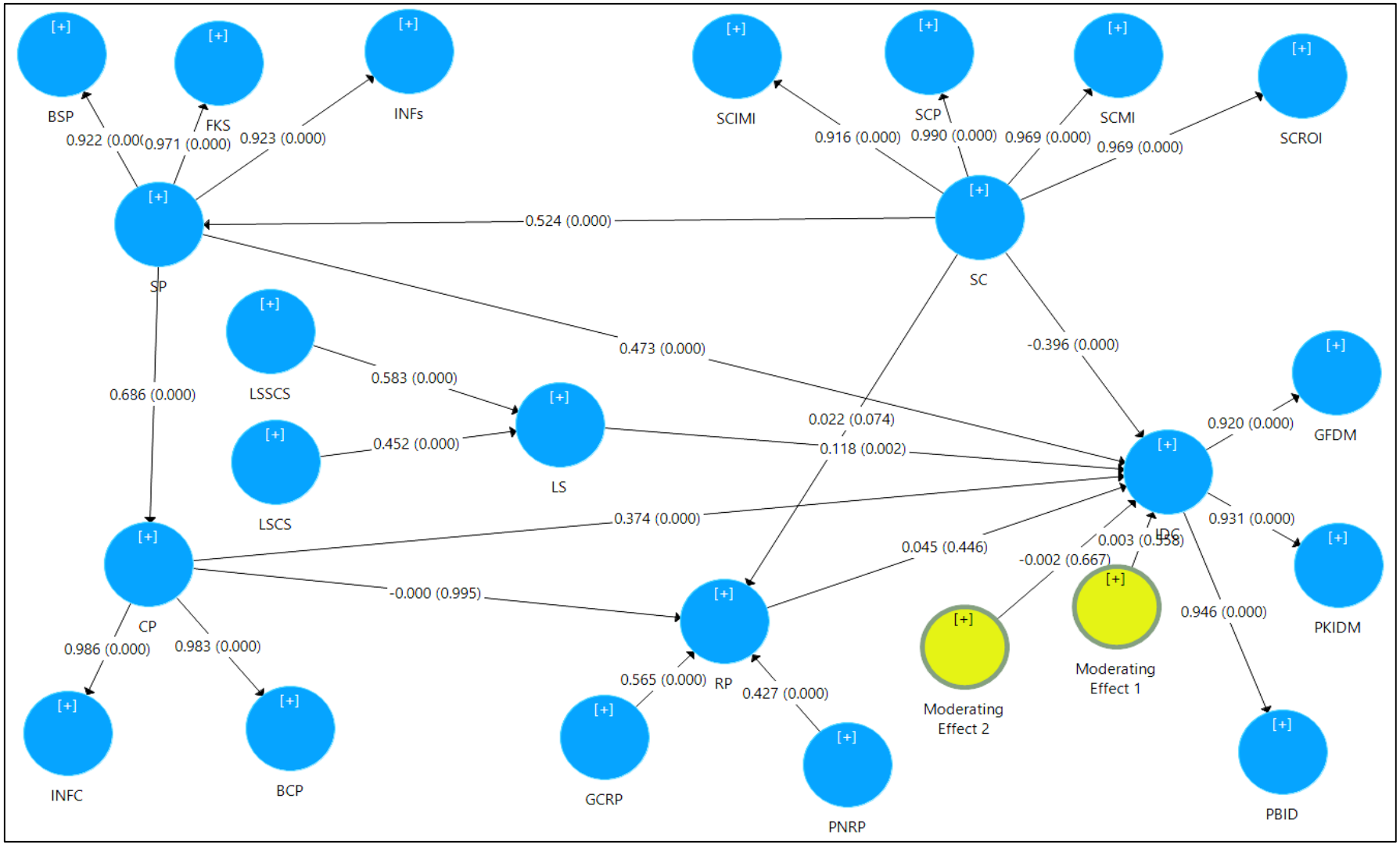


Figure 4.1: Path Coefficient (b) and t-Values

Table 4.19: Path Coefficient (b) and t- Values

	Link	t- Values	p-Value	Path Coefficient (b)	R^2
1.	S->C	32.427	0.0000	0.686	0.732
2.	S-I	40.087	0.0000	0.473	
3.	C->I	12.583	0.0000	0.374	
4.	LS->I	3.139	0.002	0.118	
5.	S ->LS->I	0.586	0.558	0.003	
6.	C->LS->I	0.436	0.667	-0.002	
7.	CxRP->I	0.0004	0.997	-0.0001	
8.	IS->S	52.330	0.000	0.524	
9.	IS->I	6.238	0.000	-0.396	
10.	RP->I	0.763	0.000	0.045	
11.	ISxRP->I	0.543	0.587	0.001	

4.15 Testing of Hypotheses

The following section will discuss and explain the results of SEM analysis for the hypothesis results.

4.16 Saving Behaviour and Consumption Behaviour

According to the PLS result (t=32.427, b=0.686, p0.05), saving behaviour is significantly correlated with consumption behaviour in a reasonably favourable direction (Table 4.20). The strength of the association is shown by the value of the path coefficient, or b value, which predicts a positive, strong relationship between saving behaviour and consumption patterns. Pearson's correlation coefficient outcome also confirmed the relationship between saving behaviour and consumption behaviour. Finally, findings support hypothesis H1: saving behaviour affects the consumption behaviour of the salaried class. Higher expected future income raises current consumption even at the same current income level, so current saving declines (Modigliani & Brumberg, 1954). The cost of living also affects savings and consumption behaviour as they become expensive and lower savings (Von Ungern, 1981). Results are also supported by Gramlich (1996), inflation and trend of living, i.e., Consumption behaviour, also realize the savings for investment (Swadospeera et al., 2012; Morren et al., 2016; Adams et al., 2010; Alonso-Garcia et al., 2017a).

4.17 Saving Behaviour (SB) and Investment Decision Making (IDM)

According to the PLS Results (t = 40.087, b = 0.473, p 0.05). Saving behaviour and Investment decision-making have a significantly positive association (Table 4.20). The path coefficient b value indicates a strong association with a strong positive relationship between saving behaviour and investment decision-making. The results also confirm the Pearson's correlation coefficient in this study to determine the relationship between saving behaviour and investment decision-making. Finally, findings support H2: Saving behaviour affects the investment decisions of the salaried class. The results are consistent with those of Statman & Wood (2004) and Marconi & Utkus (2002); planning and saving behaviour are accessible for investors who are motivated to invest with saving, but only a few are continuing savings

and investment decisions. These results are also consistent with the study with the significant relationship between savings and investment decisions (Bindabel & Salim, 2021; Agur et al., 2020). Economists also argue that saving is a source of capital and, hence, an investment in the economy (Feldstein and Horioka, 1980; Feldstein and Bacchetta, 1991; Bosworth, 1993). Also, the Solow (1956) model, the absolute income hypothesis, supports the results, as savings are essential for the long-term and short-term growth of the economy. Life cycle hypotheses support the outcome as the savings are made during the job, and consumption is managed at the end and invested to earn after retirement..

The study also recommended promoting the benefits and avenues of saving and investing through educational programs (Mann et al., 1989; Bernheim et al., 2001. Modigliani & Brumberg (1954) argued that the Life-Cycle Hypothesis supports the idea that the individual household pacifies the consumption and over expected lifetime resources they have, which predicts the rising saving rate and negative going during retirement. The findings of Ramanathan & Meenakshi (2015) are also in line with the results because savings encourage investment activity, particularly for the salaried class, who allocate their savings funds to a variety of market avenues for retirement (Ando and Modigliani's, 1963; Alonso-Garcia et al., 2017b; Struck, 2012; Van, Praag & Frijters, 2003; Alonso-Garcia et al., 2017a).

4.18 Consumption Behaviour (CB) and Investment Decision Making (IDM)

The PLS results ($t = 12.583$, $b = 0.374$, $p<0.05$) reveal that consumption behaviour has a relatively positive and significant association with investment decision-making (Table 4.20). The value of path coefficient b shows the strength of the relationship with a strong positive relationship between consumption behaviour and investment decision-making. The results also confirm Pearson's correlation coefficient to determine the relationship between consumption behaviour and investment decision-making. Finally, findings support

hypothesis H3: There is an effect of consumption behaviour on the investment decision of the salaried class. The study outcomes contrast with the study statement by Cox, Ross, and Rubinstein (1979) that individuals are considered the planners for their future financial decisions and their readiness for the adequacy of the current state and make decisions whether they are conscious of the deficiencies. The theory of lifecycle hypothesis was supported by Fisher (1930) and Modigliani and Brumberg (1954, 1979). Also, the study by Ameriks et al. (2003) supported the planned mindset with usage and towards prosperity after retirement, also backed by the lifecycle and permanent income hypothesis. Dolvin and Templeton (2006) supported outcomes through consumption and retirement planning, the diversification of portfolios, and risk management through optimized risk management. Study results are also inconsistent with the budget constraints and consumptions Fisher (1930), Modigliani and Brumberg (1954), and Modigliani (1986) described in the theory of lifecycle hypothesis. According to Cox and Huang (1989), these lifecycle planning theories have been successful when used in uncertain situations. Modigliani and Brumberg (1980) extracted that social security and pensions are some obligations such as taxes and hand, respectively, and individuals will be indifferent and have less accumulated pensions at the time of retirement. Barnett (2005) and Deaton (2005) discovered that estate planning, money management, investment planning, and retirement planning all have a significant positive relationship with retirement investment planning behaviour and consumption patterns. According to lifecycle hypotheses, Mohidin et al. (2013) also supported that the investor's wealth and consumption choices remain the same throughout their lives. Bodie et al., (1992) also supported the lifecycle consumption is at a smooth level. Modigliani and Brumberg (1954, 1980) explained that the lifecycle model describes the household dissave after retirement, leading to negative savings, which implies that individuals in the salaried class

dissave during working tenure maintain their consumption and have saved much wealth. According to Ramanathan & Meenakshi (2015), an ideal investment is an individual problem of choosing a specific investment that differs from person-to-person consumption and even the circumstances of the individual salaried class (Lusardi & Mitchell, 2007; Bucher-Koenen & Lusardi, 2011; Daley et al., 2016b; Daley et al., 2016b).

4.19 Living Standards (LS) and Investment Decision Making (IDM)

The PLS results show that living standards have a reasonably positive and significant connection with investment decision-making (t = 3.139, b = 0.18, p 0.05) (Table 4.20). The path coefficient b value indicates a strong association, and this predicts a strong positive relationship between living standards and investment decision-making. Furthermore, these findings also confirm the utility of utilizing Pearson's correlation coefficient in this study to establish a connection between living standards and the decision-making process of investments. Finally, findings support H4: There is an effect of living standards on the investment decisions of the salaried class. Insufficient funds after retirement lower living standards if reliability increases, only on pension or provident funds. According to a study by Lai et al. (2009), insufficient and lower funds after retirement decrease living standards; in addition, savings primarily respond to culturally specific norms and social interactions, as the culture is found not to affect the savings.

In contrast, cultural preferences are also necessary for saving behaviour, as the place of origin matters, which is only applied to vast, faraway areas a study by Font et al. (2020). Furthermore, according to Font and colleagues (2020), diverse socio-economic and demographic factors influence sustainable development and quality of life, resulting in a variety of living standards and saving and investing patterns; as a result, these findings do not support this claim (Klapper et al., 2015; Steinbach, 2019). In contrast, disposable income

and expenditures for material culture and consumption needs have an impact on investment and consumption decisions (Lai et al., 2009). Hershfield et al., (2011) argued that individuals see their future identities and realization of future recipients, and it affects their willingness to save and invest by individuals(Mittelstaedt et al., 2014; Love et al., 2009; Van-Ooijen, 2015). Millar and Devonish (2009) supported consistent results that individuals lack knowledge of pension plans, manage themselves, treat retirement planning as a low priority, and invest in property and land assets. This study supports the results that there is a difference in cultures, so saving and investment in retirement planning may differ (Lusardi & Mitchell, 2007; Bucher-Koenen & Lusardi, 2011; Sheth & Parvatiyar, 2021; Andrew, 1999; Henrich et al., 2010; Mittelstaedt et al., 2014; Maslow, 1943; 1970; Schwartz, 2003; Schwartz, 2010; Brüggen et al., 2017; Dunn & Mirzaie, 2012).

4.20 Living Standards (LS) Moderating Between Savings Behaviour and Investment Decision Making (IDM)

According to the PLS results ($t = 0.586$, $b = 0.000$, $p > 0.05$), living Standards have an insignificant association as a moderating influence with saving behaviour and investment decision-making (Table 4.20). The value of path coefficient b shows the strength of the relationship with a strong positive but insignificant relationship as a moderator between Saving behaviour and Investment decision-making. The value of $p > 0.00$ shows no significant relationship between moderator living standards, saving behaviour, and investment decision-making. Finally, findings do not support hypothesis H5: Living standards have a moderating role on the savings behaviour and investment decisions of the salaried class. Therefore, H5 is rejected. Byrne (2007) asserts that there might be a difference in cultural savings within samples, and Millar and Devonish (2009) support the same conclusions. As there may be a difference in culture, so saving and investment in living

standards may differ (Lusardi & Mitchell, 2007; Bucher-Koenen & Lusardi, 2011; Sheth & Parvatiyar, 2021; Andrew, 1999; Henrich et al., 2010; Mittelstaedt et al., 2014; Maslow, 1943; 1970; Schwartz, 2003; Schwartz, 2010; Brüggen et al., 2017; Dunn & Mirzaie, 2012).

4.21 Living Standards Moderating Between Consumption Behaviour and Investment Decision Making

According to the PLS results (t = 0.0.436 and b = 0.002, p > 0.05), living standards have an insignificant association as a moderating influence between consumption behaviour and investment decision-making (Table 4.20). The value of path coefficient b shows the strength of the relationship, and this predicts a strong positive insignificant relationship as a moderator between consumption behaviour and investment decision-making. The value of p > 0.00 shows no significant relationship as moderator living standards between consumption behaviour and investment decision-making. Finally, the findings do not support hypothesis H6.

Byrne's (2007) culture is most distinctive; in contrast, it is sometimes collectivistic, and there is information sharing about savings and investment as well as cultural sharing with friends, family, and co-workers of all types of individuals. Byrne (2007) states that individuals receive advice for their pension from different culturally participative resources, and these sources of advice are fellows, friends, advisors, banks, and financial institutes. Von (1981) also disagrees with these results, as inflation and consumption behaviour culturally affect savings and financial planning as an investment (Lusardi & Mitchell, 2007; Bucher-Koenen & Lusardi, 2011; Sheth & Parvatiyar, 2021; Andrew, 1999; Henrich et al., 2010; Mittelstaedt et al., 2014; Maslow, 1943; 1970; Schwartz, 2003; Schwartz, 2010; Brüggen et al., 2017; Dunn & Mirzaie, 2012).

4.22 Consumption Behaviour, Retirement Planning, and Investment Decision Making

The PLS results (t = 0.0004 and b = -0.000, p > 0.05) demonstrate that CP mediates the effects of RP and IDM in a relatively unfavourable manner (Table 4.20). The path coefficient b value, which reveals a significant negative relationship as a moderator between RP and IDM, demonstrates the strength of the association. The results also confirm the Pearson correlation coefficient in this study to determine the relationship of CP with RP and IDM. The value of p > 0.00 shows no significant relationship between retirement planning consumption patterns, and IDM. Finally, the findings do not support the hypothesis; H7, there is a mediating role of retirement planning between consumption behaviour and the investment decisions of the salaried class. Therefore, H8 is rejected.

The study outcomes contrast with the study statement by Cox et al., (1979) that individuals are considered the planners for their future financial decisions and their readiness for the adequacy of the current state and make decisions whether they are conscious of the deficiencies. The theory of the life-cycle hypothesis is supported by results by Fisher (1930) and Modigliani and Brumberg (1954, 1979). Also, the study by Ameriks, Caplin, and Leahy (2003) supported the planned mindset with usage and toward prosperity after retirement, backed by the life-cycle and permanent income hypothesis. Dolvin and Templeton (2006) supported outcomes through consumption and retirement planning, the diversification of portfolios, and risk management through optimized risk management. Study results are also in contrast with the budget constraints and consumptions Fisher (1930), Modigliani and Brumberg (1954), and Modigliani (1986) described in the theory of life-cycle hypothesis. These theories of life-cycle planning have been applied successfully under uncertainty, as discussed by Cox and Huang (1989). Modigliani and Brumberg (1980) extracted that social security, and pensions are some obligations such as taxes and hand, respectively, and

individuals will dissave and lessen accumulated pensions at the time of retirement(; Cahya et al., 2023; Camerer et al., 2003; Engen et al., 2005; Hurd & Rohwedder, 2003; Kalmi, 2018). Barnett (2005) and Deaton (2005) found that critical factors such as retirement planning, money management, investment planning, and estate planning have a strong and positive influence on retirement investment behaviours and consumption habits(; Ketkaew, et al., 2019). These findings highlight the importance of these elements in effectively preparing for retirement and managing financial resources. Mohidin et al. (2013) also supported this hypothesis, which results in the investor's wealth remaining the same and consumption decisions remaining the same throughout the life cycle of individuals, as supported by life-cycle hypotheses. Bodie, Merton, and Samuelson (1992) also supported that life-cycle consumption is at a smooth level, as the model assumes, throughout their lifetime. Modigliani and Brumberg's (1954, 1980) life-cycle model states that a household individual's assets are run down, and they disappear after retirement with negative savings. However, this does imply that individuals dissave during the working age to maintain their consumption; they have saved some wealth previously (Kumru, 2019; McCormick, 2018; Sevak, 2002; Zellweger, 2007; Ameriks et al., 2003; Briggs et al., 2017). However, a direct relationship between these variables has been found with investment decisions (Citizens Financial Group, 2016; Daley et al., 2016b; Ando and Modigliani's, 1963; Kulikov, 2007; Brüggen et al., 2017).

4.23 Scams, Retirement Planning and Investment Decision Making

The PLS results ($t = 0.543$, $b = 0.001$, $p > 0.05$) reveal that retirement planning has a relatively negative and insignificant association as a mediating effect with IS and IDM (Table 4.20). The value of path coefficient b shows the strength of the relationship, and this predicts no relationship with RP as a moderator between SC and IDM. The results also

confirm Pearson's correlation coefficient in this study to determine the relationship of SC with RP and IDM. The value of $p > 0.00$ shows no significant relationship as mediator RP between SC and IDM. Finally, the findings do not support H8. Retirement planning plays a mediating role between scams and the investment decisions of the salaried class. Therefore, H8 is rejected. These retirement planning results are supported by studies by Hallman and Rosenbloom (2003) and Moorthy et al. (2012). Also, the life stage, the status of the job, and emotional risk management are significant, with investment decisions being safer and more secure. These studies state that financial needs and assistance to the children in retaining funds after retirement are called retirement planning. So, these funds can be retained through investment, controlling consumption as provident funds are insufficient for these expenses; the factors of consumption behaviour and living expenses also support this outcome as they affect the decisive power of individuals. Zabri et al. (2016) and Huberman & Jiang (2006) have shown the confusion of respondents in asset allocation through investment decisions. Other studies by Shanmugam and Zainal (2013) and Hershey et al. (2003) supported the idea that financial objectives and purpose are associated with retirement savings and investment and are related to retirement savings contributions. Jacobs-Lawson's (2003) arguments are supported by the result of this study for the implementation of individuals' early retirement planning. According to Moorthy (2012) and Venti (2006) also supported this result that the inability of individuals to predict retirement planning leads to sub-optimal saving levels and investment decisions. However, a direct relationship has been significantly found between scams and investment decisions and even with retirement planning directly (Struck, 2012).

4.24 Scams and Saving Behaviour

The PLS results ($t=6.238$, $b = -0.524$, $p<0.05$) reveal that SC has a relatively positive significant association with SB (Table 4.20). The path coefficient b value indicates how

strong the association is, and this predicts a positive, strong relationship between SC and SB. The results also confirm the Pearson's correlation coefficient to determine the relationship between SC and SB in this study. Finally, findings support hypothesis H9: There is a relationship between investment scams and the saving behaviour of the salaried class. Therefore, H9 is accepted. Trust in the financial institution also impacts the respondent's savings and investment decisions. All over the world, banks have formulated strict rules and regulations with the aim of reducing risks and stable investment. Altuntas et al., (2011) supported these results. Bodie (2002) stated that individuals make and repeat the investment due to the need for more knowledge, advice, and reliance on the data presented and mostly, internet-sourced information is criticized. These results by St John (2006) and Coleman (2006) are also consistent with this study (Struck, 2012).

4.25 Scams and Investment Decision Making

The PLS results ($t = 6.238$ and $b = -0.396$, $p<0.05$) reveal that SC has a relatively negative and significant association with IDM (Table 4.20). The value of path coefficient b shows the strength of the relationship, and this predicts a strong positive relationship between SC and IDM. These outcomes also confirm Pearson's correlation coefficient in this study to determine the relationship between SC and IDM. Finally, findings support hypothesis H10: There is an effect of investment scams on investment decisions. Therefore, H10 is accepted. St John (2006) supported the retirement study by saying that a retirement saving strategy is not as helpful as welfare if retirement assets are not properly spent. Coleman (2006) also supported the hypothesis of scams that the savings rate only matters if it is appropriately invested through investment decisions.

Further, working-age individuals get enough returns by saving on investment decision value. Ramanathan Meenakshi (2015) conducted a study on employees, stating that investors

consider safety and security first before any investment return. Coleman (2006) also supported the idea that individuals avoid investment decisions if they feel uncomfortable with them. High returns also support greater satisfaction if the investment is wise and safe (Gitman et al., 2013). Results are similar to the theory of planned behaviours (Ajzen, 1991) and attribution theory (Heider, 1958). These theories discuss the planned behaviours of individuals and the specific reasons for the behaviours. While related to investment scams, these theories drive investors and explain the factors involved in the victimization of investors. As results are positive with investment scams and supported by the theories and outcomes of the study of Statman and Wood (2004), explaining the investigation of goals, hope, and fears, investors feel and recommend precocious temperament. Lusardi Mitchell (2007) also examined the preparedness for retirement due to insufficient information and financial literacy.

4.26 Retirement Planning and Investment Decision Making

The PLS results (t = 0.763, b = 0.045, p0.05) show that RP and IDM are significantly associated in a generally negative way (Table 4.20). The path coefficient b value indicates how strong the association is, and this predicts a strong positive relationship between RP and IDM. These outcomes also confirm Pearson's correlation coefficient in this study to determine the relationship between RP and IDM. Finally, findings support hypothesis H12: Retirement planning affects investment decisions. Therefore, H12 is accepted. Another study supported this outcome by Lusardi, Mitchell, and Curto (2010), who argued that financial planning skills are necessary and help in meeting obligations and long-term financial investment security. Also, Hershfield et al. (2011) supported the outcome that individuals withdraw their future egos through saving and choosing to spend today and in the future. Heena Kothari (2013) also agrees with these outcomes. He revealed that the investors are in

different age groups and plan retirement and investment in their age group. Also, the outcome matches with a statement that financial literacy, information for saving, and comfortable retirement improve financial investment decisions, reducing the negative consequences of poor investment decisions (Van et al., 2012; O'Sullivan, 2014; Lusardi & Mitchell, 2011; Delafrooz & Laily, 2011; Agnew, 2023).

4.27 Demographics Results

According to Kulikov et al., (2007), various factors impact the savings of lower-income households, such as educational level, expenses for children's education, family size, liabilities, and value of their home, which tend to decrease the amount of savings. However, the income level and total dependency rates have a positive influence on the savings of these households. For middle-class households, total dependency is strongly related to their savings, with a positive correlation. Conversely, factors such as expenses for children's education, liabilities, marital status, land ownership, and home value have an inverse relationship with savings. On the other hand, higher-income households are affected by different factors when it comes to their saving habits and age; involvement of a spouse, total income, and land ownership tend to increase savings (Ashok & Jagadeshwara, 1985).

Conversely, variables such as age squared, expenses for children's education, liabilities of the household head, and marital status have a negative impact on savings for higher income. They stated that saving behaviour is positively associated with income levels while remaining unaffected by the specific source of income. This study has compared the effect of demographics of the salaried with the saving and investment decisions of the salaried class by Pay Scale (SCL), Annual Income (AI), Age (AGE), Gender (GEN), Marital Status (MS), Education (EDU), family size (FZ), Profession (PRO), Job Type (JT), Experience (EXP), Family Type (FT), Family Class (FC), and Province (PRO) (Dhawan &

Mehta, 2019; Kamarudin & Hashim, 2018; Kochi, 2018; Kourtidis et al., 2017; Miao, 2017; Moreland, 2018; Stix, 2013; Varlamova & Larionova, 2013; Vasagadekar, 2014; Kourtidis et al., 2011; Kubicek et al., 2011).

Following are the demographic results of savings and investment..

4.28 Demographics and Savings

The Chi-Square test results show no significant relationship between pay scale, education, and profession and the savings behaviour of respondents. However, age, gender, family size, job type, family class, and province have been significant factors in savings behaviour for the individual salaried class. Job is consistent with Burey and Khan's (1992) findings that the status of a job increases while the employees' experience when they are at the middle level of managing their savings is high. Additionally, according to Li, Montalto, and Geistfeld's (1996) study, the respondents' family class exhibits a significant relationship with saving. The same study also found that the respondents' marital status was significant and supported the findings. It stated that married individual show more interest in saving. Utilizing proper education has been discovered to have a positive correlation with saving, consistent with previous studies by Teshome et al., (2013) and Jamal et al., (2014). This suggests that a higher level of education not only enhances financial literacy but also increases awareness of the value of saving Pangestu & Karnadi, 2020; Schumpeter, 2008; Varlamova et al., 2007;Abramsson & Andersson, 2016).

Additionally, the number of individuals in a household directly impacts savings, as larger family sizes tend to lead to greater consumption. Significant results regarding family size and savings were in line with a study by Khalek et al. (2009) and Ur Rehman et al. (2010). These studies concluded a negative association between family size and savings. In these regions, individuals have a small number of family members. Most of them have four

or more members. Therefore, an increase in family size will decrease individuals' savings. The results are consistent with Keynes's absolute income hypothesis. Therefore, hypothesis H12a, There is a relationship between demographics on saving behaviour, is accepted (Table 4.21).

4.29 Demographics and Investment Decision

Investment decisions have been found to be insignificant in the profession of the salaried class only. This means that the profession of the salaried class keeps individuals' investment decisions the same. Meanwhile, age, gender, marital status, and family size significantly affect investment decisions. It shows that gendered males and females also differ in their investment decisions. The respondents' age and family size also affect the decision-making of an individual regarding investment. Job type, work experience, family type (single or joint), and family class (upper to lower class) were also found to have a significant effect on the investment decision-making of the individual salaried class. At the same time, all other variables were significant in the investment decision-making of the individual salaried class. Based on the segregation of the population, the province of the salaried class significantly affects the individual's investment decision. This means that the culture, norms, and geographical area of an individual are found to be effective for an investment decision. The study population is from these provinces, so there is a difference in saving and investment decisions. Federal government employees work in different departments and have differentiated qualifications and expertise. The findings also show that when making decisions about saving and investing, members of the salaried class consider their jobs. This further highlights the impact that job type has on financial decision-making. Therefore, hypothesis H12b, There is a relationship between demographics and investment decisions, is accepted (Table 4.21).

Based on these findings on demographics with saving and investment, it is recommended to the government authorities, policymakers, and financial institutes to design the investment avenues and saving schemes according to the age level, job type, and provinces (cultural norms) of federal government employees. Another critical factor, income, was found to have a significant association with the savings and investment decisions of the salaried class. The results showed that the increased income would increase savings and investment as an inflow of money into the economy. These results are in accordance with income theory; the theory of the absolute Hypothesis (Keynes, 1936), the theory of Life-Cycle Hypothesis (Modigliani & Brumberg, 1954), and the Permanent Income Hypothesis (Friedman, 1957) also support the outcomes of this study. At a younger age, the APC is higher, and the APS is lower, and as time passes from lower to middle age, the higher the APS and the lower the APC. Also, middle-aged individuals have less wealth accumulated compared to the senior age, which is the retirement age. Therefore, middle-aged households have higher wealth and accumulated savings. Hence, age plays a vital role in saving, investment behaviour, and wealth accumulation at retirement age. So, the study has achieved the objectives of demographic relationship with saving behaviour and investment decision-making.

Table 4.20: Demographic Factors and Saving & Investment

Relationships Between Demographic Factors, Saving & Investment								
	Saving Behaviour				Investment Decision			
	Pearson Chi-Square Value	df	Sig. (2-sided)	Results	Pearson Chi-Square Value	df	Sig. (2-sided)	Results
Pay Scale	1.008	4	0.799	In significant	1.041	3	0.0164	Significant
Annual Income	3.748	3	0.004	significant	2.011	2	0.0003	Significant
Age	28.716	12	0.004	Significant	23.612	13	0.003	Significant
Gender	7.875	3	0.020	Significant	9.841	3	0.000	Significant
Marital Status	24.643	9	0.003	Significant	20.663	9	0.0001	Significant
Education	8.163	8	0.0174	Significant	9.171	9	0.0422	Significant
family size	39.658	12	0.000	Significant	31.586	14	0.000	Significant
Profession	12.008	5	0.649	In significant	10.04	9	0.475	Insignificant
Job Type	27.415	8	0.034	Significant	22.617	11	0.0123	Significant
Experience	7.845	4	0.041	Significant	9.675	3	0.043	Significant
Family Type	21.781	11	0.037	Significant	19.643	4	0.013	Significant
FamilyClass	7.181	6	0.002	Significant	9.771	8	0.012	Significant
Province	36.115	9	0.015	Significant	33.758	12	0.003	Significant

4.30 Research Hypothesis

Hypotheses results are mentioned below and having the p-values higher than 0.05 are rejected and p-values lower than 0.05 are accepted for alternative hypotheses (Table 4.21).

Table 4.21: Research Hypotheses

H	Hypotheses	p-value	Result
1.	There is an effect of saving behaviour on consumption behaviour of the salaried class.	0.0000	Accepted
2.	There is an effect of the saving behaviour on the investment decision of the salaried class.	0.0000	Accepted
3.	There is an effect of the consumption behaviour on the investment decision of the salaried class.	0.0000	Accepted
4.	There is the effect of the living standards on the investment decision of the salaried class.	0.002	Accepted
5.	There is a moderating role of living standards on the savings behaviour of the salaried class and the investment decision.	0.558	Rejected
6.	There is a moderating role of living standards on consumption behaviour of the salaried class and the investment decision.	0.667	Rejected

Table 4.21: Continued

7.	There is mediating the role of retirement planning between consumption behaviour on the investment decision of the salaried class.	0.000	Accepted
8.	There is a mediating role of retirement planning between scams and the investment decision of the salaried class.	0.997	Rejected
9.	There is a relationship between investment scams on saving behaviour of the salaried class.	0.000	Accepted
10.	There is an effect of investment scams on the investment decision of the salaried class.	0.000	Accepted
11.	There is an effect of retirement planning on investment decisions of the salaried class.	0.000	Accepted
12.	There is a relationship between demographics, saving behaviour and investment decision of the salaried class. a) There is a relationship between demographics on saving Behaviour. b) There is a relationship between demographics on investment decision.	0.000 0.000	a) Accepted b) Accepted Except Pay Scale , and Profession P>0.05

4.31 Chapter Summary

This chapter aims to explain the research objective achieved through a proper statistical approach and paradigm of research. It also describes the data collection methods and the methodological procedures applied in this research. The chapter also includes all the justifications, advantages, and disadvantages of different methods and techniques. The deductive approach has been used, with quantitative methods using the survey as a strategy and the questionnaire as a data collection instrument tested on two-stage quota sampling sample methods and as an exploratory study conducted over a cross-sectional time horizon. In addition, this chapter describes the statistical procedures used for hypothesis testing and the ethical considerations for the study.

The subsequent chapters contain the conclusion of the research, its implementation, and its limitations and future recommendations.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The current chapter refers to the conclusive examination and addresses the empirical findings that were reported in the preceding chapter. This chapter provides a concise overview of the theoretical, practical and social implications and contributions of the study, with a specific focus on the field of behavioural economics. This chapter includes an analysis of the findings related to the study objectives as well as a concise overview of the study's conclusion, limitations, and future recommendations.

5.2 Summary of the Study

This study examines federal government employees of Pakistan from BPS-17 to BPS-22, including a quota sample of 459 from Islamabad, Punjab, Sindh, Baluchistan, KPK, Gilgit Baltistan, and AJK working in government agencies and organizations with different education, age, experience, and demographics, culture, and society. Federal employees retire at 60 years old and get a government benevolent fund, retirement fund (gratuity), and pension as retirement funds deductible during service. Large, accumulated savings for retirement throughout the service are invested in different ways as per living standards and with different behaviour of consumption. Behavioural economics and investment theories of savings, lifecycle hypothesis and permanent income hypothesis are treated as the inflow of money both for individuals, businesses, as well government. Savings role as inflow through investment are necessary for economic growth.

To answer research questions and reach study goals with real-world evidence, hypothesis testing and developing theoretical frameworks are used. The study analyzed the

significant effect of variables on investment decision-making using quantitative data from an adapted questionnaire survey and the background, introduction, and literature on savings, consumption, scams, living standards, retirement planning, and investment decision-making, as well as the methodology was used to achieve quantitative and descriptive results. Also, this study used structural equation modelling (SEM-PLS) to test the hypothesis and find the exogenous and endogenous variables relationship (Kline, 2005; Tenenbaums et al., 2005) and checked the measurement model and acceptable assumptions of values (Hair et al., 2018). This study focuses on predicting validity and reliability, measuring ideas and consistency, the item's reliability, factor loadings to check convergent validity, and the discriminant validity (AVE) value; the item's loadings and correlation score were acceptable values above 0.60. Convergent validity is shown by construct reliability (CR) values of 0.70 or higher, which measure reliability and internal consistency. All construct items were reliable because the value was above 0.70, and the AVE was over 0.50. Confirmatory Factor Analysis (CFA) checks item validity and loading, which was higher in the own construct than in all other constructs, and all items were more dependent on their construct. The Pearson correlation coefficient was used to calculate the correlation between each variable and its component, and all variables significantly correlated with items, confirming convergent validity.

This study included all federal employees from BPS-17 to BPS-22; regardless of gender, 459 were sampled from using quota sampling at the first stage. In the second stage, data was collected using the convenience sampling method because personnel were scattered, unavailable, and busy with meetings and other official activities. Limitations on time and money prevented simultaneous interaction with all employees. Thus, these organizations' regional and zonal offices in important Pakistani cities got 550 questionnaires

by mail, email, and self-visit, and 473 were received; only 459 questionnaires were passed, while others were rejected. The questionnaire had a cover letter, a UNIMAS authorization letter, and a consent form. Pilot testing confirmed the questionnaire and finalized reliability and validity after suggestions, respondents' overviews, and expert assessment. This study employed a 0.05 significance level, as recommended by social science and behavioural economics research literature.

The empirical results of this study showed that R2 values reflected the model variables' explanatory power, while PLS path coefficients and T-values show measurement of latent variable relationships. This study's endogenous dependent variable R2-value is 0.732%. Empirical results show that SP, CP, LS, RP, and SCM influence 73% of salaried class decision-making. All independent variables firmly explained the structural model and variable relationships, and each structural model path's t-value was calculated using PLS bootstrapping. Every path and t-value established a relationship among variables, and every hypothesis was statistically tested using the t-value and p-value. Table 4.21 shows that the study's hypotheses were accepted or rejected based on the conventional t-value greater than 1.96 at a level of significance of 0.05 (Hair et al., 2006; Hair et al., 2018).

5.3 Results Conclusion

Overconsumption and autonomous consumption behaviour impact the savings and investment of an individual salaried class. This study found that consumption and saving behaviour boost private savings, and consumption changes positively with savings. Controlling consumption helps salaried workers to save and invest. The government may raise their pay or provide a subsidized incentive to meet their needs, which boosts economic investment by savings. The study found that private savings improve investment decisions. Better human resource financial policies and savings indicators like inflation, interest rate,

and retirement benefits can boost private savings, the leading indicator of economic activity and a significant source inflow of money as an investment. Government-supported private savings and fringe benefits boost economic savings. Salaried investors invest for consumption, daily needs, and living necessities. Retirement planning with consumption behaviour is essential for investment survival and has been found to have a significant relationship.

To survive, earn respect, honour, and identity in society, everyone bears the cost-of-living standard. For social respect, salaried individuals have career recognition while on the job and maintain the same living standards after retirement, as the results reveal that living standards positively and significantly impact investment decisions. So, policymakers need to guide for better investment opportunities to maintain the standard of living after retirement. As incomes increase, worker saving and investment behaviour changes, so policymakers and governments should advise with financial retirement education and literacy of salaried classes on investment through policy benefits (Fernandes, Lynch Jr & Netemeyer, 2014; Bucher et al., 2017; Banks, 2010; Atkinson et al., 2016; Belás, 2016; Fazli Sabri & Tze Juen, 2014; Gaudecker, 2015; Gutter, & Copur, 2011; Lusardi & Mitchell, 2008; Jappelli, 2010). A further study examined living standards as moderators between saving and investment decisions as well as between consumption and investment decisions. The results revealed no moderating role for this sample size due to differences in age, profession, etc. However, the living standards were found to directly affect investment decisions, meaning that salary-class individuals need to maintain the living standards after retirement and maintain investment decisions accordingly. Therefore, government and employee policy training can help salaried workers save for investment and maintain living standards, as saving money improves investment options and economic and social well-being. Also, living

standards have no moderating effect on consumption and investment. It may be because salaried individuals typically differ in their behaviour as some individuals live well or some live as ordinary people. Some save more to maintain living standards through investment. Mostly, individuals spend more on fashion, clothes, entertainment and consume more, with less savings with no investing, so consumption can only raise living standards with savings. Retirement fund constraints require employee savings and consumption behaviour to maintain living standards (Lai et al., 2009).

Cultural preferences, social connections, cultural costs, and norms influence saving behaviour in distant places. The results of this study revealed that living standards do not moderate savings and investment decisions (Font et al., 2020). However, the research outcome contradicts Lai et al., (2009) because discretionary income, material culture, and consumer needs affect saving, consumption, retirement planning, and investment decisions to sustain living standards and quality of life.

Demographics and socioeconomics affect sustainable development, quality of life, living standards, savings, and investment, so this study examined retirement planning as a mediator between consumption behaviour and investment decision (Ijaz et al., 2023; Kalamarides, 2023). Investment and consumption behaviour have an insignificant relationship, but retirement planning directly affects investment behaviour but not as a mediator. Therefore, the retirement planning of the salaried class needs to be guided by providing training on financial planning and investment opportunities by the policymakers and government.

In the modern era, scammers and fraud activities are widespread spread. Therefore, investment scams are related to investment, saving and retirement planning. Investment scams and fraud can waste salaried workers' lifetime earnings and savings made during the

service. Financial scams may reduce savings and investment behaviour, but policymakers can reduce investment fraud and educate the public. This study found strong negative associations between investments and investment scams, causing investors to lose confidence and fear of financial loss. Policymakers and the government must regulate the financial sector and stop these fraudulent activities to protect individuals through a guiding mechanism. In addition, the salaried class has the potential for savings gratuity and pension funds at the time of retirement, so there is a dire need to offer certified investment options to attract savers, and the inflow of funds into the economy may reduce post-retirement investment opportunities and welfare.

Investment scams can drain workers' life savings in inefficient and unproductive ways; therefore, a knowledgeable and influential retirement investment influences salaried-class investment decisions. Research shows that retirement planning is a significant result proved to increase salaried class investment decisions and money inflow. Policymakers and government agencies can improve retirement planning with incentives and scam-protected guidelines. In this study another role of retirement planning was mediator between investment scams and decisions. The study found insignificant results as mediators, but scams directly were found to have significant results. Reduce retirement planning and salaried class investing, so governments and policymakers should educate about safe fringe employee benefits with retirement planning, which can protect employee investments.

Government authorities, regulators, and financial institutions should use demographics, province, saving, and investment statistics to determine federal government employee investment and saving schemes, which can affect salaried individuals' savings, consumption behaviour and investment decisions, which boost economic growth through private saving investment. The participants were asked to categorize to determine the status

of their behaviour as saver or non-saver, showing the potential investment opportunities as private saving towards investment.

The participants were savers and investors were 149(32.5%) individual saver-investors, and 111(24.2%) were non-saver+ investors, showing that more than half of the individuals had the potential for the investment inflow in the economy as 55% of participants showed investor potential. Further, 97(20.9%) individuals were saver+non-investor and 10(22.2%) individuals were non-saver+non-investor. Therefore, these results showed that 20.9% of participants are savers without market investments, which is very low. Additionally, 22.2% are not investors or savers, which needs more attention to attract private savings and investment through financial inclusion programs. Thus, the study emphasizes the need to serve all these individuals through safer investment avenues and increase their savings behaviour through financial education and investment schemes. The highest percentage of participants, 32.5%, saved and invested. These participants can participate in the economy through safer investment venues controlled by policy and financial intermediaries. The second-highest, 24.2%, were market investors, not savers. Affluent families' exemplary parental influence increases the propensity to save a life and provides ongoing investment potential.

Household financial planning policies can help with retirement responsibilities. This study also shows that psychological and behavioural metrics affect savings behaviour. Individuals with a strong interest in financial avenues, strong household administration and a culture with current and future positive economic events would postpone future consumption. Results also show that individual salaried classes vary with policymakers' facilities. Thus, policymakers have to focus on monthly consumption by the salaried class

and share some substantial and limited expenditures. Consumption theory suggests individuals spend more on basic needs and vary in basic expenditure.

This study has measured the categories of different consumption expenditures in percentage terms. The study asked participants to estimate their monthly spending on essentials and modern/luxurious needs. Education expenses ranged from 30-40 % monthly by 50 % of participants, meaning that salaried individuals spend over 50% on the education of their children. This could be a lack of education opportunities, government support, or participants' interest in education but a need for support by authorities for education spending. Clothing consumption is similar, with 70 percent of the participants spending 30–40% of their income and only 10 (2.2%) spent more than 50% on their clothing. So salaried class like to wear clothes, as a major expenditure monthly.

The highest number of employees, 40%, spent on energy bills, gas, fuel, etc., and 57.5% of participants spent 40% on household expenses monthly. On entertainment, 221 individuals spend 40% of their monthly consumption on body care, and grooming consumes 75%, 30%–40%. Salaried individuals spend monthly on entertainment. Building savings were the highest at 40-60% of income. Individuals need more housing to pay rent. Policymakers can improve housing facilities and policies. 35.7% to 45.5% consumed 10% - 20% security deposits and 7.8% 50-40% bonds loans, which means the salaried class consumes differently and for special needs. The salaried class can save and improve these basic needs if policymakers support them. Safe investment decisions with these savings boost economic growth and living standards.

The study met another goal of salaried class investment preference; even with 60% of respondents at level 01, individuals preferred unexpected investments. These individuals face unexpected events and are risk-averse. Further, 234 (51%) who rely on pension and

retirement funds ranked second, indicating satisfaction at level 2. Child education and family support are the second-most preferred investments. Children's educational expenses are higher, and they are investing in their families' future. Most participants had debt to cover their daily expenses, so investing to pay it off was their top choice. The same is true for housing 219 (47%) and vacations 54 (11.8%). Car purchases are second highest with 250 (55.5%) and first with 117 (25.5%). In the current study, peer role and saving behaviour significantly impact direct relationship investment decisions. Family living standards only had a negligible impact on investment decisions. Future policy may also encourage households to plan for financial futures and maintain their psychological, financial, and basic needs. Individual preference requires financial literacy and safe investment avenues for risk-taking, as financial savings are not the only means of household financial planning(; Klapper et al., 2015). Thus, psychological and behavioural variables are essential for investment avenues, especially for salaried-class individuals (households) who are likely to invest, whether by chance or alone.

Additionally, peer role and family background affect financial literacy. The family type also affects savings and investment. Living standards and investment scams did not affect retirement planning or investment decisions in mediating and moderating relationships. According to the lack of positive results, living standards do not moderate the relationship between saving and investment decisions. However, the literature shows indirect effects and moderating roles, which may vary due to this study's context. Policymakers, government authorities, and financial institutions should plan and implement savings and investment-boosting policies. Everybody, especially the salaried class, should have different retirement options with odd benefits.

The salaried class prefers different investment, saving, and consumption options, which is fascinating. Individual salaried investors preferred riskier investments like stocks, bonds, T-Bills, and bank savings with more experience. With more safety and security beliefs, they own and prefer retirement accounts. Higher-salaried individuals prefer less investment in any portfolio and are more likely to own and benefit from retirement accounts. Retirement planning, execution, and saving and investing behaviour matter as individuals approach and enter retirement. The retirement planning results explain saving, consumption, investment scams, and risk diversification for investment decisions. The results suggest that policymakers and the government should help the salaried class plan for retirement and invest in safe, scam-free investments to survive. Safe investment, economic activity, and Pakistani growth will increase. When asked about barriers to investment avenues they knew about, the results also showed a negative relationship with market scams, saving needs, consumption preferences, and investment presences. Despite investing in basic needs, they mostly did not have basic needs and preferred saving and consumption. These results also suggest protecting salaried class savings and investments with policy changes to meet their basic needs. Investment decisions in retirement planning were also important. It directly affected investment decisions if salaried-class individuals were more explicit about retirement savings and investment needs.

One goal was to identify salaried-class investment barriers. The case of perceived risk as a barrier to investment was not very important, as 55(12%) marked it first, 241(52.5%) second, and 163 (35.5%) third. Investments, financial scandals, and financial intermediate risk are the most significant barriers, at 218 (47.5%) and 233 (50.8%). Investors want to invest, but market scams and scandals stand in their way. 57.5% and 28.8% of participants see the economic crisis as the third problem. The economic crisis changes

investment downfall policies and regulations, which affects individuals. Individuals wait for higher-return investments due to a return-on-investment barrier. They need high-return investments. Risk diversification and reduction and Payless tax at second level 188 (41%) hinder investment. Retirement planning, along with consumption, spending, and budgeting, promotes retirement savings. According to the above results and discussion, individuals use retirement planning tools for formal retirement calculations, seminars, and financial expert reports. Retirement planning predicts salaried class savings, consumption, and investment success. Some households retire with low capital and wealth (Venti & Wise, 2001; Lusardi, 1999; Mitchell & Moore, 1998; Moore & Mitchell, 2000). Finally, results show that financial education for retirees may affect retirement planning, saving, and investing.

Educational programs for specific salaried class subgroups can address differences in preferences and saving needs. Improved safe investment environments and safe decision skills may also improve investment behaviours and decisions. Since Pakistan has yet to address this experience and implementation outcome, economic development needs household savings and investment potential to support the country (Kaur, et al., 2018; Mattil, 2006; Mayer, 2021; Sinha & Sinha, 2008; Umer & Alam, 2015). Saving behaviour and methods are always tricky for policymakers. Private saving at the grassroots level is crucial to the economy. The primary compensation is determining savings types, magnitude, preferences, household investment decisions, social differences between saving and investment, and socioeconomic factors' effects on savings and investment.

Psychological, economic, sociological, and philosophical theories have supported and developed saving behaviour and invention decisions. Between current income and expenditure or non-consumed income is household individual savings. As traditional banks lack financial resources, cooperative institutions boost saving. Any cash accumulation

without economic circulation but not productively invested in household savings. Income-based consumption meets the household's basic needs. Investment is the productive use of savings, monetary or non-monetary, to increase household technical and material capacity. Material goods are household investments in production. Individual household savings overview reports and statistics show that Pakistan's saving rate has yet to contribute to economic growth, as in other developing countries. Status quo consumption of non-productive income and financial institution distrust have reduced savings rates. The household preferred real estate investment cash payments over other financial investments. Surveys show low income, more credit, and liquidity constraints. A tendency to consume income during positive shocks leads to past savings consumption and current dissaving. Pakistan's financial sector includes many formal and informal organizations and institutions that invest in market financial assets. Four categories of salaried workers exist. Some save but do not invest because they do not value it or use the available investment options. They are investing rather than saving, which interests them. Some savers and investors are the leading risks policymakers must overcome. Others who are not savers or investors value financial inclusion in money flows. Financial service providers can improve their financial literacy with this study.

5.4 Theoretical Implications

This study supports Keynes' 1936 Keynesian Consumption function, Modigliani and Brumberg's 1954 Life-Cycle Hypothesis, and Friedman's 1957 Permanent Income Hypothesis with James Duesenberry's (1948) relative income hypothesis because adults have higher APS and lower APC than young. Midlife savings and wealth increase, but retirement has more wealth. An individual's saving decision depends on his savings habits and social class. An individual's attitude to consumption and saving is dictated more by his income in

relation to others than by abstract standard of living (Duesenberry, 1948). The percentage of income consumed by an individual depends on his percentile position within the income distribution, and the present consumption is influenced by absolute and relative income but also by levels of consumption attained in a previous period and difficult to attain after retirement. The aggregate ratio of consumption to income is assumed to depend on the level of present income relative to the past ultimate income level (Ken, 2018).

Ando and Modigliani's (1963) life cycle hypothesis is another theoretical implementation of this study. It states that individuals value consistency in their life resources, matching living standards and well-being when making financial decisions. The study's practical finding suggests that living standards and scams affect investment decisions, but investment planning can improve savings and investment decisions by increasing financial literacy. Through competitive deposit rates and safe investment options, financial institutions and government policymakers can encourage savings and investment. The Life-Cycle model and permanent income hypothesis suggest the psychological and behavioural variables for decision-making and how households plan their finances and save or invest. The study outcome also contributes psychological and behavioural aspects of salaried domestic skills, personality traits, and demographic characteristics that affect the behavioural biases and traits towards savings and investment. The behavioural Life-Cycle (BLC) hypothesis adds self-control, mental accounting, and framing to the life-cycle theory of saving and consumption with mental wealth accounts, including present income, current assets, and future income and encourages spending beyond future earnings. Recent studies on the pure and prolonged life cycle hypothesis, focusing on elder life cycle behaviour, have found inconclusive results by limiting elderly physical consumption options and decreasing consumption as the individual becomes older. This shows most of the research on elderly

consumption and savings, including the decline in expenditure and the rise in savings and wealth for higher living standards. The Modigliani and Brumberg model bases consumer utility on current and future consumption, and individuals maximize their utility based on their current net worth and discounted future earnings throughout their careers.

5.5 Social Implication

However, this study socially contributes while considering investment decisions based on salaried class individuals' current, past, and present savings throughout their careers and social expenditures like income for their children's education, marriage, livelihood, business, and living standards after retirement dressing for own and children. In contrast, married families with young children have a different pattern but lose savings. The age of the salaried class and household affects decision-making priorities as they prefer cash in old age over other savings methods. However, education also promotes saving and investing through the 'demonstration effect' of better life standards. Wealth is also essential because it increases savings, and psychological and social factors shape saving attitudes. This study covers indifferent, active, and compatible savers and helps to create a "behavioural portfolio" based on salaried class social characteristics to increase the social impact of financial confidence enhancement to boost financial market participation and success; in addition, an individual's primary goal is to gain respect and honour, an especially salaried individual who is known by the status of their jobs and has to manage this through political and social status, liberty, and lavish formalities and need for luxury and the display of consumption reduces saving potential. This influences the decisions of the salaried class regarding investment decisions in social class, norms and culture, as individual survival in society depends on luxury. Every salaried household class wants to raise their status through behavioural consumption, and their independence in decision-making is limited. They save half their salary for education,

half for their daughter's wedding, or gratuity fund pension savings to pay off a loan or buy a car when unemployed. Because most individuals save, do not spend, and invest in risky things without financial education Concluding that this research is socially applicable to the individuals who uplift their status, culture and society.

5.6 Practical Implication

This study practically examined household salaried class savings, consumption, and investment decisions with living standards and retirement planning in the presence of investment scams. The study's biggest concern was the realization of salaried-class households' socio-cultural and behavioural economic savings, and practically, Retirees need help to consume income and save for investment before and after retirement, and their savings protect against uncertainty and risk-taking, depending on individual needs through safer investment. The individual had different investment, savings, and consumption preferences due to their cultures and backgrounds. Programs and policy estimations through planning, coordinating, and implementing effective saving and investment schemes for salaried classes can estimate surplus savings as inflow from private savings towards investment. The trustworthiness of savings mobilization can practically help to investigate salaried-class investment barriers. Policymakers can remove targeted barriers or provide guidelines for a safer, more secure investment. According to the life-cycle hypothesis and permanent income hypothesis, salaried workers save and consume before investing, and the salaried class seeks survival through pre- or post-retirement accumulation in response to declining real income due to illness, retirement, employment, uncertainty, etc. They plan and invest in retirement-age benefits to meet their consumption and living standards. Market investment scams can waste salaried class savings in unproductive investments and leave them with nothing after 60 years of retirement well-being. They are saving mobilization

through fiscal policy budget surplus, aggregate savings accumulation, and micro- and macro-financial institute and organization concentration of private and individual savings. These financial institutions connect savers and investors to mobilize household savings for a healthy financial system.

5.7 Conclusion

Financial advisors identify individuals more likely to follow a retirement plan and encourage them to save actively and be confident in their financial goals and contributions. The findings suggest that policymakers and service providers should improve individual education to help future retirees understand retirement and social life living standard planning. Policymakers, employees, and households can use this study to make informed financial and saving decisions to improve national well-being and savings. Today's world of scams and scandals requires corporate governance to reduce banking industry fraud and unethical behavioural investment scams. The government and policymakers must encourage smart investment choices by educating individuals on the role of financial status, its predictors, and its overall impact on living standards. The more indicating factor impacting savings and bargaining behaviour in the future is that policymakers and governments can reform and enhance policies across generation gaps and long-term scenarios to cater to shifting policies and financial planning toward salaried class households for better savings and investment of money through savings in a safe investment environment, a safeguard against scams, and strict checks and balances.

This study suggests policy changes to improve investors' financial literacy. Studying individual equity investors' investment decisions can benefit stockbrokers, investment advisors, and financial managers. Academics improve investor financial literacy with a framework to help investors, government, and non-government policymakers create new

financial policies, initiatives, and campaigns. Following this study's findings, salaried-class households should refrain from saving and investing in dominant structures, norms, traditions, social dependencies, and social hierarchies that the government cannot change through proper policy consideration.

The financial institution should also coordinate with salaried-class households to boost savings and investment as an economic inflow. These findings have significant implications for age-based planning models, retirement counsellors, and financial planners who advise workers on long-term savings strategies. Scholars are increasingly interested in the relationship between age and well-being living as addressed in the study. Investors and non-investors want to know about real-time saving and investing. Some save about not investing, and some invest but not save. The State Bank of Pakistan issues PKR currency supervises commercial banks and monitors financial intermediaries. These public-facing banks accept deposits, postal savings, finance corporations, and government savings canters like the Centre Directorate of National of Savings) CDNS. The national economy needs more savings potential and contribution, ignoring its importance.

Public socio-cultural expression shapes saving behaviour by society's philosophy, is based on norms, traditions, and cultural time values and is rigid and conventional. Rural society measures social status by saving and giving. Everyone claims respect or support through their status, spending, and living standards that society respects. Consuming these norms and cultural values to maintain a living standard reduces saving motivation. Social needs and relationships bind salaried-class individuals to be a mandatory network of community and social members. The salaried class must maintain its status, affecting these households' economic functioning. Long-term savings are impossible due to complex credit transactions among relatives and difficulty keeping savings secret.

Rapidly sharing and responding to information should help the financial market allocate resources efficiently. The government should crack down on scams to protect the financial system, and proactive regulation should reduce financial statement fraud. The financial system includes specialized and non-specialized financial institutions, organized and unorganized markets, and instruments and services to streamline fund transfers. An empirical survey shows that gender-saving attitudes and behaviour differ. Conservative women save for family security, while men accumulate social capital. Also, a stretched and nuclear family makes saving easier. Law and order depend on economics and institutions, which pay taxes, earn interest, and discourage saving, even for the deposit-to-withdraw ratio, household savings matter, especially for salaried individuals with limited income and controlled consumption. The salaried class buys gold, silver, and real estate in hopes of price increases due to information and financial market access issues. Saving is significant because investment returns encourage it. Thus, understanding the links between the formal and informal financial sectors is essential to understanding individual savings and setting priorities in Pakistan.

Living standards and consumption are too high for investment and savings decisions. Therefore, government and service fringe benefit policymakers must understand the salaried class investment and saving needs to understand their savings and consumption behaviour. Thus, the government should improve real-world policies and incentives.

This study suggests that policymakers should hold workshops, seminars, and conferences to improve people's savings and financial planning skills. The best way to connect households, the salaried class, and banks is through a third intermediary, such as policymakers and the government at the planning level. Finally, the study supports a government-facilitated saver role between investors. Long-term and short-term behaviour

conflict most when individuals invest and save. They never save enough compared to their plans. Thinking about retirement is crucial. It is crucial for retirement planning and wealth accumulation near and after retirement. The future outlook and economic behaviour are crucial for retirement investment. Individuals with children should save more than adults. Enhancing savings and investments through the implementation of more dependable and cost-effective strategies by examining the expenditure patterns, quality of life, and pension plans of government employees provides insights into their preference for unproductive and high-risk conventional investments.

In the modern economy, policymakers have to work hard to address the issue of productive sayings, even at the individual and business levels, for investment inflow. The best way to link Pakistan's formal and informal sectors, as well as financial and government sectors, is to set priorities and functions independently. A 'bottom-up strategy' indirectly links households, the salaried class, rural households, and banks with intermediaries. A proposed model is a private and public partnership with government organizations to improve the well-being of the salaried class.

5.8 Recommendations

The relationship between saving financial strength and living standards makes emergency funds essential for individuals. Personal finance programs should teach impulsive behaviour and encourage financial advisors to help individuals save more through well-executed initiatives. Money satisfaction predicts living well-being and has allowed a significant number of individual to retire, ensuring their living standards and reducing elderly poverty. The elderly will have higher poverty rates, and middle-class retirees may need more support in their retirement income to maintain their standard of living. At the same time, when calculating defined benefit plans, regulatory policies fail to encourage

retirement savings. The relationship between objective financial knowledge and emergency savings needs to be proven through financial self-efficacy, and decision-making behaviour is more important than financial competence in making wise financial decisions.

The importance of broader financial capability in forecasting emergency savings for salaried-class individuals above and below the poverty threshold suggests that emergency lifetime savings initiatives prioritize financial self-efficacy and financial inclusion. Overall, the study shows that the degree of savings and mobilization effect make it a safe and protective investment mechanism, which is crucial in this situation. Individual must decide where to invest to meet needs and maintain lifestyles. Government benefit satisfaction has lagged needs to catch up to organizational policy benefits since 1947; the same insufficient and discouraging conditions have existed.

The salaried class and society have complained about investment scams and the loss of non-economic savings. If policymakers and financial institutions adopt safer and more protective policies, increase capital investment in the economy. Policymaking with solid financial knowledge communication in Pakistan and control of investment scams convert salaried class savings to investment. Indigenous saving, which meets the needs and satisfaction of the salaried class, is the biggest issue when evaluating saving and retirement planning drivers for investment purposes. Direct savings are mostly converted into cash and replaced with traditional or advanced investments like gold, silver bonds, or certificates after retirement. This would prepare students to manage income and debt and plan for retirement as adults. Governing bodies must protect financial education initiatives to improve financial literacy and not limit them to mass media, printed materials, or other published materials. Financial education should focus on personal financial management.

5.9 Limitation of the Study

This study examined government workers' BPS-17 to BPS-22 saving, consumption, and investment decisions. The study also considered living standards, retirement planning, and scams. The study sought to increase economic investment in a safe and secure environment with government and policymaker support. The study framework suggests limitations due to the single researcher's time and finances. The researcher answered the mission questions to solve the problem and draw conclusions, but there are some limitations. Due to time, finances, and scope, this study has these limitations.

a) This model can be used to study private employees in well-distributed organizations with large employee numbers and sector-specific segregation. They also offer varying employment benefits and packages.
b) Additional government employees in six provinces can be studied separately through independent provincial organizations.
c) To study retirement savings and investment choices, compare pre-retirement and post-retirement employees.
d) Future studies can interview experts and policymakers to understand this model better and add variables to improve it.
e) This model applies to federal salaried employees but can be tested on individuals with diverse backgrounds and income sources, such as households.

5.10 Future Recommendations

The following recommendations are present for future research.

a) Empirically test the same model for private employees and compare it with government employees.

b) Use other variables such as intelligence, emotions and wealth status with the investment and saving behaviour.

c) Policy maker and government intervention steps can be taken as variables in addition to the growth of the organizational profitability working.

d) Include other theories dealing with behavioural and psychological aspects of savings and investment.

REFERENCES

Abdi, H. (2010) Partial Least Squares Regression and Projection on Latent Structure Regression (PLS-Regression): Wiley Interdisciplinary Reviews, *Computational Statistics & Data Analysis,* 2 (1), 97-106.

Abramsson, M., & Andersson, E. (2016). Changing preferences with ageing–housing choices and housing plans of older people. *Housing, theory and society*, *33*(2), 217-241.

Abu, N., & Karim, M. Z. A. (2016). The relationships between foreign direct investment, domestic savings, domestic investment, and economic growth: The case of Sub-Saharan Africa. *Society and Economy in Central and Eastern Europe*, *38*(2), 193-217.

Acciarini, C., Brunetta, F., & Boccardelli, P. (2021). Cognitive biases and decision-making strategies in times of change: a systematic literature review. *Management Decision*, *59*(3), 638-652.

Achar, A. (2012). Saving and Investment Behaviour of teachers-An empirical study. *International Journal of Physical and Social Sciences*, *2*(8), 263-286.

Achou, B. (2021). Housing liquidity and long-term care insurance demand: A quantitative evaluation. *Journal of Public Economics*, *194*, 104353.

Adam, M., Toutaoui, J., Pfeuffer, N., & Hinz, O. (2019). Investment decisions with robo-advisors: the role of anthropomorphism and personalized anchors in recommendations. In *Proceedings of the 27th European Conference on Information Systems (ECIS 2019). https://aisel. aisnet. org/ecis2019_rp/33*.pp-1-18

Adams, G. A., & Rau, B. L. (2011). Putting off tomorrow to do what individual want today. Planning for retirement. *American Psychologist*, 3, 180–192.

Adams, Matthew and Jayne Raisborough. (2010), "Making a difference: Ethical consumption and the everyday," The British Journal of Sociology, 61 (2), 256-274.

Adewumi, S. (2024). Pension Management Challenges and Retirement Life Experiences: A Policy Implication. *International Journal of Economics and Financial Issues, 14*(2), 26-35.

Adil, M., Singh, Y., & Ansari, M. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision?. *Asian Journal of Accounting Research*, *7*(1), 17-30.

Administrators, C. S. (2007). Protect your money: Avoiding frauds and scams. Canadian Securities Administrators, 1-13. www.securities-administrators.ca

Afifi, S., & Setyorini, H. (2023). The Effect of Financial Literacy, Financial Experience, and Income Level on Family Financial Behavior. *Management Studies and Entrepreneurship Journal (MSEJ)*, *4*(5), 5995-6002.

Afzal, A., Kızıldeniz, T., Sardar, A., & Javed, S. (2023). Need of Social Security in Vulnerable Countries: A Comparison of a Developed and a Developing Country. In *Climate Change Impacts on Agriculture: Concepts, Issues and Policies for Developing Countries* (pp. 173-189). Cham: Springer International Publishing.

Agabalinda, C., & Isoh, A. V. N. (2020). Moderating effects of social learning on the usage of formal financial services in Kampala, Uganda. *Journal of Economics and International Finance*, *12*(3), 120-129.

Agarwal, S., & Mannil, N. (2023). Household financial decision making. In *Handbook of Financial Decision Making* (pp. 375-410). Edward Elgar Publishing.

Agarwal, S., & Mazumder, B. (2013). Cognitive abilities and household financial decision making. *American Economic Journal: Applied Economics*, *5*1), 193-207.

Agarwal, S., Driscoll, J. C., Gabaix, X., & Laibson, D. (2009). The age of reason: Financial decisions over the life cycle and implications for regulation. *Brookings Papers on Economic Activity*, 2009(2), 51-117.

Agarwal, S., Pan, J., & Qian, W. (2020). Age of decision: Pension savings withdrawal and consumption and debt response. *Management Science*, *66*(1), 43-69.

Agnew, J. (2023). 19. behavioural finance and retirement planning in defined contribution plans. *Handbook of Financial Decision Making*, 411.

Agnew, S., & Cameron-Agnew, T. 2015; The influence of consumer socialisation in the home on gender differences in financial literacy. *International journal of consumer studies*, *39*6), 630-638.

Agnew, S., Maras, P., & Moon, A. 2018; Gender differences in financial socialization in the home—An exploratory study. *International journal of consumer studies*, *42*3), 275-282.

Aguiar, M., & Hurst, E. (2005). Consumption versus expenditure. *Journal of political Economy*, *113*(5), 919-948.

Aguiar, M., & Hurst, E. (2007). Life-cycle prices and production. *American Economic Review*, *97*(5), 1533-1559.

Aguiar, M., & Hurst, E. (2007). Measuring trends in leisure: The allocation of time over five decades. *The Quarterly Journal of Economics*, *122*(3), 969-1006.

Aguirre-Urreta MI and Rönkkö M. (2018) Statistical Inference with PLSc Using Bootstrap Confidence Intervals. *MIS Quarterly* 42(3): 1001-1020.

Agur, I., Peria, S. M., & Rochon, C. (2020). Digital financial services and the pandemic: Opportunities and risks for emerging and developing economies. *International Monetary Fund Special Series on COVID-19, Transactions*, *1*, 2-1.

Ahmad, D., & Premaratna, S. P. (2019). Effect of financial liberalization on savings and investment in Nigeria. *Colombo Journal of multi-disciplinary Research*, *4*(1).

Ahmad, M. H., Atiq, Z., Alam, S., & Butt, M. S. (2006). The impact of demography, growth and public policy on household saving: a case study of Pakistan. *Asia Pacific Development Journal*, *13*(2), 57-72.

Ahmad, M., & Shah, S. Z. A. (2020). Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, *38*(1), 60-90.

Ahmad, W., Kim, W. G., Anwer, Z., & Zhuang, W. (2020). Schwartz personal values, theory of planned behaviour and environmental consciousness: How tourists' visiting intentions towards eco-friendly destinations are shaped?. *Journal of Business Research*, *110*, 228-236.

Ahmed, F., Shehzadi, Y., Sufyan, M., & Hassan, M. (2022). Exploring the impact of financial inclusion and financial development on non-performing loans: Evidence from banking sector of Pakistan. *International Journal of Business and Management Sciences*, *3*(1), 68-89.

Ahmed, H., & Pg Md Salleh, A. M. H. A. (2016). Inclusive Islamic financial planning: a conceptual framework. *International Journal of Islamic and Middle Eastern Finance 10 and Management*, *9*(2), 170-189

Ahmed, Z., Noreen, U., Ramakrishnan, S. A., & Abdullah, D. F. B. (2021). What explains the investment decision-making behaviour? The role of financial literacy and financial risk tolerance. *Afro-Asian Journal of Finance and Accounting*, *11*(1), 1-19.

Ahn, Y. B., & Tsuchiya, Y. (2023). Consumers' perceived and expected inflation in South Korea. *Applied Economics Letters*, *30*(11), 1561-1565.

Aigbovo, O. (2019). Trend and pattern of economic and financial crimes statutes in Nigeria. *Journal of Financial Crime*, *26*(4), 969-977.

Ainia, N. S. N., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. *Journal of Economics, Business, & Accountancy Ventura*, *21*(3), 401-413.

Ainslie, G. (1975). Specious reward: A behavioural theory of impulsiveness and impulse control. Psychological Bulletin, 82, 463–496. Strotz, R. H. (1956). Myopia and inconsistency in dynamic utility maximization. *Review of Economic Studies, 23*, 159–173.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control: From cognition to behavior* (pp.11-39). Berlin, Heidelberg: Springer Berlin Heidelberg.

Ajzen, I. (1991). The theory of planned behaviour. *Organizational behaviour and human decision processes*, *50*(2), 179-211.

Akben-Selcuk, E., & Aydin, A. E. (2021). Ready or not, here it comes: A model of perceived financial preparedness for retirement. *Journal of Adult Development*, *28*(4), 346-357.

Akhtar, F., & Das, N. (2019). Predictors of investment intention in Indian stock markets: Extending the theory of planned behaviour. *International journal of bank marketing*, *37*(1), 97-119.

Akhtar, M., & Malik, M. U. (2023). Personality traits and investor risk behaviour: moderating role of financial literacy. *Managerial Finance*, *49*(5), 884-905.

Akpan, S. B., Udoh, E. J., & Aya, E. A. (2011). Analysis of Savings determinants among Agro-based firm workers in Nigeria: a simultaneous equation approach. *Research on 19 Humanities and Social Sciences*, 1(3), 1-12

Akram, N. (2023). Household's saving behaviour in Pakistan: A micro-data analysis. *Studies in Microeconomics*, *11*(2), 139-156

Alam, A., & Siddiqui, D. A. (2021). How financial Knowledge and personal Saving Orientation affect money management stress and financial security, Leading towards Wellbeing and positive financial behavior: the complementary Role of Materialism and Self Efficacy, mediated by the willingness to take risk. *Leading towards Wellbeing and positive financial behavior: the complementary Role of Materialism and Self Efficacy, mediated by the willingness to take risk (October 14, 2021)*.

AlAzzawi, S. (2020). Regional and income disparities in cost of living changes: evidence from Egypt. *Middle East Development Journal*, *12*(2), 243-267.

Aldeman, C., & Randazzo, A. (2020). Are Texas Teacher Retirement Benefits Adequate?. *Bellwether Education Partners*.

Alderman, H., & Garcia, M. (1993). Poverty, household food security and nutrition in Rural Pakistan. Research Report 96. Washington, DC: *The International Food Policy Research Institute*. (Vol. 96). pp-116

Alderman, H., & Paxson, C. H. (1994). Do the poor insure? A synthesis of the literature on risk and consumption in developing countries. *Economics in a changing world*, 48-78.

Alessie, R., Brugiavini, A., Weber, G., Desai, M. A., & McMahon, M. (2004, January). Saving and Cohabitation: The Economic Consequences of Living with One's Parents in Italy and the Netherlands [with Comments]. In *NBER International seminar on macroeconomics* (Vol. 2004, No. 1, pp. 413-457). Chicago, IL: The University of Chicago Press.

Alexander, C., & Cumming, D. (Eds.). (2022). *Corruption and Fraud in financial markets: Malpractice, Misconduct and Manipulation*. John Wiley & Sons.

Alexander, S. (2011). Looking backward from the year 2099: Ecozoic reflections on the future. *Earth Jurisprudence & Envtl*, *1*, 25-40.

Al-Hashedi, K. G., & Magalingam, P. (2021). Financial fraud detection applying data mining techniques: A comprehensive review from 2009 to 2019. *Computer Science Review*, *40*, 100402.

Ali Khan, Z., Azam, M., & Agha, S. E. (2019). Security Deposit Issues in Ijārah Financing: Evidence from the Islamic Banks of Pakistan. *Turkish Journal of Islamic Economics*, *6*(2).

Ali, A., Rahman, M.S.A. and Bakar, A. (2015), "Financial satisfaction and the influence of financia literacy in Malaysia", *Social Indicators Research*, Vol. 120 No. 1, pp. 137-156.

Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*.

Ali, M. A., Azad, M. A., Centeno, M. P., Hao, F., & van Moorsel, A. (2019). Consumer-facing technology fraud: Economics, attack methods and potential solutions. *Future Generation Computer Systems*, 100, 408-427.

Ali, M. M., & Sadiq, R. (2020). Foreign Direct Investment and Current Account Balance: The Case of South Asian Economies. *Pakistan Journal of Social Sciences*, *40*(4), 1577-1588

Ali, M. S., & Marwat, I. U. K. (2021). Financial Literacy and Saving behaviour of Private Sector Employees in Pakistan: Examining the Mediating Role of Self-efficacy. *Journal of Management Sciences, 8*(2), 39-54.

Ali, M. S., Ali, M. N., & Bagram, M. M. M. (2021). Financial Literacy and Financial Satisfaction: A Moderated Mediation Analysis of Self-Esteem and Financial behaviour. *JISR management and social sciences & economics*, *19*(1), 67-84.

Alleva, B. (2016). Discount Rate Specification and the Social Security Claiming Decision. *Social Security Bulletin*, *76*(2), 1-15.

Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). behavioural finance factors and investment decisions: A mediating role of risk perception. *Cogent Economics & Finance*, 11(2), 2239032

Alonso-Garcıa, J., Bateman, H., Bonekamp, J., & Stevens, R. (2017). *Retirement drawdown defaults: the role of implied endorsement* (No. 2017/20). CEPAR Working Paper Series.

Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, *12*(9), 3910.

Alshebami, A. S., & Aldhyani, T. H. (2022). The interplay of social influence, financial literacy, and saving behaviour among Saudi youth and the moderating effect of self-control. *Sustainability, 14*(14), 8780. 1-18

Al-Tamimi, H. A. H. (2009). Financial literacy and investment decisions of UAE investors. *The Journal of Risk Finance*. Vol. 10 No. 5, pp. 500-516

Altuntas, M., Berry-Stölzle, T. R., & Hoyt, R. E. (2011). Dynamic determinants of enterprise risk management adoption in the property-liability insurance industry: evidence from Germany. *Journal of risk management, 123*(17), 1234-1244.

Alvarenga, L. N., Kiyan, L., Bitencourt, B., & Wanderley, K. (2009). The impact of retirement on the quality of life of the elderly. *Rev Esc Enferm USP*, *43*(3), 794–800.

Amaglobeli, M. D., Chai, H., Dabla-Norris, M. E., Dybczak, M. K., Soto, M., & Tieman, A. F. (2019). *The future of saving: The role of pension system design in an aging world*. International Monetary Fund.

Amaresh, M., Sureddy, S. S., Rashmi, K., Gayathri, R., & Ponsindhu, T. (2017). Mitigation of malicious nodes using T-AODV in MANET. *Advances in Natural and Applied Sciences*, *11*(4), 349-356.

Amari, M., Salhi, B., & Jarboui, A. (2020). Evaluating the effects of sociodemographic characteristics and financial education on saving behaviour. *International Journal of Sociology and Social Policy*, *40*(11/12), 1423-1438.

Ambachtsheer, K. P. (2016). *The future of pension management: integrating design, governance, and investing*. John Wiley & Sons.

Ameriks, J., & Zeldes, S. (2001). *How do household portfolios vary with age*? New York: Working paper, Columbia University. Columbia Business School, Finance; *National Bureau of Economic Research (NBER*). Available at SSRN: https://ssrn.com/abstract=292017 Columbia University.

Ameriks, J., Caplin, A., & Leahy, J. (2003). Wealth accumulation and the propensity to plan. *Quarterly Journal of Economics*, *68*, 1007–1048.

Ameriks, J., Caplin, A., & Leahy, J. 2003; Wealth accumulation and the propensity to plan. *The Quarterly Journal of Economics*, *118*3), 1007-1047.

Ameriks, J., Kézdi, G., Lee, M., & Shapiro, M. D. (2020). Heterogeneity in expectations, risk tolerance, and household stock shares: The attenuation puzzle. *Journal of Business & Economic Statistics*, *38*(3), 633-646.

Ammad, S., & Ahmed, Q. M. (2020). Comparative Efficacy of Life-Cycle and Absolute Income Hypothesis in Pakistan. *The Journal of Developing Areas*, *54*(1).

Amoah, A., & Addoah, T. (2021). Does environmental knowledge drive pro-environmental behaviour in developing countries? Evidence from households in Ghana. *Environment, Development and Sustainability*, *23*, 2719-2738.

Anantanasuwong, K. (2023). Improving Retirement Savings by Alleviating behavioural Biases with Financial Literacy. *The Journal of Retirement*.Volume 11, Issue 1. 202-227

Andersen, H. Y., Hansen, N. L., & Kuchler, A. (2023). Mandatory pension savings and long-run debt accumulation: evidence from Danish low-wage earners. *Journal of Pension Economics & Finance*, *22*(3), 371-399..

Andersen, T. M., Bhattacharya, J., & Liu, Q. (2023). Can optimal unfunded public pensions co-exist with voluntary private retirement savings?. *Indian Economic Review*, 1-15.

Anderson, A., Baker, F., & Robinson, D. T. (2017). Precautionary savings, retirement planning and misperceptions of financial literacy. *Journal of financial economics*, 126(2), 383-398.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, *103*(3), 411.423.

Anderson, L., & Ostrom, A. L. (2015). Transformative Service Research: Advancing thisKnowledge about Service and Well-Being. *Journal of Service Research*, 18(3), 243–249.

Andespa, R. (2017). Pengaruh Budaya dan Keluarga terhadap Minat Menabung Nasabah di Bank Syariah. *Maqdis :Jurnal Kajian Ekonomi Islam*, *2*(1), 35–49.

Ando, A., & Modigliani, F. (1963). The "Life Cycle" Hypothesis of Saving: Aggregate Implications and Tests. *The American Economic Review*, 53(1), 55–84. http://www.jstor.org/stable/1817129.

Andonov, A., & Rauh, J. D. (2022). The return expectations of public pension funds. *The Review of Financial Studies*, 35(8), 3777-3822.

Angelucci, M., Attanasio, O., & Di Maro, V. (2012). The impact of Oportunidades on consumption, savings and transfers. *Fiscal Studies*, *33*(3), 305-334.

Anindya, D. A. (2023). An Influence Of Interest Rate, Financial Literacy And Quality Service On Customer Decision To Saving At Pt Bank Sumut Branch Pematang Raya Simalungun. *Jurnal Ekonomi*, 12(01), 1582-1589.

Anne Lee, J., Garbarino, E., & Lerman, D. (2007). How cultural differences in uncertainty avoidance affect product perceptions. *International Marketing Review*, *24*(3), 330-349.

Ansong, D., Chowa, G. A., & Grinstein-Weiss, M. (2013). Future orientation as a mediator between assets and perceived household economic stability: A structural equation modeling approach. *Social Work Research*, *37*(2), 147-158.

Ansong, D., Okumu, M., Huang, J., Sun, S., Huseynli, A., Koomson, I., . & Sherraden, M. (2023). Financial capability and asset building: innovations in social protection and development. In *Handbook on Social Protection and Social Development in the Global South* (pp. 308-330). Edward Elgar Publishing.

Ariç, K. H. (2015). Determinants of savings in the APEC countries. *Theoretical & Applied Economics*, *22*(2).

Armour, P., Carman, K. G., & Hung, A. A. (2019). *Retirement Security and Financial Decision Making*. RAND.

Arora, M., & Kumari, S. (2015). Risk taking in financial decisions as a function of age, gender: mediating role of loss aversion and regret. *International Journal of Applied Psychology*, *5*(4), 83-89.

Arshed, N., Nasir, S., & Saeed, M. I. (2022). Impact of the external debt on standard of living: a case of Asian countries. *Social Indicators Research*, *163*(1), 321-340.

Asadov, A. I. (2021). Financial Scams Through Ponzi Schemes: The Case of CIS Countries. In *Handbook of Research on Theory and Practice of Financial Crimes* (pp. 271-292). IGI Global.

Asadullah, M., Bashir, A., & Aleemi, A. R. (2021). Forecasting exchange rates: An empirical application to Pakistani rupee. *The Journal of Asian Finance, Economics and Business*, *8*(4), 339-347.

Aschauer, D. A. (1989). Public investment and productivity growth in the Group of Seven. *Economic perspectives*, *13*(5), 17-25.

Asebedo, S. D., & Seay, M. C. (2015). From functioning to flourishing: Applying positive psychology to financial planning. *Journal of Financial Planning*, 28(11), 50-58.

ASFA (2018a). *ASFA Retirement Standard*.

Ashok Kumar P., Jagadeshwara M., (1985). Demographic Change and Household SavingsBehavior in India. Indian Journal of Economics, Vol. 65.

Ashraf, N., Karlan, D., & Yin, W. (2006). Tying Odysseus to the mast: Evidence from a commitment savings product in the Philippines. *The Quarterly Journal of Economics*, *121*(2), 635-672.

Ashraf, Nava; Gons, Nathalie; Karlan, Dean S.; Yin, Wesley (2003) : A Review of Commitment Savings Products in Development Countries, ERD Working Paper Series, No. 45, *Asian Development Bank (ADB),* Manila, https://hdl.handle.net/11540/1969

Asimakopulos, A. (2020). A Kaleckian theory of income distribution. In *Investment, Employment and Income Distribution* (pp. 23-46). Routledge.

Asumah, Z. (2021). *Financial Inclusion and Poverty Incidence in Ghana: The Moderating Role of Gender, Location and Household Size* (Doctoral dissertation, University of Cape Coast).

Atalay, K., & Barrett, G. (2022). Retirement routes and the well-being of retirees. *Empirical Economics*, *63*(5), 2751-2784.

Athukorala, P. C., & Sen, K. (2004). The determinants of private saving in India. *World development*, *32*(3), 491-503.

Athukorala, P.-C., & Tsai, P.-L. (2003). Determinants of household saving in Taiwan: Growth, demography and public policy. *The Journal of Development Studies, 39*(5), 65-88.

Atkinson, A., Messy, F. A., Rabinovich, L., & Yoong, J. (2015). Financial education for long-term savings and investments: Review of research and literature.

Atkinson, A., Monticone, C., & Mess, F. A. 2016; OECD/INFE international survey of adult financial literacy competencies. *Technica l Report*.

Atlas, S. A., Lu, J., Micu, P. D., & Porto, N. (2019). Financial knowledge, confidence, credit use, and financial satisfaction. *Journal of Financial Counseling and Planning,*30(2), 175–190. Retrieved fromhttps://connect.springerpub.com/content/sgrjfcp/30/2/175

Attanasio, O. P., Banks, J., Meghir, C., & Weber, G. (1999). Humps and bumps in lifetime consumption. *Journal of Business & Economic Statistics*, *17*(1), 22-35.

Attanasio, O. R., & Banks, J. (2001). The assessment: household saving-issues in theory and policy. *Oxford Review of Economic Policy*, *17*(1), 1-19.

Attanasio, O., & Székely, M. (2000, January). Household Saving in East Asia and Latin America: Inequality Demographics and All That. In *Annual World Bank Conference on Development Economics* (pp. 393-438).

Audretsch, B. D., & Belitski, M. (2023). The limits to open innovation and its impact on innovation performance. *Technovation*, *119*, 102519.

Augenblick, N., Niederle, M., & Sprenger, C. (2015). Working overtime: Dynamic inconsistency in real effort tasks. *The Quarterly Journal of Economics*, *130*(3), 1067-1115.

Austen, S., Broomhill, R., Costa, M., & Sharp, R. (2022). Living with risk: Retired couples' experiences of a financialised retirement income system. *The Economic and Labour Relations Review*, *33*(4), 737-753.

Avgoustaki, D. D., & Xydis, G. (2020). Indoor vertical farming in the urban nexus context: Business growth and resource savings. *Sustainability*, *12*(5), 1965.

Awais, M., Khan, R., & Muhammad, A. (2023). The Media's Role in Fostering Knowledge of Financial Management: A Case of Pakistan: Media's Role in Promoting Financial Management Knowledge. *Journal of Workplace behaviour*, 4(1), 51-67.

Aydemir, S. D., & Aren, S. (2017). Do the effects of individual factors on financial risk-taking behaviour diversify with financial literacy? *Kybernetes* Vol. 46 No. 10, pp. 1706-1734.

Aydiner Boylu, A., & Günay, G. (2017). Life Satisfaction and Quality Of Life Among The Elderly: Moderating Effect Of Activities Of Daily Living. *Turkish Journal of Geriatrics/Türk Geriatri Dergisi*, *20*(1).61-69.

Aye, N. M. (2018). Assessing the Effect of Financial Literacy on Saving Behaviour of Staff *: A Case of Co-operative University, Thanlyin*.

Ayres, I., & Nalebuff, B. (2013). Diversification across time. *The Journal of Portfolio Management*, *39*(2), 73-86.

Azam, M. (2022). Selectivity and Market-Timing Performance of Mutual Funds Using Human-Capital Augmented Various Asset-Pricing Models: Evidence from Pakistan. *International Journal of Management Research and Emerging Sciences*, *12*(3).

Aziz, M. J., & Cui, L. (2007). Explaining China's low consumption: the neglected role of household income (No. 7-181). *International Monetary Fund*. 7-181, pp-01-36

Bacchetta, P., Van Wincoop, E., & Young, E. R. (2023). Infrequent random portfolio decisions in an open economy model. The Review of Economic Studies, 90(3), 1125-1154.

Baddeley, M. (2023). Behavioural methods for macroeconomics: Modelling investment. In *Handbook of Research Methods in Behavioural Economics* (pp. 120-136). Edward Elgar Publishing.

Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. Journal of the Academy of Marketing Science, 40(1), 8–34. https://doi.org/10.1007/s11747-011-0278-x

Baiardi, D., Magnani, M., & Menegatti, M. (2020). The theory of precautionary saving: an overview of recent developments. Review of Economics of the Household, 18, 513-542.

Baidawi, S. H. (2017). An integrated exploration of psychological distress among older prisoners. *Unpublished PhD Thesis, Monash University. Retrieved from https://aueast. erc. monash. edu. au/fpfiles/8443328/BaidawiSusanPhDTh esisFinal9May2017. pdf*.

Bailey, W. C., & Turner, M. J. (1994). Significance of sources of retirement planning information for farmers. Financial Counselling and Planning, 5, 83-99.

Bairoliya, N. (2019). Pension plan heterogeneity and retirement behavior. *European Economic Review, 116*, 28-59.

Bairoliya, N., & McKiernan, K. (2021). Revisiting retirement and social security claiming decisions. Available at SSRN 3896031.

Bajtelsmit, V., & Coats, J. (2023). Designing behavioural prompts to improve saving decisions: Implications for retirement plans. Financial Planning Review, e1163. 1-26

Bakar, M. Z. A., & Bakar, S. A. (2020). Prudent financial management practices among Malaysian youth: The moderating roles of financial education. *The Journal of Asian Finance, Economics and Business (JAFEB), 7*(6), 525-535

Baker, H. K., Kumar, S., Goyal, N., & Gaur, V. (2019). How financial literacy and demographic variables relate to behavioural biases. *Managerial Finance, 45*(1), 124-146.

Baker, H. K., Nofsinger, J. R., & Spieler, A. C. (2020). Using Mutual Funds and ETFs to Achieve Your Financial Goals. In *The Savvy Investor's Guide to Building Wealth Through Traditional Investments* (pp. 125-158). Emerald Publishing Limited.

Bakır Yiğitbaş, Ş. (2023). A Theoretical Assessment of Financial Literacy and Financial Education. F. Akbıyık (Ed.), The Changing Face of Social Sciences and Humanities: Strategic Approaches (s. 133-156). (Atkinson and Messy, 2012: 13).

Balasubramanian, P. (2022). BIBLIOMETRIC REVIEW OF THEORIES RELATED TO INVESTMENT DECISIONS IN FINANCIAL INSTRUMENTS. *Journal of Pharmaceutical Negative Results*, 1447-1454.

Baláž, V. (2023). Household Economics, Information Sources and Annuity Choices: Annuitisation Preferences of Members of the Slovak Private Pension Pillar. Economies, 11(4), 123. 1-16.

Ball-Rokeach, S. J. 1973; Values and violence: A test of the subculture of violence thesis. *American Sociological Review*, 736-749. Feiveson, Laura, and John Sabelhaus 2019;

Bandiera, O., Caprio, G., Honohan, P., & Schiantarelli, F. (2000). Does financial reform raise or reduce saving? *Review of Economics and Statistics*, *82*(2), 239-263.

Bandopadhyay, M. (2023). Key Factors Influencing Investment Decisions for Retirement Planning: A Brief Review. *Sustainable Excellence: A Contemporary Business Perspective*, 151.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. Psychological Review, 84(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Banks, J. 2010; Cognitive function, financial literacy and financial outcomes at older ages: Introduction. *The Economic Journal*, *120*548), F357-F362.

Banks, J., & Oldfield, Z. 2007; Understanding pensions: Cognitive function, numerical ability and retirement saving. *Fiscal studies*, *28*2), 143-170.

Banks, J., Blundell, R., & Tanner, S. (1998). Is there a retirement-savings puzzle?. *American Economic Review*, 769-788.https://www.jstor.org/stable/117005.

Barak, G. (Ed.). (2015). *The Routledge international handbook of the crimes of the powerful*. Routledge. Vol. 5, No.09; 207-226.

Barber, B. M., & Odean, T. (2000). Trading is hazardous to your wealth: The common stock investment performance of individual investors. *The journal of Finance*, *55*(2), 773-806.

Barbić, D., Lučić, A., & Chen, J. M. (2019). Measuring responsible financial consumption behaviour. *International journal of consumer studies*, *43*(1), 102-112.

Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to casual modeling: personal computer adoption and use as an Illustration. *Technology studies: special issue on Research Methodology*, *2*(2), 284-324.

Barnett, W. (2003). The modern theory of consumer behavior: Ordinal or cardinal?. *The Quarterly Journal of Austrian Economics*, 6(1), 41-65.

Barnett, W. A., & Solow, R. (2000). An Interview with Franco Modigliani. *Macroeconomic Dynamics*, *4*(2), 222-256.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Barrett, G. F., & Kecmanovic, M. (2013). Changes in subjective well-being with retirement: assessing savings adequacy. *Applied Economics*, *45*(35), 4883-4893.

Barth, J. R., Hartarska, V., Hilliard, J., & Nguyen, N. (2023). 16. Financial literacy and the use of financial services by US households. Escalation Management in International Crises: The United States and its Adversaries, 297. 297–315

Baryła-Matejczuk, M., Skvarciany, V., Cwynar, A., Poleszak, W. and Cwynar, W. (2020), "Link between financial management behaviours and quality of relationship and overall life satisfaction among married and cohabiting couples: insights from application of artificial neural networks", International Journal of Environmental Research and Public Health, Vol. 17 No. 4, p. 1190.

Bashir, D. F. (2011). Saving behaviour among different income groups in Pakistan: a micro study. *International Journal of Humanities and Social Science*. Vol. 1 No. 10; 268-277

Bashir, T., Ahmed, H. R., Jahangir, S., Zaigam, S., Saeed, H., & Shafi, S. (2013). Investment preferences and risk level: Behaviour of salaried individuals. *IOSR Journal of Business and Management*, *10*(1), 68-78.

Bashir, T., Shaheen, S., Batool, Z., Butt, M. H., & Javed, A. (2014). The Impact of Demographic Characteristics and Risk Tolerance on Investors' Risk Perception and Portfolio Management. *The Lahore Journal of Business, 2(2),* 33-48.

Basu, K. (2014). Ponzis: the science and mystique of a class of financial frauds. World Bank Policy Research Working Paper, (6967).

Battle, B. P. (2019). "They're Stealing My Opportunity to Be a Father": The Child Support System and State Intervention in the Family (Doctoral dissertation, Rutgers The State University of New Jersey, School of Graduate Studies).

Batty, M., Collins, J. M., & Odders-White, E. (2015). Experimental evidence on the effects of financial education on elementary school students' knowledge, behaviour, and attitudes.Journal of Consumer Affairs, 49(1), 69–96. https://doi.org/10.1111/joca.12058

Baugh, B., Ben-David, I., Park, H., & Parker, J. A. (2021). Asymmetric consumption smoothing. *American Economic Review*, *111*(1), 192-230.

Bayer, C., Lütticke, R., Pham-Dao, L., & Tjaden, V. (2019). Precautionary savings, illiquid assets, and the aggregate consequences of shocks to household income risk. *Econometrica*, *87*(1), 255-290.

Baylan, M. (2019). Impact of social security expenditures on income distribution: case of Turkey. *MANAS Sosyal Araştırmalar Dergisi*, *8*(3), 2579-2593.

Beals, M. E., Carr, D. C., Mottola, G. R., Deevy, M. J., & Carstensen, L. L. (2017). How does survey context impact self-reported fraud victimization?. *The Gerontologist*, *57*(2), 329-340.

Becker, G. S. (1965). A Theory of the Allocation of Time. *The economic journal*, 493-517.

Becker, J.-M., Cheah, J. H., Gholamzade, R., Ringle, C. M., Sarstedt, M. (2023): PLS-SEM's Most Wanted Guidance, International Journal of Contemporary Hospitality Management, 35(1), pp. 321-346.

Becker, J.-M., Ringle, C. M., and Sarstedt, M. (2018). Estimating Moderating Effects in PLS-SEM and PLSc-SEM: Interaction Term Generation x Data Treatment Journal of Applied Structural Equation Modeling, 2(2): 1-21.

Becker, J.-M., Cheah, J.-H., Gholamzade, R., Ringle, C.M. and Sarstedt, M. (2023), "PLS-SEM's most wanted guidance", *International Journal of Contemporary Hospitality Management*, Vol. 35 No. 1, pp. 321-346.

Beckmann, E., & Mare, D. S. (2017). Formal and informal household savings: how does trust in financial institutions influence the choice of saving instruments?. *Available at SSRN 3023711*.

Behrman, J. R., Duryea, S., & Székely, M. (1999). Aging and Economic Opportunities: Major World Regions around the Turn of the Century: Inter-American Development Bank, Research Department.

Behrman, J. R., Mitchell, O. S., Soo, C. K., & Bravo, D. 2012; How financial literacy affects household wealth accumulation. *American Economic Review*, *102*3), 300-304.

Bekbossinova, A., Dzhunusov, A. M., & Simanavičienė, Z. (2021). Factors Influence Of Saving behaviour Of Rural And Urban Self-Employedindividual In The Context Of Kazakhstan Pension System. Central Asian Economic Review, (6 (141)), 6.

Belás, J., Nguyen, T. A. N., Smrčka, L., Kolembus, J., & Cipovová, E. (2016). Financial literacy of secondary school students. Case study from the Czech Republic and Slovakia. *Economics and Sociology*.

Benartzi, S. (2009). Choice Architecture and Retirement Saving Plans. *UC Irvine: Institute for Mathematical behavioural Sciences***.** Retrieved from https://escholarship.org/uc/item/3734d7j4

Benartzi, S., & Thaler, R. H. (2001). Naive diversification strategies in defined contribution saving plans. *American economic review*, *91*(1), 79-98.

Benartzi, S., & Thaler, R. H. (2007). Heuristics and biases in retirement savings behaviour. *Journal of Economic perspectives*, *21*(3), 81-104.

Benartzi, S., Peleg, E., & Thaler, R. H. (2007). Choice architecture and retirement saving plans. *Available at SSRN 999420*.

Bendig, M., Giesbert, L. and Steiner, S. (2009). Savings, Credit, and Insurance: Household Demand for formal financial services in Rural Ghana. *BWPI* Working Paper no 76, 1-26.

Bennet, E., Selvam, M., Vivek, N., & Shalin, E. E. (2012). The impact of investors' sentiment on the equity market: Evidence from Indian stock market. *African Journal of business management*, *6*(32), 9317.

Bentler, P.M. (1995). *EQS structural equations programmanual.* Encino, CA: Multivariate Software.

Berg, L. (2005). Age Distribution, Saving and Consumption in Sweden. *SSRN Electronic Journal*, 1–19. https://doi.org/10.2139/ssrn.1405

Bergant, K., Milesi-Ferretti, G. M., & Schmitz, M. (2023). *Cross-Border investment in emerging market bonds: stylized facts and security-level evidence from Europe*. Centre for Economic Policy Research.

Bergh, A., & Nilsson, T. (2014). When more poor means less poverty: On income inequality and purchasing power. *Southern Economic Journal*, 81(1), 232-246.

Bernard, R. (2023). Mental accounting and the marginal propensity to consume. Deutsche Bundesbank Discussion Paper No. 13/2023

Bernheim BD, DM Garrett (1996): The Determinants and Consequences of Financial Education in the Workplace: Education from a Survey of Households. Working Paper No. 5667. Cambridge, MA: National Bureau of Economic Research.

Bernheim, B. D. (1996). Financial illiteracy, education, and retirement saving. Wharton Pension Research Council Working Papers 604. 39-68.

Bernheim, B. D., Forni, L. O. R. E. N. Z. O., Gokhale, J. A. G. A. D. E. E. S. H., & Kotlikoff, L. J. (2000). How well are the study and the government planning for the future. *The American Economic Review*, *90*(2), 288-292.

Bernheim, B. D., Forni, L., Gokhale, J., & Kotlikoff, L. J. (2003). The mismatch between life insurance holdings and financial vulnerabilities: evidence from the Health and Retirement Study. *American Economic Review*, *93*(1), 354-365.

Bernheim, B.D. & Scholz, J.K. (1993). Private saving and public policy. *Tax Policy and the Economy, 7:* 73-110.

Bernheim, D. (1998). Financial illiteracy, education and retirement saving. Living with defined contribution pensions, 3868.

Bernheim, D., & Garrett, D. (2003). The effects of financial education in the workplace: Evidence from a survey of households. Journal of Public Economics, 87, 1487-1519.

Bernheim, D., Garrett, D., & Maki, D. (2001). Education and saving: the long-term effects of high school curriculum mandates. *Journal of Public Economics, 80*, 435–465.

Bernhofer, J., Costantini, F., & Kovacic, M. (2023). Risk attitudes, investment behaviour, and linguistic variation. *Journal of Human Resources*, *58*(4), 1207-1241.

Berzonsky, M. D. (1989). Identity style: Conceptualization and measurement. Journal of Adolescent Research, 4(3), 268–282. https://doi.org/10.1177/074355488943002

Betz-Hamilton, A. (2022). A comparison of the financial, emotional, and physical consequences of identity theft victimization among familial and non-familial victims. *Journal of Financial Counseling and Planning*, *33*(2), 217-227.

Beverly, S. G., & Sherraden, M. (1999). Institutional determinants of saving: Implications for low-income households and public policy. *The Journal of Socio-Economics*, 28(4), 457–473.

Bhadra, S., & Singh, K. N. (2024). Ponzi scheme like investment schemes in India–causes, impact and solution. *Journal of Money Laundering Control*, *27*(2), 348-362.

Bhardwaj, B., Sharma, N., & Sharma, D. (2013). Income, Saving and Investment Pattern of Employees of Bahra University, Solan. *IJMS*, *3*(1), 137-141.

Bhatt, K. A., & Bhatt, K. (2012). Effects of investor occupation and education on choice of investment: an empirical study in India. *International Journal of Management*, 29(4), 439.

Bhavani, G., & Shetty, K. (2017). Impact of demographics and perceptions of investors on investment avenues. SSRN.." *Accounting and Finance Research* 6, no. 2 (2017): 198-205.

Bhushan. P,. (2014). 'Relationship between Financial literacy and Investment Behaviour of Salaried Individual', *Journal of Business Management & Social Sciences Research, Vol. 3*, No. 5, May 2014.

Bhutto, M. Y., Liu, X., Soomro, Y. A., Ertz, M., & Baeshen, Y. (2020). Adoption of energy-efficient home appliances: Extending the theory of planned behaviour. *Sustainability*, *13*(1), 250.

Bialowolski, P., Cwynar, A., & Weziak-Bialowolska, D. (2022). The role of financial literacy for financial resilience in middle-age and older adulthood. *International Journal of Bank Marketing*, *40*(7), 1718-1748

Bierstaker, J. L., Brody, R. G., & Pacini, C. (2006). Accountants' perceptions regarding fraud detection and prevention methods. *Managerial Auditing Journal*, *21*(5), 520-535.

Bindabel, W., & Salim, A. (2021). Relationship between saving and investment pattern and orientation towards finance among working women in the universities of Saudi Arabia. *Accounting*, *7*(1), 81-88.

Binswanger, J., & Carman, K. G. (2012). How realindividual make long-term decisions: The case of retirement preparation. Journal of Economic behaviour & Organization, 81(1), 39–60.

Binswanger, J., & Schunk, D. (2012). What is an adequate standard of living during retirement?. *Journal of Pension Economics & Finance*, *11*(2), 203-222.

Binti Inchiem, N. A., Bujang, I., Matahir, H., & anak Nipo, D. T. (2020). FACTORS INFLUENCING THE LIVING WAGE IN EAST MALAYSIA. *Malaysian Journal of Business and Economics (MJBE)*, *7*(1), 95-95.

Bitenc, M. (2016). Financial Investment Frauds: Victimological View. *Journal of Criminal Justice and Security*, (3), 303-324.

Biyanwila, B. P. U. K., & Anuradha, P. A. N. S. (2023). behavioural Factors Affecting Household Over-Indebtedness: A Systematic Review. *Vidyodaya Journal of Management*, *9*(I).

Blake, D. (2004). The impact of wealth on consumption and retirement behaviour in the UK. *Applied Financial Economics*, *14*(8), 555-576.

Blanchard, O. (2019). Public debt and low interest rates. *American Economic Review*, *109*(4), 1197-1229.

Blankespoor, E., deHaan, E., & Marinovic, I. (2020). Disclosure processing costs, investors' information choice, and equity market outcomes: A review. *Journal of Accounting and Economics*, *70*(2-3), 101344.

Blattner, L., & Nelson, S. (2021). How costly is noise? Data and disparities in consumer credit. arXiv preprint arXiv:2105.07554

Bloom, D. E., & McKinnon, R. (2013). *The design and implementation of public pension systems in developing countries: Issues and options* (No. 59). IZA Policy Paper.

Bloom, D. E., Canning, D., & Fink, G. (2010). Implications of population ageing for economic growth. *Oxford review of economic policy*, *26*(4), 583-612.

Bloom, D. E., Canning, D., & Graham, B. (2003). Longevity and life-cycle savings. *Scandinavian Journal of Economics*, *105*(3), 319-338.

Bloom, D. E., Canning, D., Mansfield, R. K., & Moore, M. (2007). Demographic change, social security systems, and savings. *Journal of Monetary Economics*, *54*(1), 92-114.

Boar, C. (2021). Dynastic precautionary savings. *The Review of Economic Studies*, *88*(6), 2735-2765.

Bodie , Z . (2002) An Analysis of Investment Advice to Retirement Plan Participants . The Wharton School, University of Pennsylvania. PRC WP 2002-15 .

Bodie, Z. (1995). On the risk of stocks in the long run. *Financial Analysts Journal*, *51*(3), 18-22.

Bodie, Z. (2002). Life-cycle Finance in Theory and in Practice. Boston University School of Management Working Paper, (2002-02).

Bodie, Z., & Merton, R. C. (1995). The Informational Role of the Financial System: The Case of Implied Volatility. *The Global Financial System: A Functional Perspective*.

Bodie, Z., Merton, R., and W. Samuelson (1992), "Labor Supply Flexibility and Portfolio Choice in a Life-Cycle Model," Journal of Economic Dynamics and Control, 16, pp. 427–449.

Bodie, Z., Treussard, J., & Willen, P. (2007). The theory of life-cycle saving and investing. *FRB of Boston Public Policy Discussion Paper*, (07-3).

Bodie, Zvi, (1990), "Inflation Insurance," *The Journal of Risk and Insurance, Vol. LVII,* No. 4, (December), 634-645.

Boersch-Supan, A. H., & Winter, J. (2001). Population aging, savings behavior and capital markets.

Bohra, N. S., Sethi, M., & Kothari, S. (2022). Financial Illiteracy As Catalyst To Promote Financial Frauds In The Unorganized Sector-A Review Of Frauds In The State Of Uttarakhand. *Elementary Education Online*, *20*(4), 4346-4346.

Bollen, K. A. (1986). Sample size and Bentler and Bonett's nonnormed fit index. *Psychometrika*, *51*(3), 375-377.

Bollen, K. A. (1990). Overall fit in covariance structure models: Two types of sample size effects. *Psychological bulletin*, *107*(2), 256.

Bolton, R. J., & Hand, D. J. (2002). Statistical fraud detection: A review. Statistical science, 17(3), 235-255. Ullah, I., Ahmad, W., & Ali, A. (2022).

Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2018). Nexus between financial literacy and financial inclusion. *International Journal of Bank Marketing*.*Vol. 36* No. 7, pp. 1190-1212

Bonoli, G., & Shinkawa, T. (Eds.). (2006). *Ageing and pension reform around the world: evidence from eleven countries*. Edward Elgar Publishing.

Börsch-Supan, A., & Lusardi, A. (2003). Saving: A cross-national perspective. In *Life-cycle savings and public policy* (pp. 1-31). Academic Press.

Börsch–Supan, A., Bucher–Koenen, T., Coppola, M., & Lamla, B. (2016). Savings in times of demographic change: Lessons from the German experience. *A Collection of Reviews on Savings and Wealth Accumulation*, 245-269.

Börsch-Supan, A., Härtl, K., & Leite, D. N. (2016). Social security and public insurance. In *Handbook of the economics of population aging* (Vol. 1, pp. 781-863). North-Holland.

Bortis, H. (2023). Classical-Keynesian Political Economy, not Neoclassical Economics, is the Economic Theory of the Future. Review of Political Economy, 35(1), 65-97.

Bosley, S. A., Bellemare, M. F., Umwali, L., & York, J. (2019). Decision-making and vulnerability in a pyramid scheme fraud. *Journal of behavioural and Experimental Economics*, *80*, 1-13.

Bosworth, B. P., Collins, S. M., & Reinhart, C. M. (1999). Capital flows to developing economies: implications for saving and investment. *Brookings papers on economic activity*, *1999*(1), 143-180.

Boubaker, S., Dang, V. A., & Sassi, S. (2022). Competitive pressure and firm investment efficiency: Evidence from corporate employment decisions. *European Financial Management*, *28*(1), 113-161.

Boudreau, M. C., Ariyachandra, T., Gefen, D., & Straub, D. W. (2004). Validating IS positivist instrumentation: 1997-2001. In *The handbook of information systems research* (pp. 15-26). IGI Global.

Boug, P., Cappelen, Å., Jansen, E. S., & Swensen, A. R. (2021). The consumption Euler equation or the Keynesian consumption function?. *Oxford Bulletin of Economics and Statistics*, *83*(1), 252-272.

Boumans, M. (2011). The two-model problem in rational decision making. Rationality and Society, 23(3), 371-400

Bowen, C.F. (2002), "Financial knowledge of Teens and their parents", Financial Counseling and Planning, Vol. 13 No. 2, pp. 93-102.

Boyer, M. M., & Glenzer, F. (2021). Pensions, annuities, and long-term care insurance: On the impact of risk screening. *The Geneva Risk and Insurance Review*, *46*, 133-174

Boyland, J., & Warren, R. (2013). Assessing the financial literacy of domestic and international college students. *MBA Student Scholarship 18*. https://scholarsarchive.jwu.edu/mba_student/18

Bradbury, B and Mendolia, S. (2012), 'Living Standards after Retirement: Perceptions and Expenditure Patterns'', prepared for the Department of Families, Housing, Community Services and Indigenous Affairs under the Deed of Agreement for the Provision of Social Policy Research Services. SPRC Report 2/121-30

Brandstätter, H. (2005). The personality roots of saving - Uncovered from German and Dutch surveys. *Consumers, Policy and the Environment A Tribute to Folke Ölander*, 65–87. https://doi.org/10.1007/0-387-25004-2_4

Bravo, J. M. (2020). Addressing the pension decumulation phase of employee retirement planning. *Who wants to retire and who can afford to retire*, 1-21

Bravo, J. M., & Herce, J. A. (2022). Career breaks, Broken pensions? Long-run effects of early and late-career unemployment spells on pension entitlements. Journal of Pension Economics & Finance, 21(2), 191-217.

Bridges, D., Bamberry, L., Wulff, E., & Krivokapic-Skoko, B. (2022). "A trade of one's own": The role of social and cultural capital in the success of women in male-dominated occupations. *Gender, Work & Organization*, *29*(2), 371-387

Briggs, R., Canney, M., Carey, D., Donoghue, O., Foley, M., Kenny, R. A., & Moore, P. 2017; Health and Wellbeing: Active Ageing for Older Adults in Ireland.

Brounen, D., Koedijk, K. G., & Pownall, R. A. (2016). Household financial planning and savings behaviour. *Journal of International Money and Finance*, *69*, 95-107.

Brown, D. C., Cederburg, S., & O'Doherty, M. S. (2017). Tax uncertainty and retirement savings diversification. *Journal of Financial Economics*, *126*(3), 689-712.

Brown, G. D., & Gathergood, J. (2020). Consumption changes, not income changes, predict changes in subjective well-being. *Social Psychological and Personality Science*, *11*(1), 64-73.

Browning, M., & Crossley, T. F. (2001). The life-cycle model of consumption and saving. *Journal of Economic Perspectives*, *15*(3), 3-22.

Browning, M., & Lusardi, A. (1996). Household saving: Micro theories and micro facts. *Journal of Economic literature*, *34*(4), 1797-1855.

Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of business research*, *79*, 228-237.

Brunton, C. (2009). Retirement Commission 2009 Financial Knowledge Survey.

Bucciol, A., & Trucchi, S. (2021). Locus of control and saving: The role of saving motives. *Journal of Economic Psychology*, *86*, 102413.

Bucher-Koenen, T., & Lusardi, A. (2011). Financial literacy and retirement planning in Germany. Journal of Pension Economics and Finance, 10(4), 565–584.

Bucher-Koenen, T., Lusardi, A., Alessie, R., & Van Rooij, M. 2017; How financially literate are women? An overview and new insights. *Journal of Consumer Affairs*, *51*2), 255-283.

Buddaraju, A., & Devaiah, P. R. (2021). The Impact of Financial Scams on Investor behaviour. *IUP Journal of Financial Risk Management*, *18*(1).

Buhalis, D., Andreu, L., & Gnoth, J. (2020). The dark side of the sharing economy: Balancing value co-creation and value co-destruction. *Psychology & Marketing*, *37*(5), 689-704.

Bunting, D. (1991). Savings and the distribution of income. *Journal of Post Keynesian Economics*, *14* (1): 3-22.

Burks, S. V., Carpenter, J. P., Goette, L., & Rustichini, A. (2009). Cognitive skills affect economic preferences, strategic behaviour, and job attachment. *Proceedings of the National Academy of Sciences*, *106*(19), 7745-7750.

Burnes, D., Henderson, C. R., Jr, Sheppard, C., Zhao, R., Pillemer, K., & Lachs, M. S. (2017). Prevalence of financial fraud and scams among older adults in the United States: A systematic review and meta-analysis. *American Journal of Public Health,* 107(8), 13–21. doi:10.2105/AJPH.2017.303821

Burnett, J., Davis, K., Murawski, C., Wilkins, R., & Wilkinson, N. (2018). Measuring the adequacy of retirement savings. *Review of Income and Wealth*, *64*(4), 900-927

Burns, J., & Dwyer, M. (2007). Households' attitudes to saving, investment and wealth. Reserve Bank of New Zealand Bulletin, 70(4), 25-38.

Byrne, A. (2007). Employee saving and investment decisions in defined contribution pension plans: survey evidence from the UK. *Financial Services Review*, *16*(1).

Cabeza-García, L., Del Brio, E. B., & Oscanoa-Victorio, M. L. (2019, November). Female financial inclusion and its impacts on inclusive economic development. In *Women's Studies International Forum* (Vol. 77, p. 102300). Pergamon

Cahya, B. T., Erlita, I., & Muttaqin, I. (2023). The Impact Of Financial Literacy, Financial Behaviour, And Income On Financial Planning For Child's Education Funds. Setara: Jurnal Studi Gender dan Anak, 5(01), 45-58.

Calder-Wang, S. (2021). The distributional impact of the sharing economy on the housing market. *Available at SSRN 3908062*.

Callis, Z., Gerrans, P., Walker, D. L., & Gignac, G. E. (2023). The association between intelligence and financial literacy: A conceptual and meta-analytic review. Intelligence, 100, 101781. 1-23.

Calvo, E., Bertranou, F. M., & Bertranou, E. (2010). Are old-age pension system reforms moving away from individual retirement accounts in Latin America?. *Journal of Social Policy*, *39*(2), 223-234.

Camagni, R. (2023). Adam Smith (1723–1790): Uncovering his legacy for regional science. In *Great Minds in Regional Science, Vol. 2* (pp. 13-70). Cham: Springer International Publishing.

Camara, N. and David, T. (2015), "Factors that matter for financial inclusion: evidence from Peru", Aestimatio, Vol. 9, pp. 8-29.

Camerer, C., Issacharoff, S., Loewenstein, G., O'donoghue, T., & Rabin, M. (2003). Regulation for Conservatives: Behavioural Economics and the Case for" Asymmetric Paternalism". *University of Pennsylvania law review*, *151*(3), 1211-1254.

Camilleri, A. R., Cam, M. A., & Hoffmann, R. (2019). Nudges and signposts: The effect of smart defaults and pictographic risk information on retirement saving investment choices. Journal of behavioural Decision Making, 32(4), 431-449.

Campara, J. P., Vieira, K. M., & Potrich, A. C. G. (2017). Overall life satisfaction and financial well-being: Revealing the perceptions of the beneficiaries of the bolsa família program. *Revista de Administração Pública*, *51*, 182-200.

Campbell Jr, H. S., & James, R. D. (2020). A look at geographic differences in income and cost of living. Papers in Applied Geography, 6(1), 4-18.

Campbell, J. R., & Hercowitz, Z. (2019). Liquidity constraints of the middle class. American Economic Journal: Economic Policy, 11(3), 130-155

Caplinska, A., & Ohotina, A. (2019). Analysis of financial literacy tendencies with young people. Entrepreneurship and Sustainability Issues, 6(4), 6.

Cardella, E., Kalenkoski, C. M., & Parent, M. (2023). Less is not more: 401 (k) plan information and retirement planning choices. Journal of Pension Economics & Finance, 22(3), 331-351. Bernstein, D. (2021). Pre-retirement use of 401 (k) funds. *Business Economics*, *56*(2), 81-86.

Cardoso, M., Ferreira, C., Leiva, J. M., Nuño, G., Ortiz, Á., Rodrigo, T., & Vazquez, S. (2022). The heterogeneous impact of inflation on households balance sheets. *Red Nacional de Investigadores en Economıa Working Paper*, *176*

Carmeli, A., Yitzhak-Halevy, M. and Weisberg, J. (2009), "The relationship between emotional intelligence and psychological wellbeing", Journal of Managerial Psychology, Vol. 24 No. 1, pp. 66-78.

Carranza, M., & Niles, M. T. (2019). Smallholder farmers spend credit primarily on food: gender differences and food security implications in a changing climate. *Frontiers in Sustainable Food Systems*, *3*, 56.

Carrière-Swallo Y. & Haksar V. (2019). The Economics and Implications of Data: An Integrated Perspective, Departmental Paper No. 19/16. Washington D:C., IMF

Carroll, C. D., & Kimball, M. S. (2001). Liquidity constraints and precautionary saving. National Bureau of Economic Research Working Paper Series, VL - No. 8496 -

October 2001DO - 10.3386/w8496 UR - http://www.nber.org/papers/w8496 L1 - http://www.nber.org/papers/w8496.pdf

Carroll, C. D., Rhee, B. K., & Rhee, C. (1994). Are there cultural effects on saving? Some cross-sectional evidence. *The Quarterly Journal of Economics*, *109*(3), 685-699.

Carroll, C. D., Slacalek, J., & Sommer, M. (2012). *Dissecting saving dynamics: Measuring wealth, precautionary, and credit effects* (No. 2012/10). Center for Financial Studies (CFS).

Carter, E. (2021). Distort, extort, deceive and exploit: Exploring the inner workings of a romance fraud. *The British Journal of Criminology*, *61*(2), 283-302.

Carvalho, L. S., Meier, S., & Wang, S. W. (2016). Poverty and economic decision-making: Evidence from changes in financial resources at payday. *American economic review*, *106*(2), 260-84.

Casali, G. L., & Perano, M. (2021). Forty years of research on factors influencing ethical decision making: Establishing a future research agenda. *Journal of Business Research*, *132*, 614-630.

Casarico, A., Del Rey, E., & Silva, J. I. (2023). Child care costs, household liquidity constraints, and gender inequality. Journal of Population Economics, 1-27.

Case, K. E., Quigley, J. M., & Shiller, R. J. (2005). Comparing wealth effects: the stock market versus the housing market. *The BE Journal of Macroeconomics*, *5*(1).: 1235-1255.

Cashell, B. W. (2009). The fall and rise of household saving.

Cavezzali, E., Gardenal, G., & Rigoni, U. (2012). Risk taking, diversification behaviour and financial literacy of individual investors. *Università Ca'Foscari Department of Management Venezia Working Paper*, (17). Center for Retirement Research at Boston College (CRR) 1-9 . chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://crr.bc.edu/wp-content/uploads/2023/05/IB_23-12.pdf.

Cepeda, G., Nitzl, C., and Roldán, J. L. (2017). Mediation Analyses in Partial Least Squares Structural Equation Modeling: Guidelines and Empirical Examples., in Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications, H. Latan and R. Noonan (eds.), Springer: Cham, pp. 173-195.

Çera, G., Ajaz Khan, K., Mlouk, A., & Brabenec, T. (2021). Improving financial capability: the mediating role of financial behaviour. *Economic Research-Ekonomska Istraživanja*, *34*(1), 1265-1282.

Çera, G., Khan, K. A., Belas, J., & Ribeiro, H. N. R. (2020). The role of financial capability and culture in financial satisfaction. *Economic Papers: A journal of applied economics and policy*, *39*(4), 389-406.

Cera, G., Phan, Q. P. T., Androniceanu, A., & C¸era, E. (2020). Financial capability and technology implications for online shopping. EþM Ekonomie a Management, 23(2), 156–172.https://doi.org/10.15240/tul/001/2020-2-011

Certified Financial Planner Board of Standards, Inc. (2009), "National consumer survey on personal finance", available at: www.cfp.net/downloads/CFP_Board_2009_National_ Consumer_Survey.pdf (accessed 4 May 2010).

Cervellati, E. M., Fattori, P., & Pattitoni, P. (2011). Individual investor behaviour: evidence from the clients of a small credit cooperative bank. *International Journal of Behavioural Accounting and Finance*, *2*(3-4), 191-207.

Chalimah, S. N., Martono, S., & Khafid, M. (2019). The saving behaviour of public vocational high school students of business and management program in Semarang. *Journal of Economic Education*, *8*(1), 22-29.

Cham: Springer International Publishing Ali, K., & Khalid, M. (2019). Sources to finance fiscal deficit and their impact on inflation: A case study of Pakistan. The Pakistan Development Review, 27-43.

Chammas, C. B., & Hernandez, J. M. D. C. (2019). Comparing transformational and instrumental leadership: The influence of different leadership styles on individual employee and financial performance in Brazilian startups. *Innovation & Management Review*, *16*(2), 143-160.

Chandavarkar, A. (1993). Saving Behaviour in the Asian-Pacific Region. *Asian-Pacific Economic Literature*, *7*(1), 9-27.

Chandra, A. and & Kumar, R., (2011). Determinants of individual investor behaviour: An orthogonal linear transformation approach. *MPRA* Paper No. 29722, posted 22 Mar 2011 16:11 UTC

Chandra, A., & Kumar, R. (2012). Factors influencing Indian individual investor behaviour: survey evidence. *Vol. 39,* No. 3, pp. 141-167, December 2012

Chandra, P. K., Pangkey, L. B., & Soetanto, T. V. (2023). Young adults' investment decisions in surabaya: the influence of financial literacy and risk perception. International Journal of Organizational behaviour and Policy, 2(2), 87-96.

Chang, Y. R., & Hanna, S. (1994). Determinants of household expected real income growth in the USA. *Journal of Consumer Studies & Home Economics*, *18*(4), 315-329.

Chariri, A., Sektiyani, W., Nurlina, N., & Wulandari, R. W. (2018). Individual characteristics, financial literacy and ability in detecting investment scams. *Jurnal Akuntansi dan Auditing*, *15*(1), 91-114.

Chater, N., & Loewenstein, G. (2023). The i-frame and the s-frame: How focusing on individual-level solutions has led behavioural public policy astray. *behavioural and Brain Sciences, 46,* e147.

Chattha, I. (2012). Competitions for resources: Partition's Evacuee Property and the Sustenance of Corruption in Pakistan. Modern Asian Studies, 46(5), 1182-1211

Chaturvedi, M., & Khare, S. (2012). Study of saving pattern and investment preferences of individual household in India. *International Journal of Research in Commerce and Management*, *3*(5), 115-120.

Chaudary, S. (2019). Does salience matter in investment decision? Differences between individual and professional investors. *Kybernetes, 48*(8), 1894-1912.

Chaudhry, A. F., Hanif, M. M., Hassan, S., & Chani, M. I. (2019). Efficiency of the Black Foreign Exchange Market. *International Journal of Economics and Finance, 11*(2), 165.

Chavali, K., & Mohanraj, M. P. (2016). Impact of Demographic variables and Risk Tolerance on Investment Decisions–An Empirical Analysis. *International journal of economics and financial issues*, *6*(1), 169-175.

Chen, A., Yin, Y., & Munnell, A. H. (2023). How well doindividual perceive their retirement preparedness?. Center for Retirement Research Boston College.23(12),1-9.

Chen, F., Lu, X., & Wang, W. (2022). Informal financial education and consumer financial capability: The mediating role of financial knowledge. *Frontiers in Psychology*, *13*, 1042085.1-14

Chen, H., & Volpe, R. P. (2002).Gender differences in personal financial literacy among college students.*Financial Services Review, 11(3), 289-307.*

Chen, Y., & Bellavitis, C. (2019). Decentralized finance: Blockchain technology and the quest for an open financial system. *Stevens Institute of Technology School of Business Research Paper*.

Chen, Y., Kumara, E. K., & Sivakumar, V. (2021). Investigation of finance industry on risk awareness model and digital economic growth. *Annals of Operations Research*, 1-22.

Chergarova, V., Arcanjo, V., Tomeo, M., Bezerra, J., Vera, L. M., & Uloa, A. (2022). Cryptocurrency fraud: A study on the characteristics of criminals who are using fake profiles on a social media platform to persuade individuals to invest into cryptocurrency. *Issues in Information Systems*, *23*(3).

Chiapello, E., & Knoll, L. (2020). Social finance and impact investing. Governing welfare in the era of financialization. *Historical Social Research/Historische Sozialforschung*, *45*(3), 7-30.

Chieffe, N., & Rakes, G. K. (1999). An integrated model for financial planning. Financial Services Review, 8(4), 261-268.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Methods for Business Research:Methodology for Business & Management Series*: Lawrence Erlbaum Associates., *295*(2), 295-336.

Chin, W. W., & Gopal, A. (1995). Adoption intention in GSS: relative importance of beliefs. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, *26*(2-3), 42-64.

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least square latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, *14*(2), 189-217.

Chowa, G. A., Masa, R. D., & Ansong, D. (2012). Determinants of saving among low-income individuals in rural Uganda: Evidence from assets Africa. Advances in Applied Sociology, 2(04), 280-291.

Chowa, G.A.N., Despard, M. and Osei-Akoto, I. (2012), "Financial knowledge and attitudes of youth in Ghana", Youthsave Research Brief, Vol. 2, pp. 12-37.

Chowdhury, A., & Shil, N. C. (2019). Influence of new public management philosophy on risk management, fraud and corruption control and internal audit: evidence from an Australian public sector organization. *Accounting and Management Information Systems*, *18*(4), 486-508.

Chowdhury, E. K., & Chowdhury, R. (2023). Role of financial inclusion in human development: Evidence from Bangladesh, India and Pakistan. *Journal of the Knowledge Economy*, 1-26

Chowdhury, R .MMI. (2020), "Personal values and consumers' ethical beliefs: The mediating roles of moral identity and machiavellianism," Journal of Macromarketing, 40 (3), 415-431.

Christelis, D., Georgarakos, D., Jappelli, T., Pistaferri, L., & Van Rooij, M. (2019). Asymmetric consumption effects of transitory income shocks. *The Economic Journal*, *129*(622), 2322-2341.

Christelis, D., Jappelli, T., & Padula, M. 2010; Cognitive abilities and portfolio choice. *European Economic Review*, *54*1), 18-38.

Christiansen, C., Joensen, J. S., & Rangvid, J. 2008; Are economists more likely to hold stocks?. *Review of Finance*, *12*3), 465-496.

Chu, Z., Wang, Z., Xiao, J. J., & Zhang, W. (2017). Financial literacy, portfolio choice and financial well-being. Social Indicators Research, 132(2), 799–820. https://doi.org/10.1007/ s11205-016-1309-2

Citizens Financial Group (2016). Millennial college graduates with student loans now spending nearly one-fifth of their annual salaries on student loan repayments. retrieved from http://investor.citizensbank.com/about-us/newsroom/latest-news/ 2016/2016-04-07-140336028.aspx

Clark, D. A. (2003). Concepts and perceptions of human well-being: Some evidence from South Africa. *Oxford Development Studies*, *31*(2), 173-196.

Clark, D. A. (2005). Sen's capability approach and the many spaces of human well-being. Journal of Development Studies, 41(8), 1339–1368. https://doi.org/10.1080/ 00220380500186853

Clark, R. L., d'Ambrosio, M. B., McDermed, A. A., & Sawant, K. (2006). Retirement plans and saving decisions: the role of information and education. *Journal of Pension Economics & Finance*, *5*(1), 45-67.

Clark, R., Lusardi, A., & Mitchell, O. S. 2017; Employee financial literacy and retirement plan behavior: a case study. *Economic Inquiry*, *55*1), 248-259.

Clarke, M. C., Heaton, M. B., Israelsen, C. L., & Eggett, D. L. (2005). The acquisition of family financial roles and responsibilities. *Family and Consumer Sciences Research Journal*, *33*(4), 321-340.

Coleman, A. (2006, November). The life-cycle model, savings, and growth. *Reserve Bank workshop on "Housing, savings, and the household balance sheet* (Vol. 14).

Collins, J. M., & Urban, C. (2021). Measuring financial well-being over the lifecourse. In *Financial Literacy and Responsible Finance in the FinTech Era* (pp. 45-63). Routledge.

Collins, L. M., Graham, J. W., & Flaherty, B. P. (1998). An alternative framework for defining mediation. *Multivariate behavioural Research, 33*, 295–312.

Competition and Consumer Protection Commission. 2018; Financial Capability and Wellbeing in Ireland in 2018. *Dublin: CCPC*.

Cook, Thomas D., Donald Thomas Campbell, and Arles Day. *Quasi-experimentation: Design & analysis issues for field settings*. Vol. 351. Boston: Houghton Mifflin, 1979.

Cooke, T. (1998) Regression Analysis in Accounting Disclosure Studies, *Accounting and Business Research*, 28 (3), 209-224.

Cooper, D. R. & Schindler, P. S. (2006) *Business Research Methods,* 6thn edition, London: McGraw-Hill.

Costa-Font, J., Giuliano, P., & Ozcan, B. (2018). The cultural origin of saving behaviour. *PloS one*, *13*(9), e0202290.

Cox, J. C., Ross, S. A., & Rubinstein, M. (1979). Option pricing: A simplified approach. *Journal of financial Economics*, *7*(3), 229-263.

Cox, N., Ganong, P., Noel, P., Vavra, J., Wong, A., Farrell, D., . & Deadman, E. (2020). Initial impacts of the pandemic on consumer behaviour: Evidence from linked income, spending, and savings data. *Brookings Papers on Economic Activity*, *2020*(2), 35-82.

Crane, A., & Matten, D. (2004). Business ethics: a European perspective; managing corporate citizenship and sustainability in the age of globalization. Oxford University Press.

Crawford, R., & Karjalainen, H. (2020). Retirement saving of the self-employed (No. R181). IFS Report.

Crawford, R., & O'Dea, C. (2020). Household portfolios and financial preparedness for retirement. *Quantitative Economics*, *11*(2), 637-670.

Cristea, L. M. (2020). Current security threats in the national and international context. *Journal of accounting and management information systems*, *19*(2), 351-378.

Crowe, C. L., Domingue, B. W., Graf, G. H., Keyes, K. M., Kwon, D., & Belsky, D. W. (2021). Associations of loneliness and social isolation with health span and life span in the US Health and Retirement Study. *The Journals of Gerontology: Series A*, *76*(11), 1997-2006.

Cruijsen, C., de Haan, J., & Roerink, R. (2023). Trust in financial institutions: A survey. Journal of economic surveys, 37(4), 1214-1254.

Cua, K. O., McKone, K. E., & Schroeder, R. G. (2001). Relationships between implementation of TQM, JIT, and TPM and manufacturing performance. *Journal of operations management*, *19*(6), 675-694.

Cuadros-Meñaca, A. (2020). Remittances, health insurance, and pension contributions: Evidence from Colombia. *World Development*, *127*, 104766.

Cucinelli, D., & Soana, M. G. (2023). Investor preferences, financial literacy and intermediary choice towards sustainability. *Research in International Business and Finance*, *66*, 102027.

Cude, B., Lawrence, F., Lyons, A., Metzger, K., LeJeune, E., Marks, L. and Machtmes, K. (2006), "College students and financial literacy: what they know and what the study need to learn", Eastern Family Economics and Resource Management Association, Vol. 102 No. 9, pp. 106-109.

Cuesta-González, M., Paredes-Gazquez, J., Ruza, C., & Fernández-Olit, B. (2021). The relationship between vulnerable financial consumers and banking institutions. A qualitative study in Spain. *Geoforum*, *119*, 163-176

Cumming, D., Meoli, M., & Vismara, S. (2019). Investors' choices between cash and voting rights: Evidence from dual-class equity crowdfunding. *Research Policy*, *48*(8), 103740.

Cusimano, A., Donegani, C. P., Jackson, I., & McKay, S. (2023). The rationality of rainy day savers: objective and subjective determinants of individual savings in Britain. *Applied Economics*, *55*(23), 2624-2644.

Daley, J., Coates, B., & Young, W. (2016). *Age of entitlement: age-based tax breaks*. Grattan Institute.

Daley, J., Coates, B., Wiltshire, T., Emslie, O., Nolan, J., & Chen, T. (2018). Money in retirement: More than enough. Grattan Institute. https://grattan.edu.au/report/money-in-retirement/.

Damodaran, A. (2012). Investment valuation: Tools and techniques for determining the value of any asset (Vol. 666). John Wiley & Sons.

Danks N and Ray S. (2018) Predictions from Partial Least Squares Models. In: Ali F, Rasoolimanesh SM and Cobanoglu C (eds) *Applying Partial Least Squares in Tourism and Hospitality Research.* Bingley: Emerald, 35-52.

Danziger, S., Van Der Gaag, J., Smolensky, E., & Taussig, M. K. (1982). The Life-Cycle Hypothesis and the Consumption behaviour of the Elderly. Journal of Post Keynesian Economics, 5(2), 208–227. http://www.jstor.org/stable/4537732

David Blanchett, C. F. P. (2014). Exploring the retirement consumption puzzle. *Journal of Financial Planning*, *27*(5), 34.

Davis, E.P. and Weber, J.A. (1990), "Patterns and obstacles to financial management", Financial Counseling and Planning, Vol. 1 No. 402, pp. 41-52.

Davis, K., & Runyan, R. C. (2016). Personality traits and financial satisfaction: Investigation of a hierarchical approach. *Journal of Financial Counseling and Planning*, *27*(1), 47-60.

De Francisco, E. (2023). Housing choices and their implications for consumption heterogeneity. *Macroeconomic Dynamics*, *27*(1), 56-71.

De Graaf, J. (2002). *Affluenza: The all-consuming epidemic* Emerald Group Publishing Limited. Vol. 13, No. 2, pp. 224-224.

De Nardi, M., French, E., & Jones, J. B. (2016). Savings after retirement: A survey. *Annual Review of Economics*, *8*, 177-204.

De Villiers-Strijdom, J., & Krige, N. (2023). Living annuity satisfaction. Journal of Economic and Financial Sciences, 16(1), 12.

Deaton, A. (1992). *Understanding consumption*: Oxford University Press.

Deaton, A. (2005). Franco Modigliani and the life cycle theory of consumption. Available at SSRN: https://ssrn.com/abstract=686475 or http://dx.doi.org/10.2139/ssrn.686475

Deaton, A. S., & Paxson, C. H. (1997). The effects of economic and population growth on national saving and inequality. *Demography*, *34*(1), 97-114.

Deenanath, V., Danes, S. M., & Jang, J. (2019). Purposive and unintentional family financial socialization, subjective financial knowledge, and financial behaviour of high school students. *Journal of Financial Counseling and Planning*, *30*(1), 83-96.

Dees, J. G., & Anderson, B. B. (2003). For-profit social ventures. *International Journal of Entrepreneurship Education*, *2*(1), 1-26.

Delafrooz, N., & Paim, L. H. (2011). Determinants of saving behaviour and financial problem among employees in Malaysia. *Australian Journal of Basic and Applied Sciences*, *5*(7), 222-228.

Delavande, A., Rohwedder, S., & Willis, R. J. 2008; Preparation for retirement, financial literacy and cognitive resources. *Michigan Retirement Research Center Research Paper*, 2008-190;

DeLiema, M. (2018). Elder fraud and financial exploitation: Application of routine activity theory. *The Gerontologist*, *58*(4), 706-718.

DeLiema, M., Burnes, D., & Langton, L. (2021). The financial and psychological impact of identity theft among older adults. *Innovation in Aging*, *5*(4), igab043.

DeLiema, M., Deevy, M., Lusardi, A., & Mitchell, O. S. (2020). Financial fraud among older Americans: Evidence and implications. *The Journals of Gerontology: Series B*, *75*(4), 861-868.

Deliema, M., Shadel, D., & Pak, K. (2020). Profiling victims of investment fraud: Mindsets and risky behaviours. *Journal of Consumer Research*, *46*(5), 904-914.

Demirgüç-Kunt, A., Klapper, L. F., & Panos, G. A. (2016). Saving for old age. *World Bank Policy Research Working Paper*, (7693).

Demirtaş, Ö., & Güngör, Z. (2004). Portföy yönetimi ve portföy seçimine yönelik uygulama. *Journal of Aeronautics and Space Technologies*, *1*(4), 103-109.

Denizer, C., Wolf, H., & Ying, Y. (2002). Household savings in the transition. Journal of Comparative Economics, 30(3), 463-475.

Deshpande, A., & Kabeer, N. (2024). Norms that matter: Exploring the distribution of women's work between income generation, expenditure-saving and unpaid domestic responsibilities in India. *World Development*, *174*, 106435.

Despard, M. R., Friedline, T., & Martin-West, S. (2020). Why do households lack emergency savings? The role of financial capability. *Journal of Family and Economic Issues*, *41*, 542-557.

DeVaney, S. A. (2016). Financial issues of older adults. *Handbook of consumer finance research*, 155-166.

DeVaney, S. A., & Yi-Wen, C. (2001). A model of savings behaviour and the amount saved in retirement accounts. *Journal of Financial Service Professionals*, *55*(2), 72.

Devi S.D and & Chitra. P, (2014), 'A Study on Salaried Employees Behaviour towards Domestic Savings and Investment in Rasipuram Town', *Research Explorer, Vol. III*, Issue 9, July-Dec 2014, pp 40-43.

Devine, M. T., & Siddiqui, S. (2023). Strategic investment decisions in an oligopoly with a competitive fringe: An equilibrium problem with equilibrium constraints approach. *European Journal of Operational Research, 306*(3), 1473-1494.

Dewi, V., Febrian, E., Effendi, N., & Anwar, M. (2020). Financial literacy among the millennial generation: Relationships between knowledge, skills, attitude, and behaviour. *Australasian Accounting, Business and Finance Journal*, *14*(4), 24-37.

Deyalage, P. A., & Kulathunga, D. (2019). Factors affecting online customer satisfaction: The Sri Lankan perspective. International Journal of Business and Management, 14(2), 99. https://doi.org/10.5539/ijbm.v14n2p99

Dhawan, D., & Mehta, S. K. (2019). Saving and investment pattern: assessment and prospects. *ACRN Journal of Finance and Risk Perspectives*, *8*, 123.

Diamantopoulos A, Sarstedt M, Fuchs C, et al. (2012) Guidelines for choosing between multiitem and single-item scales for construct measurement: a predictive validity perspective. *Journal of the Academy of Marketing Science* 40(3): 434-449.

Didenko, I., Petrenko, K., & Pudlo, T. (2023). The role of financial literacy in ensuring financial inclusion of the population. Financial Markets, Institutions and Risks, 7(2), 72-79.

Didwania & Sharma (2022) behavioural Finance: Delineation and Coalescence of Human behaviour & Investment Decisions, *The Seyboldreport*. V -18 (I03) 1291-1301.

Dietz, B. E., Carrozza, M., & Ritchey, P. (2003). Does Financial Self-Efficacy Explain Gender Differences in Retirement Saving Strategies? Journal of Women & Aging, 15(4), 83-96.

Dilshad, W., Ali, M., & Javed, S. M. K. (2024). Do Financial Literacy and Financial Information Influence Financial Decision? Mediated by Financial Behavior. *Journal of Excellence in Management Sciences*, *3*(1), 101-114.

Disney, R. (1996). Ageing and saving. *Fiscal Studies*, *17*(2), 83-101.

Djafarova, E., & Foots, S. (2022). Exploring ethical consumption of generation Z: Theory of planned behaviour. *Young Consumers*, *23*(3), 413-431.

Do Hwang, I. (2021). Prospect theory and insurance demand: Empirical evidence on the role of loss aversion. *Journal of behavioural and Experimental Economics*, *95*, 101764.

Dohmen, T., Falk, A., Huffman, D., & Sunde, U. 2010; Are risk aversion and impatience related to cognitive ability?. *American Economic Review*, *100*3), 1238-1260.

Dolvin, S. D., & Templeton, W. K. (2006). Financial education and asset allocation. *Financial Services Review*,*15*, 133–149.

Domar, E. D. (1946). Capital expansion, rate of growth, and employment.*Econometrica, Journal of theEconometric Society*, *137-147.*

Dong, X., & Simon, M. A. (2013). Elder abuse as a risk factor for hospitalization in older persons. *JAMA internal medicine*, *173*(10), 911-917.

Donkers, B., & van Soest, A. (1999). Subjective measures of household preferences and financial decisions. Journal of Economic Psychology, 20(6), 613–642.

Donoghue, O. A., McGarrigle, C. A., Foley, M., Fagan, A., Meaney, J., & Kenny, R. A. 2018; Cohort profile update: the Irish longitudinal study on ageing TILDA; *International journal of epidemiology*, *47*5), 1398-1398l.

Doorley, K., & Nolan, A. 2019; The determinants of retirement planning within couples in Ireland.

Douglas, H. S. R. (2021). Funding our future: Self determination delivering prosperity. *Journal of Economic and Social Thought*, *8*(4), 157-171.

Drakopoulos, S. A. (2021). The marginalization of absolute and relative income hypotheses of consumption and the role of fiscal policy. *The European Journal of the History of Economic Thought*, *28*(6), 965-984.

Drew, J. M., & Cross, C. (2013). Fraud and its PREY: Conceptualising social engineering tactics and its impact on financial literacy outcomes. *Journal of Financial Services Marketing*, *18*, 188-198.

Drolet AL and Morrison DG. (2001) Do the study Really Need Multiple-Item Measures in Service Research? *Journal of Service Research* 3(3): 196-204.

Druedahl, J., & Jørgensen, T. H. (2020). Can consumers distinguish persistent from transitory income shocks?. *The Economic Journal*, *130*(632), 2410-2437.

Du, W., & Chen, M. (2023). Too much or less? The effect of financial literacy on resident fraud victimization. Computers in Human behaviour, 148, 107914. 107914, https://doi.org/10.1016/j.chb.2023.107914.

Duarte, P. A. O., & Raposo, M. L. B. (2010). A PLS model to study brand preference: An application to the mobile phone market. In *Handbook of partial least squares* (pp. 449-485). Springer, Berlin, Heidelberg.

Duflo, E., &Saez, E. (2002). Participation and investment decisions in a retirement plan: The influence of colleagues' choices. *Journal of public Economics, 85(1), 121-148*

Dulebohn, J. H., & Murray, B. (2007). Retirement savings behaviour of higher education employees. *Research in Higher Education, 48*, 545-582.

Dunn, G., Everitt, B., & Pickles, A. (1993). *Modeling covariances and latent variables using EQS.* London: Chapman & Hall.

Dunn, L., & Mirzaie, I. A. (2012). Determinants of consumer debt stress: Differences by debt type and gender. Columbus, OH: Working Paper, Ohio State University.

Dunn, R. A. (2008). Labor supply and household meal production: new results from the Health and Retirement Survey. *Available at SSRN 1098942*.

Durr-e-Nayab. (2008). Demographic dividend or demographic threat in Pakistan? *The Pakistan Development Review*, 1-26.

Eagly, A. and Chaiken, S. (1993), "The psychology of attitudes", Psychology and Marketing, Vol. 12 No. 5, pp. 459-466.

El Khatib, A. S. (2021). Financial Literacy: What Have the study Learned so Far?. International Journal for Innovation Education and Research Vol:-9 No-03,47-62.

Elizabeth, A., & Minton, K. (2013). Belief Systems, religion, and Behavioral economics. Business Expert Press.

Elliott, A. (2021). Money and Sustainability: Examining the Potential Moderating Role of Financial Capability and Decent Work on the Relationship between Income and Quality of life.

Emmons, W. R. (2005). Consumer-finance myths and other obstacles to financial literacy. . Louis U. Pub. L. Rev., 24, 335.

Engels, C., Kumar, K., & Philip, D. (2021). Financial literacy and fraud detection. In *Financial Literacy and Responsible Finance in the FinTech Era* (pp. 124-146). Routledge.

Engen, E. M., Engen, E. M., & Engen, E. M. (2005). Lifetime earnings, Social Security benefits, and the adequacy of retirement wealth accumulation. *Soc. Sec. Bull.*, *66*, 38.

Epstein, J., Santo, R. M., & Guillemin, F. (2015). A review of guidelines for cross-cultural adaptation of questionnaires could not bring out a consensus. *Journal of clinical epidemiology*, *68*(4), 435-441.

Erskine, M., Kier, C., Leung, A., & Sproule, R. (2006). Peer crowds, work experience, and financial saving behaviour of young Canadians. *Journal of Economic Psychology*, *27*(2), 262-284.

Esoimeme, E. E. (2021). Identifying and reducing the money laundering risks posed by individuals who have been unknowingly recruited as money mules. *Journal of Money Laundering Control*, *24*(1), 201-212.

Evstigneev, I., Bahsoun, W., Taksar, M., MacLean, L., & Ziemba, W. (2013). Prospect theory: an analysis of decision under risk., 99-127. https://doi.org/10.1142/9789814417358_0006.

Ewens, M., & Townsend, R. R. (2020). Are early stage investors biased against women?. Journal of Financial Economics, 135(3), 653-677.

Fachrudin, K. R., & Fachrudin, K. A. (2016). The influence of education and experience toward investment decision with moderated by financial literacy. *Polish Journal of Management Studies*, *14*.

Faff, R., Mulino, D., & Chai, D. (2008). On the linkage between financial risk tolerance and risk aversion. *Journal of financial research*, *31*(1), 1-23.

Fagereng, A., Gottlieb, C. & Guiso, L. (2017). Asset Market Participation and Portfolio Choice over the Life-Cycle. The Journal of Finance, 72(2), 705-750.

Fagereng, A., Holm, M. B., Moll, B., & Natvik, G. (2019). *Saving behaviour across the wealth distribution: The importance of capital gains* (No. w26588). National Bureau of Economic Research.

Fah, B. C. Y. (2010). Living standard, living level and economic wellbeing of older persons. Canadian Social Science, 6(5), 145–150.

Fajri, A., & Setiawati, E. (2023) The Influence of Over Confidence, Illusion of Control, Availability, Anchoring Bias and Financial Literacy on Investment Decision Making in the Community of Demak District As Beginning Investors.The International Journal of Business Management and Technology, Volume 7 Issue 4.187-198.

Falah, F. F., & Haryono, N. A. (2023). The Influence of Herding, Anchoring, Disposition, Personal Income, and Financial Literacy on Generation Z's Investment Decision Making in Surabaya City. Technium Soc. Sci. J., 45, 210.

Falk, A., Becker, A., Dohmen, T. J., Enke, B., Huffman, D., & Sunde, U. (2015). The nature and predictive power of preferences: Global evidence.

Falk, A., Becker, A., Dohmen, T., Huffman, D., & Sunde, U. (2023). The preference survey module: A validated instrument for measuring risk, time, and social preferences. *Management Science*, *69*(4), 1935-1950.

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of financial economics*, *33*(1), 3-56.

Fan, L. and Babiarz, P. (2019), "The determinants of subjective financial satisfaction and the moderating roles of gender and marital status", Family and Consumer Sciences Research Journal, Vol. 47 No. 3, pp. 237-259.

Fan, L., & Lei, S. (2023). Financial well-being, family financial support and depression of older adults in China. *International Journal of Bank Marketing*, *41*(6), 1261-1281.

Fan, L., Stebbins, R., & Kim, K. T. (2022). Skint: Retirement? Financial hardship and retirement planning behaviours. *Journal of Family and Economic Issues*, *43*(2), 354-367.

Farooq, S. H., Shah, S. Z. A., & Rasheed, S. (2021). Impact of Financial Attitude, Financial Literacy and Parental Financial Socialization on Prudent Financial Management Practices: A Moderating Effect of Financial Well-Being among the Youth of Pakistan. *Abasyn University Journal of Social Sciences*, *14*(1).

Farrell, L., Fry, T. R., & Risse, L. 2016; The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of economic psychology*, *54*, 85-99.

Fatima S. (2019, April 13). 'Financial literacy in Pakistan. The Express Tribune: Pakistan Edition. https://tribune.com.pk/story/1949358/financial-literacy-pakistan

Fazli Sabri, M., & Tze Juen, T. (2014). The influence of financial literacy, saving behaviour, and financial management on retirement confidence among women working in the Malaysian public sector. *Asian Social Science*. https://doi.org/10.5539/ass.v10n14p40

Feather, N. (2005). Values, religion and motivation. In *Advances in motivation and achievement: Motivation and religion* (pp. 35-73). JAI Press.

Fedorova, E. A. E., Nekhaenko, V. V., & Dovzhenko, S. E. E. (2015). Impact of financial literacy of the population of the Russian Federation on behaviour on financial market: Empirical evaluation. *Studies on Russian Economic Development*, *26*(4), 394-402.

Feiveson, Laura, and John Sabelhaus (2019). "Lifecycle Patterns of Saving and Wealth Accumulation," Finance and Economics Discussion Series 2019-010. Washington:

Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2019.010.

Feldstein, M. (1980). Inflation, portfolio choice, and the prices of land and corporate stock. *American Journal of Agricultural Economics*, *62*(5), 910-916

Feldstein, M. S. and C. Y. Horioka (1980) "Domestic Saving and International Capital Flows." *Economic Journal* 90, 314–329.

Feldstein, M., & Bacchetta, P. (1991). National saving and international investment. *National saving and economic performance*, 201-220.

Feldstein, M., & Barro, R. J. (1978). The Impact of Social Security on Private Saving: Evidence from the US Time Series. *Books*.

Fernandes, D., Lynch Jr, J. G., & Netemeyer, R. G. 2014; Financial literacy, financial education, and downstream financial behaviors. *Management science*, *60*8), 1861-1883.

Fernandes, D., Lynch, J. G. J., & Netemeyer, R. G. (2014). Financial literacy, financial education and downstram financial behaviour. Management Science, 60(8), 1861–1883.

Fernández-Villaverde, J., & Krueger, D. (2007). Consumption over the life cycle: Facts from consumer expenditure survey data. *The Review of Economics and Statistics*, *89*(3), 552-565.

Ferrer, M., Alonso, J., Prieto, L., Plaza, V., Monsó, E., Marrades, R., ... & Antó, J. M. (1996). Validity and reliability of the St George's Respiratory Questionnaire after adaptation to a different language and culture: the Spanish example. *European Respiratory Journal*, *9*(6), 1160-1166.

Ferrer-i-Carbonell, A. and Frijters, P. (2004), "How important is methodology for the estimates of the determinants of happiness?", Economic Journal, Vol. 114 No. 497, pp. 641-659.

Fiaz, A., Malik, S. W., & Khurshid, N. (2021). Empirical evidence from NARDL analysis: an asymmetric effect of exchange rate volatility on agricultural sector in Pakistan. *Asia-Pacific Social Science Review*, *21*(2), 13.

Field, A. (2006) *Discovering Statistics Using SPSS,* London: Sage Publications.

Filliben, J. J. (1975) The Probability Plot Correlation Coefficient Test for Normality, *Technometrics,* 17 (1), 111-117.

FINRA. (2012). National financial capability study military survey. Financial Industry Regulatory Authority Investor Education Foundation. https://www.usfinancialcapability.org/

Finucane, M. L., Alhakami, A., Slovic, P., & Johnson, S. M. (2000). The affect heuristic in judgments of risks and benefits. Journal of behavioural Decision Making, 13(1), 1–17.

Fischer, P., Lea, S. E., & Evans, K. M. (2013). Why do individuals respond to fraudulent scam communications and lose money? The psychological determinants of scam compliance. *Journal of Applied Social Psychology*, 43(10), 2060–2072. doi:10.1111/jasp.12158

Fisher, I. (1930). The theory of interest: Kelley and Millman. *Inc., New York*, 566.

Fitriaty, F. (2023). Exploring the Factors Shaping Investment Decisions: Insights from Financial Literacy, Financial behaviour, and Income among Lecturers at the Faculty of Economics and Business, University of Jambi. Dinasti International Journal of Economics, Finance & Accounting (DIJEFA), 4(3). 465-474.

Fitriaty, F. (2023). The Effect Of Financial Literacy, Education Level On Investment Decisions In Generation Z SMEs. *Jurnal Mebis*, *8*(1), 15-26.

Florea, N. V., Croitoru, G., Robescu, V. O., Florea, D., & Croitoru, M. B. (2024). Financial Sustainability and the Wellbeing of the Elder Romanian Population Using Pension Modelling: A Social and Economic Impact Factor-Based Analysis. In *Social and Ethical Implications of AI in Finance for Sustainability* (pp. 41-88).

Floyd, F. J. & Widman, K. F. (1995) Factor Analysis in the Development and Refinement of Clinical Instrument, *Psychological assessment*, 7 (3), 286-299.

Flynn, J., Slovic, P., & Mertz, C. K. (1994). Gender, race, and perception of environmental health risks. Risk Analysis, 14(6), 1101–1108.

Foley, M., & Pyle, W. (2005). Household savings in Russia during the transition. *Middlebury College Economics Discussion Paper*, (05-22), 1-36.

Folk, J. Y., Beh, L. S., & Baranovich, D. L. (2012). Financial education: Determinant of retirement planning in Malaysia. *E3 Journal of Business Management & Economics*, *3*(2), 69-78.

Fombang, M., & Wanzala, R. W. (2024). Relationship between Countries Savings and Economic Growth: A Case of South Africa (1970-2022)

Fong, J. H., & Lee, Z. (2023). Trust in Financial Institutions and Demand for Financial Advice. Journal of Financial Counseling and Planning, 34(1), 81-95.

Fong, J. H., Koh, B. S., Mitchell, O. S., & Rohwedder, S. (2021). Financial literacy and financial decision-making at older ages. Pacific-Basin Finance Journal, 65, 101481.

Fonseca, R., Mullen, K. J., Zamarro, G., & Zissimopoulos, J. 2012; What explains the gender gap in financial literacy? The role of household decision making. *Journal of Consumer Affairs, 46*1), 90-106.

Font, J. C., Giuliano, P., & Ozcan, B. (2020). The Cultural Origin of Saving behaviour. ISSN 0265-8003

Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing research, 19*(4), 440-452.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research.* Volume 18, Issue 3, 382-388.

Frank, D., Singh, R. R., & Bai, V. (2023). Relevance of Employee Saving Attitude Towards Retirement Planning and Satisfaction. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(5), 17.

Frank, R.H., Levine, A.S. and Dijk, O. 2014. "Expenditure Cascades." Review of Economics 1(1-2): 55– 73. doi: 10.1561/105.00000003

Franzoi, S.L. (2006) Social Psychology, 154, 354-373

Frederick, S., Loewenstein, G., & O'donoghue, T. (2002). Time discounting and time preference: A critical review. *Journal of economic literature, 40*(2), 351-401.

Frederiksen, A., Halliday, T., & Koch, A. K. (2010). What do the study work for? An anatomy of pre-and post-tax earnings growth. Discussion Paper No. 5298 IZA DP No. 5298

Fregert, K., & Jonung, L. (2005). Makroekonomi–Teori, politik & institutioner. *Studentlitteratur, andra upplagan*.

Friedberg, L., Leive, A., Jang, J., & Young, E. R. (2023). Health Savings Accounts and life-cycle saving: Implications for retirement preparedness. *TIAA Institute Research Paper Series*, (194).

Friedline, T., & West, S. (2016). Financial education is not enough: Millennials may need financial capability to demonstrate healthier financial behaviours. Journal of Family and Economic Issues, 37(4), 649–671. https://doi.org/10.1007/s10834-015-9475-y

Friedman, M. (1957). Introduction to" A theory of the consumption function". In *A theory of the consumption function* (pp. 1-6). Princeton university press.

Friedman, M. (2018). Theory of the consumption function.). Barnett, W. (2003). The modern theory of consumer behavior: Ordinal or cardinal?. *The Quarterly Journal of Austrian Economics*, 6(1), 41-65.

Friedman, M., & Savage, L. J. (1948). The utility analysis of choices involving risk. *Journal of Political Economy, 56,* 279–304.

Fuadah, H., & Setiyawati, H. (2020). The Effect of the implementation of transparency and accounting information systems on the quality of financial reports. *IJO-International Journal of Business Management (ISSN 2811-2504), 3*(11), 01-12.

Gallery, G., & Gallery, N. (2005). Paradox of choice in a mandatory pension savings system: challenges for Australian retirement income policy. *Policy & Politics, 33*(3), 519-532.

Gallipoli, G., & Gomez-Cardona, S. (2023). The Production of Financial Literacy (No. 2023-007).working paper university of chigaco,

Ganegoda, A., & Evans, J. (2014). A framework to manage the measurable, immeasurable and the unidentifiable financial risk. *Australian Journal of Management*, *39*(1), 5-34.

Ganong, P., & Noel, P. (2019). Consumer spending during unemployment: Positive and normative implications. American economic review, 109(7), 2383-2424.

Gao, K., Sun, L., Yang, Y., Meng, F., & Qu, X. (2021). Cumulative prospect theory coupled with multi-attribute decision making for modeling travel behaviour. *Transportation research part A: policy and practice*, *148*, 1-21.

García-Schmidt, M., & Woodford, M. (2019). Are low interest rates deflationary? A paradox of perfect-foresight analysis. *American Economic Review*, *109*(1), 86-120.

Garman, E. T., Sorhaindo, B., Bailey, W., Kim, J., & Xiao, J. (2004). Financially distressed credit counseling clients and the incharge financial distress/financial well-being scale. In *Proceedings of the eastern regional family economics and resource management association conference* (pp. 71-81).

Gaudecker, H. M. V. (2015). How does household portfolio diversification vary with financial literacy and financial advice?. *The Journal of Finance*, *70*(2), 489-507.

Gebler, J. (2018). Analysis: Retirees' spending falls faster than expected into old age. Economic Issues, 31(1), 63–81.

Gedela, S. P. R. (2012). Determinants of saving behaviour in rural and tribal households (An empirical analysis of Visakhapatnam District). International Journal of Research in Social Sciences, 2(3), 108-114.

Geetha, N., & Ramesh, M. (2011). A study on people's preferences in Investment Behaviour. *International Journal of Engineering and Management Research*, *1*(6), 285-306.

Geetha, N., & Ramesh, M. (2012). *A study on relevance of demographic factors in investment decisions* (No. 1231-2016-100817, pp. 14-27).

Geetha, S. N., & Vimala, K. (2014). Perception of household individual investors towards selected financial investment avenues (with reference to investors in Chennai city). *Procedia Economics and Finance*, *11*, 360-374.

Geetha. N and & Ramesh. M. (2011). 'A Study of People's Preference in Investment Behaviour', *IJMER, Vol 1*, Issue 6, November 2011, pp 1-10.

Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems*, *16*(1), 5.

Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, *4*(1), 7.

Gerrans, P., Speelman, C., & Campitelli, G. (2014). The relationship between personal financial wellness and financial wellbeing: A structural equation modelling approach. *Journal of Family and Economic Issues*, *35*, 145-160.

Gertler, Paul J., Sebastian W. Martinez, and Marta Rubio-Codina. 2012. "Investing Cash Transfers to Raise Long-Term Living Standards." *American Economic Journal: Applied Economics*, 4 (1): 164–92.

Ghadwan, A., Wan Ahmad, W. M., & Hanifa, M. H. (2022). Financial planning for retirement: The mediating role of culture. *Risks*, *10*(5), 104. 1-20

Ghaffar, J.A., Khattak, M.S., Shah, T.A. and Jehangir, M. (2022), "Impact of personality traits on financial planning: an empirical evidence from Pakistan", *Journal of*

Economic and Administrative Sciences, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JEAS-08-2021-0147

Ghazali, M. S., Alwi, S. F. S., Othman, I., Sabri, M. F., & Abd Aziz, N. N. (2022). The Relationship between Subjective Financial Knowledge and Financial Well-Being among Emerging Adults in Malaysia: Mediating Effect of Financial Behaviour. *International Journal of Academic Research in Business and Social Sciences*, *12*(4), 1263-1284.

Ghez, G., & Becker, G. S. (1975). The allocation of time and goods over the life cycle. *NBER Books*.

Ghilarducci, T., 2007. Guaranteed Retirement Accounts: Toward Retirement Income Security. United States of America. Retrieved from https://policycommons.net/artifacts/977994/guaranteed-retirement-accounts/1707121/ on 06 Oct 2023. CID: 20.500.12592/q5761s

Gibadullina, A. (2023). Rent and financial accumulation: locating the profitability of American finance. *New political economy*, *28*(2), 259-283.

Gillion, C., Turner, J., Bailey, C. & Latulipe, D. (2000). Social security pensions: Development and reform (*International Labour Office, Geneva*, 2000).

Giridhari, M., & Debasish, S. (2011). A study on investment perception among urban investors in orissa. *Journal of Management thought and practices*, *3*(1), 1-26.

Girshina, A. (2019). Wealth, savings, and returns over the life cycle: the role of education. *Swedish House of Finance Research Paper*, (19-10).

Gitman, L., Joehnk, M., & Smart, S. (2011). Fundamentals of Investing (11. p.). *Painos. Prentise-Hall: Boston*.

Gitman, L.J. and Michael, D. (2011), Joehnk and Randall S. Billingsley, Personal Financial Planning, 12th edition, South-Western, Cengage Learning, Mason, OH.

Gleckler, M. M. (2021). *Faculty Attitudes toward Online Education: Faculty Profiles in the Diffusion of Innovation* (Doctoral dissertation, The University of Toledo).

Godwin, D.D. and Koonce, J.C. (1992), "Cash flow management of low-income newlyweds", Financial Counseling and Planning, Vol. 3, pp. 17-42.

Goel, R., & Novikova, N. (2023). Capital Flows: Trends, Risks, and New Investor Bases. India's Financial System: Building the Foundation for Strong and Sustainable Growth, 161.

Goetzmann, W. N., & Ibbotson, R. G. (2006). *The equity risk premium: essays and explorations*. Oxford University Press.

Goldhaber, D., & Holden, K. L. (2023). How much do teachers value compensation deferred for retirement? Evidence from defined contribution rate choices. *Educational Researcher, 52*(2), 80-90.

Gomes, F. (2020). Portfolio choice over the life cycle: A survey. *Annual Review of Financial Economics, 12*, 277-304

González, C. R. (2014). Can micro-finance help small farmers in developing countries improve their livelihoods? A Systematic Review. Florida International University, Florida.

Gonzalez, J. V. (2014). The Complete Equation, Saving Equals Investment. *International Journal of Research Science and Management, 1*(4), 8-22.

Goodfellow, C., Bohl, M. T., & Gebka, B. (2009). Together the study invest? Individual and institutional investors' trading behaviour in Poland. *International Review of Financial Analysis, 18*(4), 212-221.

Goodhue DL, Lewis W and Thompson R. (2012) Does PLS Have Advantages for Small Sample Size or Non-Normal Data? *MIS Quarterly* 36 (3): 981-1001.

Goodwin-Hawkins, B., & Dafydd Jones, R. (2022). Rethinking lifestyle and middle-class migration in “left behind” regions. *Population, Space and Place, 28*(8), e2495.

Gordon, M. G. 2008. The Life Cycle of Financial Planning. University of Wyoming Cooperative Extention Service. 420 p.

Gordon, M. J. (2016). The neoclassical and a post Keynesian theory of investment. In Can the Free Market Pick Winners? (pp. 3-21). Routledge

Gorgievski-Duijvesteijn, M. J., Bakker, A. B., Schaufeli, W. B., & van der Heijden, P. G. (2005). Finances and well-being: a dynamic equilibrium model of resources. Journal 256 of Occupational Health Psychology, 10(3), 210-224.

Gottschalk, P. (2010). Categories of financial crime. *Journal of financial crime, 17*(4), 441-458.

Gottschalk, P. (2010). Theories of financial crime. *Journal of Financial Crime, 17*(2), 210-222.

Götz O, Liehr-Gobbers K and Krafft M. (2010) Evaluation of Structural Equation Models Using the Partial Least Squares (PLS) Approach. In: Esposito Vinzi V, Chin WW, Henseler J, et al. (eds) *Handbook of Partial Least Squares: Concepts, Methods and*

Applications (Springer Handbooks of Computational Statistics Series, vol. II). Heidelberg, Dordrecht, London, New York: Springer, 691-711.

Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, *45*(1), 80-105.

Goyal, K., Kumar, S. and Xiao, J.J. (2021). "Antecedents and Consequences of Personal Financial Management behaviour: a systematic literature review and future research agenda", International Journal of Bank Marketing, Vol. 39 No. 7, pp. 1166–1207. https://doi.org/10.1108/IJBM-12-2020-0612

Graafland, J. (2020). When does economic freedom promote well being? On the moderating role of long-term orientation. *Social Indicators Research*, *149*(1), 127-153.

Grable, J. E. (1997). *Investor risk tolerance: Testing the efficacy of demographics as differentiating and classifying factors* (Doctoral dissertation, Virginia Tech). https://vtechworks.lib.vt.edu/handle/10919/30762

Grable, J. E., & Joo, S. H. (2000). A cross-disciplinary examination of financial risk tolerance. *Consumer Interests Annual*, *46*, 151-157.

Graff, M., Tang, K., & Zhang, J., (2008). Demography, Financial Openness, National Savings and External Balance.

Graham, J., & Makridis, C. A. (2023). House prices and consumption: a new instrumental variables approach. *American Economic Journal: Macroeconomics*, *15*(1), 411-443.

Gramlich, E. M. (1996). Different approaches for dealing with social security. *Journal of Economic Perspectives*, *10*(3), 55-66.

Grant-Smith, D., & de Zwaan, L. (2019). Don't spend, eat less, save more: Responses to the financial stress experienced by nursing students during unpaid clinical placements. *Nurse education in practice*, *35*, 1-6.

Grant-Smith, D., & de Zwaan, L. (2019). Grant-Smith, D., & de Zwaan, L. (2019).

Gray, D. E. (2021). Doing research in the real world. *Doing research in the real world*, 1-100.

Greenberg, A. E., & Hershfield, H. E. (2019). Financial decision making. *Consumer Psychology Review*, *2*(1), 17-29.

Griggs, David, Mark Stafford-Smith, Owen Gaffney, Johan Rockström, Marcus C Öhman,, Priya Shyamsundar, . . ., et al. (2013),Journal of Macromarketing 43(2)“Sustainable development goals forindividual and planet,” Nature, 495 (7441), 305-307.

Grigion Potrich, A. C., Vieira, K. M., & Kirch, G. (2015). Determinantes da Alfabetização Financeira: Análise da Influência de Variáveis Socioeconômicas e Demográficas. *Revista Contabilidade & Finanças-USP, 27*(69).

Guest, R., & McDonald, I. (2001). The impact of population aging on the socially optimal rate of national saving: A comparison of Australia and Japan. *Review of Development Economics, 5*(2), 312-327.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes?. Journal of Economic perspectives, 20(2), 23-48.

Gujarati, D. (2003) *Basic Econometrics,* 4th edition, London: McGraw-Hill.

Gunawan, J., Marzilli, C., & Aungsuroch, Y. (2021). Establishing appropriate sample size for developing and validating a questionnaire in nursing research. *Belitung Nursing Journal*, 7(5), 356-360.

Guntur, Y. S., & Soares, J. (2022, August). Financial Literacy as a Mediation of Financial Attitudes and Financial Experience on Financial Management Behaviour. In International Conference On Economics Business Management And Accounting (ICOEMA) (Vol. 1, pp. 392-404).

Guo, C., Yang, P., & Mu, Y. (2023). Expectations of Improvement of Socioeconomic Status Throughout the Life Course as a Component for Promoting Fertility Intentions. *China CDC Weekly*, *5*(16), 365.

Gupta A (2023). Scams That Changed India's Capital Market. SunText Rev Arts Social Sci 4(2): 155.

Gupta, C. (2019). Decision Making, Belief and Behavioural Biases. *Belief and Behavioural Biases (JUNE 01, 2019).*

Gupta, P. K., & Gupta, S. (2015). Corporate frauds in India: perceptions and emerging issues. Journal of Financial Crime, 22(1), 79–103.

Gupta, R. (2023). Social Security Act of 2020: A Significant Step towards Universalizing Social Protection for India's Working Class Social Protection as a Prerequisite for Sustainability Development. *Res Militaris*, *13*(3), 1178-1187

Gupta, S., Ksoll, C., & Maertens, A. (2021). Intra-household efficiency in extended family households: Evidence from rural India. The Journal of Development Studies, 57(7), 1172-1197.

Guptan, V., Rasiah, R., Pritam Singh, H. K., Turner, J. J., Kumar, S., & Sorooshian, S. (2021). Retirement Preparedness and Subjective Well-Being: Evidence from Malaysia. *Quality-Access to Success*, *22*(185).

Gurun, U. G., Stoffman, N., & Yonker, S. E. (2018). Trust busting: The effect of fraud on investor behaviour. *The Review of Financial Studies*, *31*(4), 1341-1376.

Gurung, M., & Gautam, K. P. (2023). Financial Well-being and Financial Literacy in Bhutan: Evidence from Bongo Gewog. Universal Journal of Financial Economics, 2(1), 1-18.

Gustafsson, J. (2023). Public pension policy and the equity–efficiency trade-off∗. *The Scandinavian Journal of Economics*, *125*(3), 717-752.

Gutter, M., & Copur, Z. (2011). Financial behaviours and financial well-being of college students: Evidence from a national survey. Journal of Family and Economic Issues, 32(4), 699–714.

Habibah, U. (2023). Exploring Households'financial Planning: A Qualitative Study In Pakistan. Journal of Social Research Development, 4(2), 489-498.

Hacker, J. S., & Lowentheil, N. (2012). ProsPerity economics. *Building an economy for all*.

Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, *3*(4), 283-297.

Hair JF, Hult GTM, Ringle CM, et al. (2017a) *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Thousand Oaks, CA: Sage.

Hair JF, Ringle CM and Sarstedt M. (2011) PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice* 19(2): 139-151.

Hair JF, Sarstedt M and Ringle CM. (2019) Rethinking Some of the Rethinking of Partial Least Squares. *European Journal of Marketing* forthcoming.

Hair JF, Sarstedt M, Ringle CM, et al. (2018) *Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Thousand Oaks, CA: Sage.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.

Hair, J. F., Anderson, R. E., Tathan, R. L. & Black, W. C. (2006) *Multivariate Data Analysis*, Oxford: Maxwell Macmillan.

Hair, J. F., Hult, G. T. M., Ringle, C. M. & Sarstedt, M. (2013) *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Thousand Oaks: Sage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (2nd ed.). Sage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) **(**3 ed.). Thousand Oaks, CA: Sage.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed, a silver bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139-152.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, *31*(1), 2-24.

Hair, J., Tatham, R., Anderson, R. & Black, W. (1998) *Multivariate Data Analysis*, 5Th edition, London: Prentice Hall.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and Tatham, R.L., (2009). The text refers to the 7th edition of a book titled "Multivariate Data Analysis" in Volume 7. Pearson Prentice Hall is located in Upper Saddle River, NJ.

Hajam, M. A. (2020). The Effect of Future Orientation and Financial Literacy on Family Retirement Planning Mediated by Saving Attitude. *Jurnal Sosial Humaniora*, *13*(2), 176–189. https://doi.org/10.12962/j24433527.v13i2.7810

Hall, L., Campbell, R., Gross, E., & Lichtenberg, P. A. (2022). The impact of financial coaching on older adult victims of financial exploitation: A quasi-experimental research study. *Journal of Financial Counseling and Planning*, *33*(1), 66-78.

Hallman, V. G., & Rosenbloom, J. S. (2003). Private Wealth Management: The Complete Reference for the Personal Financial Planner, 7. *Aufl.*, *New York*.

Hamza, N., & Arif, I. (2019). Impact of Financial Literacy on Investment Decisions: The Mediating Effect of Big-Five Personality Traits Model. *Market Forces*, *14*(1).

Handa, S., Natali, L., Seidenfeld, D., Tembo, G., Davis, B., & Zambia Cash Transfer Evaluation Study Team. (2018). Can unconditional cash transfers raise long-term living standards? Evidence from Zambia. *Journal of Development Economics*, *133*, 42-65.

Hanel, P. H., Maio, G. R., Soares, A. K., Vione, K. C., de Holanda Coelho, G. L., Gouveia, V. V., . & Manstead, A. S. (2018). Cross-cultural differences and similarities in human value instantiation. *Frontiers in psychology*, 849. 1-13

Harahap, S., Thoyib, A., Sumiati, S., & Djazuli, A. (2022). The Impact of Financial Literacy on Retirement Planning with Serial Mediation of Financial Risk Tolerance and Saving behaviour: Evidence of Medium Entrepreneurs in Indonesia. *International Journal of Financial Studies*, *10*(3), 66. 1-22.

Harber, K. D., Zimbardo, P. G., & Boyd, J. N. (2003). Participant self-selection biases as a function of individual differences in time perspective. *Basic and Applied Social Psychology, 25*(3), 255-264.

Harlow, W. V., Brown, K. C., & Jenks, S. E. (2020). The use and value of financial advice for retirement planning. *The Journal of Retirement, 7*(3), 46-79.

Hartono, H. R. P., & Kurniawan, Y. D. (2023). Financial Literacy. A Case Study in Madiun. Indonesian Journal of Business Analytics, 3(3), 665-672.

Hasan, L., Chaudhry, A., & Jalil, H. (2022). Regulation, Corruption, and Land Grab: A Tale of Illegal Private Housing Societies in Islamabad. *Available at SSRN 4019448*.

Hasan, S. (2020). *Drivers of ethical consumption: A cross-cultural comparison* (Doctoral dissertation, University of Otago). Journal of Macromarketing2023, Vol. 43(2) 175-189

Hasan, S., Wooliscroft, B., & Ganglmair-Wooliscroft, A. (2023). Drivers of Ethical Consumption: Insights from a Developing Country. Journal of Macromarketing, 43(2), 175-189.

Hasanah, R. S. (2020). The Role of Capital Inflow through Saving-Investment Framework: The Case of Indonesia. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning, 4*(1), 1-26.

Hashim, H. A., Salleh, Z., Shuhaimi, I., & Ismail, N. A. N. (2020). The risk of financial fraud: a management perspective. *Journal of Financial Crime, 27*(4), 1143-1159.

Hassan, K. H., Rahim, R. A., Ahmad, F., Zainuddin, T. N. A. T., Merican, R. R., & Bahari, S. K. (2016). Retirement Planning Behaviour of Working Individuals and Legal Proposition for New Pension System. *Journal of Political Science & Learning.,* 9, 43. DOI:10.5539/JPL.V9N4P43

Hastings, J., & Mitchell, O. S. (2020). How financial literacy and impatience shape retirement wealth and investment behaviours. Journal of Pension Economics & Finance, 19(1), 1-20.

Hastings, M. (2019). Neoliberalism and education. In *Oxford Research Encyclopedia of Education*.

Haushofer, J., & Shapiro, J. (2016). The short-term impact of unconditional cash transfers to the poor: experimental evidence from Kenya. *The Quarterly Journal of Economics, 131*(4), 1973-2042.

Hayward, M. D., Friedman, S., & Chen, H. (1998). Career trajectories and older men's retirement. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *53*(2), S91-S103.

Headey, B., & Wearing, A. (1989). Personality, life events, and subjective well-being: To ward a dynamic equilibrium model. Journal of Personality and Social Psychology, 57(4), 731-739.

Heeb, F., Kölbel, J. F., Paetzold, F., & Zeisberger, S. (2023). Do investors care about impact?. The Review of Financial Studies, 36(5), 1737-1787.

Heider (1958): The Psychology of Interpersonal Relations. In *Schlüsselwerke der Netzwerkforschung* (pp. 259-262). Springer VS, Wiesbaden. Handke, L., & Barthauer, L. (2019).

Helden, J., & Reichard, C. (2019). Making sense of the users of public sector accounting information and their needs. *Journal of Public Budgeting, Accounting & Financial Management*, *31*(4), 478-495.

Hemalatha, T. M., & Pavithra, S. (2018). A study on savings and investment pattern of salaried women in Coimbatore District. *Int. j. res. anal. rev*, *5*(3), 143-148.

Henchoz, C., Coste, T., & Wernli, B. (2019). Culture, money attitudes and economic outcomes. *Swiss journal of economics and statistics*, *155*(1), 1-13.

Henrich, Joseph, Steven J Heine, and Ara Norenzayan. (2010), "The weirdestindividual in the world?" behavioural and Brain Sciences, 33 (2–3), 61-83.

Henry, K. (2009). Australia's Future Tax System-The Retirement Income System: Report on Strategic Issues. *Commonwealth of Australia*.

Henseler J and Sarstedt M. (2013) Goodness-of-Fit Indices for Partial Least Squares Path Modeling. *Computational Statistics* 28(2): 565-580.

Henseler J, Ringle CM and Sarstedt M. (2015) A New Criterion for Assessing Discriminant Validity in Variance-based Structural Equation Modeling. *Journal of the Academy of Marketing Science* 43(1): 115-135.

Henseler J, Ringle CM and Sinkovics RR. (2009) The Use of Partial Least Squares Path Modeling in International Marketing. In: Sinkovics RR and Ghauri PN (eds) *Advances in International Marketing.* Bingley: Emerald 277-320.

Henseler, J. (2007). A new and simple approach to multi-group analysis in partial least squares path modeling. In *5th International Symposium on PLS and Related Methods, PLS 2007: Causalities explored by inditect observation* (pp. 104-107). PLS.

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., ... & Calantone, R. J. (2014). Common beliefs and reality about partial least squares. *Organizational Research Methods*, *17*(2), 182-209.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (pp. 277-319). Emerald Group Publishing Limited.

Herliana, Y. T., Ratnawati, K., & Djumahir, D. (2023). The Role of Personality Traits as Mediation: The Effect of Financial Literacy and Risk Perception on Investment Decision. Journal of Business and Management Review, 4(6), 469-493.

Herrmann, A. F. (2007). "People get emotional about their money:" Performing masculinity in a financial discussion board. *Journal of computer-mediated communication*, *12*(2), 499-522.

Hershey, D. A., Jacobs-Lawson, J. M., & Neukam, K. N. (2002). Influences of age and gender on workers' goals for retirement. *International Journal of Aging & Human Development*, *55*, 163-179.

Hershey, D. A., Jacobs-Lawson, J. M., McArdle, J. J., & Hamagami, F. (2007). Psychological foundations of financial planning for retirement. *Journal of Adult Development*, *14*, 26-36.

Hershey, D. A., Walsh, D. A., Brougham, R., Carter, S., & Farrell, A. (1998). Challenges of training pre-retirees to make sound financial planning decisions. *Educational Gerontology: An International Quarterly*, *24*(5), 447-470.

Hershfield, H. E., Goldstein, D. G., Sharpe, W. F., Fox, J., Yeykelis, L., Carstensen, L. L., & Bailenson, J. N. (2011). Increasing saving behaviour through age-progressed renderings of the future self. *Journal of Marketing Research*, S23-S37.

Hervani, A. A., Hudson, P. L., Ben-Jebara, M., & Porca, S. (2020). Factors affecting retirement security. *International Journal of Business and Social Science*, *11*(12), 1-11

Hidajat, T., Primiana, I., Rahman, S., & Febrian, E. (2020). Why areindividual trapped in Ponzi and pyramid schemes?. *Journal of Financial Crime*, *28*(1), 187-203.

Higgins, M. (1998). Demography, national savings, and international capital flows. *International Economic Review*, 343-369.

Hildebrandus, H., Hady, H., & Nalurita, F. (2023). The Influence of Financial Literacy as a Mediation of the Relationship Between behavioural Bias and Decisions in Investing Employees in Jabodetabek. Journal of Social Research, 2(5), 1643-1654.

Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behaviour. Federal Reserve Bulletin, 106, 309–322.

Hira, T. K. (1987). Money management practices influencing household asset ownership. *Journal of Consumer Studies & Home Economics*, *11*(2), 183-194.

Hira, T. K., & Loibl, C. (2008). Gender differences in investment behavior. In *Handbook of consumer finance research* (pp. 253-270). New York, NY: Springer New York.

Hira, T.K. and Mugenda, O. (2000), "Gender differences in financial perceptions, behaviours and satisfaction", Journal of Financial Planning-Denver, Vol. 13 No. 2, pp. 86-93.

Hoang, H., Moroney, R., Phang, S. Y., & Xiao, X. (2023). Investor reactions to key audit matters: Financial and non-financial contexts. *Accounting & Finance*, *63*(3), 3325-3349. South Asian Journal of Business Studies, 9(2), 261-278.

Hogarth, J. M. (1991). Asset management and retired households: Savers, dissavers, and alternators. *Financial Counseling and Planning*, *2*(2), 97-121.

Holik, A. (2022).The Importance of Financial Literacy Education. Adpebi International Journal of Multidisciplinary Sciences, 1(1), 354– 363.

Holt, D. B. (1998). Does cultural capital structure American consumption?. *Journal of consumer research*, *25*(1), 1-25

Holzmann, R. (2005). *Old-age income support in the 21st century: An international perspective on pension systems and reform*. World Bank Publications.

Holzmann, R. (2009). *Aging population, pension funds, and financial markets: regional perspectives and global challenges for Central, Eastern, and Southern Europe*. World Bank Publications.

Holzmann, R. (2012). Global pension systems and their reform: Worldwide drivers, trends, and challenges.

Holzmann, R., & Hinz, R. (2005). *Old-age income support in the 21st century: An international perspective on pension systems and reform*. The World Bank.

Hone, Z., & Marisennayya, S. (2019). Determinants of Household Consumption Expenditure in Debremarkos Town, Amhara Region, Ethiopia. *American Academic Scientific Research Journal for Engineering, Technology, and Sciences*, *62*(1), 124-144.

Hong, B., & Jensen, J. (2004). Assessing the adequacy of private provision for retirement: A living standards perspective. *Social Policy Journal of New Zealand*, 148-169.

Hong, H., Wang, Z., & Xiong, Y. (2023). Is "Well-Paid Employment" Worth It? Evidence from Corporate Investment in China. *Emerging Markets Finance and Trade*, *59*(3), 800-817.

Hong, S. (2023). MPCs in an emerging economy: Evidence from Peru. *Journal of International Economics*, *140*, 103712.

Horioka, C. Y. (1989). Why is Japan's private saving rate so high? *Developments in Japanese economics* (pp. 145-178): Elsevier.

Horioka, C. Y. (2004). Are the Japanese unique? An analysis of consumption and saving behaviour in Japan.

Horneff, V., Maurer, R., & Mitchell, O. S. (2020). Putting the pension back in 401 (k) retirement plans: Optimal versus default deferred longevity income annuities. Journal of Banking & Finance, 114, 105783

Howe, L.C. and Krosnick, J.A. (2017), "Attitude strength", Annual Review of Psychology, Vol. 68, pp. 327-351.

Howlett, E., Kees, J., & Kemp, E. (2008). The role of self-regulation, future orientation, and financial knowledge in long-term financial decisions. *Journal of Consumer Affairs*. 42(2), 223-242https://doi.org/10.1111/j.1745-6606.2008.00106.x

HSBC Global Report (2016). The future of retirement: A balancing act.

Hsu, C. (2016). Information sources and retirement savings of working women. *Journal of Financial Counseling and Planning, 27*(2), 252-264.https://doi.org/10.1111/j.1745-6606.2010.01170.x

Hsu, Y. L., Chen, H. L., Huang, P. K., & Lin, W. Y. (2021). Does financial literacy mitigate gender differences in investment behavioural bias?. *Finance Research Letters*, *41*, 101789.

Huang, Y., Lin, R., & Chen, X. (2021). An enhancement EDAS method based on prospect theory. *Technological and Economic Development of Economy*, *27*(5), 1019-1038.

Hubacek, Klaus, Dabo Guan, and Anamika Barua. (2007), "Changing lifestyles and consumption Behaviour in developing countries: A scenario analysis for China and India," Futures, 39 (9), 1084-1096.

Huberman, G., & Jiang, W. (2006). Offering vs. choice in 401(k) plans: equity exposure and number of funds. *Journal of Finance, 61*, 763–801.

Huffman, D., Maurer, R., & Mitchell, O. S. (2019). Time discounting and economic decision-making in the older population. *The journal of the economics of ageing*, *14*, 100121.

Huijsmans, R., Ansell, N., & Froerer, P. (2021). Introduction: Development, young people, and the social production of aspirations. The European Journal of Development Research, 33, 1-15.

Humaidi, A., Khoirudin, M., Adinda, A. R., & Kautsar, A. (2020). The effect of financial technology, demography, and financial literacy on financial management behaviour of productive age in Surabaya, Indonesia. *International Journal of Advances in Scientific Research and Engineering*, *6*(01), 77-81.

Humphery, Kim. (2010), Excess: Anti-consumerism in the West:Polity.

Hundie, S. K. (2014). Savings, investment and economic growth in Ethiopia: Evidence from ARDL approach to co-integration and TYDL Granger-causality tests. Journal of Economics and international finance, 6(10), 232-248.

Hunjra, A. I. (2019). Investment Options and Preferences of Small Investors from Salaried Class. *City University Research Journal*, *9*(2).

Hunjra, A. I., Bakari, H., & Batool, I. (2018). Application of Financial Decisions, their Determinants, and Financial Performance: A Tabular Summary of Systematic Literature Review. *Empirical Economic Review*, *1*(2), 91-142.

Hurd, M. D., & Rohwedder, S. (2003). The retirement-consumption puzzle: Anticipated and actual declines in spending at retirement. National Bureau of Economic Research Working Paper Series No. 9586

Hurst, E., & Aguiar, M. (2008). Deconstructing Lifecycle Expenditure. In *2008 Meeting Papers* (No. 771). Society for Economic Dynamics.

Husna, F. M., Adrianto, F., & Rahim, R. (2023). Pengaruh Financial Literacy dan Karakteristik Individu terhadap Retirement Budget melalui Financial Risk Tolerance. Jurnal Informatika Ekonomi Bisnis, 157-167.

Hussain, M., Shah, S., Durrani, Z., & Hassan, M. (2023). Determining nexus between monetary policy transmission channels and GDP of Pakistan. Journal of Management Info, 10(1), 53-68.

Hussain, S., & Pareek, A. Correlation between Satisfaction with Life, Self-Esteem, and Flourishing among educated working women of Leh. International Journal for Multidisciplinary Research (IJFMR) E-ISSN: 2582-2160 Volume 5, Issue 6, November-December 2023

Huston, S.J. (2010), "Measuring financial literacy", The Journal of Consumer Affairs, Vol. 44 No. 2, pp. 296-316.

Hwang, Hyesun. (2018), "Do religion and religiosity affect consumers' intentions to adopt pro-environmental behaviours?" International Journal of Consumer Studies, 42 (6), 664-674.

Iftikhar, S., & Saba, I. (2020). Blockchain Based Smart Sukuk as Shariah Compliant Investment Avenues for Islamic Financial Institutions in Pakistan. Journal of Finance and Economics Research, 5(1), 30-45.

Ighodalo, E. D. 2019; *Occupational pension and scenario investment decisions for age 30-34 Dublin, Ireland.)* Doctoral dissertation, Dublin Business School;

Ijaz, F., Awan, M. S., & Shah, F. N. (2023). Impact of Financial Sector Development & Savings on Economic Development of Pakistan. International Journal of Social Science & Entrepreneurship, 3(2), 91-111.

IJzerman, H., Lewis Jr, N. A., Przybylski, A. K., Weinstein, N., DeBruine, L., Ritchie, S. J., . & Anvari, F. (2020). Use caution when applying behavioural science to policy. *Nature Human Behaviour*, *4*(11), 1092-1094.

Ikram, B., Fouad, B. E. H., & Sara, C. (2023). An Exploration of Overconfidence and the Disposition Effect in the Stock Market. International Journal of Financial Studies, 11(2), 78

IMF, 2005. Global Financial Stability Report. Market Developments and Issues. International Monetary Fund, April.

Imran, Z. A., & Ahad, M. (2023). Safe-haven investments against stock returns in Pakistan: a role of real estate, gold, oil and US dollar. International Journal of Housing Markets and Analysis, 16(1), 167-189.

Indarto, S. L., & Ghozali, I. (2016). Fraud diamond: Detection analysis on the fraudulent financial reporting. *Risk governance & control: financial markets & institutions*, *6*(4), 116-123.

INFE, O. (2011). Measuring Financial Literacy: Core Questionnaire in measuring Financial Literacy: Questionnaire and Guidance Notes for conducting an Internationally Comparable Survey of Financial literacy. Paris: OECD. Kahneman, D., & Tversky, A. (1979).

Ingrid, B., Majda, R. and Dubravka, M. (2009), "Life goals and well-being: are extrinsic aspirations always detrimental to well-being?", Psychological Topics, Vol. 18 No. 2, pp. 317-334.

Innocenti, S., Clark, G. L., & McGill, S. (2023). Experience of financial challenges, retirement concerns, and planning: evidence from representative samples of workers in 16 countries. Journal of Pension Economics & Finance, 1-19.

Iqbal, M. A., Saeed, A., & Rehman, S. U. (2023). Impact Of Financial Literacy On Financial Satisfaction: Mediating Roles Of Investment Decisions & Moderating Role Of Risk Attitude. *Journal of Social Research Development*, *4*(2), 274-283.

Iram, T., Bilal, A. R., & Ahmad, Z. (2023). Investigating the mediating role of financial literacy on the relationship between women entrepreneurs' behavioural biases and investment decision making. Gadjah Mada International Journal of Business, 25(1), 93-118.

Iriani, A. R., Rahayu, C. W. E., & Rahmawati, C. H. T. (2021). The influence of demographic factors and financial literacy on the financial behaviour. *Jurnal Kajian Manajemen Bisnis*, *10*(1), 33-45.

Islamoğlu, M., Apan, M., & Ayvalı, A. (2015). Determination of factors affecting individual investor behaviours: A study on bankers. *International Journal of Economics and Financial Issues*, *5*(2), 531-543.

Issahaku, H. (2011). Determinants of saving and investment in deprived district capitals in Ghana-a case study of Nadowli in the upper west region of Ghan*a*. *UDSspace1* - 12, 2011 ISSN: 2141 - 4265.

Jacobs-Lawson, J. M., & Hershey, D. A. (2003). Perceptions of financial stability in retirement: Do Americans really know what to expect? In S. P. Shohov (Ed.), *Advances in Psychology Research* (pp. 123-136). Hauppauge, NY: Nova Science Publishers.

Jadoon, A. K., Iqbal, M., Imran, M., & Riaz, A. (2023). Demographic Transition and Saving Rates in Pakistan. *Journal of Policy Research*, *9*(1).

Jain, D. D., & Mandot, M. N. (2012). Impact of Demographic Factors on Investment Decision of Investors in Rajasthan. Journal of Arts, Science & Commerce, III (2(3)), 81 - 92.

Jain, J., Walia, N., & Gupta, S. (2020). Evaluation of behavioural biases affecting investment decision making of individual equity investors by fuzzy analytic hierarchy process. *Review of behavioural Finance*, *12*(3), 297-314.

Jakit, F. H. A., Ghani, J. A., Hamid, T. A. A., & Mazlan, N. S. (2023). An Analysis of Socio-Economic Determinants Affecting Retirement Adjustment and Life Satisfaction Among Public Retirees in The Klang Valley. *International Journal of Economics & Management*, *17*(2).

Jalali, Z. (2023). Financial Literacy and Financial Resilience. Academic Journal of Accounting and Economic Researches, 12(1), 1-6.

Jamal, A. A. A., Ramlan, W. K., Karim, M. A., & Osman, Z. (2015). The effects of social influence and financial literacy on savings behaviour: A study on students of higher learning institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science*, *6*(11), 110-119.

James, B. D., Boyle, P. A., & Bennett, D. A. (2014). Correlates of susceptibility to scams in older adults without dementia. *Journal of elder abuse & neglect*, *26*(2), 107-122.

James, E. (1998). New models for old-age security: experiments, evidence, and unanswered questions. *The World Bank Research Observer*, *13*(2), 271-301.

Jamshidinavid, B., Chavoshani, M., & Amiri, S. (2012, August). The Impact of Demographic and Psychological Characteristics on the Investment Prejudices in Tehran Stock. European Journal of Business and Social Sciences, 1(5), 41 - 53.

Janposri, P. (2021). The Role of Financial Literacy in Retirement Planning and Wealth Accumulation Among Self-employed Thai Workers. *Journal of Population and Social Studies [JPSS]*, *29*, 177-194.

Jappelli, T. 2010; Economic literacy: An international comparison. *The Economic Journal*, *120*548), F429-F451.

Jappelli, T., & Pistaferri, L. (2010). The consumption response to income changes. *Annu. Rev. Econ.*, *2*(1), 479-506.

Jennings, J. D., Quinn, C., Ly, J. A., & Rehman, S. (2019). Orthopaedic surgery resident financial literacy: an assessment of knowledge in debt, investment, and retirement savings. *The American Surgeon*, *85*(4), 353-358.

Jhamb, D., Aggarwal, A., Mittal, A., & Paul, J. (2020). Experience and attitude towards luxury brands consumption in an emerging market. *European Business Review*, *32*(5), 909-936.

Jones, M. A., Lesseig, V. P., & Smythe, T. I. (2005). Financial advisors and mutual fund selection. *Journal of Financial Planning*, *18*(3), 64-70.

Joo, S. H., & Grable, J. E. (2000). A retirement investment and savings decision model: Influencing factors and outcomes. *Consumer Interests Annual*, *46*, 43-48.

Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of family and economic Issues*, *25*, 25-50

Joseph, A. L., & Prakash, M. (2014). A study on preferred investment avenues among theindividual and factors considered for investment. *International Journal of Management and Commerce Innovations ISSN*, 2348-7585.

Joseph, C., & Velavan, A. (2024). An analysis of saving and investment behaviour of school teachers of selective districts in Kerala. *International Journal of Indian Culture and Business Management*, *31*(4), 516-526.

Josephson, A., Kilic, T., & Michler, J. D. (2021). Socioeconomic impacts of COVID-19 in low-income countries. *Nature human behaviour*, *5*(5), 557-565.

Jothilingam, K., & Kannan, K. V. (2013). Investors attitude towards investment avenues-A study in Namakkal district. *International Journal of Innovative Research and Development (ISSN 2278–0211)*, *2*(2), 57-68.

Junoh, M. Z. B. H., Hidthiir, M. M. H. B., & Basheer, M. F. (2019). Entrepreneurial financial practices in Pakistan: The role of access to finance and financial literacy. *International Journal of Innovation, Creativity and Change*, *7*(9), 210-231.

Juster, F. T., Lupton, J. P., Smith, J. P., & Stafford, F. (2006). The decline in household saving and the wealth effect. *Review of Economics and statistics*, *88*(1), 20-27.

Kahneman, D. and Deaton, A. (2010), "High income improves evaluation of life but not emotional wellbeing", Proceedings of the National Academy of Sciences, Vol. 107 No. 38, pp. 16489-16493.

Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part study* (pp. 99-127).

Kaiser, T., Lusardi, A., Menkhoff, L., & Urban, C. (2022). Financial education affects financial knowledge and downstream behaviours. *Journal of Financial Economics*, *145*(2), 255-272.

Kalamarides, J. (2023). Improving the Financial Security of Workers of Color through Employee Financial Wellness Programs. *Wharton Pension Research Council Working Paper*, (2023-25).

Kalmi, P. (2018). The effects of financial education: Evidence from Finnish lower secondary schools. Economic Notes, 47(2–3), 353–386. https://doi.org/10.1111/ecno.12114

Kalra Sahi, S. (2013), "Demographic and socio-economic determinants of financial satisfaction: a study of SEC-A segment of individual investors in India", International Journal of Social Economics, Vol. 40 No. 2, pp. 127-150.

Kamarudin, Z. B., & Hashim, J. H. (2018). Factors Affecting the Saving Behaviour of TAJ International College Students. *Journal of Management and Science*, *4*(1).

Kaplan, G., & Violante, G. L. (2022). The marginal propensity to consume in heterogeneous agent models. *Annual Review of Economics*, *14*, 747-775.

Kapounek, S., Korab, P., & Deltuvaite, V. (2016). (Ir) rational Households' Saving Behaviour? An Empirical Investigation. *Procedia Economics and Finance*, *39*, 625-633.

Kappes, H. B., Gladstone, J. J., & Hershfield, H. E. (2021). Beliefs about whether spending implies wealth. *Journal of Consumer Research*, *48*(1), 1-21.

Karsono, B., & Suraji, R. (2020). Factors Influencing Fraud behaviour In State Civil Apparatus. *Psychology and Education*, *57*(9), 1541-1547.

Karthika, M., Abraham, J., Kodali, P. B., & Mathews, E. (2023). Financial Wellbeing Among Older Persons. In *Handbook of Aging, Health and Public Policy: Perspectives from Asia* (pp. 1-19).

Karthikeyan, B. (2001). Small Investors' Perception on Post Office Small Savings Schemes'. *unpublished thesis, Madras University, Tamilnadu, India*.

Kartini, K., & NAHDA, K. (2021). behavioural biases on investment decision: A case study in Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(3), 1231-1240.

Kasim, E. S., Awalludin, N. R., Zainal, N., Ismail, A., & Shukri, N. H. A. (2023). The effect of financial literacy, financial behaviour and financial stress on awareness of investment scams among retirees. *Journal of Financial Crime*, *31*(3), 652-666.

Katona, G. (1975). Psychological economics. New York: Elsevier.

Kaur, K., Garg, S., Aujla, G. S., Kumar, N., Rodrigues, J. J., & Guizani, M. (2018). Edge computing in the industrial internet of things environment: Software-defined-networks-based edge-cloud interplay. *IEEE communications magazine*, *56*(2), 44-51.

Kawaguchi, D. (2003). Human capital accumulation of salaried and self-employed workers. Labour Economics, 10, 55-71.

Kawaguchi, M. (2004). GSR: Examples of Relevant Practices ofJapanese SMEs. *Corporate Social Responsibility in the Promotion of Social Development: Experiences from Asia and Latin America*, 141.

Kayarkatte, N. (2023). Savings and Investment Behaviour of Beedi Rollers–A Quantitative ABCD Analysis. *International Journal of Management, Technology and Social Sciences (IJMTS)*, *8*(4), 309-332.

Kefela, G. T. (2010). Promoting access to finance by empowering consumers-Financial literacy in developing countries. *Educational research and reviews*, *5*(5), 205.

Kempson, E., & Collard, S. (2005). *Advice on pensions and saving for retirement: Qualitative research with financial intermediaries* (No. 289). Corporate Document Services.

Kenny, R. A., Coen, R. F., Frewen, J., Donoghue, O. A., Cronin, H., & Savva, G. M. 2013; Normative values of cognitive and physical function in older adults: findings from the Irish Longitudinal Study on Ageing. *Journal of the American Geriatrics Society*, *61*, S279-S290.

Kessel, R. A. (1956). Inflation-caused wealth redistribution: A test of a hypothesis. The American Economic Review, 46(1), 128-141.

Ketkaew, C., Van Wouwe, M., Vichitthamaros, P., & Teerawanviwat, D. (2019). The effect of expected income on wealth accumulation and retirement contribution of Thai wageworkers. SAGE Open, 9(4), 2158244019898247.

Kevin, S. (2022). *Security analysis and portfolio management*. PHI Learning Pvt. Ltd.

Khagram, S., & Levitt, P. (2008). Constructing transnational studies. In *Rethinking transnationalism* (pp. 33-51). Routledge.

Khalek, T. A., Arestoff, F., De-Freitas, N. E. and Mage, S. (2009). A Micro-econometric analysis of Households Saving determinants in Morocco. 1-18.

Khan, G. F., Sarstedt, M., Shiau, W. L., Hair, J. F., Ringle, C. M., & Fritze, M. P. (2019). Methodological research on partial least squares structural equation modeling (PLS-SEM) An analysis based on social network approaches. Internet Research, 29(3), 407-429.

Khan, I., Afeef, M., Jan, S., & Ihsan, A. (2021). The impact of heuristic biases on investors' investment decision in Pakistan stock market: moderating role of long term orientation. *Qualitative Research in Financial Markets*, *13*(2), 252-274.

Khan, M. A., Shah, N. H., Hussain, A., Hussain, J., Khan, M., & Khan, A. (2021). The Effect of Financial Knowledge on Financial behavioural Intention to Invest: Mediating Role of Risk Perception and Attitude. *LINGUISTICA ANTVERPIENSIA*, 1212-1224.

Khan, M. F., Ali, S., & Aftab, N. (2020). The coronomics and world economy: Impacts on Pakistan. *Electronic Research Journal of Social Sciences and Humanities*, *2*.

Khan, M. F., Ali, S., & Aftab, N. (2020). The coronomics and world economy: Impacts on Pakistan. *Electronic Research Journal of Social Sciences and Humanities*, *2*. Vol 2: Issue III, Jul - Sep 2020, Available at SSRN: https://ssrn.com/abstract=3670332

Khan, M. F., Raza, A., & Naseer, N. (2021). Cyber security and challenges faced by Pakistan. Pakistan Journal of International Affairs, 4(4).

Khan, M. I., Khan, S. A. I., & Khan, S. J. I. (2022). RELATIONSHIP BETWEEN SAVINGS, TRADE FACILITATION, GOVERNANCE, AND INVESTMENT IN PAKISTAN. *Pakistan Journal of Social Research*, *4*(04), 1106-1116.

Khan, N. (2015). Smart crime science and shabby control technologies. *VFAST Transactions on Education and Social Sciences*, *6*(1).

Khan, S. K., Hassan, N. U., & Islam, J. (2023). UNLOCKING THE INVESTMENT PUZZLE: THE INFLUENCE OF BEHAVIOURAL BIASES & MODERATING ROLE OF FINANCIAL LITERACY. Journal of Social Research Development, 4(2), 433-444.

Khan, Y., & Rehman, A. (2019). Pakistani Mutual Fund Performance: the demonstration of Multifactor Assets Pricing Models. *Journal of Managerial Sciences*, *13*(4).

Khan, Y., & Rehman, A. (2019). Pakistani Mutual Fund Performance: the demonstration of Multifactor Assets Pricing Models. *Journal of Managerial Sciences, 13*(4). *(Major Investment Avenues, 2021)*

khan,K (2023, Jan. 22). *Importance of financial literacy*. The News. Political Economy. https://www.thenews.com.pk/tns/detail/1032886-importance-of financialliteracy#:~:text=As%20Pakistan%20continues%20to,financial%20literacy%E2%80%94%20just%2023%20percent.

Khidirov, N. G. (2021). Mechanisms and methods of financing enterprise investment projects. *Journal of Economics, Finance and Management Studies*, *4*(05), 475-482

Kibet, L. K., Mutai, B. K., Ouma, D. E., Ouma, S. A. and Owuor, G. (2009). Determinants of household saving: Cast study of Small holder farmers, entrepreneurs and teachers in rural areas of Kenya. *Journal of Development and Agricultural Economics*, 1(7), 137-143.

Kim, J., & Garman, E. T. (2003). Financial stress and absenteeism: An empirically derived model. Financial Counseling and Planning, 14(1), 31–42.

Kim, K. T., Anderson, S. G., & Seay, M. C. (2019). Financial knowledge and short-term and long-term financial behaviours of millennials in the United States. *Journal of Family and Economic Issues*, *40*, 194-208.

Kim, K. T., Anderson, S. G., & Seay, M. C. (2019). Financial knowledge and short-term and long-term financial behaviours of millennials in the United States. Journal of Family and Economic Issues, 40(2), 194–208. https://doi.org/10.1007/s10834-018-9595-2

Kim, K. T., Pak, T. Y., Shin, S. H., & Hanna, S. D. (2018). The relationship between financial planner use and holding a retirement saving goal: A propensity score matching analysis. *Financial Planning Review*, e10081(1-2),.1-11

Kim, Y., Kim, W., & Yang, T. (2012). The effect of the triple helix system and habitat on regional entrepreneurship: Empirical evidence from the U.S. Research Policy, 41(1), 154–166.https://doi.org/10.1016/j.respol.2011.08.003

Kimiyagahlam, F., Safari, M., & Mansori, S. (2019). Influential behavioural factors on retirement planning behaviour: The case of Malaysia. *Journal of Financial Counseling and Planning*, *30*(2), 244-261.

King, M. A., & Suntory-Toyota International Centre for Economics and Related Disciplines. (1984). *The economics of saving: A survey of recent contributions*. ESRC Programme on Taxation, Incentives and the Distribution of Income.

Kiran, D., & Rao, U. S. (2005). Identifying Investor Group Segments Based on Demographic and Psychographic Characteristics', Proceedings of the 8th Capital Markets Conference, Indian Institute of Capital Markets Paper, Mumbai, India

Kish-Gephart, J. J., Moergen, K. J., Tilton, J. D., & Gray, B. (2023). Social class and work: A review and organizing framework. *Journal of Management*, *49*(1), 509-565.

Kızılarslan, Ş., & Göcen, S. (2023). Determinants of household savings rates: Logistic quantile regression approach. *JOURNAL OF APPLIED MICROECONOMETRICS*, *3*(1), 11-22.

KJ, A. (2017). The nexus between Demographics and Investment Behaviour. *Asian Journal of Management*, *8*(2), 361-369.

Klapper, L., Lusardi, A., & Van Oudheusden, P. 2015; Financial literacy around the world. *World Bank. Washington DC: World Bank*, *2*, 218-237.

Klein, C. J., Chan, G. K., Pierce, L., Van Keuren-Parent, K., & Cooling, M. (2021). Development of an advanced practice preceptor evaluation tool. *Journal of the American Association of Nurse Practitioners*, *33*(11), 983-990.

Kline, R. B. (2005) *Principles and Practice of Structural Equation Modelling*, 2nd edition, New York: The Guilford Press.

Klos, A., Weber, E. U., & Weber, M. (2005). Investment decisions and time horizon: Risk perception and risk behaviour in repeated gambles. *Management Science*, *51*(12), 1777-1790.

Knüpfer, S., Rantala, V., & Vokata, P. (2021). Scammed and scarred: Effects of investment fraud on its victims. In *Scammed and Scarred: Effects of Investment Fraud on its Victims: Knüpfer, Samuli| uRantala, Ville| uVokata, Petra*. [Sl]: SSRN.

Knupfer, S., Rantala, V., & Vokata, P. (2021). *Scammed and scarred: Effects of investment fraud on its victims* (No. 2021-08). Working Paper Series 2021-08, Ohio State University, Charles A. Dice Center for Research in Financial Economics.<https://ideas.repec.org/p/ecl/ohidic/2021-08.html>

Kochi, A. V. V. (2018). An Insight Into the Savings and Investment Pattern of Salaried Employees Working in Private Sector of Shipping Industries at Ernakulam. *International Journal of Pure and Applied Mathematics*, *118*(18), 1347-1363.

Kock, N. (2011). Using WarpPLS in e-collaboration studies: Mediating effects, control and second order variables, and algorithm choices. *International Journal of e-Collaboration (IJeC)*, *7*(3), 1-13.

Kolsrud, J., Landais, C., Reck, D., & Spinnewijn, J. (2023). Retirement consumption and pension design (No. w31628). National Bureau of Economic Research.

Komiak, S. Y., & Benbasat, I. (2006). The effects of personalization and familiarity on trust and adoption of recommendation agents. *MIS quarterly*, Vol.30 No 4, pp-941-960.

Kongrungchok, A. (2016, October). The Effectiveness of Personal Financial Planning of Rubber Farmers in Thailand: Case Study of Suratthani Province. In Proceedings of International Academic Conferences (No. 4106729). International Institute of Social and 359 Economic Sciences.

Koomson, I., Martey, E., & Etwire, P. M. (2023). Mobile money and entrepreneurship in East Africa: The mediating roles of digital savings and access to digital credit. *Information Technology & People*, *36*(3), 996-1019.

Korankye, T., Pearson, B., & Salehi, H. (2023). Financial Advice Use and Saving for Children's College Education: A Propensity Score Matching Approach. Journal of Financial Counseling and Planning, 34(1), 96-111.

Koşar, G., & Van der Klaauw, W. (2023). Workers' Perceptions of Earnings Growth and Employment Risk. FRB of New York Staff Report, (1056).

Kothari, C. (2017). research methodology methods and techniques by CR Kothari. *Published by New Age International (P) Ltd., Publishers*, *91*.

Kothari, H. (2012). Investors Behaviour towards Investment Avenues: a study with Reference to Indore city. *Altius Shodh Journal of Management & Commerce*, *6*(2), 56-68.

Kotian, S., & Aithal, P. S. (2024). The Influence of Socio-Economic Factors on Savings and Investment Decisions of School Teachers-A Study with Reference to Women Teachers in Kodagu District of Karnataka. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, *9*(1), 33-46.

Kourtidis, D., Chatzoglou, P., & Sevic, Z. (2017). The role of personality traits in investors trading behaviour: Empirical evidence from Greek. *International Journal of Social Economics*, *44*(11), 1402-1420.

Kourtidis, D., Šević, Ž., & Chatzoglou, P. (2011). Investors' trading activity: A behavioural perspective and empirical results. *The Journal of Socio-Economics*, *40*(5), 548-557.

Kozel, V. J. (1987). *Income, consumption, and savings behaviour in the Côte d'Ivoire* (Doctoral dissertation, Massachusetts Institute of Technology).

Kratcoski, P. C., & Edelbacher, M. (2016). Trends in the criminality and victimization of the elderly. *Fed. Probation*, *80*, 58.

Kreiser, P. M., Marino, L. D., Dickson, P., & Weaver, K. M. (2010). Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs. *Entrepreneurship theory and practice*, *34*(5), 959-984.

Kriese, M., Abor, J. Y., & Agbloyor, E. (2019). Financial access and economic development: the moderating role of financial consumer protection. *International Journal of Managerial Finance*, *15*(4), 406-424.

Kubicek, B., Korunka, C., Raymon, J. M., & Hoonakker, P. (2011). Psychological Well-Being in Retirement: The Effects of Personal and Gendered Contextual Resources. *Journal of Occupational Health Psychology*, *16*(2), 230–246.

Kuchler, T., Piazzesi, M., & Stroebel, J. (2023). Housing market expectations. In *Handbook of Economic Expectations* (pp. 163-191). Academic Press.

Kulikov, D., Paabut, A., & Staehr, K. (2007). *A microeconometric analysis of household saving in Estonia: income, wealth and financial exposure*. Eesti Pank.

Kulikov, D., Paabut, A., & Staehr, K. (2009). A microeconometric analysis of household saving in Estonia: income, wealth and financial exposure. Chapters, 190-241.

Kulkarni, M. S. (2014). A study of investment behaviour based on demographics. *Journal of Commerce and Accounting Research*, *3*(4), 47-54.

Kumar, A., Rai, P., & Singh, S. N. 2021 EXPLORING THE RECENT SCAMS AND FRAUDS IN INDIAN BANKING SYSTEM.Exploring the Recent Scams and Frauds in Indian Banking System, *bilingual* international research journal Sanchar Bulletin (ISSN: 2229-3620) Vol.11, Issue: 41, 265-271

Kumar, P., Pillai, R., Kumar, N., & Tabash, M. I. (2023). The interplay of skills, digital financial literacy, capability, and autonomy in financial decision making and well-being. Borsa Istanbul Review, 23(1), 169-183.

Kumar, R. (2019). Research methodology: A step-by-step guide for beginners. Sage Publications Limited. 528 p

Kumru, G. (2019). *An empirical class analysis based on indebtedness, expenditure and living conditions* (Doctoral dissertation).

La Barbera, F., & Ajzen, I. (2020). Control interactions in the theory of planned behaviour: Rethinking the role of subjective norm. *Europe's Journal of Psychology*, *16*(3), 401.

Lachs, M. S., & Han, S. D. (2015). Age-associated financial vulnerability: An emerging public health issue. *Annals of Internal Medicine*, 163(11), 877–878. doi:10.7326/M15-0882

Lahiri, A. K. (1989). Dynamics of Asian savings: the role of growth and age structure. Staff Papers, 36(1), 228-261.

Lai, M. M., Lai, M. L., & Lau, S. H. (2009). Managing money and retirement planning: Academics' perspectives. *Pensions: An International Journal*, *14*(4), 282-292.

Lal, M., Kumar, S., Pandey, D. K., Rai, V. K., & Lim, W. M. (2023). Exchange rate volatility and international trade. *Journal of Business Research*, *167*, 114-156.

Lapp, W. M. (2010). behaviour Models for Prosperity: A Statistical Assessment of Savings and behavioural Change. EARN Research Brief, 1-14.

Larsson, M. (2024). Savers and Borrowers in the Swedish Working Class During the 19th Century—A Life Cycle Perspective. *Journal of Family History*, *49*(3), 273-294.

Latan H. (2018) PLS Path Modeling in Hospitality and Tourism Research: The Golden Age and Days of Future Past. In: Ali F, Rasoolimanesh SM and Cobanoglu C (eds) *Applying Partial Least Squares in Tourism and Hospitality Research.* Bingley: Emerald, 53-84.

Lea, S. E. G., Webley, P., & Walker, C. M. (1995). Psychological factors in consumer debt: Money management, time horizons and consumer behaviour. Journal of Economic Psychology, 16, 681–701.

Least Squares: Comments on Rönkkö & Evermann (2013). *Organizational Research Methods* 17(2): 182-209.

Lee, J. M., Kim, K. T., & Hanna, S. D. (2023). Myopia, Financial Knowledge, and Financial Well-Being. Journal of Financial Counseling and Planning, 34(1), 42-54.

Lee, L., Petter, S., Fayard, D. & Robinson, S. (2011) On the Use of Partial Least Squares Path modeling in Accounting research, *International Journal of Accounting Information Systems,* 12 (4), 305-328.

Lee, R., Mason, A., & Miller, T. (2003). Saving, wealth and the transition from transfers to individual responsibility: The cases of Taiwan and the United States. *The Scandinavian Journal of Economics*, *105*(3), 339-358.

Lee, S., Park, M. H., & Montalto, C. P. (2000). The effect of family life cycle and financial management practices on household saving patterns. *Journal of Korean Home Economics Association English Edition: Vol*, *1*(1).pp-79-93

Leonce, T. E. (2020). The inevitable rise in dual-income households and the intertemporal effects on labor markets. *Compensation & Benefits Review*, *52*(2), 64-76.

Letkiewicz, J. C., and Fox, J. J. (2014).Conscientiousness, Financial Literacy, and Asset Accumulation of Young Adults.*Journal of Consumer Affairs48(2), 274-300.*

Levy, H., & Levy, M. (2021). Prospect theory, constant relative risk aversion, and the investment horizon. *PloS one*, *16*(4), e0248904.

Li, H., Neumuller, S., & Rothschild, C. (2021). Optimal annuitization with imperfect information about insolvency risk. *Journal of Risk and Insurance*, *88*(1), 101-130.

Li, J., Montalto, C. P., & Geistfeld, L. V. (1996). Determinants of financial adequacy for retirement. *Journal of Financial Counseling and planning*, *7*, 39.

Li, L., Jin, J., Zhang, C., Qiu, X., & Liu, D. (2023). How do livelihood capital affect farmers' energy-saving behaviors: Evidence from China. *Journal of Cleaner Production*, *414*, 137769.

Li, R., Wu, J., Zhang, S., Zhang, S., & Wu, Y. (2023). Social endowment insurance and inequality of the household portfolio choice: the moderating effect of financial literacy. *SAGE Open*, *13*(1), 21582440231152399.

Li, X. (2024). A Review of the Research on Labor Supply Effect of Active Aging. *Applied Mathematics and Nonlinear Sciences*, *9*(1).,

Li, Y., Burr, J. A., & Miller, E. A. 2019; Pension plan types and financial literacy in later life. *The Gerontologist*, *59*2), 260-270.Dublin, Economic and Social Research Institute.

Lichtenberg, P. A., Hall, L., Gross, E., & Campbell, R. (2019). Providing assistance for older adult financial exploitation victims: Implications for clinical gerontologists. *Clinical Gerontologist*, *42*(4), 435-443.

Lichtenberg, P., Hall, L., Campbell, R., & Gross, E. (2020). The Impact of Financial Coaching on Health and Finances in Older Scam and ID Theft Victims. *Innovation in Aging*, *4*(Suppl 1), 309.

Liu, C., Bai, X., & Knapp, M. (2021). Multidimensional retirement planning behaviours, retirement confidence, and post-retirement health and well-being among Chinese older adults in Hong Kong. *Applied Research in Quality of Life*, 1-17.

Liu, D., Zhang, Y., Hafeez, M., & Ullah, S. (2022). Financial inclusion and its influence on economic-environmental performance: demand and supply perspectives. Environmental Science and Pollution Research, 29(38), 58212-58221.

Liu, F., Yilmazer, T., Loibl, C., & Montalto, C. (2019). Professional financial advice, self-control and saving behaviour. *International journal of consumer studies*, *43*(1), 23-34.

Liu, X., Wang, Q., Wei, H. H., Chi, H. L., Ma, Y., & Jian, I. Y. (2020). Psychological and demographic factors affecting household energy-saving intentions: a TPB-based study in Northwest China. *Sustainability*, *12*(3), 836.

Liu, Xianbing, Can Wang, Tomohiro Shishime, and Tetsuro. Fujitsuka (2012), "Sustainable consumption: Green purchasing behaviours of urban residents in China," Sustainable Development, 20 (4), 293-308.

Lodhi, S. (2014). Factors influencing individual investor behaviour: An empirical study of city Karachi. *Journal of Business and Management*, *16*(2), 68-76.

Loewenstein, G. (1996). Out of control: Visceral influences on behaviour. *Organizational behaviour and human decision processes*, *65*(3), 272-292.

Lokanan, M. E., & Liu, S. (2021). The demographic profile of victims of investment fraud: an update. *Journal of Financial Crime*, *28*(3), 647-658.

Loke, V., Choi, L., & Libby, M. (2015). Increasing youth financial capability: An evaluation of the MyPath savings initiative. Journal of Consumer Affairs, 49(1), 97–126. https://doi.org/10. 1111/joca.12066

Lone, U. M., & Bhat, S. A. (2024). Impact of financial literacy on financial well-being: a mediational role of financial self-efficacy. *Journal of Financial Services Marketing*, *29*(1), 122-137

Lopez-Agudo, L. A., & Marcenaro-Gutierrez, O. D. (2023). Financial Education in Secondary Education: A Cross-Country Analysis. CESifo Economic Studies, 69(1), 21-60.

Lorenc, B., Giesen, D., Persson, A., & Bavdaz, M. (2011, March). Understanding and Meeting Businesses‟ Needs for Official Statistics: an NSI perspective. In *Proceedings of the BLUE-ETS Conference on Burden and Motivation in Official Business Surveys* (pp. 69-78).

Lou, Y., Zhang, Y., & Chen, S. (2020, November). Ponzi contracts detection based on improved convolutional neural network. In *2020 IEEE International Conference on Services Computing (SCC)* (pp. 353-360). IEEE.

Love et al (2009). Love, D. A., Palumbo, M. G. and Smith, P. A. "The trajectoryof wealth in retirement". *Journal of Public Economics* 93.1-2,pp. 191–208.

Lown, J. M. (2011). Development and validation of a financial self-efficacy scale. journal of Financial Counseling and Planning, 22(2), 54-63.

Lučić, A., Barbić, D., & Uzelac, M. (2023). Theoretical underpinnings of consumers' financial capability research. International Journal of Consumer Studies, 47(1), 373-399.

Lude, M., & Prügl, R. (2019). Risky decisions and the family firm bias: An experimental study based on prospect theory. *Entrepreneurship Theory and Practice*, *43*(2), 386-408.

Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: a meta-analysis. *Journal of personality and social psychology*, *102*(3), 592.

Lusardi, A. (1998). On the importance of the precautionary saving motive. *The American Economic Review*, *88*(2), 449-453.

Lusardi, A. (1999). Information, expectations, and savings. In H. J. Aaron (Ed.), behavioural Dimensions of retirement economics (pp. 81–115).

Lusardi, A. (2001). Explaining why so manyindividual do not save. *Center for Retirement Research Working Paper*, (2001-05).

Lusardi, A. (2008) Household saving behaviour. The role of financial literacy, information and financial education programs (No. w13824). *National Bureau of Economic Research*

Lusardi, A. (2008). Financial literacy: An essential tool for informed consumer choice? Joint Center for Housing Studies, Cambridge: Harvard, 1-30.

Lusardi, A. (2012). Financial literacy and financial decision-making in older adults. Journal of the American Society of Aging, 36(2), 25–32.

Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*, *155*(1), 1-8.

Lusardi, A. M. (2007b). Financial literacy and retirement preparedness: Evidence and implications for financial education. Business Economics, 42(1), 35-44.

Lusardi, A., & Messy, F. A. (2023). The importance of financial literacy and its impact on financial wellbeing. Journal of Financial Literacy and Wellbeing, 1(1), 1-11.

Lusardi, A., & Mitchell, O. (2007a). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. Journal of Monetary Economics, 54(1), 205–224.

Lusardi, A., & Mitchell, O. (2007b). Financial literacy and retirement planning: New evidence from the Rand American life panel. MRRC Working Paper No. 2007–157. Slovic, P. (1987). Perception of risk. Science, 236(4799), 280–285

Lusardi, A., & Mitchell, O. S. (2006). Financial literacy and planning: Implications for retirement wellbeing. MRRC Working Paper (2006–144).

Lusardi, A., & Mitchell, O. S. (2007a). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of monetary Economics*, *54*(1), 205-224.

Lusardi, A., & Mitchell, O. S. (2007b). Financial New Michigan Retirement *Research Center Research Paper No. WP 157*, 157.

Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare?. *American Economic Review*, *98*(2), 413-17.

Lusardi, A., & Mitchell, O. S. (2023). The Importance of Financial Literacy: Opening a New Field (No. w31145). National Bureau of Economic Research. NBER Working Paper No. 31145 . 1-31

Lusardi, A., & Mitchell, O. S. 2007; Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of monetary Economics*, *54*1), 205-224.

Lusardi, A., & Mitchell, O. S. 2008; Planning and financial literacy: How do women fare?. *American economic review*, *98*2), 413-417.

Lusardi, A., & Mitchell, O. S. 2011; Financial literacy and retirement planning in the United States. *Journal of pension economics & finance*, *10*4), 509-525.

Lusardi, A., & Mitchell, O. S. 2011; Financial literacy around the world: an overview. *Journal of pension economics & finance*, *10*4), 497-508.

Lusardi, A., & Mitchell, S. O. (2007). Financial literacy and retirement planning: New evidence from the Rand American Life Panel. *Lusardi, A., & Mitchell, O. S. (2007). Financial New Michigan Retirement Research Center Research Paper No. WP 157*, 157.

Lusardi, A., & Mitchelli, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education: The problems are serious, and remedies are not simple. *Business economics*, *42*, 35-44.

Lusardi, A., & Tufano, P. (2015). Debt literacy, financial experiences, and overindebtedness. *Journal of pension economics & finance*, *14*(4), 332-368.

Lusardi, A., and Mitchell, O.S. (2005) Financial Literacy and Planning: Implications for RetirementWellbeing.*Michigan Retirement Research Center: Research Paper No. WP 2005-108*. Ann Arbor:Michigan Retirement Research Center.

Lusardi, A., Michaud, P. C., & Mitchell, O. S. (2011*).* Optimal Financial Literacy and Saving for Retirement (September *3, 2011)*. *RAND Working Paper* Series No. WR-905-SSA.

Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of consumer affairs*, *44*(2), 358-380.

Lusardi, A., Mitchell, O. S., & Curto, V. 2014; Financial literacy and financial sophistication in the older population. *Journal of pension economics & finance*, *13*4), 347-366.

Ma, Y., & Lv, L. (2023). Financial development, financial instability, and fiscal policy volatility: International evidence. *The North American Journal of Economics and Finance*, *64*, 101873.

MacDonald, B. J., Osberg, L., & Moore, K. D. (2016). How accurately does 70% final employment earnings replacement measure retirement income (in) adequacy? Introducing the Living Standards Replacement Rate (LSRR). *ASTIN Bulletin: The Journal of the IAA*, *46*(3), 627-676.

MacKenzie, S. B., Podsakoff, P. M., & Jarvis, C. B. (2005). The problem of measurement model misspecification in behavioural and organizational research and some recommended solutions. *Journal of applied psychology*, *90*(4), 710. pp. 710-730

MacLean, L. C., & Ziemba, W. T. (2013). *Handbook of the fundamentals of financial decision making* (Vol. 4). World Scientific.

Madaan, G., & Singh, S. (2019). An analysis of behavioural biases in investment decision-making. *International Journal of Financial Research*, *10*(4), 55-67.

Maharani, A., & Saputra, F. (2021). Relationship of investment motivation, investment knowledge and minimum capital to investment interest. Journal of Law, Politic and Humanities, 2(1), 23-32.

Mahdzan, N. S., Zainudin, R., & Shaari, M. S. (2023). The influence of religious belief and psychological factors on borrowing behaviour among Malaysian public sector employees. Asia-Pacific Journal of Business Administration, 15(3), 361-385.

Mahdzan, N.S., &Tabiani, S. (2013). The Impact of Financial Literacy on Individual Saving: An Exploratory Study in the Malaysian Context. *Transformation in Business and Economics, 12(1), 41-55.*

Mahendru, M., Sharma, G. D., & Hawkins, M. (2022). Toward a new conceptualization of financial well-being. *Journal of Public Affairs*, *22*(2), e2505.

Mainelli, M. (2004). Personalities of risk/reward: Human factors of risk/reward and culture. *Journal of Financial Regulation and Compliance*, *12*(4), 340-350

Malhotra, N., Dash, S., Kumar, R. S., & Purwar, P. C. (2013). The nature and antecedents MajorInvestmentAvenues.(2021,September26).https://www.psx.com.pk/blog/index.php/2021/10/26/investment-avenues-in-pakistan-2/ Macroeconomic Dynamics 4 222-256of brand equity and its dimensions. *Marketing Intelligence & Planning*.

Mallick, S. K., & Debasish, S. S. (2017). Determinants of savings behaviour: A study on the rural households of India. *ZENITH International Journal of Business Economics & Management Research, 7*(8), 42-52.

Malone, K., Stewart, S. D., Wilson, J., & Korsching, P. F. (2010). Perceptions of financial well-being among American women in diverse families. Journal of Family and Economic Issues, 31(1), 63–81.

Maluccio, J. A. (2020). The impact of conditional cash transfers on consumption and investment in Nicaragua. In *Migration, transfers and economic decision making among agricultural households* (pp. 14-38).

Malviya, S., & Pandey, R. (2015). Study of Factor Influencing Investment Behaviour of Investor of Indore City. *Intercontinental Journal of Banking, Insurance and Finance, 2*(9), 27-38.

Mann, L., Beswick, G., Allouache, P., & Ivey, M. (1989). Decision workshops for the improvement of decision making skills and confidence. *Journal of Counseling and Development*, *67*, 478–481.

Mansor, M., Sabri, M. F., Mansur, M., Ithnin, M., Magli, A. S., Husniyah, A. R., . & Janor, H. (2022). Analysing the Predictors of Financial Stress and Financial Well-Being among the Bottom 40 Percent (B40) Households in Malaysia. International Journal of Environmental Research and Public Health, 19(19), 12490

Marconi, C. M., and S. P. Utkus, 2002, "Using 'money attitudes'to enhance retirement

communications," Vanguard Center for Retirement Research Working Paper

Marcoulides GA, Chin WW and Saunders C. (2012) When Imprecise Statistical Statements Become Problematic: A Response to Goodhue, Lewis, and Thompson. *MIS Quarterly* 36(3): 717-728.

Marier, P. (2008). Empowering epistemic communities: Specialised politicians, policy experts and policy reform. *West European Politics*, *31*(3), 513-533

Marinov, K. M. (2023). Financial Literacy: Determinants and Impact on Financial Behaviour. Economic Alternatives, (1), 89-114.

Marius-Răzvan, S., & Camelia, S. (2014). Some considerations regarding the effects of taxation on the economy. *Procedia Economics and Finance*, *8*, 688-695.

Martinez, Carmelita P, Marigold G Castaneda, Rodilina B Marte, and Banjo Roxas. (2015), "Effects of institutions on ecological attitudes and behaviour of consumers in a developing Asian country: The case of the Philippines," International Journal of Consumer Studies, 39 (6), 575-585.

Martinez, S. (2004). Pensions, poverty and household investments in Bolivia. *Department of Economics, University of California at Berkeley*.

Martini, A., & Spataro, L. (2022). The contribution of Carlo Casarosa on the forerunners of the life cycle hypothesis by Franco Modigliani and Richard Brumberg. *International Review of Economics*, *69*(1), 71-101.

Martini, A., & Spataro, L. (2023). At the origins of the life cycle hypothesis of Franco Modigliani and Richard Brumberg: an attempt at analysis. The European Journal of the History of Economic Thought, 1-34.

Maslow, A. (1943), "A theory of human motivation," Psychological Review, 50 (4), 370-396.

Maslow, Abraham H. (1970), Motivation and personality (2d ed. ed.). New York: Harper & Row.Middlebury College Economics Discussion Paper, No. 22.

Masson, P. R., Bayoumi, T., & Samiei, H. (1998). International evidence on the determinants of private saving. *The World Bank Economic Review*, *12*(3), 483-501.

Matekenya, W., Moyo, C., & Jeke, L. (2021). Financial inclusion and human development: Evidence from Sub-Saharan Africa. Development Southern Africa, 38(5), 683-700.

Mathivannan, S., & Selvakumar, M. (2011). Savings and investment pattern of school teachers–A study with reference to Sivakasi Taluk, Tamil Nadu. *Indian journal of Finance*, *5*(4), 12-26.

Mattil, B. (2006). *Pension Systems: sustainability and distributional effects in Germany and The United Kingdom*. Springer Science & Business Media.

Mauldin, T. A., Henager, R., Bowen, C. F., & Cheang, M. (2016). Barriers and facilitators to saving behaviour in low-to moderate-income households. Journal of Financial Counseling and Planning, 27(2), 231-251.

Maulidi, A. (2020). Critiques and further directions for fraud studies: Reconstructing misconceptions about developing fraud theories. *Journal of Financial Crime*, *27*(2), 323-335.

Mayer, C. (2021). The future of the corporation and the economics of purpose. *Journal of Management Studies*, *58*(3), 887-901.

McArdle, J. J., Smith, J. P., & Willis, R. 2009; *Cognition and economic outcomes in the Health and Retirement Survey* Vol. 15266; Cambridge, MA: National Bureau of Economic Research.

McCaffery, K. J., Dodd, R. H., Cvejic, E., Ayre, J., Batcup, C., Isautier, J. M., . & Wolf, M. S. (2020). Disparities in COVID-19 related knowledge, attitudes, beliefs and behaviours by health literacy. *medRxiv*, 2020-06.

McCormick, K. (2018). James Duesenberry as a practitioner of behavioral economics. *Journal of Behavioral Economics for Policy*, *2*(1), 13-18.

McWilliams, J. M., Hatfield, L. A., Landon, B. E., & Chernew, M. E. (2020). Savings or selection? Initial spending reductions in the Medicare Shared Savings Program and considerations for reform. The Milbank Quarterly, 98(3), 847-907.

Mehmood, A., Subhan, S., & Hafeez, A. Unveiling the Nexus between Planned Behavior and Financial Stress: Insights from Rawalpindi, Pakistan. Pakistan Economic Review 6:2 (Winter 2023), PP. 78-100

Mehmood, A., Subhan, S., Fatima, N., & Shah, S. A. A. (2022). Financial factors and saving behavior of salaried class: A case study of Rawalpindi, Pakistan. *Journal of Management Info*, *9*(3), 284-298.

Merton, R. C. (2006). Paul Samuelson and financial economics. *The American Economist*, *50*(2), 9-31.

Merton, R. C., & Samuelson, P. A. (1990). Continuous-time finance. Basil Blackwell, Oxford (1990) https://cir.nii.ac.jp/crid/1130282269447312384

Metawa, N., Hassan, M. K., Metawa, S., & Safa, M. F. (2019). Impact of behavioural factors on investors' financial decisions: case of the Egyptian stock market. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(1), 30-55.

Meulbroek, L. K. (2002). Company stock in pension plans: how costly is it?. *Harvard Business School Working Paper No. 02-058;*

Meyer, G. D. (1996). Living for today while saving for Tomorrow. Journal of the American Society of CLU and ChFC, 50(6), 34–35.

Miao, Y. (2017). Middle class identity in China: Subjectivity and stratification. *Asian Studies Review*, *41*(4), 629-646.

Michaelides, P. G., & Papadakis, T. E. (2023). Milton Friedman (1912–2006). In *History of Economic Ideas: From Adam Smith to Paul Krugman* (pp. 93-105). Cham: Springer International Publishing.

Michaud, P. C., & Amour, P. S. (2023). Longevity, Health and Housing Risks Management in Retirement (No. w31038). National Bureau of Economic Research. NBER WORKING PAPER SERIES. Working Paper 31038. 1-23

Millar, M., & Devonish, D. (2009). Attitudes, savings choices, level of knowledge and investment preferences of employees toward pensions and retirement planning: Survey evidence from Barbados. *Pensions: An International Journal*, *14*(4), 299-317.

Minney, A. (2018). Household spending Behaviour in retirement. *JASSA-The Finsia Journal Of Applied Finance*, (1), 18-26.

Mirosea, N., & Hajar, I. (2023). Effect of Financial Literacy and Behaviour on Investment Decisions (Study on Southeast Sulawesi investors). KnE Social Sciences, 230-238.

Mitchell, O. S. (1998). *Building an environment for pension reform in developing countries*. Social Protection, World Bank.

Mitchell, O. S., & Lusardi, A. (2011). Financial literacy and planning: Implications for retirement well-being. Implications for Retirement Security and the Financial Marketplace. https://doi.org/10.1093/acprof:oso/9780199696819.003.0002

Mitchell, O. S., Utkus, S. P., & Yang, T. S. (2005). *Turning workers into savers? Incentives, liquidity, and choice in 401 (k) plan design* (No. w11726). National Bureau of Economic Research.

Mittal, M., & Vyas, R. K. (2008). Personality type and investment choice: an empirical study. *The ICFAI University Journal of Behavioural Finance*, *5*(3), 7-22.

Mittelstaedt, John D, Clifford J Shultz, William E Kilbourne, and Mark. Peterson (2014), "Sustainability as megatrend: Two schools of macromarketing thought," Journal of Macromarketing, 34 (3), 253-264.

Mittra, S., Potts, T. and LaBrecque, L. (2005), Practicing Financial Planning for Professionals, RH Publishing, MI.

Mmakwena, M., & Moses, M. (2022). The nexus between corruption and opportunistic crimes during Covid-19 in South Africa. *Technium Soc. Sci. J., 27*, 980.

Modigliani, F. (1966). The life cycle hypothesis of saving, the demand for wealth and the supply of capital. *Social research*, 160-217.

Modigliani, F. (1970). The life cycle hypothesis of saving and intercountry differences in the saving ratio. *Induction, growth and trade*, 197-225.

Modigliani, F. (1986). Life cycle, individual thrift, and the wealth of nations. *Science*, *234*(4777), 704-712.

Modigliani, F. 1986; Life cycle, individual thrift, and the wealth of nations. *Science*, *234*4777), 704-712.

Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. Franco Modigliani, 1(1), 388-436.

Modigliani, F., & Brumberg, R. (1979). Utility Analysis and Aggregate Consumption Functions: An Attempt at Integration.(Ed. A. Abel), The Collected Papers of Franco Modiglioni.

Mohammadi, H. (2014). The moderating role of individual and social factors in Internet banking loyalty: an exploratory study. *Transforming Government: People, Process and Policy*, *8*(3), 420-446.

Mohammed, D., Asokan, K., & Arunasalam, K. (2023). Anti-fraud measures and corporate policies to combat financial fraud in the financial institutes of Malaysia. In *E3S Web of Conferences* (Vol. 389, p. 09028). EDP Sciences.

Mohanta, G., & Dash, A. (2022). Do financial consultants exert a moderating effect on savings behaviour? A study on the Indian rural population. *Cogent Economics & Finance*, *10*(1), 2131230. 1-20

Mohd Padil, H., Kasim, E. S., Muda, S., Ismail, N., & Md Zin, N. (2022). Financial literacy and awareness of investment scams among university students. *Journal of Financial Crime*, *29*(1), 355-367.

Mohidin, R., Jamal, A. A. A., Geetha, C., Sang, L. T., Karim, M. R. A., & Abdul Karim, M. (2013). Revisiting the relationship between attitudes and retirement planning behaviour: A study on personal financial planning. *International Journal of Multidisciplinary Thought*, *3*(2), 449-461.

Molenberghs, G. (2010). Survey methods & sampling techniques. *Interuniversity Institute for Biostatistics and statistical Bioinformatics (I-BioStat)*, *31*(2), 12-34.

Moore, A., Beverly, S., Sherraden, M., Sherraden, M., Johnson, L., & Schreiner, M. (2000). Saving and asset-accumulation strategies used by low-income individuals. *Center for Social Development. St. Louis: Washington University*.

Moore, K. D., Robson, W. B., & Laurin, A. (2010). Canada's Looming Retirement Challenge: Will future retirees be able to maintain their living standards upon retirement?. *CD Howe Institute Commentary Pension Paper*, (317).

Moorthy, M. K., Chelliah, T. D. a/l, Sien, C. S., Leong, L. C., Kai, N. Z., Rhu, W. C., & Teng, W. Y. (2022). A Study on the Retirement Planning Behaviour of Working Individuals. International *Journal of Academic Research in Economics and Management Sciences*, Vol. 1, No, 54-. DOI:10.1108/IJSE-08-2020-0581

Moreland, K. A. (2018). Seeking financial advice and other desirable financial behaviours. Journal of Financial Counseling and Planning, 29(2), 198–206. https://doi.org/10.1891/1052-3073.29.2.198

Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behaviour in Laos. Journal of Asian Economics, 68, 101197.

Moridu, I., Posumah, N. H., Fitriani, F., Bakri, A. A., & Yusni, Y. (2023). Future Financial Decisions Influencing Factors. CEMERLANG: Jurnal Manajemen dan Ekonomi Bisnis, 3(2), 203-214.

Morren, Meike and Amir. Grinstein (2016), "Explaining environmental behaviour across borders: A meta-analysis," Journal ofEnvironmental Psychology, 47, 91-106.

Mosca, I., & McCrory, C. 2016; Personality and wealth accumulation among older couples: Do dispositional characteristics pay dividends?. *Journal of Economic Psychology*, *56*, 1-19.

Moses, T. (2019). Corruption, financial statement fraud, and business failure in Nigeria. *South asian journal of social studies and economics*, *2*(4), 1-10.

Mpaata, E., Saina, E., & Koskei, N. (2021). Does self-control moderate the relationship between social influence and savings behavior among small business owners?. *SEISENSE Business Review*, *1*(2), 32-47.

Muat, S., & Henry, K. (2023). Lecturers' financial wellness: The role of religiosity, financial literacy, behaviour, and stress with gender as the moderating variable. Journal of Accounting and Investment, 24(2), 427- 449.

Mueller, E. A., Wood, S. A., Hanoch, Y., Huang, Y., & Reed, C. L. (2020). Older and wiser: age differences in susceptibility to investment fraud: the protective role of emotional intelligence. *Journal of Elder Abuse & Neglect*, *32*(2), 152-172.

Mugarura, N. (2017). The use of anti-money laundering tools to regulate Ponzi and other fraudulent investment schemes. *Journal of Money Laundering Control*, *20*(3), 231-246.

Muhammad, A., Ahmad, N., & Dos-Santos, M. J. P. L. (2020). Forecast foreign exchange rate: the case study of PKR/USD. *Forecast foreign exchange rate: the case study of PKR/USD*, (4), 129-137.

Mulasi, A., & Mathew, J. (2021). Role of financial literacy in predicting financial behaviour: The mediating role of financial self-efficacy. *Indian Journal of Economics and Business*, *20*(2), 121-131.

Mulasi, A., Mathew, J., & Desai, K. (2022). Predicting the financial behavior of Indian salaried-class individuals. *Investment Management and Financial Innovations*, *20*(1), 26-37.

Munir, W., & Malik, M. S. Effect Of Individual Behaviour Towards Investment In National Saving Schemes On The Economy Of Pakistan.*thesyboldreport*, | V 1 8 . I 0 2 625-646.

Munisamy, A., Sahid, S., & Hussin, M. (2022). Socioeconomic sustainability for low-income households: The mediating role of financial well-being. *Sustainability*, *14*(15), 9752. 1-21

Munnell, A. H., & Soto, M. (2005). The house and living standards in retirement. *Issue in Brief*, *39*. Center for Retirement Research at Boston College. 1-5.http://www.bc.edu/crr/papers/wp_2005-10.pdf.

Munnell, A. H., Golub-Sass, F., & Webb, A. (2007). *Is there really a retirement savings crisis? An NRRI analysis* (pp. 7-11).

Munnell, A. H., Hou, W., & Sanzenbacher, G. T. (2018). National Retirement Risk Index shows modest improvement in 2016. Chestnut Hill, MA: Center for Retirement Research, Trustees of Boston College Retrieved from http:// crr.bc.edu/wp-content/uploads/2017/12/IB_18-1.pdf

Munnell, A. H., Hou, W., Webb, A., & Li, Y. (2017). How has the shift to 401 (k) plans affected retirement income? Chestnut Hill, MA: Center for Retirement Research, Trustees of Boston College Retrieved from http://crr.bc.edu/ wp-content/uploads/2017/03/IB_17-5.pdf

Muñoz de Bustillo Llorente, R., & Esteve Mora, F. (2022). *Social classes in economic analysis. A brief historical account* (No. 2022-02). Joint Research Centre.

Murray, D. (2004). More investment scams: con artists are more resourceful than ever. Here's how they might try to hook you. *Medical Economics*, *81*(19), 40-43.

Murugan G. Dura and Chandrasekaran. (2018) G, 'the Opinion and Attitude of Investors towards Investment Schemes in Tripur District IOSR *Journal of Economics and Finance (IOSR-JEF) e-ISSN*: *Volume 11,* Issue 1 Ser. IV (Jan – Feb 2020), PP 43-46

Mustafa, W. M. W., Islam, M. A., Asyraf, M., Hassan, M. S., Royhan, P., & Rahman, S. (2023). The effects of financial attitudes, financial literacy and health literacy on sustainable financial retirement planning: The moderating role of the financial advisor. *Sustainability*, *15*(3), 2677. 1-17

Muthitacharoen, A., & Burong, T. (2023). Retirement Saving Over the Life Cycle: Evidence from a Developing Country. Journal of Aging & Social Policy, 1-18.

Mutran, E. J., Reitzes, D. C., & Fernandez, M. E. (2017). Factors that influence attitudes toward retirement. *Research on aging*, 19(3), 251-273. DOI:10.1177/0091415020926843

Mwobobia, C. K. (2022). Effect of Financial Literacy on Saving Culture Among the Youth in Nairobi County (Doctoral dissertation, University of Nairobi).

Nagel, S., & Xu, Z. (2023). Dynamics of subjective risk premia. *Journal of Financial Economics*, *150*(2), 103713.

Nagy, R. A., & Obenberger, R. W. (1994). Factors influencing individual investor behaviour. *Financial Analysts Journal*, *50*(4), 63-68.

Nam, Y., & Loibl, C. (2021). Financial capability and financial planning at the verge of retirement age. *Journal of Family and Economic Issues*, *42*(1), 133-150.

Nanda, A. P., & Banerjee, R. (2021). Consumer's subjective financial well-being: A systematic review and research agenda. *International Journal of Consumer Studies*, *45*(4), 750-776

Naqvi, B., Rizvi, S. K. A., & Shahzad, A. (2023). Selection of Retirement Saving Plan for a Private-sector Employee in Pakistan. *Asian Journal of Management Cases*, *20*(1), 23-34.

Naranjo, C., & Grimaldos, S. (2022). Economic thought within its historical context: A revision of the eighteenth century. *Revista Chakiñan de Ciencias Sociales y Humanidades*, (16), 194-210.

Narayanan, S. (2004). Financial Market Regulation-Security Scams In India with historical evidence and the role of corporate governance. MPRA Paper No. 4438, posted 13https://mpra.ub.uni-muenchen.de/4438/

Narayanan, V., Baird, K., & Tay, R. (2021). Investment decisions: The trade-off between economic and environmental objectives. *The British Accounting Review*, *53*(3), 100969.

Nasir, H., Fatima, A., & Zahid, G. (2023). Time allocation pattern for household and expenditure saving market activities by using economic value of time: A gender-based analysis in Pakistan. Business Review, 18(1), 24-47

Nations, U. (2015). Transforming thisworld: the 2030 agenda for sustainable development General Assembly UN. *70th Session, ed A/RES/70/1 Geneva, Switzerland*.

Nausher, M. M., Iqrar, M. S., & Islam, A. (2024). Social-Culture Factors are Impacting the Status of Women in Punjab: a Case Study. *GUMAN*, *7*(1), 17-27.

Naveed, M., Ali, S., Iqbal, K., & Sohail, M. K. (2020). Role of financial and non-financial information in determining individual investor investment decision: a signaling perspective. South Asian Journal of Business Studies, 9(2), 261-278.

Ndou, A. (2023). The relationship between demographic factors and financial literacy. International Journal of Research in Business and Social Science (2147-4478), 12(1), 155-164.

Nedelcu, M., Tomás, L., Ravazzini, L., & Azevedo, L. (2023). A retirement mobilities approach to transnational ageing. *Mobilities*, 1-19.

Neelam, N., Sheorey, P., Bhattacharya, S., & Kunte, M. (2020). Organization for Economic Co-operation and Development guidelines for learning organization in higher education and its impact on lifelong learning–evidence from Indian business schools. *VINE Journal of Information and Knowledge Management Systems*, *50*(4), 569-596.

Nelson, C., (2010). "Financial Education for All Ages," Innovations, MIT Press Journal. Vol. 5, Issue 2. Cambridge, MA: Spring 2010.

Ng, W. and Diener, E. (2014), "What matters to the rich and the poor? Subjective well-being, financial satisfaction, and postmaterialist needs across the world", Journal of Personality and Social Psychology, Vol. 107 No. 2, p. 326.

Nga, J. K. H. (2018). An exploratory model on retirement savings behaviour: A Malaysian study. *International Journal of Business and Society*, *19*(3), 637-659.

Ngaowichai, A., & Sripongpun, K. (2019). Factors Influencing Personal Retirement Saving behaviour Of Teachers In Nongkhai Province, Thailand. *International Academic Multi disciplines Research Conference in Switzerland*, 162–169.

Nghiem, H., Muric, G., Morstatter, F., & Ferrara, E. (2021). Detecting cryptocurrency pump-and-dump frauds using market and social signals. *Expert Systems with Applications*, *182*, 115284.

Nguyen, L. T. M., Nguyen, P. T., Tran, Q. N. N., & Trinh, T. T. G. (2022). Why does subjective financial literacy hinder retirement saving? The mediating roles of risk tolerance and risk perception. *Review of behavioural Finance*, *14*(5), 627-645.

Nguyen, T. A. N., & Rozsa, Z. (2019). Financial literacy and financial advice seeking for retirement investment choice. *Journal of Competitiveness*, *11*(1), 70-83.

Nguyen, T. A. N., R_ozsa, Z., Bel_as, J., & Bel_asov_a, L'. L'. (2017). The effects of perceived and actual financial knowledge on regular personal savings: Case of Vietnam. Journal of International Studies, 10(2), 278–291. https://doi.org/10.14254/2071-8330.2017/10-2/19

Nie, J., & Gautam, A. (2020). Spending patterns and cost of living for younger versus older households. *The Federal Reserve Bank of Kansas City Economic Review*, 5-21.

Niimi, Y., & Horioka, C. Y. (2019). The wealth decumulation behaviour of the retired elderly in Japan: The relative importance of precautionary saving and bequest motives. *Journal of the Japanese and International Economies*, *51*, 52-63.

Nirmala, P. S. (2014). Role of MSME in women entrepreneurial development. *Int J. Res. Dev. Manag. Rev. (IJRDMR)*, *2*(4), 10-14.

Nitzl C, Roldán JL and Cepeda Carrión G. (2016) Mediation Analysis in Partial Least Squares Path Modeling: Helping Researchers Discuss More Sophisticated Models. *Industrial Management & Data Systems* 119(9): 1849-1864.

Nivakoski, S. 2014; Determinants of pension coverage and retirement income replacement rates–Evidence from TILDA. *The Economic and Social Review*, *45*3, Autumn), 299-328.

Nivakoski, S., & Barrett, A. 2019; Estimating, and interpreting, retirement income replacement rates. *The Economic and Social Review*, *50*3, Autumn), 587-609.

Nolan, A., & Doorley, K. (2019). Financial literacy and preparation for retirement.

Noone, J., Alpass, F., & Stephens, C. (2010). Do men and women differ in their retirement planning? Testing a theoretical model of gendered pathways to retirement preparation. *Research on aging*, *32*(6), 715-738.

Noor, A. (2020). The flow-performance relationship: evidence from Pakistani mutual funds. *Journal of Accounting and Finance in Emerging Economies*, *6*(1), 145-154.

Noor, N., Batool, I., & Arshad, H. M. (2020). Financial literacy, financial self-efficacy and financial account ownership behaviour in Pakistan. *Cogent Economics & Finance, 8*(1), 1806479. 1-17

Noor, N., Batool, I., & Rehman, H. U. (2022). An empirical assessment of mediating role of financial self efficacy on financial literacy and financial inclusion in Pakistan. *Annals of Social Sciences and Perspective*, *3*(1), 77-103

Noreen, M., Mia, M. S., Ghazali, Z., & Ahmed, F. (2022). Role of government policies to fintech adoption and financial inclusion: A study in Pakistan. *Universal Journal of Accounting and Finance, 10*(1), 37-46.

Norusis, M. J. (1998) *SPSS: Guide to Data Analysis*, New Jersey: Prentice Hall.

Norvilitis, J. M., Szablicki, P. B., &Wilson, S. D. (2003). Factors influencing levels of creditcard debt in college students. Journal of Applied Social Psychology, 33(5), 935–947.

Nunnally, J. C., & Durham, R. L. (1975). Validity, reliability, and special problems of measurement in evaluation research. *Handbook of evaluation research*, *1*, 289-352.

Nuswantara, D. A., & Maulidi, A. (2020). Psychological factors: self-and circumstances-caused fraud triggers. *Journal of Financial Crime, 28*(1), 228-243.

Nutt P. C. (2006). Comparing Public and Private Sector Decision-Making Practices, Journal of Public Administration Research and Theory, Volume 16, No. 2 , pp. 289-318, Oxford University Press

Nyangarika, A., & Bundala, F. S. (2020). Influence of Retirement Benefits and Its Impact on Socio-Economic Development of Retirees in Tanzania. *International Journal of Advance Research and Innovative Ideas in Education*, *6*(2), 1245-1258.

Nye, P., & Hillyard, C. (2013). Personal financial behaviour: The influence of quantitative literacy and material values. Numeracy, 6(1), 3-20

O'Neill, B., Sorhaindo, B., Xiao, J. J., & Garman, E. T. (2005). Financially distressed consumers: Their financial practices, financial well-being, and health. Journal of Financial Counseling and Planning, 16, 73–87.

Obagbuwa, O., & Kwenda, F. (2020). Determinants of Students' Spending Habits: a Case Study of Students at a Premier University of African Scholarship. *African Journal of Business & Economic Research*, *15*(4).

Obaid, H. J., Hama, K. N. K., & Yasir, M. H. (2023). The Role of Financial Literacy in Achieving Financial Satisfaction Through Financial Well-Being. International Journal of Professional Business Review, 8(7). 01-18

Obamuyi, T. M. (2013). Determinants Of Banks'profitability in A Developing Economy: Evidence From Nigeria. *Organizations and markets in emerging economies*, *4*(08), 97-111.

Odigliani, F. & Brumberg, R., (1954). Utility Analysis and the Consumption Function: An Interpretation of Cross-Sectional Data.

Odoemenem, I. U., Ezihe, J. A. C., & Akerele, S. O. (2013). Saving and investment pattern of small-scale farmers of Benue State, Nigeria. Global Journal of Human Social Science Sociology and Culture, 13(1), 7-12.

OECD (2021) Demography - Working age population - OECD Data. (2021). Retrieved 10 June 2021, from https://data.oecd.org/pop/working-age-population.htm

OECD, I. 2015; National strategies for financial education. *Manual de políticas OCDE/INFE*.

OECD. (2013). Financial literacy and inclusion. Financial literacy & education. Organisation for Economic Co-operation and Development. https://doi.org/10.1787/9789264254855-en

OECD. (2015). National strategies for financial education: OECD/INFE policy handbook. https://www.oecd.org/daf/fin/financial-education/national-strategies-for-financial-educationpolicy-handbook.htm

OECD. (2016). Financial education in Europe: Trends and recent developments. Organisation for Economic Co-operation and Development. https://doi.org/10.1787/9789264254855-en

OECD. (2020). *International Survey of Adult Financial Literacy*.

Ofwona, A. C. (2013). An estimation of the consumption function for Kenya using Keynes' Absolute Income Hypothesis for the period 1992-2011. *Journal of Emerging Trends in Economics and Management Sciences*, *4*(1), 103-105.

Oggero, N., Figari, F., Fornero, E., & Rossi, M. (2023). Support for pension reforms: What is the role of financial literacy and pension knowledge?. Journal of Accounting and Public Policy, 42(4), 107096. 1-6.

Oishi, S., Diener, E., Lucas, R. E., & Suh, E. M. (2009). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Culture and well-being: The collected works of Ed Diener*, 109-127.

Okeach, M. (1973). *The nature of human values*. Free press.

Olawuni, A. O., Ambali, T. T., & Noibi, T. O. (2023). Retirement Education and Financial Security among Senior Citizens in Tertiary Institutions in Nigeria. *Journal of Capital Development in Behavioural Sciences Vol*, *11*(2).

O'Neill, B., Sorhaindo, B., Xiao, J. J., & Garman, E. T. (2005). Financially distressed consumers: Their financial practices, financial well-being, and health. Financial Counseling and Planning, 16(1), 73–87.

Organisation for Economic Co-operation and Development. 2017; G20/OECD INFE report on adult financial literacy in G20 countries. *Organization for Economic Co-operation and Development*.

Orszag, P. R., & Stiglitz, J. E. (2001). Rethinking pension reform: Ten myths about social security systems. *New ideas about old age security*, 17-56.

Ortiz, I., Duran, F., Urban, S., Wodsak, V., & Yu, Z. (2018). Reversing pension privatization: Rebuilding public pension systems in Eastern European and Latin American countries (2000-18). *Available at SSRN 3275228*.

Orton, L. (2007). Financial literacy: Lessons from international experience. Canadian Policy Research Networks, Incorporated.

Oseni, I. O., Adelowokan, O. A., & Akpa, E. O. (2023). The Effect of Income and Financial Integration on Consumption Smoothing in Africa. Does Income Asymmetry Matter. Economic Insights–Trends and Challenges, 12(3), 95-106.

Osondu, C. K., & Obike, K. C. (2015). Comparative analysis of poverty determinants among cassava producing households by gender of household heads in Umunneochi local government area of Abia state, Nigeria. *Nigerian Journal of Agriculture, Food and Environment*, *11*(4), 52-60.

Osondu, C. K., Obike, K. C., & Ogbonna, S. I. (2015). Savings, income and investment Behaviour and its determinants among small holder arable crop farmers in Umuahia Capital Territory, Abia State Nigeria. *European Journal of Business and Innovation Research, 3*(1), 51-70.

Ostry, M. J. D., Berg, M. A., & Tsangarides, M. C. G. (2014). *Redistribution, inequality, and growth*. International Monetary Fund.

O'Sullivan, V., Nolan, B., Barrett, A., & Dooley, C. 2014; Income and wealth in the Irish longitudinal study on ageing. *The Economic and Social Review, 45*3, Autumn), 329-348.

Outcault, S. (2012). *Saving for the Future: Trends, Patterns, and Decision-making Processes Among Young Americans* (Doctoral dissertation, The Pardee RAND Graduate School). 193

Owusu, G. M. Y. (2021). Predictors of financial satisfaction and its impact on psychological wellbeing of individualsJournal of Humanities and Applied Social Sciences Vol. 5 No. 1, 2023 pp. 59-76

Owusu, G.M.Y. (2023), "Predictors of financial satisfaction and its impact on psychological wellbeing of individuals", *Journal of Humanities and Applied Social Sciences*, Vol. 5 No. 1, pp. 59-76. https://doi.org/10.1108/JHASS-05-2021-0101

Oyejide, T. A. (2002). Taking stock of sustainable development finance in Sub-Saharan Africa. *Testing New Policy Approaches*, *29*. United Nations publication Sales No. E.02.II.A.2 ISBN 92-1-104512-6

Ozili, P. K. (2020). Theories of financial inclusion. In *Uncertainty and challenges in contemporary economic behaviour* (pp. 89-115). Emerald Publishing Limited.

Özkul, F. U., & Pamukçu, A. (2012). Fraud detection and forensic accounting. In *Emerging fraud: Fraud cases from emerging economies* (pp. 19-41). Berlin, Heidelberg: Springer Berlin Heidelberg.

Padil, H. M., Kasim, E. S., Ismail, N., Zin, N. M., & Muda, S. (2020). An exploratory factor analysis of financial literacy and awareness of investment scam. In *Proceedings International Invention, Innovative and Creative Conference, Series 2* (Vol. 61).

Pag`es, J. & Tenenhaus, M. (2001) Multiple Factor Analysis Combined with PLS Path modeling. Application to the Analysis of Relationships between Physic-ochemical Variables, Sensory Profiles and Hedonic Judgments, *Chemometrics and Intelligent Laboratory Systems,* 58, 261-273.

Pagano, M., Wagner, C., & Zechner, J. (2023). Disaster resilience and asset prices. *Journal of Financial Economics*, *150*(2), 103712.

Pak, T. Y. (2020). Social protection for happiness? The impact of social pension reform on subjective well-being of the Korean elderly. *Journal of Policy Modeling*, *42*(2), 349-366.

PakistanGrossSavingsRate.*(2019,June30)https://www.ceicdata.com/en/indicator/pakistan/gross-savings-rate*

Palacios, R. J., & Robalino, D. A. (2020). Integrating social insurance and social assistance programs for the future world of labor.. IZA Discussion Paper No. 13258,AvailableatSSRN: https://ssrn.com/abstract=3602434 or http://dx.doi.org/10.2139/ssrn.3602434. IZA DP No. 13258 pp1-36.

Palanivelu, V. R., & Chandrakumar, K. (2013, March). A study on preferred investment avenues among salaried peoples with reference to Namakkal Taluk, Tamil Nadu, India. In *International Conference on Business, Economics, and Accounting* (pp. 25-32).

Pallant, J. (2007) *SPSS Survival Manual,* Berkshire: Open University Press.

Palley, T. I. (2010). The relative permanent income theory of consumption: a synthetic Keynes–Duesenberry–Friedman model. *Review of political economy*, 22(1), 41-56.

Palley, T. I. (2010). The relative permanent income theory of consumption: a synthetic Keynes–Duesenberry–Friedman model. *Review of political economy*, 22(1), 41-56

Paluri, R.A. and Mehra, S. (2016), "Financial attitude based segmentation of women in India: an exploratory study", International Journal of Bank Marketing, Vol. 34 No. 5, pp. 670-689.

Panakaje, N. (2023). Investment in National Pension Scheme: Issues and Trends. *International Journal of Case Studies in Business, IT and Education (IJCSBE), 7*(4), 392-402.

Panda, R., & Sethi, M. (2016). Gold as an investment option in India: Myth and reality. *Indian Journal of Finance, 10* (5), p.7 –21.

Pandey, I. M. (2015). *Essentials of Financial Management, 4th Edtion*. Vikas publishing house.

Pandey, R., & Jessica, V. M. (2019). Sub-optimal behavioural biases and decision theory in real estate: The role of investment satisfaction and evolutionary psychology. *International Journal of Housing Markets and Analysis, 12*(2), 330-348

Pandiyan, L., & Aranganathan, T. (2012). Savings and Investments Attitude of Salaried Class incuddalore District. *Journal of Business and Management, 1*(1), 40-50.

Pangestu, S., & Karnadi, E. B. (2020). The effects of financial literacy and materialism on the savings decision of generation Z Indonesians. *Cogent Business & Management*, *7*(1), 1743618.

Panjali, N., & Kasilingam, R. (2015). A study on the impact of investors' life style on their investment behaviour. *NBR E-Journal, 1,* 1-16.

Panos, G. A., & Wilson, J. O. (2020). Financial literacy and responsible finance in the FinTech era: capabilities and challenges. *The European Journal of Finance, 26*(4-5), 297-301.

Parahoo, K. (2007). Focus groups: Kader Parahoo on why focus groups are enjoying increased in popularity as a research method. *Nurse researcher, 14*(2), 4-7.

Parihar, B. B. S., & Sharma, K. K. (2012). An Empirical Study of the Investment Preferences of Salaried Employees. *Technoface-A Journal of Multidisciplinary Advance Research, 1*(2), 39-48.

Parimalakanthi, K., & Kumar, M. A. (2015). A study pertaining to investment behaviour of individual investors in Coimbatore city. *International Journal of Advance Research in Computer Science and Management Studies*, *3*(6), 149-157.

Parker, J. A., Schoar, A., & Sun, Y. (2023). Retail financial innovation and stock market dynamics: The case of target date funds. *The Journal of Finance*, *78*(5), 2673-2723.

Parrotta, J.L. and Johnson, P.J. (1998), "The impact of financial attitudes and knowledge on financial management and satisfaction of recently married individuals", Journal of Financial Counseling and Planning, Vol. 9 No. 2, pp. 59-75.

Partial Least Squares Structural Equation Modeling (PLS-SEM): Editorial. *European Management Journal* 34(6): 589-597.

Parulian, P., & Bebasari, N. (2023). The impact of financial attitudes and revenue on financial planning through financial behaviour. Jurnal Mantik, 7(1), 329-336.

Pashchenko, S., & Porapakkarm, P. (2022). Value of life and annuity demand. Journal of Risk and Insurance, 89(2), 371-396.

Patel, C. Y. P., & Patel, C. C. Y. (2012). A study of investment perspective of salariedindividual (private sector). *Asia Pacific Journal of Marketing & Management Review*, *1*(2), 126-146.

Patel, Jayesh, Ashwin Modi, and Justin. Paul (2017), "Pro-environmental behaviour and socio-demographic factors in an emerging market," Asian Journal of Business Ethics, 6 (2), 189-214.

Patil, S., & Bagodi, V. (2021). A study of factors affecting investment decisions in India: The KANO way. *Asia Pacific Management Review*, *26*(4), 197-214.

Patil, S., & Nandawar, K. (2014). A study on preferred investment avenues among salariedindividual with reference to Pune, India. *IOSR Journal of Economics and Finance (IOSRJEF) e-ISSN*, *23215933*, vol-09 page-17.

Pavelescu, F. M. (2009). Savings-Investments Relationship in an Open Economy. *Revista Romana de Economie*, *28*(2).

Payne, S. H., Yorgason, J. B., & Dew, J. P. (2014). Spending today or saving for tomorrow: The influence of family financial socialization on financial preparation for retirement. *Journal of Family and Economic Issues*, *35*, 106-118.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. Journal of Health and Social behaviour, 19(1), 2–21.

Pelizzon, L., & Weber, G. (2009). Efficient portfolios when housing needs change over the life cycle. Journal of Banking & Finance, 33(11), 2110-2121.

Peng Lok, S. Y., Wei Ying, C., & Hon Wei, L. (2017). *A Framework for Retirement Planning Based on Financial Literacy and Wealth Accumulation*. https://doi.org/10.20472/bmc.2017.006.012

Weiss, H. (2019). the study *have never been middle class: How social mobility misleads us*. Verso Books.

Pervaiz, F., Nawaz, R. S., Ramzan, M. U., Usmani, M. Z., Mare, S., Heimerl, K., . & Razaq, L. (2019, July). An assessment of SMS fraud in Pakistan. In Proceedings of the 2nd ACM SIGCAS Conference on Computing and Sustainable Societies (pp. 195-205).

Pervez, T. (2021). The Role of Interest Rate, Unemployment and Inflation in Deciding Domestic Saving of Pakistan: An Empirical Analysis. Journal of Policy Research, 7(1), 26-35.

Peter, P. (2019). Savings Month: beware of these online savings scams. *MoneyMarketing*, *2019*(7), 24-24.

Pham, M. H., & Doan, T. P. L. (2020). The impact of financial inclusion on financial stability in Asian countries. *The Journal of Asian Finance, Economics and Business (JAFEB)*, *7*(6), 47-59.

Piekut, M. (2020). Living standards in one-person households of the elderly population. *Sustainability, 12*(3), 992. 1-26

Piligrimienė, Ž., Žukauskaitė, A., Korzilius, H., Banytė, J., & Dovalienė, A. (2020). Internal and external determinants of consumer engagement in sustainable consumption. *Sustainability, 12*(4), 1349.

Pillai, A. R., & Rajasekar, A. (2020). FINANCIAL LITERACY ON INVESTMENT PERFORMANCE: THE MEDIATING EFFECT OF BIG-FIVE PERSONALITY TRAITS MODEL. *International Journal of Management (IJM), 11*(3), 782-790.

Piotrowska, M. (2019). Facets of competitiveness in improving the professional skills. Journal of Competitiveness, 11(2), 95–112. https://doi.org/10.7441/joc.2019.02.07

Piquero, N. L., Piquero, A. R., Gies, S., Green, B., Bobnis, A., & Velasquez, E. (2022). Preventing identity theft: perspectives on technological solutions from industry insiders. In *The New Technology of Financial Crime* (pp. 163-182).

Pischke, J. (1978), Towards an Operational Approach to Savings for Rural Developers, Savings and Development, Vol. II, pp. 43-55.

Pituch, K. A., & Stapleton, L. M. (2008). The performance of methods to test upper-level mediation in the presence of nonnormal data. *Multivariate Behavioural Research, 43*(2), 237-267.

Platt, M. L., & Huettel, S. A. (2008). Risky business: the neuroeconomics of decision making under uncertainty. *Nature neuroscience*, *11*(4), 398-403.

Plouffe, R.A. and Tremblay, P.F. (2017), "The relationship between income and life satisfaction: does religiosity play a role?", Personality and Individual Differences, Vol. 109, pp. 67-71.

Pollak, R. A., & Wales, T. J. (1978). Estimation of complete demand systems from household budget data: the linear and quadratic expenditure systems. *The American Economic Review*, *68*(3), 348-359.

Ponsindhu, T., & Nirmala, S. (2014). Women Entrepreneurial Development and MSME's. *International Journal of Research in Computer Application and Management*, *4*(12), 32-35.

Porter, N. M., & Garman, E. T. (1992). Money as part of a measure of financial well-being. American behavioural Scientist, 35(6), 820–826.

Potocki, T., & Cierpiał-Wolan, M. (2019). Factors shaping the financial capability of lowincom consumers from rural regions of Poland. International Journal of Consumer Studies, 43(2), 187–198. https://doi.org/10.1111/ijcs.12498

Potrich, A. C. G., & Vieira, K. M. (2018). Demystifying financial literacy: a behavioural perspective analysis. *Management Research Review, 41* (9), 1047-1068.

Potrich, A. C. G., Vieira, K. M., & Kirch, G. (2015). Determinants of financial literacy: Analysis of the influence of socioeconomic and demographic variables. Revista Contabilidade & Financ¸as, 26(69), 362–377. https://doi.org/10.1590/1808-057x201501040

Pramanik, S. (2024). A Socioeconomic Effect Analysis of the Financial Sustainable Development of the Elder Romanian Population Through Pension Modelling. In *Recent Developments in Financial Management and Economics* (pp. 350-384).

Prameswari, S., & Mulyanto Nugroho, U. P. The Influence of Financial Literacy, Financial Awareness, and Income on Financial Well-Being with Financial behaviour and Financial Inclusion as Intervening Variables (A Case Study on Families in Surabaya). Journal of Economics, Finance and Management Studies Volume 6 Issue 1 . 511-522 DOI: 10.47191/jefms/v6-i1-55,

Prast, H. M., & van Soest, A. (2016). Financial literacy and preparation for retirement. *Intereconomics*, *51*(3), 113-118.

Prawitz, A. D., Garman, E. T., Sorhaindo, B., O'Neill, B., Kim, J., & Drentea, P. (2006). InCharge financial distress/financial well-being scale: Development, administration, and score interpretation. *Journal of Financial Counseling& Planning*, 17(1), 34–50.

Prentice, C., Nguyen, M., Nandy, P., Winardi, M. A., Chen, Y., Le Monkhouse, L., . & Stantic, B. (2021). Relevant, or irrelevant, external factors in panic buying. *Journal of Retailing and Consumer Services*, *61*, 102587.

Prinsloo, J. W. (2000). *The saving behaviour of the South African economy*. South African Reserve Bank.

Pritchett, L., & Filmer, D. (1999). What education production functions really show: a positive theory of education expenditures. *Economics of Education review*, *18*(2), 223-239.

Qamar, M.A.J., Khemta, M.A.N. and Jamil, H. (2016), "How knowledge and financial self-efficacy moderate the relationship between money attitudes and personal financial

management behaviour", European Online Journal of Natural and Social Sciences, Vol. 5 No. 2, p. 296.

Qamruzzaman, M. (2023). Nexus between economic policy uncertainty and institutional quality: evidence from India and Pakistan. Macroeconomics and finance in emerging market economies, 16(3), 389-408

Qaralleh, S. J., Rahim , N. F. A., & Richardson , C. (2023). Job Resource and Job Performance Among Physicians in the Jordanian Health Sector: The mediating role of Job satisfaction. *International Journal of Professional Business Review*, *8*(1), e0378. https://doi.org/10.26668/businessreview/2023.v8i1.378

Qayyum, A., Qadir, J., Janjua, M. U., & Sher, F. (2019). Using blockchain to rein in the new post-truth world and check the spread of fake news. IT Professional, 21(4), 16-24.

Qazi, M. A., & Ammad, S. (2021). Public investment efficiency and sectoral economic growth in Pakistan. *Development Policy Review*, *39*(3), 450-470

Quraishi, M. (1985), Rural Savings Mobilization in Pakistan, FAO Regional Office for Asia and Pacific, (APRACA, Report No. 15), Bangkok.

Qureshi, F., Kutan, A. M., Ghafoor, A., Khan, H. H., & Qureshi, Z. (2019). Dynamics of mutual funds and stock markets in Asian developing economies. *Journal of Asian Economics*, *65*, 101135.

R. Baker, S., Farrokhnia, R. A., Meyer, S., Pagel, M., & Yannelis, C. (2023). Income, liquidity, and the consumption response to the 2020 economic stimulus payments. *Review of Finance*, *27*(6), 2271-2304.

Rabbani, M. G. S., & Butt, B. Z. (2021). Post Draw Effects of Prize Bonds' Investment on Bullion Returns. *PÉNZÜGYI SZEMLE/PUBLIC FINANCE QUARTERLY*, *66*(2), 291-302

Raghuram, V., & Dubey, M. (2021). Delving into Ponzi Schemes-Evolution Impact and Enforcement. *Available at SSRN 3869793*.

Rahim, A., Hussain Shah, M., & Zeb, J. (2021). Post Covid-19 Influence Of Herding Effect Bias On Investment Decisions Of Pakistani Stock Investors. *Ilkogretim Online*, *20*(5).

Rahman, M., Isa, C. R., Masud, M. M., Sarker, M., & Chowdhury, N. T. (2021). The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia. *Future Business Journal*, *7*(1), 1-18.

Rahman, S. u., Abubaker, A., & Idrees, S. (June 2019). Long Run Relationship between Domestic Private Investment and Manufacturing Sector of Pakistan: An Application of Bounds Testing Cointegration. *Pakistan Journal of Social Sciences*, 39, 2 (2019),739-749.

Rahut, D. & Destefanis, A., 2024. The Multidimensional Well-Being of Asian Senior Citizens: A Systematic Review, Asian Development Bank. Philippines. Retrieved fromDBIWorkingPapeNo.1443AsianDevelopmentBankInstitute(ADBI),Tokyohttps://policycommons.net/artifacts/12039402/the-multidimensional-well-being-of-asian-senior-citizens/12933021/ on 01 Jul 2024. CID: 20.500.12592/g79ctzr.

Rai, K., Dua, S., & Yadav, M. (2019). Association of financial attitude, financial behaviour and financial knowledge towards financial literacy: A structural equation modeling approach. *FIIB Business Review*, *8*(1), 51-60.

Rake, B. (2022). Controversies with Clinical Trial Regulations in Low-and Middle-Income Countries. *Integrity of Scientific Research: Fraud, Misconduct and Fake News in the Academic, Medical and Social Environment*, 235-242.

Ramanathan, K. V., & Meenakshi, S. (2015). A study on Investment preferences of Bank employees. *GE-International Journal of Management Research*, *3*, 130-144.

Ramayah T, Cheah J-H, Chuah F, et al. (2016) *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using SmartPLS 3.0: An Updated and Practical Guide to Statistical Analysis,* Singapore et al. : Pearson.

Ramayah, T., Jason Wai Chow Lee, and Osman. Mohamad (2010), "Green product purchase intention: Some insights from a developing country," Resources, Conservation and Recycling, 54 (12), 1419-1427.

Rameli, R. S., & Marimuthu, M. (2018). A conceptual review on the effect of attitudes towards retirement on saving intentions and retirement planning behaviour. In *SHS Web of Conferences* (Vol. 56, p. 02005). EDP Sciences. **1-6** https://doi.org/10.1051/shsconf/20185602005

Ranerup, A., & Henriksen, H. Z. (2022). Digital discretion: Unpacking human and technological agency in automated decision making in Sweden's social services. Social Science Computer Review, 40(2), 445-461.

Rappaport, A. M., Mitchell, O. S., & Hammond, P. B. (2000). *Forecasting retirement needs and retirement wealth*. University of Pennsylvania Press.

Rashid, K., Tariq, Y. B., & Rehman, M. U. (2022). Behavioural errors and stock market investment decisions: recent evidence from Pakistan. Asian Journal of Accounting Research, 7(2), 129-145.

Rasool, N., & Ullah, S. (2020). Financial literacy and behavioural biases of individual investors: empirical evidence of Pakistan stock exchange. *Journal of Economics, Finance and Administrative Science*, *25*(50), 261-278.

Rasool, N., & Ullah, S. (2020). Financial literacy and behavioural biases of individual investors: empirical evidence of Pakistan stock exchange. Journal of Economics, Finance and Administrative Science, 25(50), 261-278

Rasoolimanesh, S. M., & Ali, F. (2018). Partial least squares-structural equation modeling in hospitality and tourism. *Journal of Hospitality and Tourism Technology*, *9*(3), 238-248.

Rathnamani, V. (2013). Investor's preferences towards mutual fund industry in Trichy. *IOSR Journal of Business and Management*, *6*(6), 48-55.

Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st-century economist*. Chelsea Green Publishing.

Ray, R., & Singh, P. (2021). Regionally disaggregated estimates of global income inequality with evidence on sensitivity to purchasing power parity. Journal of the Asia Pacific Economy, 26(2), 252-270.

Raza, H., Ahmed, F., Mohiuddin, Z. A., & Osama, A. (2017). Mitigating financial burden of elderly through social protection schemes: Issues and challenges for Pakistan. International Journal of Emerging Trends in Social Sciences, 1(2), 81-89.

Reeves, A. (2019). How class identities shape highbrow consumption: A cross-national analysis of 30 European countries and regions. *Poetics*, *76*, 101361.

Rehman, A., Radulescu, M., Ahmad, F., Kamran Khan, M., Iacob, S. E., & Cismas, L. M. (2023). Investigating the asymmetrical influence of foreign direct investment, remittances, reserves, and information and communication technology on Pakistan's economic development. Economic Research-Ekonomska Istraživanja, 36(2), 2131591.

Rehman, H., Chaudhry, I. S., Farid, Z. M., & Bashir, F., (2011). Rural-Urban Saving Differentials in Pakistan: Investigation from Primary Data. A Research Journal of South Asian Studies, Vol. 26, No. 1

Rehman, H., Faridi, M. Z. and Bashir, F. (2010). Households Saving behaviour in Pakistan: A case of Multan district. *Pakistan Journal of Social Sciences*, 30(1), 17-29.Review, Vol. 6, No. 3.

Reitzes, D. C., & Mutran, E. J. (2006). Lingering identities in retirement. *The Sociological Quarterly*, *47*(2), 333-359.

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. Journal of consumer affairs, 44(2), 276-295. https://doi.org/10.1111/j.1745-6606.2010.01169.x

Reurink, A. (2019). Financial fraud: A literature review. *Contemporary Topics in Finance: A Collection of Literature Surveys*, 79-115.

Reyers, M. (2019). Financial capability and emergency savings among South Africans living above and below the poverty line. *International Journal of Consumer Studies*, *43*(4), 335-347.

Reznik, G. L., Couch, K. A., Tamborini, C. R., & Iams, H. M. (2021). Changing longevity, social security retirement benefits, and potential adjustments. *Soc. Sec. Bull.*, *81*, 19.

Ribaj, A., & Mexhuani, F. (2021). The impact of savings on economic growth in a developing country (the case of Kosovo). *Journal of Innovation and Entrepreneurship*, *10*, 1-13.

Rice, A., & Bonarius, N. (2019). What is the right level of superannuation guarantee. *Rice Warner, June*.

Richard G Netemeyer and others, How Am study Doing? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being, ***Journal of Consumer Research***, Volume 45, Issue 1, June 2018, Pages 68–89, https://doi.org/10.1093/jcr/ucx109

Richter, N. F., Cepeda-Carrion, G., Roldán Salgueiro, J. L., & Ringle, C. M. (2016). European management research using partial least squares structural equation modeling (PLS-SEM). *European Management Journal, 34 (6), 589-597.*

Rigdon EE, Becker J-M and Sarstedt M. (2017a) Equating Unobserved Conceptual Variables and Common Factors in Structural Equation Models. *Working Paper*.

Rigdon EE. (2016) Choosing PLS Path Modeling as Analytical Method in European Management Research: A Realist Perspective. *European Management Journal* 34(6): 598-605.

Rigdon, E. E., Becker, J. M., & Sarstedt, M. (2019). Factor indeterminacy as metrological uncertainty: Implications for advancing psychological measurement. *Multivariate Behavioral Research*, *54*(3), 429-443.

Rigdon, E. E., Ringle, C. M., & Sarstedt, M. (2010). Structural modeling of heterogeneous data with partial least squares. In N. K. Malhotra (Ed.), *Review of Marketing Research. Armonk: Sharpe*, 7, 255–296.

Riitsalu, L. and Murakas, R. (2019), "Subjective financial knowledge, prudent behaviour and income: the predictors of financial well-being in Estonia", International Journal of Bank Marketing, Vol. 37 No. 4, pp. 934-950.

Ringle, Christian M., Wende, Sven, & Becker, Jan-Michael. (2022). SmartPLS 4. Oststeinbek: SmartPLS. Retrieved from https://www.smartpls.com

Rizvi, S. K. A., Naqvi, B., & Tanveer, F. (2018). Is Pakistan ready to embrace Fintech innovation?. The Lahore Journal of Economics, 23(2), 151-182.

Robb, C.A. and Woodyard, A.S. (2011), "Financial knowledge and best practice behaviour", Journal of Financial Counseling and Planning, No. 205, pp. 60-70.

mRodems, R., & Pfeffer, F. T. (2021). Avoiding material hardship: The buffer function of wealth. *Journal of European Social Policy*, *31*(5), 517-532.

Rogg CS (2000) "The Impact of Access to Credit on the Saving behaviour of Micro-entrepreneurs: Evidence from Three Latin American Countries" A paper based on a Thesis submitted to the University of Oxford in June 1999.

Röhn, O. (2010), "New Evidence on the Private Saving Offset and Ricardian Equivalence", *OECD Economics Department Working Papers*, No. 762, OECD Publishing, Paris,

Rojas, M. (2006). Life satisfaction and satisfaction in domains of life: Is it a simple relationship?. *Journal of happiness studies*, *7*, 467-497.

Rokhman, M. A. (2021). The Effect of Financial Literature and Future Orientation With Mediating Role of Saving Attitude. *International Journal of Economics, Business and Management Research*, *5*(09), 207–226.

Roldán, J. L., Sánchez-Franco, M. J., & Real, J. C. (2017). From frequency of use to social integration: The mediation of routinization and infusion in Tuenti community. *European Research on Management and Business Economics*, *23*(2), 63-69.

Ross, M., Grossmann, I., & Schryer, E. (2014). Contrary to psychological and popular opinion, there is no compelling evidence that older adults are disproportionately victimized by consumer fraud. *Perspectives on Psychological Science*, 9(4), 427–442. doi:10.1177/ 1745691614535935

Rothman, G. (2007, July). The adequacy of Australian retirement incomes–new estimates incorporating the Better Super reforms. In *Proceedings of the 15th Colloquium of Superannuation Researchers, Centre for Pensions and Superannuation, University of New South Wales, Sydney*. Paper presented to the Fifteenth Colloquium of Superannuation Researchers, University of Sydney

Rothman, G., & Bingham, C. (2004, July). Retirement income adequacy revisited. In *Paper to the Twelfth Annual Colloquium of Superannuation Researchers, University of New South Wales, July* (pp. 1933-1981).

Rothwell, D. W., Khan, M. N., & Cherney, K. (2016). Building financial knowledge is not enough: Financial self-efficacy as a mediator in the financial capability of low-income families. Journal of Community Practice, 24(4), 368–388. https://doi.org/10.1080/10705422.2016.1233162

Routledge. Shaddy, F., Fishbach, A., & Simonson, I. (2021). Trade-offs in choice. *Annual Review of Psychology*, *72*, 181-206.

Ruefenacht, M., Schlager, T., Maas, P., & Puustinen, P. (2015). Drivers of long-term savings behaviour from the consumers' perspective. *International Journal of Bank Marketing*, *33*(7), 922-943.

Rusdianto, H. (2022). The Influence Of Sharia Bank Products On Interest In Saving With Community Perception As A Moderating Variable. *Economics And Business Management Journal (EBMJ)*, *1*(01), 13-22.

Rusiadi, R., Novalina, A., Trisia, R., Sijabat, W., & Rosna, B. B. (2023). Covid-19 Pandemic and Open Economy: Can it Influence the Stability of the Financial System in Sigeract Countries?. *International Journal of Artificial Intelligence Research*, *6*(1.1)

Ryff, C.D. (1995), "Psychological well-being in adult life", Current Directions in Psychological Science, Vol. 4 No. 4, pp. 99-104.

Ryu, S., & Fan, L. (2023). The relationship between financial worries and psychological distress among US adults. *Journal of Family and Economic Issues*, *44*(1), 16-33.

Sabir, D. S. A., Javed, T. A. S. A. W. A. R., Khan, S. A., & Javed, M. Z. (2021). Investment Behaviour of Individual Investors of Pakistan Stock Market with Moderating Role of Financial Literacy. Journal of Contemporary Issues in Business and Government| Vol, 27(2), 1156.

Sabirov, O. S., Berdiyarov, B. T., Yusupov, A. S., Absalamov, A. T., & Berdibekov, A. I. U. (2021). Improving Ways to Increase the Attitude of the Investment Environment. *Revista Geintec-Gestao Inovacao E Tecnologias*, *11*(2), 1961-1975.

Sabri, M. F. (2010). Savings behaviour and financial problems among college students: the role of financial literacy in Malaysia. *Cross cultural communication*, 6(3), 103-110.

Sabri, M. F., Wahab, R., Mahdzan, N. S., Magli, A. S., & Rahim, H. A. (2022). Mediating Effect of Financial Behaviour on the Relationship Between Perceived Financial

Wellbeing and Its Factors Among Low-Income Young Adults in Malaysia. *Frontiers in Psychology*, *13*, 858630.1-16

Sadia, H., Bhatti, A. A., & Ahmad, E. (2019). Developing a financial stress index for Pakistan. *Business & Economic Review*, *11*(4), 113-132.

Sadik-Zada, E. R. (2023). Resource rents, savings behavior, and scenarios of economic development. *Resources Policy*, *81*, 103258.

Sadiq, S., Raza, H., & Rasheed, M. H. (2023). Time-Varying Dynamics of Private Consumption in Pakistan. Abasyn University Journal of Social Sciences, 16(1).

Saez, E., & Zucman, G. (2020). The rise of income and wealth inequality in America: Evidence from distributional macroeconomic accounts. *Journal of Economic Perspectives*, *34*(4), 3-26.

Safari, K., Njoka, C., & Munkwa, M. G. (2021). Financial literacy and personal retirement planning: a socioeconomic approach. *Journal of Business and Socio-Economic Development*, *1*(2), 121-134.

Sagar, A. (2019). The Concept of White-Collar Crime: Nature, Causes, Political and Legal Aspects in Accountability and Way Forward. Journal of Political Studies, 26(1).

Sahu, A. (2012). *Practicing financial planning for professionals*. Xlibris Corporation.

Saleem, S., Mahmood, F., Usman, M., Bashir, M., & Shabbir, R. (2021). Determinants of Investment behaviour in mutual funds: evidence From Pakistan. Frontiers in Psychology, 12, 666007.

Salim, A., Sulphey, M. M., & Thilagar, P. (2017). A study on the relationship between long-term orientation, self-efficacy and certain behavioural aspects of women micro-entrepreneurs. *Journal of Advanced Research in Dynamical and Control Systems*, *9*(12), 764-784.

Sam, Y.T., Geetha, C., Mohidin, R. (2012). What Were the Factors that Influence the Financial Management behaviour of Undergraduates? *International Journal of Business Trends and Technology, Vol 2, Issues 1-2012. ISSN: 2249-0183*

Samudra, A., & Burghate, M. A. (2012). A Study on investment behaviour of middle-class households in Nagpur. *International Journal of Social Sciences and Interdisciplinary Research*, *1*(5), 43-54.

Samuel, M., & Sharon, M. A. (2024). A Study On Investment Behaviour Of Midlle Class Households With Reference To Dakshina Kannada Distrcit. *Educational Administration: Theory and Practice*, *30*(6), 2131-2141.

Sandhu, N., Singh, D., & Mankotia, N. (2015). Perceptual Factors Impeding Stock Market Investment-An Empirical Study. In *International Conference on Technology and Business Management,* 23 (25), 120-124.

Sandi, H., Yunita, N. A., Heikal, M., Ilham, R. N., & Sinta, I. (2021). Relationship Between Budget Participation, Job Characteristics, Emotional Intelligence and Work Motivation As Mediator Variables to Strengthening User Power Performance: An Emperical Evidence From Indonesia Government. Morfai Journal, 1(1), 36-48.

Sang, L.T., ZatulKaramah, A.B.U., Mail, R., Jamal, A.A.A., Osman, Z., Mohidin, R. (2014) *an Investigation of the Level and Determinants of Financial Literacy among Different Groups in Sabah.* Unpublished research grant report, Universiti Malaysia Sabah, Malaysia

Santosha, & Mallick, Santosha. (2016). The Behavioural Finance Aspects of Chit-Fund Scams of Odisha: Loss is almost certain Profit is Not. *International Journal of Business and Management Invention ISSN (Online):* 2319 – 8028, ISSN (Print): 2319 – 801X www.ijbmi.org || Volume 5 Issue 8 || August. 2016 || PP—71-78

Saputri, S. N., Indrawati, N. K., & Juwita, H. A. J. (2023). Determinant factors of herding behaviour and financial literacy on investment decision and risk tolerance as mediator factor. The International Journal of Social Sciences World (TIJOSSW), 5(2), 47-55.

Sari, K. K. (2024). Whistleblowing System: The Effective Solution to Prevent Financial Accounting Fraud?. Owner: Riset dan Jurnal Akuntansi, 8(2), 1746-1758.

Sarstedt M, Ringle CM and Hair JF. (2017a) Partial Least Squares Structural Equation Modeling. In: Homburg C, Klarmann M and Vomberg A (eds) *Handbook of Market Research.* Heidelberg: Springer.

Sarstedt, M., Bengart, P., Shaltoni, A. M., & Lehmann, S. (2018). The use of sampling methods in advertising research: A gap between theory and practice. *International Journal of Advertising*, *37*(4), 650-663.

Sarstedt, M., Bengart, P., Shaltoni, A. M., & Lehmann, S. (2018). The use of sampling methods in advertising research: A gap between theory and practice. *International Journal of Advertising*, *37*(4), 650-663.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. *Handbook of market research*, *26*, 1-40.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 587-632). Cham: Springer International Publishing.

Sathiyamoorthy, M. C., & Krishnamurthy, K. (2015). Investment pattern and awareness of salaried class investors in Tiruvannamalai district of Tamilnadu. *Asia Pacific Journal of Research, 1 (*26), 75-83.

Satwika, S. D., & Swardhana, G. M. (2023). CRIMINAL LIABILITY FOR PERFORMERS OF ILLEGAL ONLINE INVESTMENTS USING PONZI SCHEMES. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, *2*(11), 3317-3326.

Saunders, M., Lewis, P. & Thornhill, A. (2009) *Research Methods for Business Students,* Harlow, England: Pearson Education.

Saunders, P. (1998). Development and application of indicative budget standards for Australia. *Social Security Journal*, (1), 57-68.

Saunders, P. and Bedford, M. (2017) New minimum income for healthy living budget standards for low-paid and unemployed Australians, Social Policy Research Centre, UNSW Sydney, Sydney, SPRC Report 11/17, doi: 10.4225/53/5994e0ca804a4

Saurabh, K., & Nandan, T. (2019). Role of financial knowledge, financial socialisation and financial risk attitude in financial satisfaction of Indian individuals. *International Journal of Indian Culture and Business Management*, *18*(1), 104-122.

Savaliya, M. P., & Ayre, M. V. An Analysis of financial planning for salaried employees and strategies for tax saving. *International Journal of Advances in Engineering and Management (IJAEM)*Volume 5, Issue 4 April 2023, pp: 273-276 www.ijaem.net ISSN: 2395-5252

SBP (2021, 10 September). Warnings. https://www.sbp.org.pk/warnings.asp

Scandizzo, P. L. (1991). The effects of capital inflow on national savings. In *World Saving, Prosperity and Growth* (pp. 91-112). London: Palgrave Macmillan UK

Schmeiser, M. D., & Hogarth, J. M. (2013). Good advice, good outcomes? How financial advice-seeking relates to self-perceived financial well-being. *What a Financial Advice-Seeking Relates to Self-Perceived Financial Well-Being (May 7, 2013)*. 1-25 Electronic copy available at: https://ssrn.com/abstract=2261707

Schmidt-Hebbel, K., Webb, S. B., & Corsetti, G. (1992). Household saving in developing countries: first cross-country evidence. *The world bank economic review*, *6*(3), 529-547.

Schofield, D., Kelly, S., Shrestha, R., Callander, E., Passey, M., & Percival, R. (2012). The impact of back problems on retirement wealth. *Pain*, *153*(1), 203-210.

Schuabb, T. C., França, L. H., & Amorim, S. M. (2019). Retirement savings model tested with brazilian private health care workers. *Frontiers in psychology*, *10*, 1701.1-11

Schumpeter, J.A., 1934 (2008), The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle, translated from the German by Redvers Opie, New Brunswick (U.S.A) and London (U.K.): Transaction PublishersPages 654-655

Schwartz, A. J. (2003). Asset price inflation and monetary policy. *Atlantic Economic Journal*, *31*, 1-14.

Schwartz, S. H. (2010). Basic values: How they motivate and inhibit prosocial behaviour. In M. Mikulincer & P. R. Shaver (Eds.), Prosocial motives, emotions, and behaviour: The better angels of this nature (pp. 221–241). *American Psychological Association*. https://doi.org/10.1037/12061-012

Schwartz, Shalom H. (2003), "A proposal for measuring value orientations across nations," Questionnaire Package Of The European Social Survey, 259 (290), 261.

Schwarz, A. M., Arias, O. S., Zviniene, A., Rudolph, H. P., Eckardt, S., Koettl, J., ... & Abels, M. (2014). *The inverting pyramid: Pension systems facing demographic challenges in Europe and Central Asia*. World Bank Publications.

Scobie, G., Gibson, J., & Le, T. (2004). *Saving for retirement: new evidence for New Zealand* (No. 04/12). New Zealand Treasury Working Paper. New Zealand Treasury Working Paper, No. 04/12. 1-35.

Sconti, A., & Fernandez, D. (2023). The importance of financial literacy: Evidence from Singapore. Journal of Financial Literacy and Wellbeing, 1-19.

Seginer, R. (2009). *Future orientation: Developmental and ecological perspectives*. Springer Science & Business Media.

Sekar, M., & Gowri, M. (2015). A study on financial literacy and its determinants among generation Y employees in Coimbatore city. Great Lakes Herald, 9(1), 35-45.

Selhausen, F.M.Z. (2011). Mpanga Tea Growers Saving Survey. Retrieved from https://mmumf.files.wordpress.com/2011/06/mpanga-tea-growers-savings-survey508 2011.pdf.

Selvakumar, M., & Mahesh, N. M. (2015). A Study of Investment Behaviour of Households in Virudhunagar District. *SDMIMD Journal of Management*, *6*(2), 19-32.

Servon, L.J. and Kaestner, R. (2008), "Consumer financial literacy and the impact of online banking on the financial behaviour of lower-income bank customers", Journal of Consumer Affairs, Vol. 42No. 2, pp. 271-305.

Setiawan, P. J., & Ardison, H. (2021). Criminal Victimization on Large-Scale Investment Scam in Indonesia. *Veritas et Justitia*, *7*(1), 1-30.

Sevak, P. (2002). Wealth shocks and retirement timing: Evidence from the nineties. *Michigan Retirement Research Center Research Paper No. WP*, *27*.

Sexton, E., King-Kallimanis, B. L., Conroy, R. M., & Hickey, A. 2013; Psychometric evaluation of the CASP-19 quality of life scale in an older Irish cohort. *Quality of Life Research*, *22*, 2549-2559.

Shabbir, A., Kousar, S., & Batool, S. A. (2020). Impact of gold and oil prices on the stock market in Pakistan. Journal of Economics, Finance and Administrative Science, 25(50), 279-294.

Shaddy, F., Fishbach, A., & Simonson, I. (2021). Trade-offs in choice. *Annual Review of Psychology*, *72*, 181-206.

Shafique, M. R., Sohail, A., Nisar, S., & Munir, M. (2023). Examining Financial Decision-Making of Retail Investors in Pakistan Stock Exchange (PSX): Moderating Role of Financial Literacy. *Journal of Applied Research and Multidisciplinary Studies*, 4(1), 2-22.

Shafqat, T., Ishaq, M. I., & Ahmed, A. (2023). Fashion consumption using minimalism: Exploring the relationship of consumer well-being and social connectedness. *Journal of Retailing and Consumer Services*, *71*, 103215.

Shah, R. U. (2023). Financial Literacy & Financial Planning For Retirement In Pakistan: Case Of Academicians In Public Universities Of Kp. *Gomal University Journal of Research*, *39*(3), 330-340

Shah, S., Babar, M., Zaman, K., Rehman, A., Shah, M., & Muhammad, A. (2016). Determinants of Saving behaviour in Pakistan. *Asian Journal of Agricultural Extension, Economics & Sociology*, *14*(1), 1-13.

Shahbaz, M. (2009). Financial performance and earnings of poor people: a case study of Pakistan. Yaşar Üniversitesi E-Dergisi, 4(16), 2557-2572

Shahbaz, M., Ahmad, N., & Wahid, A. N. (2010). Savings–investment correlation and capital outflow: the case of Pakistan. Transition Studies Review, 17, 80-97.

Shahid, M. S., & Abbas, M. (2019). Does corporate governance play any role in investor confidence, corporate investment decisions relationship? Evidence from Pakistan and India. *Journal of Economics and Business*, *105*, 105839.

Shahvari, N. (2023). Financial Literacy, Economics Factors and Investing Decisions: A Study of Individual Investors in Iran. International Journal of Innovation in Management, Economics and Social Sciences. Retrieved from https://www.ijimes.ir/index.php/ijimes/article/view/

Shaik, M. B., Kethan, M., Jaggaiah, T., & Khizerulla, M. (2022). Financial Literacy and Investment Behaviour of IT Professional in India. *East Asian Journal of Multidisciplinary Research*, *1*(5), 777-788.

Shaikh, A. A., & Shah, S. M. M. (2012). Auto teller machine (ATM) fraud-case study of a commercial bank in pakistan. *International Journal of Business and Management*, *7*(22), 100.

Shaikh, A. R. H., & Kalkundrikar, A. B. (2011b). Impact on demographic factors on retail investors' investment decisions - An exploratory study. *Indian Journal of Finance*, 5 (9), 35-44.

Shaikh, A. R., & Kalkundarikar, A. (2011). Analysis of retail investor's behaviour in belgaum district, Karnataka state. *International Journal for Management Research*, *1*(2), 22-39.

Shanmugam, A., & Zainal Abidin, F. (2013). Retirement confidence and preparedness: A study among working adults in a northern state in Malaysia. *Advanced Journal of Technical and Vocational Education, 1* (4): 09-13

Shanmugham, R., & Ramya, K. (2012). Impact of social factors on individual investors' trading behaviour. *Procedia Economics and Finance*, *2*, 237-246.

Shao, C., & Li, W. (2023). Pension level, subjective wellbeing, and preference of care model among elderly people: An empirical study based on structural equation modeling. *Frontiers in Public Health*, *11*, 1104556.

Shao, J., Zhang, Q., Ren, Y., Li, X., & Lin, T. (2019). Why are older adults victims of fraud? Current knowledge and prospects regarding older adults' vulnerability to fraud. *Journal of Elder Abuse & Neglect*, *31*(3), 225-243.

Shapira, Z. and Venezia, I. (2001). Behaviour of behaviour of professionally managed and independent investors". *Journal of Banking & Finance, 25*(8), 1573-1587.

Shapiro, A. C., & Hanouna, P. (2019). Multinational financial management. John Wiley & Sons.

Shapiro, S. S. & Wilk, M. B. (1965) An analysis of variance test for normality (complete samples), *Biometrika,* 52 (3/4), 591-611.

Sharma et al. (2020). Small investor capital market investment strategy management: research findings. The Pacific Journal of Science and Technology, volume 21, issue 1, pages 179–187.

Sharma, N.K., D. Capogrossi, H. Mendon, and N. Ray. 2020. "History of Scams, Corruptions, and Low Financial Literacy in Indian Stock, Capital, and Money Markets". *Pacific Journal of Science and Technology*. 21(1):170-178.

Sharma, Rajat and Mithileshwar. Jha (2017), "Values influencing sustainable consumption behaviour: Exploring the contextual relationship," Journal of Business Research, 76, 77-88.

Sharot, T., & Sunstein, C. R. (2020). Howindividual decide what they want to know. *Nature Human Behaviour*, *4*(1), 14-19.

She, L., Rasiah, R., Turner, J. J., Guptan, V., & Nia, H. S. (2021). Psychological beliefs and financial well-being among working adults: the mediating role of financial behaviour. *International Journal of Social Economics*, *49*(2), 190-209.

Sheller, M., and J. Urry. 2006. "The New Mobilities Paradigm." Environment and Planning A: Economy and Space 38 (2): 207–226. doi:10.1068/a37268.

Sheshinski, E. (2021). The economic theory of annuities.

Sheth, J. N., & Parvatiyar, A. (2021). Sustainable marketing: Market-driving, not market-driven. *Journal of Macromarketing*, 41(1), 150-165.

Shiau, W. L., Sarstedt, M., & Hair, J. F. (2019). Internet research using partial least squares structural equation modeling (PLS-SEM). *Internet Research*, *29*(3), 398-406.

Shichor D., Sechrest D., Doocy J. (2000) Victims of investment fraud. In: Pontell H., Shichor D.(eds) *Contemporary issues in crime and criminal justice: Essays in Honor of Gilbert Geis*, NewYork, NY: Prentice Hall, pp. 87–96.

Shih, T. Y., & Ke, S. C. (2014). Determinates of financial behaviour: Insights into consumer money attitudes and financial literacy. Service Business, 8(2), 217–238. https://doi.org/10. 1007/s11628-013-0194-x

Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., &Serido, J. (2010). Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence, 39(12), 1457-1470.*

Shim, S., Serido, J., Bosch, L., & Tang, C. (2013). Financial identity-processing styles among young adults: A longitudinal study of socialization factors and consequences for financial capabilities. *Journal of Consumer Affairs, 47*(1), 128-152.

Shim, S., Xiao, J. J., Barber, B. L., & Lyons, A. C. (2009). Pathways to life success: A conceptual model of financial well-being for young adults. Journal of Applied Developmental Psychology, 30(6), 708–723.

Shin, S. H., & Kim, K. T. (2018). Perceived income changes, saving motives, and household savings. Journal of Financial Counseling and Planning, 29(2), 396-409.

Shinde, P. L. (2021). *Awareness analysis of retirement planning in finance professional-a study of personnel in the age group 25-40 years working in Pune city* (Doctoral dissertation, Tilak Maharashtra Vidyapeeth).

Shmueli G, Ray S, Velasquez Estrada JM, et al. (2016) The Elephant in the Room: Evaluating the Predictive Performance of PLS Models. *Journal of Business Research* 69(10): 4552-4564.

Shmueli G, Sarstedt M, Cheah J, et al. (2019) Predictive Model Assessment in PLS-SEM: Guidelines for Using PLSpredict. *European Journal of Marketing* forthcoming.

Shrestha, S. K., Manandhar, B., Bhattarai, P., & Shrestha, N. (2023). Impact of Financial Literacy on Personal Investment Decisions in Kathmandu Valley. INTELLIGENCE Journal of Multidisciplinary Research, 2(1), 25-34.

ShuHong, Y., Din, M., & Ranjha, K. (2017). Social protection schemes in Pakistan: an assessment of existing program. *Academic Journal of Business, Administration, Law and Social Sciences, 3*(2).

Shukla, N. S. (2016). Investment Preference of Working Women of North Gujarat Region. *International Journal for Scientific Research & Development (IJSART)*, 118 (18), 1347-1363.

Siegel, D. J. (2007). Mindfulness training and neural integration: Differentiation of distinct streams of awareness and the cultivation of well-being. *Social cognitive and affective neuroscience*, *2*(4), 259-263.

Siegel, J. J. (2021). Stocks for the long run: The definitive guide to financial market returns & long-term investment strategies. McGraw-Hill Education

Silva, A. J., & Dias, R. (2022). The role of financial status, attitudes, behaviours and knowledge for overall well-being in Portugal: The mediating role of financial well-being. *International Journal of Organizational Analysis*. Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJOA-08-2022-3385

Simon, C. J., Warner, J. T., & Pleeter, S. (2015). Discounting, cognition, and financial awareness: new evidence from a change in the military retirement system. *Economic Inquiry*, *53*(1), 318-334.

Singh, B. (1972). On the determination of economies of scale in household consumption. *International Economic Review*, 257-270.

Singh, P. (2023). *Essential of Managerial Economics*. Blue Rose Publishers.

Sinha, D., & Sinha, T. (2008). Relationships among household saving, public saving, corporate saving and economic growth in India. *Journal of International Development: The Journal of the Development Studies Association*, *20*(2), 181-186.

Sireesha, P.B., & Laxmi, S., (2013). Impact of Demographics on Select Investment Avenues: A Case Study of Twin Cities of Hyderabad and Secunderabad, India. International Journal of Marketing, Financial Services & Management Research, ISSN 2277-3622.

Sirgy, M. J. (2021). Macromarketing metrics of consumer well-being: An update. *Journal of Macromarketing*, *41*(1), 124-131.

Siu, G. A., & Hutchings, A. (2023, July). "Get a higher return on your savings!": Comparing adverts for cryptocurrency investment scams across platforms. In *2023 IEEE European Symposium on Security and Privacy Workshops (EuroS&PW)* (pp. 158-169). IEEE.

Sivaramakrishnan, S., Srivastava, M., & Rastogi, A. (2017). Attitudinal factors, financial literacy, and stock market participation. *International journal of bank marketing*, *35*(5), 818-841.

Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, G., & Västfjäll, D. 2018; Financial literacy and the role of numeracy–How individuals' attitude and affinity with numbers influence financial literacy. *Journal of behavioral and experimental economics*, *74*, 18-25.

Sklansky, J. (2023). The Work of Retirement. *International Review of Social History*, *68*(2), 301-323.

Smeeding, T. M., & Thompson, J. P. (2010). Recent trends in the distribution of income: labor, wealth and more complete measures of wellbeing. *Political Economy Research Institute Working Paper Series*, (25). Research in Labor Economics, vol. 32, pp. 1–57

Smith, A. B. (2021). *Pews, Proprietors, and Plutocracy: The Business Model of Unitarian and Congregational Religious Societies in Northern New England, 1790–1850* (Doctoral dissertation, University of New Hampshire).

Smith, J. K. (1983). Quantitative versus qualitative research: An attempt to clarify the issue. *Educational researcher*, *12*(3), 6-13.

Smith, J. P., McArdle, J. J., & Willis, R. 2010; Financial decision making and cognition in a family context. *The Economic Journal*, *120*548), F363-F380.

Smith, M. B. (2023). Personal values in the study of lives. In *The study of lives* (pp. 324-347). Routledge.

Smith, P. B., Peterson, M. F., & Schwartz, S. H. (2002). Cultural values, sources of guidance, and their relevance to managerial behaviour: A 47-nation study. *Journal of cross-cultural Psychology*, *33*(2), 188-208.

Smith, R. G. (2000). Fraud and financial abuse of older persons. *Current issues in criminal justice*, *11*(3), 273-291.

Smyth, D. J., Montgomery, E. B., & Flavin, M. (1993). Toward a theory of saving. *The economics of saving*, 47-107.

Social Security Administration. (2018). The 2018 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. Retrieved from https://www.ssa.gov/oact/tr/2018/ tr2018.pdf

Solomon, A. (2022). Bundled Risks in Insurance Markets. Available at SSRN 4212650.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The quarterly journal of economics*, *70*(1), 65-94.

Soman, D., & Zhao, M. (2011). The fewer the better: Number of goals and savings behaviour. *Journal of Marketing Research*, *48*(6), 944-957.

Sony, Alisa and David. Ferguson (2017), "Unlocking consumers' environmental value orientations and green lifestyle behaviours: A key for developing green offerings in Thailand," Asia-Pacific Journal of Business Administration, 9 (1), 37-53.

Sood, P., & Bhushan, P. (2020). A structured review and theme analysis of financial frauds in the banking industry. Asian Journal of Business Ethics, 9(2), 305-321.

Sorgente, A., & Lanz, M. (2019). The multidimensional subjective financial well-being scale for emerging adults: Development and validation studies. *International Journal of behavioural Development*, *43*(5), 466-478.

Sousa, V. E., Matson, J., & Dunn Lopez, K. (2017). Questionnaire adapting: Little changes mean a lot. *Western journal of nursing research*, *39*(9), 1289-1300.

Spash, C. L. (2021). 'The economy'as ifindividual mattered: revisiting critiques of economic growth in a time of crisis. *Globalizations*, *18*(7), 1087-1104.

Sritharan, N., & Salawati, S. (2019). Economic Factors Impact on Individual Taxpayers' Tax Compliance Behaviour in Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *9*(2), 172-182.

Starr, C., & Whipple, C. (2019, June). Risks of risk decisions. In *Risk in the Technological Society* (pp. 217-239). Routledge.

Statman, M., & Wood, V. (2004). Investment temperament. *Journal of Investment Consulting*, *7*, 55–66.

Stawski, R. S., Hershey, D. A., & Jacobs-Lawson, J. M. (2007). Goal Clarity and Financial Planning Activities as Determinants of Retirement Savings Contributions. *TheInternational Journal of Aging & Human Development*, *64*(1), 13–32. https://doi.org/10.2190/13GK-5H72-H324-16P2

Steffens, M. (2012). Covering Consumer Issues: From Scams to Preparedness. In *Reporting Disaster on Deadline* (pp. 93-104). Routledge.

Steinbach, R. (2019). Growth in low-income countries: evolution, prospects, and policies. *World Bank Policy Research Working Paper*, (8949).

Stewart, C. C., Yu, L., Glover, C., Mottola, G., Valdes, O., Wilson, R. S., . & Boyle, P. A. (2023). Well-Being and Aging-Related Decline in Financial and Health Literacy in Advanced Age. The Journals of Gerontology: Series B, Volume 78, Issue 9, September 2023, Pages 1526–

Stiroh, K. J. (2001). What drives productivity growth?. *Economic Policy Review*, *7*(1).

Stix, H. (2013). Why do individual save in cash? Distrust, memories of banking crises, weak institutions and dollarization. *Journal of Banking & Finance*, *37*(11), 4087-4106.

Straub, D., Boudreau, M. C., & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information systems*, *13*(1), 24. 380-427.

Straub, L. (2019). Consumption, savings, and the distribution of permanent income. Unpublished manuscript, Harvard University.

Struck, H. (2012). Gen Y seeks savings advice in face of down economy. Retrieved from http://www.reuters.com/article/2012/11/29/us-retirement-401k-generationyidUSBRE8AS0ZA20121129

Sturr, T., Lynn, C., & Lawson, D. (2021). Financial self-efficacy and retirement preparation. *Journal of Financial Planning*, *34*(6), 86-98.

Suh, J. B., Nicolaides, R., & Trafford, R. (2019). The effects of reducing opportunity and fraud risk factors on the occurrence of occupational fraud in financial institutions. *International Journal of Law, Crime and Justice*, *56*, 79-88.

Sultana, S. T. (2010). An empirical study of Indian individual investors' behaviour. *Global journal of finance and management*, *2*(1), 19-33.

Sultana, S. T., & Pardhasaradhi, S. (2012). An empirical analysis of factors influencing Indian individual equity investors' decision making and behaviour. *European Journal of Business and Management*, *4*(18), 50-61.

Sunstein, C. R. (2023). Hayekian behavioural economics. *Behavioural Public Policy*, *7*(1), 170-188.

Sutter, M., Kocher, M. G., Glätzle-Rützler, D., & Trautmann, S. T. (2013). Impatience and uncertainty: Experimental decisions predict adolescents' field behaviour. *American Economic Review*, *103*(1), 510-31.

Svensson G, Ferro C, Høgevold N, et al. (2018) Framing the Triple Bottom Line Approach: Direct and Mediation Effects Between Economic, Social and Environmental Elements. *Journal of Cleaner Production* 197(Part 1): 972-991.

Swasdpeera, P., & Pandey, I. M. (2012). Determinants of Personal Saving: A Study of Salaried Individuals in Thailand. *Afro-Asian J. of Finance and Accounting*, 3(1), 34. https://doi.org/10.1504/AAJFA.2012.046347

Szinovacz, M. E. (2003). Contexts and pathways: Retirement as institution, process, and experience. *Retirement: Reasons, processes, and results*, *6*, 52.

Tabachnick, B. G. & Fidell, L. S. (2007) *Using Multivariate Statistics,* 5th edition, Boston, MA: Pearson Education, Inc.

Taguchi, H., & Lowhachai, S. (2014). A revisit to the incremental capital-output ratio: the case of Asian economies and Thailand. International Journal of Economic Policy in Emerging Economies, 7(1), 35-54.

Tahir, M. S., Ahmed, A. D., & Richards, D. W. (2021). Financial literacy and financial well-being of Australian consumers: a moderated mediation model of impulsivity and financial capability. *International Journal of Bank Marketing*, *39*(7), 1377-1394.

Tahir, M. S., Shahid, A. U., & Richards, D. W. (2022). The role of impulsivity and financial satisfaction in a moderated mediation model of consumer financial resilience and life satisfaction. *International Journal of Bank Marketing*, *40*(4), 773-790.

Tahir, M., Gul, A., & Qazi, S. (2019). The causality between macroeconomic factors on stock returns: A study of Pakistan equity market. International Journal of Information, Business and Management, 11(4), 212-222.

Talan, A., Talan, P., & Ansari, A. H. (2015). Future orientation as the mediator of life satisfaction and recruitment saving attitudes and retirement savings perception. *Indian Journal of Health and Wellbeing*, *6*(5), 471.

Tam, L., & Dholakia, U. M. (2011). Delay and duration effects of time frames on personal savings estimates and behaviour. *Organizational behaviour and Human Decision Processes*, *114*(2), 142-152.

Tan, S. Y., & Taeihagh, A. (2020). Smart city governance in developing countries: A systematic literature review. *sustainability*, *12*(3), 899.

Tan, S., & Singaravelloo, K. (2020). Financial literacy and retirement planning among government officers in Malaysia. *International Journal of Public Administration*, *43*(6), 486-498.

Tang, C. F. (2010). Savings-led growth theories: A time series analysis for Malaysia using the bootstrapping and time-varying causality techniques. *MPRA Paper 27299, University Library of Munich, Germany*

Taqi, M., e Ali, M. S., Parveen, S., Babar, M., & Khan, I. M. (2021). An analysis of Human Development Index and Economic Growth. A Case Study of Pakistan. iRASD Journal of Economics, 3(3), 261-271

Tarazoodar, M., Ghasemi, M., & Mohseni, A. (2023). A Model to Identify the Impact of behavioural Biases and Financial Literacy and Their Role on Investor Decision Making ((Based on Grounded Theory). Journal of Accounting Knowledge.

Temme, D., Kreis, H., & Hildebrandt, L. (2010). A comparison of current PLS path modeling software: Features, ease-of-use, and performance. In *Handbook of partial least squares* (pp. 737-756). Springer, Berlin, Heidelberg.

Tenenhaus, M., Esposito Vinzi, V., Chatelinc, Y.-M. & Lauro, C. (2005) PLS Path Modelling, *Computational Statistics & Data Analysis*, 48 (1), 159-205.

Thakur, G. (2018). Financial awareness and investment behaviour of salaried class in Himachal Pradesh. *The Indian Journal of Commerce,62* (4), 58-63.

Thakur, G., & Sharma, D. (2021). Factors of investment preferences in physical assets: A study of public and private sector salaried class in Himachal Pradesh. International Journal of Commerce and Management Research Volume 8, Issue 4, 2022, Page No. 1-5

Thaler, R. H., & Shefrin, H. M. (1981). An economic theory of self-control. *Journal of political Economy*, *89*(2), 392-406.

Thirlwall, A. P. (1974). Inflation and the savings ratio across countries. The Journal of Development Studies, 10(2), 154-174.

Thompson, L. H. (1983). The social security reform debate. *Journal of economic literature*, *21*(4), 1425-1467.

Thulasipriya, B. (2014). Investment Pattern of Government Employees-An Empirical Study. *International Journal on Global Business Management & Research*, *3*(1), 35-41.

Thuraisingam, R., Buvanendra, S., & Fernando, K. G. K. (2022). Effect of Psychological Factors and Financial Behavior on Financial Well-being of Equity Investors in Sri Lanka.JOURNAL OF EMERGING FINANCIAL MARKETS AND POLICY ,VOL. 1, NO. 2, 46-54.

Tian, Y., Ang, J. S., Fu, P., Ma, C., & Wang, X. (2023). Does social trust mitigate insiders' opportunistic behaviours? Evidence from insider trading. *Global Finance Journal*, 100907.

Tilai, A., Brahmana, R. K., & Puah, C. H. (2022). Does Financial Planning Moderate the Relationship between Productivity and Wellbeing of Sarawak Paddy Rice Farmer? *Malaysian Journal of Consumer and Family Economics*, *29*, 74-107.

Tiwari, C. K., Yadav, P. D., & Vadgama, C. (2021). FINANCIAL BEHAVIOUR AND RETIREMENT PLANNING: MODERATING ROLE OF FINANCIAL KNOWLEDGE. *Journal of General Management Research*, *8*(1).94-99

Todorov, I., & Angelova, G. (2023). PURCHASING POWER, INCOME INEQUALITY AND ENVIRONMENTAL DEGRADATION: THE CASE OF BULGARIA. *Economic and Social Development: Book of Proceedings*, 32-42.

Tomar, S., Baker, H. K., Kumar, S., & Hoffmann, A. O. (2021). Psychological determinants of retirement financial planning behaviour. *Journal of Business Research*, *133*, 432-449.Various studies raise concerns over the pervasive poverty among women after retirement. Although muchresearch is

Tomescu-Dumitrescu, C., & Mihai, E. A. (2019). Management As Processes And Personal Factors. *Annals-Economy Series*, *3*, 143-148.

Toms, S. (2019). Financial scandals: a historical overview. *Accounting and Business Research*, *49*(5), 477-499.

Topa, G., & Herrador-Alcaide, T. (2016). Procrastination and financial planning for retirement: A moderated mediation analysis. *Journal of neuroscience, psychology, and economics*, *9*(3-4), 169.

Toyon, M. (2016). Exploring the Economic Behaviour of Households of Barisal District. *Scholar Journal of Business and Social Science*, *2*(1), 19-26.

Trivedi, J. C., & Soni, B. K. (2021). Retirement Planning: An Indian Study. *ASBM Journal of Management*, *14*(1/2), 76-99.

Tuan Mansor, T. M., Mohamad Ariff, A., & Hashim, H. A. (2020). Whistleblowing by auditors: the role of professional commitment and independence commitment. *Managerial Auditing Journal*, *35*(8), 1033-1055.

Tufail, S., & Batool, S. (2013). An analysis of the relationship between inflation and gold prices: evidence from Pakistan. *The Lahore journal of economics*, *18*(2), 1–35.

Turin, S. Y., Fine, P., & Fine, N. (2022). Wealth Management and Retirement. *Plastic and reconstructive surgery*, *149*(2), 323e-332e.

Turner, A. (2006). Pension challenges in an aging world. *Finance & Development*, *43*(3), 36-39.

Twumasi, M. A., Jiang, Y., Ding, Z., Wang, P., & Abgenyo, W. (2022). The mediating role of access to financial services in the effect of financial literacy on household income: The case of rural Ghana. *Sage Open*, *12*(1), 1 –13 21582440221079921.

UBS (2014). Couples and money: Who decides. UBS investor watch 2Q2014: Analyzing investor sentiment and behaviour retrieved from https://www.ubs.com/content/dam/WealthManagementAmericas/documents/investor-watch-2Q2014-report.pdf

Uddin, G. A., Alam, K., & Gow, J. (2016). Population age structure and savings rate impacts on economic growth: Evidence from Australia. *Economic Analysis and Policy*, *52*, 23-33.

Uddin, M. A., & Ahmar, F. (2023). The Role of Financial Literacy in Retirement Planning. Addaiyan Journal of Arts, Humanities and Social Sciences 5(3):1-7

Ueda, K., Watanabe, K., & Watanabe, T. (2020). *Consumer Inventory and the Cost of Living Index: Theory and Some Evidence from Japan* (Doctoral dissertation, The University of Tokyo).

Ullah, F., & Sepasgozar, S. M. (2020). Key factors influencing purchase or rent decisions in smart real estate investments: A system dynamics approach using online forum thread data. Sustainability, 12(11), 4382.

Ullah, I., Ahmad, W., & Ali, A. (2022). Determinants of investment decision in a Ponzi scheme: Investors' perspective on the Modaraba scam. *Journal of Financial Crime*, *29*(4), 1172-1190.

Ullah, I., Ahmad, W., Ali, A., & Ullah, S. (2021). Red flags of the Modaraba scam-a ponzi scheme in Pakistan: using victim accounts for better prevention. *Crime Prevention and Community Safety*, *23*, 278-301.

Ullah, S., Ahmad, A., & Khan, T. F. (2012). Fundraising for sustainable community development and role of social media: case of Pakistan. Marketing, 1009, 4Cs International Journal of Business, Humanities and Technology Vol. 2 No. 3; May 2012.

Ulupui, I. G. K. A., & Buchdadi, A. D. (2022). Influence of financial literacy and family education on retirement planning with saving behaviour as intervening variable: Case study at employees of angkasa pura company. *The International Journal of Social Sciences World (TIJOSSW)*, *4*(1), 352-364.

Umamaheswari, S., & Kumar, M. A. (2014). A special study on Coimbatore based salaried investors' awareness, attitude, expectation and satisfaction over their investments. *Impact: International Journal of Research in Business Management*, *2*(2), 99-108.

Umer, F., & Alam, S. (2015). Trade Openness, Size of Economy and the Saving–Investment Relationship: A Dynamic Analysis for Pakistan. South Asian Journal of Macroeconomics and Public Finance, 4(2), 233-257

Ungerer, L. M., & Strasheim, A. (2011). The moderating effect of living standards on the relationship between individual-level culture and life satisfaction: A value segmentation perspective. *Management Dynamics: Journal of the Southern African Institute for Management Scientists*, *20*(3), 25-50.

Unity, A. (2014). Financial wellbeing questionnaire—Design and validation. *Victoria, Melbourne: Australian Unity*.

Ur Rehman, H., Bashir, F., & Faridi, M. Z. Saving behaviour among Different Income Groups in Pakistan: A Micro Study. International Journal of Humanities and Social ScienceVol. 1 No. 10; August 2011 268-277.

Urban, C., Schmeiser, M., Collins, J. M., & Brown, A. (2020). The effects of high school personal financial education policies on financial behaviour. *Economics of Education Review*, *78*, 101786.

Uslu Divanoğlu, S., & Bağci, D. (2018). Determining the Factors Affecting Individual Investors' Behaviours. *International Journal of Organizational Leadership, 7*, 284-299.

Utkarsh, Pandey, A., Ashta, A., Spiegelman, E., & Sutan, A. (2020). Catch them young: Impact of financial socialization, financial literacy and attitude towards money on financial well-being of young adults. International Journal of Consumer Studies, 44(6), 531-541.

Utkus, S. P., Yang, T., & Mitchell, O. S. (2005). Better Plans for the Better-Paid: Determinants and Effects of 401 (K) Plan Design. *Pension Research Council WP2005-5*.

Uzawa, H. (1962). Economics Department of the University of Pennsylvania Institute of Social and Economic Research--Osaka University. *International Economic Review*, *3*(2), 218-232.

Vallejo-Medina, P., Gómez-Lugo, M., Marchal-Bertrand, L., Saavedra-Roa, A., Soler, F., & Morales, A. (2017). Developing guidelines for adapting questionnaires into the same language in another culture. *Terapia psicológica*, *35*(2), 181-194.

Van Ooijen, R., Alessie, R., & Kalwij, A. (2015). Saving behaviour and portfolio choice after retirement. De Economist, 163, 353-404.

Van Praag, B. M. S., & Frijters, P. (2003). The anatomy of subjective well-being. Journal of Economic behaviour and Organization, 51(1), 29–49.

Van Rooij, M. C., Lusardi, A., & Alessie, R. J. 2012; Financial literacy, retirement planning and household wealth. *The Economic Journal*, *122*560), 449-478.

Van Rooij, M., Lusardi, A., and Alessie, A. (2011) Financial Literacy and StockMarket Participation.*Journal of Financial Economics, 101 (2): 449–472.*

Varlamova, J., & Larionova, N. (2013). The Trends of Household Economic Behaviour in International Comparison. *Procedia Economics and Finance*, *5*, 737-746.

Vasagadekar, P. (2014). A research paper on investment awareness among Indian working women with reference to Pune region. *IJSER International Journal of Scientific & Engineering Research*, 5(6), 1333-1350.

Velilla, S. (1993) A Note on Multivariate Box-Cox Transformations to Normality., *Statistics and Probability Letter,* 17 (4), 259-263.

Venti, S. F. (2006). Choice, behaviour, and retirement saving. In *The Oxford handbook of pensions and retirement income*.

Vera-Sanso, P. (2012). Gender, poverty and old-age livelihoods in urban South India in an era of globalisation. *Oxford Development Studies*, *40*(3), 324-340.

Vera-Toscano, E., Ateca-Amestoy, V. and Serrano-del-Rosal, R. (2006), "Building financial satisfaction", Social Indicators Research, Vol. 77 No. 2, pp. 211-243.

Verma, R., & Wilson, E. J. (2005). Savings, Investment, Foreign Inflows and Economic Growth of the Indian Economy 1950-2001.

Vieira, B. E., de Araujo Oliveira, J. G., & Sugahara, R. N. (2023). A LIFE-CYCLE INTERGENERATIONAL MODEL CONSIDERING SOCIAL SECURITY. *Brazilian Keynesian Review*, *9*(1), 128-157.

Viktoria, V. (2011). Disaster Fraud: Financial Crime Committed Against Disaster Victims and Donators. *Műszaki Katonai Közlöny*, *21*(Special Edition), 54-69.

Villacís, J. (2010). SAVINGS, INVESTMENT AND NET AVAILABILITIES IN THE BASIC EQUATION (S= I). JEL E00. *International Journal of Accounting Information Science & Leadership*, *3*(7

Vinson, Donald, Jerome Scott, and Lawrence. Lamont (1977), "The role of personal values in marketing and consumer behaviour," Journal of Marketing, 41 (2), 44. Vol. 34, No. 2.

Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). Handbook of partial least squares: Concepts. Springer Science & Business Media: Methods and Applications.

Virani, V. (2012). Saving and Investment pattern of school teachers-A study With special reference to Rajkot City, Gujrat. *Abhinav National Refereed journal of research in Commerce and Management*, *2*(4), 2277-1166.

Visaria, P. (1980), Poverty and Living Standards in Asia: An Overview of the Main Results and Lessons of Selected Household Surveys, Living Standard Measurement Study, (World Bank Working Paper 2), Washington, D. C.

Vlaev, I., & Elliott, A. (2017). Defining and influencing financial capability. *Economic psychology*, 187-205.

Von Ungern-Sternberg, T. (1981). Inflation and Savings: International Evidence on Inflation-Induced Income Losses. *The Economic Journal*, Vol. 91, No. 364 , pp. 961-976.

Voorhees CM, Brady MK, Calantone R, et al. (2016) Discriminant Validity Testing in Marketing: An Analysis, Causes for Concern, and Proposed Remedies. *Journal of the Academy of Marketing Science* 44(1): 119-134.

Vosloo, W., Fouche, J., & Barnard, J. (2014). The Relationship Between Financial Efficacy, Satisfaction With Remuneration And Personal Financial Well-Being. *International Business & Economics Research Journal (IBER)*, 13(6), 1455–1470.

Vovk, O., Kravchenko, M., Popelo, O., Tulchynska, S., & Derhaliuk, M. (2021). Modeling the choice of the innovation and investment strategy for the implementation of modernization potential. *WSEAS transactions on systems and control*, *16*, 430-438.

Wa¨rneryd, K.-E. (1999). The psychology of saving. A study on economic psychology. Cheltenham, UK: Edward Elgar. Psychology, 19, 25–320.

Wagner, J., & Walstad, W. B. (2019). The effects of financial education on short-term and long-term financial behaviours. Journal of Consumer Affairs, 53(1), 234-259.

Waheed, H., Ahmed, Z., Saleem, Q., Din, S. M. U., & Ahmed, B. (2020). The mediating role of risk perception in the relationship between financial literacy and investment decision. *International Journal of Innovation, Creativity and Change*, *14*(4), 112-131.

Waheed, S. (2002). *Household savings in rural Pakistan: empirical and conceptual issues* (Doctoral dissertation, Göttingen, Georg-August Universität, Diss., 1997)

Waheed, S., & Akram, M. S. (2023). Twin Deficits Revisited: The Role of Fiscal Institutions in Pakistan. Journal of Economic Sciences, 2(1), 69-78.

Wahyuni, L., Chariri, A., & Yuyetta, E. A. (2021). Whistleblowing intention: Theory of planned behaviour perspectives. *The Journal of Asian Finance, Economics and Business*, *8*(1), 335-341.

Wang, H., Hu, H., & Yu, Y. (2019). Research on the Issue of the Individual behaviour and Social Atmosphere of "Keeping-Up with the Joneses" and Rural Households' Marriage Expenditure: An Analysis Based on Buck's Survey Data of Chinese Farmers during 1929-1933. *Open Journal of Social Sciences*, *7*(7), 217-227.

Wang, H., Siu, T. K., Hu, S., & Wang, N. (2024). Life-cycle model with subsistence consumption constraint and state-dependent utilities. *The North American Journal of Economics and Finance*, *73*, 102182.

Wang, P., Liu, Q., & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: a survey of the rural residents in China. Journal of cleaner production, 63, 152-165.

Wang, Y., Stuart, T., & Li, J. (2021). Fraud and innovation. *Administrative Science Quarterly*, *66*(2), 267-297.

Wangechi, P. M., & Ndung'u, P. (2019). Crime of the Powerful: A Theoretical Review. *East African Journal of Law and Ethics*, *1*(2), 35-42.

Warner, D. F., Hayward, M. D., & Hardy, M. A. (2010). The retirement life course in America at the dawn of the twenty-first century. *Population research and policy review*, *29*, 893-919.

Wasim, S. Z., Iftikhar, K., & Rizvi, S. Z. A. (2022). Relationship between Financial Inclusion, Trade, and Economic Growth. *Pakistan Journal of Social Research*, *4*(03), 675-684.

Watson, J., Lacey, D., Kerr, D., Salmon, P., & Goode, N. (2019). Understanding the effects of compromise and misuse of personal details on older people. *Australasian Journal of Information Systems*, *23*.

Watson, L. (2015). Tips to sidestep investment scams: investigations. *Personal Finance, 2015*(419), 9.

Webb, C. (2023). In defence of ordinary help: estimating the effect of early help/family support spending on children in need rates in England using ALT-SR. *Journal of Social Policy*, *52*(2), 396-423.

Weber, D., & Loichinger, E. (2022). Live longer, retire later? Developments of healthy life expectancies and working life expectancies between age 50–59 and age 60–69 in Europe. *European Journal of Ageing*, *19*(1), 75-93.

Weber, E. U., Blais, A. R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviours. *Journal of behavioural Decision Making*, *15*(4), 263-290

Webley, P., & Nyhus, E. K. (2001). Life-cycle and dispositional routes into problem debt. *British journal of psychology*, *92*(3), 423-446.

Webley, P., & Nyhus, E. K. (2006). Parents' influence on children's future orientation and saving. *Journal of Economic Psychology*, *27*(1), 140-164.

Weissberger, G. H., Nguyen, A. L., Lim, A. C., Fenton, L., Mosqueda, L., & Han, S. D. (2023). The Cognitive Correlates of Financial Literacy in Older Adults. Clinical Gerontologist, 1-9.

Wellalage, N. H., Locke, S., & Samujh, H. (2019). Corruption, gender and credit constraints: Evidence from South Asian SMEs. *Journal of Business Ethics*, *159*, 267-280.

Weller, C. E., & Tolson, M. E. (2020). The retirement savings penalty borne by women. *Challenge*, *63*(4), 201-218.

Werner, M. (2023). Occasionally binding liquidity constraints and macroeconomic dynamics. Journal of Economic Dynamics and Control, 150, 104609.

White, G. L., Banks, L., Briggs, H. E., Allen, J. L., & Lowe, T. (2021). The effects of child support payment factors on satisfaction with levels of parental involvement by noncustodial fathers. *Research on Social Work Practice*, *31*(8), 851-859.

Whitehouse, E. (2007). Pensions panorama: Retirement-income systems in 53 countries.

Whitty, M. T. (2020). Is there a scam for everyone? Psychologically profiling cyberscam victims. *European Journal on Criminal Policy and Research*, *26*(3), 399-409.

Widdowson, D., & Hailwood, K. (2007). Financial literacy and its role in promoting a sound financial system. *Reserve Bank of New Zealand Bulletin*, *70*(2).

Widjaja, I., Arifin, A., & Setini, M. (2020). The effects of financial literacy and subjective norms on saving behaviour. *Management Science Letters*, *10*(15), 3635-3642.

Widyaningtyas, R. C. (2021). *The Influence Of Income Level, Family Education, Financial Literature On Retirement Planning*. *5*(1), 74–78.

Wieland, A., Durach, C. F., Kembro, J., & Treiblmaier, H. (2017). Statistical and judgmental criteria for scale purification. *Supply Chain Management: An International Journal*, *22*(4), 321-328.

Wikartika, I., Evanthi, A., & Suwaidi, R. A. (2023). Investment Decision Making With Investment Satisfaction As An Intervening Variable: Availability Bias And Financial Literacy. JBMP (Jurnal Bisnis, Manajemen dan Perbankan), 9(1), 12-24.

Wilber, K. H., & Reynolds, S. L. (1996). Introducing a framework for defining financial abuse of the elderly. *Journal of Elder Abuse & Neglect*, *8*(2), 61-80.

Wilhelm, W. K. (2004). The fraud management lifecycle theory: A holistic approach to fraud management. *Journal of economic crime management*, *2*(2), 1-38.

Willmore, L. (2007). Universal pensions for developing countries. *World Development*, *35*(1), 24-51.

Wise, D. A. (Ed.). (2007). *Themes in the Economics of Aging*. University of Chicago Press.

Wong, A. (2019). Refinancing and the transmission of monetary policy to consumption. *Unpublished manuscript*, *20*.

Wongmonta, S. (2023). Financial Capability and Saving behaviour: Evidence From Industrial Workers in Thailand. Journal of Financial Counseling and Planning, 34(2), 251-265.

Wood, D., Thornley, B., & Grace, K. (2013). Institutional impact investing: practice and policy. Journal of Sustainable Finance & Investment, 3(2), 75-94.

Wood, M. (1998). Socio-economic status, delay of gratification, and impulse buying. *Journal of economic psychology*, *19*(3), 295-320.

Woods, C., & Wason, N. (2023). Making Well-Informed Decisions: Data Collection, Health Information, and Undergraduate Writing Instruction. *Composing Health Literacies: Perspectives and Resources for Undergraduate Writing Instruction*.

Woodyard, A. S., & Robb, C. A. (2016). Consideration of financial satisfaction: What consumers know, feel and do from a financial perspective. *Journal of Financial Therapy*, *7*(2), 4. 41-61

Wooliscroft, B., Ganglmair-Wooliscroft, A., & Noone, A. (2014). The hierarchy of ethical consumption behavior: The case of New Zealand. Journal of Macromarketing, 34(1), 57-72.

Wu, J., & Chao, Q. (2023). How older adults fulfill their retirement plans relates to positive mental health: a path model analysis of social activity and self-esteem. *Current Psychology*, 1-12.Xiao, J. J., & Anderson, J. G. (1997). Hierarchical financial needs reflected by household financial asset shares. Journal of Family and Economic Issues, 18(4), 333-355.

Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies*, *40*(6), 712-721.

Xiao, J. J., & O'Neill, B. (2018). Propensity to plan, financial capability, and financial satisfaction. *International Journal of Consumer Studies*, *42*(5), 501-512.

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. Social Indicators Research, 118(1), 415–432. https://doi.org/10.1007/s11205-013-0414-8

Xiao, J.J. and Porto, N. (2017), "Financial education and financial satisfaction: financial literacy, behaviour, and capability as mediators", International Journal of Bank Marketing, Vol. 35 No. 5, pp. 805-817.

Xiong, L., Deng, H., & Xiao, L. (2021). Does stock market liberalization mitigate litigation risk? Evidence from Stock Connect in China. *Economic Modelling*, *102*, 105581.

Xu, C. L. (2021). Time, class and privilege in career imagination: Exploring study-to-work transition of Chinese international students in UK universities through a Bourdieusian lens. *Time & Society*, *30*(1), 5-29.

Xu, H., & Wang, Y. (2021). The impacts of gender on seasonal retirement mobility and wellbeing. *Ageing & Society*, *41*(1), 187-207.

Xu, X., Young, M., Zou, L., & Fang, J. (2023). Retirement Income and Financial Market Participation in New Zealand. *International Journal of Financial Studies*, *11*(1), 24. 1-23

Yakoboski, P., & VanDerhei, J. (1996). Worker investment decisions: an analysis of large 401 (k) plan data. *EBRI Issue Brief*, (176).

Yakoboski, P., Lusardi, A., & Hasler, A. (2023). Financial Well-being and Literacy in a High-inflation Environment: the 2023 TIAA Institute-GFLEC Personal Finance Index. TIAA Institute Research Paper Series, GFLEC Personal Finance Index TIAA Institute Research Paper Series, GFLEC Personal Finance Index 2023,1-31. Available at SSRN: https://ssrn.com/abstract=4555538

Yamokoski, A. and Keister, L.A. (2006), "The wealth of single women: marital status and parenthood in the asset accumulation of young baby boomers in the United States", Feminist Economics, Vol. 12 Nos 1-2, pp. 167-194.

Yap, R. J. C., Komalasari, F., & Hadiansah, I. (2018). The effect of financial literacy and attitude on financial management behaviour and satisfaction. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *23*(3). 141-146.

Yaqoob, T., & Bibi, R. (2021). Determinants of Pakistan Stock Exchange (PSX) Index Under Optimal Conditions: A Factor Analysis Approach. *The Journal of Asian Finance, Economics and Business*, *8*(6), 153-162.

Yasin, B., Azim, M., & Lodhi, A. S. (2024). Shrinking Possibilities to Educate Youth with Compromised Socioeconomic Background: Uncertain Economic Shift of Pakistan. *Pakistan Social Sciences Review*, *8*(2), 121-130.

Yasir, A., Ahmed, A., & Anum, L. (2022). Corporate financial crimes in Pakistan–a review and analysis. *Journal of Financial Crime*, *29*(3), 1064-1077.

Yazdi, M., Kabir, S., & Walker, M. (2019). Uncertainty handling in fault tree based risk assessment: state of the art and future perspectives. *Process Safety and Environmental Protection*, *131*, 89-104.

Yeung, D. Y., & Zhou, X. (2017). Planning for retirement: Longitudinal effect on retirement resources and post-retirement well-being. *Frontiers in psychology*, *8*, 1300.

Yeung, D. Y., Ho, A. K., Lam, A. H., & Lam, A. C. (2023). An integrated model on purchase intentions of typical and tax-deductible saving products: The roles of retirement goal clarity and age. *Journal of Behavioral and Experimental Economics*, *104*, 101995.

Yousaf, I., & Ali, S. (2020). Integration between real estate and stock markets: new evidence from Pakistan. International Journal of Housing Markets and Analysis, 13(5), 887-900

Yousaf, I., Suleman, M. T., & Demirer, R. (2022). Green investments: A luxury good or a financial necessity?. *Energy Economics*, *105*, 105745.

Yu, G. B., Lee, D. J., Sirgy, M. J., & Bosnjak, M. (2020). Household income, satisfaction with standard of living, and subjective well-being. The moderating role of happiness materialism. *Journal of Happiness Studies*, *21*, 2851-2872.

Yu, L., Gao, J., Kong, Y., & Huang, L. (2023). Impact of perceived scarcity on delay of gratification: meditation effects of self-efficacy and self-control. Current Psychology, 1-9.

Zabri, S. M., Ahmad, K., & Lian, A. A. L. H. (2016). The awareness of private retirement scheme and the retirement planning practices among private sector employees in Malaysia. International Journal of Economics and Financial Issues, 6(6), 120-124.

Zahariadis, N. (2019). The multiple streams framework: Structure, limitations, prospects. In Theories of the Policy Process, Second Edition (pp. 65-92). Routledge.

Zahra, D. R., & Anoraga, P. (2021). The influence of lifestyle, financial literacy, and social demographics on consumptive behaviour. *The Journal of Asian Finance, Economics and Business*, *8*(2), 1033-1041.

Zaidi, A., Bovenberg, L., Van Ewijk, C., & Westerhout, E. (2012). Population aging and financial and social sustainability challenges of pension systems in Europe. *The future of multi-pillar pensions*, 17-45.

Zainudin, Z., & Ahmad, A. (2023). Determinants of Investor's Behaviour Towards Mudarabah Investment Deposits: A Case of Pakistan Islamic Banks. In Finance, Accounting and Law in the Digital Age: The Impact of Technology and Innovation in the Financial Services Sector (pp. 1-11). Cham: Springer International Publishing.

Zain-ul-Abdin, S., Shahzad, K., Kaleemullah, M., & Ahmad, M. (2019). Real-Estate Investor's Psychology: Heuristics and Prospect Factors. *Paradigms*, *13*(1), 1-6.

Zellweger, T. (2007). Time horizon, costs of equity capital, and generic investment strategies of firms. Family business review, 20(1), 1-15.

Zemtsov, A.A., Osipova, T.Y. and Osipova, T. (2015), "Financial wellbeing as a type of human wellbeing: theoretical review", The European Proceedings of Social and Behaviour Sciences, Vol. 7, pp. 385-392.

Zhao, X., Lynch, J. G., and Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths About Mediation Analysis. Journal of Consumer Research, 37(2), 197–206.

Zhao, Y. (2024). The Impact of Population Ageing on the Economy. *International Journal of Social Sciences and Public Administration*, *2*(2), 108-121.

Zhao, Y., & Zhu, Q. (2014). Evaluation on crowdsourcing research: Current status and future direction. *Information systems frontiers*, *16*, 417-434.

Zhu, A. Y. F., & Chou, K. L. (2018). Retirement goal clarity, needs estimation, and saving amount: evidence from Hong Kong, China. *Journal of Financial Counseling and Planning*, *29*(2), 328-342.

Zhu, X., Ao, X., Qin, Z., Chang, Y., Liu, Y., He, Q., & Li, J. (2021). Intelligent financial fraud detection practices in post-pandemic era. *The Innovation*, *2*(4).

Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/0022-3514.77.6.1271

Zom, H. I. (2023). Knowledge, Attitude and Practice of Retirement Planning Among Civil Servants in The Kaduna Metropolis, Nigeria (Doctoral dissertation).

Zulkarnain, R. (2022). Flash Estimates of Household Final Consumption Expenditure in East Java. *East Java Economic Journal*, *6*(1), 60-85.

سعيد احمد, ر. س. ا., & رغده سعيد احمد. (2023). The Moderating Role of Financial Development on the Relationship between Financial Inclusion & FDI: Case of Lower-Middle Income Group of Countries. *المجلة العلمية للدراسات والبحوث المالية والتجارية*, *4*(1), 703-749.

ANNEXURES

Questionnaire

This questionnaire is designed to collect the data for educational usage only, and all the data has been kept confidential and secret. This research is about the savings and consumption of the salaried class individual and their effect on the investment decisions made in their daily life, especially after retirement. This study with the outcome on the effect of the factors on the behaviour of the salaried class and their preferences of investment and saving and consumption.	
1. *Demographic Factors* *(select only one)*	
1. Pay Scale (SCL)	□ BPS-17□ BPS-18 □ BPS-19 □ BPS-20□ BPS-21 □ BPS-22
2. Income (TAI) Rs Total Annual Income	□100000-200000□200001-500000□ 500001-750000□750001-1000000 □ 1000001-1250000 □ 1260000-1500000□1500001 & above
3. Savings (ANS) Rs Total Annual Savings	□0 □50000-100000 □ 100001-200000 □200001-300000□ 300001-500000 □ 500000 & above
4. Age (AGE)	□21-30 years□31-40 years □41-50 years□51-60 years□60 years & above
5. Gender (GEN)	□ Male □ Female
6. Education (EDU)	□Matriculation□Intermediate □ Bachelor □ Master□ MPhil □ Ph.D.□Others
7. Family Size (FZ)	No of dependents: □0□1 □2 □3 □ 4 □5 □Above 5
8. Profession (PRO)	□ Engineering □ Medical □ Business & Accounts & Admin □Legislative □ Academics □ Law and Order □ Other
9. Job Type (JT)	□ Permanent (P) □ Contract (C)
10. Experience (EXP)	□ 1 to 5 years □ 6 to 10 years □ 11 to 15 years□ 16 to 20 years□21-25 year □26 year and above
11. Family Type (FT)	□Single □Joint
12. Family Class (FC)	□Upper-Class □ Upper Middle-Class □ Middle-Class □ Lower Middle-Class□ Lower Class
13. Province (PRO)	□ Punjab □ Sindh□ KPK □ Baluchistan□ Gilgit Baltistan□ AJK

2. ***Preferences (if)***	
1.Saving (SPREF)	□ Meet the Basic Needs □ Education of Children□ Marriage of Children Health Expenses □ Buy Property □ Pay Back Loan or Interest□ Other
2.Consumption (CPREF)	□ Meet the Basic Needs □ Education of Children □ Clothes and Fashion □ Fitness and Health □ Technology□ Food□ Entertainment □Other
3.Categorize yourself. (CAT)	□ Non-Saver + non-Investor □ Saver + non-Investor □Saver + Investor □ Non-Saver + Investor

3. ***Government Employee Policy/ Investment Benefits /Schemes***			
Satisfaction items (tick one in a row)	***Satisfied=1***	***Neutral=2***	***Not Satisfied=3***
1. Health	1	2	3
2. Education of children	1	2	3
3. House loan/ maintenance	1	2	3
4. Car loan/ transport	1	2	3
5. Other_____	1	2	3

4. ***Expenditure Type (Top Five individual Think fit)*** **percentage term.**	**Monthly (Rs%)**
1. Food	
2. Clothes and Shoes	
3. Energy (electricity, gas fuel)	
4. Goods for Housekeeping	
5. Traffic and News Service	
6. Care of Body and Health	
7. Education and Entertainment	
8. Personal Equipment	
9. Other Expenditures	
10. Saving for Building	
11. Society Deposits	
12. Bonds Loans	

5. ***Investment Avenues***			
Several investment avenues are listed below; select the appropriate column according to the level of awareness (select one in a row)	**1= Unaware**	**2= Moderately aware**	**3= Completely Aware**
1. Saving Account	1	2	3
2. Bank FD	1	2	3
3. Equity Shares	1	2	3
4. Govt Bonds / Debentures/ NCDs	1	2	3
5. Derivatives (Futures and Options Markets) / Commodity Market/ Currency Market	1	2	3
6. Mutual Funds	1	2	3
7. PPF	1	2	3
8. Other Post Office Products (NSC MIP)	1	2	3
9. Life Insurance	1	2	3
10. Money Market (Call T Bill Liquid Funds)	1	2	3
11. Tax Saving Schemes	1	2	3
12. Real Estate	1	2	3
13. Non-Conventional Avenues (Precious, Coins, Paintings)	1	2	3

6. ***Choices and Preferences for Investment (Please select any three options)***	
1. Provision for Unexpected Events	
2. Complement Pension at Retirement	
3. Children Education	
4. Support of Children/Grandchildren	
5. Pay off debts	
6. Vacations	
7. Provision for unexpected events	
8. Complement future public pensions	
9. Children's education and support)	
10. Housing	
11. Vehicles	
12. Durable Goods	

7. *Barriers to Investment individual Feel are Present (Please select any three options)*	
1. Perceived risk of investments	1
2. Financial scandals and corruption	2
3. Economic crisis	3
4. Perceived risk of financial intermediaries -	4
5. Lack of knowledge to analyze investment alternatives	5
6. Complement future public pensions	6
7. Gaining lower returns	7
8. Risk diversification and risk reduction	8
9. Pay fewer taxes	9

please select (tick) the best option among the five-point scale having a value from 1 to 51 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Disagree

LS	**8. *Living Standards***					
A. **Social Cost & Saving**		**SD**	**D**	**N**	**A**	**SA**
LSC1	Money matters for my respect in the society	1	2	3	4	5
LSC 2	People get impressed by me when study have new things	1	2	3	4	5
LSC 3	My standards of living make me proud in society	1	2	3	4	5
LSC 4	The social behaviour of others affects my savings	1	2	3	4	5
LSC 5	My standards of living are up to the mark of society	1	2	3	4	5
LSC 6	My social behaviour affects the savings	1	2	3	4	5
LSC 7	People that are important to me think study should save regularly	1	2	3	4	5
LSC 8	Mostindividual like me to save regularly	1	2	3	4	5
B. **Culture & saving**		**SD**	**D**	**N**	**A**	**SA**
CS1	I bargain about the cost of anything study buy	1	2	3	4	5
CS2	I often have difficulty in making decisions about spending on culture	1	2	3	4	5
CS3	My social behaviour affects the savings	1	2	3	4	5
CS4	My savings are for cultural adaptations	1	2	3	4	5
CS5	Cultural cost affects my savings	1	2	3	4	5
CS6	It is necessary for cultural living and to save for it	1	2	3	4	5

9. *Saving Behaviour (5 Likert scales)*						
A. **Inflation INFS**		**SD**	**D**	**N**	**A**	**SA**
INFS1	Expected future rise in prices is the cause of my savings after retirement	1	2	3	4	5
INFS2	I know future uncertainty to save more after retirement	1	2	3	4	5
INFS3	Saving for the bad time is essential for the life of a retiree	1	2	3	4	5
INFS4	Inflation affects my saving goals after retirement	1	2	3	4	5
B. Financial knowledge FKS		**SD**	**D**	**N**	**A**	**SA**
FKS1	I am aware that the value of money will depreciate over time and may decrease my saving after retirement	1	2	3	4	5
FKS2	Employee Provident Fund (EPF) or Public Pension scheme is the only source of income after my retirement	1	2	3	4	5
FKS3	I am aware of other investment alternatives (stocks, properties, etc.) after retirement	1	2	3	4	5
FKS4	I don't know the inflation rate is calculated	1	2	3	4	5
FKS5	I understand the process of compound interest gain as a return after retirement	1	2	3	4	5
FKS6	I am aware that participating in many different investments reduces my investment risk	1	2	3	4	5
FKS7	Presently study am not aware of the retirement benefits offered by my company/ government	1	2	3	4	5
FKS8	I cannot clearly distinguish between retirement funds and other funds (s) (child education fund, medical fund, etc.)	1	2	3	4	5
C. The behaviour of Saving Behaviour BSP		**SD**	**D**	**N**	**A**	**SA**
BSP1	I have good behaviour towards saving money for future retirement plan	1	2	3	4	5
BSP2	I have good behaviour towards spending money and responsibly saving for retirement	1	2	3	4	5
BSP3	I find it easy to save money from my salary	1	2	3	4	5
BSP4	I enjoy like to save money	1	2	3	4	5
BSP5	I am always organized regarding managing money for future use	1	2	3	4	5
BSP6	Saving regularly is beneficial (desirable)	1	2	3	4	5
BSP7	My regular savings will result in a more secure financial future for my family and me	1	2	3	4	5

10. *Consumption Behaviour PFS(5 Likert scale*						
A. **The behaviour of Consumption Behaviour** BCP		**SD**	**D**	**N**	**A**	**SA**
BCP1	I always read the terms and conditions on the use of financial products/services in daily life	1	2	3	4	5
BCP 2	I always consume more on sale items or discounted items	1	2	3	4	5

BCP 3	I always look to spend money on my nonfood items	1	2	3	4	5
BCP 4	I always keep aside some money for future use after retirement	1	2	3	4	5
BCP 5	I always choose financial products that suit my needs and conditions	1	2	3	4	5
B. **Inflation Consumption Behaviour INFC**		**SD**	**D**	**N**	**A**	**SA**
INFC1	My consumption increases with the change in inflation	1	2	3	4	5
INFC2	I consume more due to the expected rise in future prices	1	2	3	4	5
INFC3	After retirement, Consumption must be reduced on an item when its price increases	1	2	3	4	5
INFC4	After retirement for an increase in the general price level, my consumption remains the same	1	2	3	4	5
INFC5	After retirement increase in Price the level is the major cause of my high consumption	1	2	3	4	5

11. *Retirement Planning*						
A. **Goal Clarity GCRP**		**SD**	**D**	**N**	**A**	**SA**
GCRP1	I set specific goals for much study will need to save for retirement	1	2	3	4	5
GCRP2	I think a great deal about the quality of life after retirement	1	2	3	4	5
GCRP3	I have a clear vision of life will be after retirement	1	2	3	4	5
GCRP4	I set clear goals for gaining information about and after retirement	1	2	3	4	5
GCRP5	I discussed retirement plans with my spouse's friend or financial consultant	1	2	3	4	5
B. Personal Needs PNRP		**SD**	**D**	**N**	**A**	**SA**
PNRP1	I consume my health and children's education a lot	1	2	3	4	5
PNRP2	I consume less while keeping my future needs	1	2	3	4	5
PNRP3	My consumptions are only for my basic needs	1	2	3	4	5
PNRP4	My personal needs are fulfilled by my savings	1	2	3	4	5

12. *Investment Decisions*						
A. Personal behaviour of Investors PBID		**SD**	**D**	**N**	**A**	**SA**
PBID1	My family structure and social environment affect my investment decisions	1	2	3	4	5
PBID2	Publications with financial content presented with means of communication like the internet and media positively influence my investment behaviour	1	2	3	4	5
PBID3	I tend to prefer low-risk investments as they get older	1	2	3	4	5
PBID4	I closely follow investment tools' performance of return	1	2	3	4	5
PBID5	I have a high level of self-confidence in their investment decisions	1	2	3	4	5
PBID6	My religious and political views affect their investment decisions	1	2	3	4	5

PBID7	I make payments (individual loan credit card etc.) in time for investment	1	2	3	4	5
PBID8	People that are important to me think that study should invest regularly	1	2	3	4	5
PBID9	Mostindividual always like to invest regularly	1	2	3	4	5
B. Preferences and Knowledge Level of Investors (PKIDM)		**SD**	**D**	**N**	**A**	**SA**
PKIDM1	I mostly reside in the countryside	1	2	3	4	5
PKIDM2	I have sufficient information regarding investment tools	1	2	3	4	5
PKIDM3	I discriminate between domestic and foreign banks in their bank preference	1	2	3	4	5
PKIDM4	I prefer long-term investments rather than short-term investments	1	2	3	4	5
PKIDM5	I prefer traditional investment tools (real estate gold etc.)	1	2	3	4	5
PKIDM6	I prefer less risky investment tools (bank deposit bonds etc.) to risky investment tools (stock certificates etc.)	1	2	3	4	5
PKIDM7	I tend to reduce risk through portfolio diversification	1	2	3	4	5
PKDM8	The gold account presented by the banks attracts the attention of investors	1	2	3	4	5
C. **General Factor Affecting Investment Decisions (**GFDM)		**SD**	**D**	**N**	**A**	**SA**
GFDM1	Government policies (contributions, tax reductions, etc.) affect investor behaviour in a positive way	1	2	3	4	5
GFDM2	Investors attach importance to innovations in banking and financial services	1	2	3	4	5
GFDM3	An increase in income level raises investor interest in financial instruments	1	2	3	4	5
GFDM4	Investors' income levels affect the maturity date of the investments they make	1	2	3	4	5
GFDM5	Investors consider their past investment experiences while making investment decisions	1	2	3	4	5
GFDM6	Investors are influenced by an expert (consumer or investment representatives) and other investors' decisions while making investment decisions	1	2	3	4	5
GFDM7	Economic stability is a key element affecting investment decisions for investors	1	2	3	4	5

13. *Scams Investment*						
A. Return on Investment:		**SD**	**D**	**N**	**A**	**SA**
SCROI1	Investments with unreasonably high returns attract me well to invest	1	2	3	4	5
SCROI2	Investment offering inconsistent return is fake	1	2	3	4	5
SCROI3	Investment offering tax-free return is beneficial for me to invest	1	2	3	4	5
***B.* Marketing of Investment**		**SD**	**D**	**N**	**A**	**SA**

SCMI1	Investment offered individually with unreasonable promises attracts me well	1	2	3	4	5
SCMI2	Investment focusing on the recruitment of new members makes me invest	1	2	3	4	5
SCMI3	Investment by which its member recruitment and activities are like multi-level marketing, and study will do surely	1	2	3	4	5
SCMI4	I get involved in the Investment involving salespeople that tend to force potential investors to make an immediate decision about the investment	1	2	3	4	5
C. **Procedure of Investment**		**SD**	**D**	**N**	**A**	**SA**
SCPI1	Investment is safe in the Investment do not carry their principles of fairness and prudence in the investment sectors	1	2	3	4	5
SCPI2	Investment is safe in the Investment in goods or commodities, but the quality is not consistent with its prices	1	2	3	4	5
SCPI3	Investment is safe in the Investment by which its products are not clearly registered	1	2	3	4	5
SCPI4	Investment is safe in the Investment without any clear documentation	1	2	3	4	5
D. **Investment Management Information**		**SD**	**D**	**N**	**A**	**SA**
SCIMI1	Mostly any Investment is a scam with no clear explanation of the investment funds are managed	1	2	3	4	5
SCIMI2	Mostly any Investments is a scam without any information on the structure of management ownership and business and the address of the companies	1	2	3	4	5
SCIMI3	Mostly any Investment is a scam providing a bonus, and the payment of the bonus depends on the recruitment of new members	1	2	3	4	5
SCIMI4	Mostly any Investment is a scam offered by complex strategies that is difficult to understand	1	2	3	4	5

Questionnaire letter

To Dated: 21-05-2021.
The Chairman
Higher Education Commission Pakistan
Islamabad, Pakistan

Subject: <u>REQUEST FOR FILLING OUT QUESTIONNAIRE FOR Ph.D. ECONOMICS, ACADEMIC PURPOSE ONLY.</u>

Dear Sir,

1. **Introduction:** study am a Ph.D. Scholar at the University of Malaysia Sarawak Campus Malaysia. Name WAQAR MUNIR S/o MUHAMMAD MUNIR, Student No 19010027, Ph.D. Economics session 2019 to 2022. (Credential Letter is attached). Study aim researching government employees s of Federal Government Pakistan from Grade BPS-17 to BPS-22 or Equivalent under the title "Effect of saving and consumption Behaviour on the investment decision of salaried class; a case of federal employees of Pakistan."

2. **Scope and Importance:** This research is about solving the retirement and prevailing scams of investment in Pakistan. Losing money/ savings, especially in the salaried class, is a serious issue nowadays, even for the public. This study will help the governing financial bodies, based on the recommendation of this study, to resolve the issue and take measurements and suggestions for the betterment of the salaried class during and after retirement life. Furthermore, this study will find the effect of the salaried class's savings and consumption Behaviour on investment decisions as inflow of money by their savings and retirement benefits to living after retirement living standards up to mark.

3. I sent this questionnaire to get data with the cover and the letter of UNIMAS. However, Federal government organizations have requested that this be routed through HEC, Pakistan, or its permission or covering letter. Therefore, it has taken more than four months for no response received due to Cov-19 not approaching offices.

4. **About Questionnaire:** This questionnaire will take 10 to 15 minutes only. It can be accessed from the link below, barcode scan, or hard-form—no need for identity in fulfilling this questionnaire. (Questionnaire copy attached for your review. (Note: for BPS-17 to BPS-22 only). Maximum participants are required for this survey. (photocopy or online response can be submitted)

5. Please, it is a humble request to your Excellency in data collection for my thesis and research work to complete my degree on time. Your contribution and coordination are highly appreciated in this regard. Please, see the attachment for the data permission letter and student's credentials. *(Can be verified from dean FEB, UNIMAS, Sarawak).*

Truly Yours
Waqar Munir
Street no 17 Wahdat Colony
near Kashmiri Bazaar,
Gujranwala

+92-0331-6500676.

Cover Letter of Questionnaire

The Research Survey on

Effect of Saving and Consumption Behaviour on the Investment Decision of Salaried Class; a Case of Pakistan

We are conducting research that empirically examines whether the salaried class individuals' savings and consumption Behaviour affect their investment decisions after retirement. This study will discuss the impact of behaviour and preferences of salaried class individuals saving and consumption Behaviour towards investment decisions and living standards and retirement planning during the job and after retirement.

This ground-breaking research on federal government employees Pakistan service sector is conducted on a primary hands-on approach. the study have short-listed esteem organizations based on their creditability, performance, size structure, and qualified human resource to accomplish thisdata collection goal. the study request individual to fill in an enclosed questionnaire.

This survey has 13 parts, and part 1 consists of demographic information. Tick in the relevant information only. Part 2 to part 7 contain the personal preferences and information; select the most applicable and suitable option. Parts 8 to 13 consist of individuals who agreed not to agree on options.

We assure individual that this data has been purely used for academic research purposes and is confidential. Further, this research will enable us to determine the savings and investment in Pakistan's economy and the individuals' problems in investing and savings. Therefore, the contribution has been highly appreciated and will bring new horizons to the economy of Pakistan.

Sincerely

WAQAR MUNIR

Ph.D. Scholar

FEB UNIMAS

Sarawak Malaysia

Introduction

The researcher is a Ph.D. scholar at the University of Malaysia Sarawak Campus. The researcher needs your time in fulfilling this questionnaire as part of the thesis report for academic purposes. As per data secrecy is ensured. This data will help in completing studies and research on time. Therefore, it is requested that fulfilling this questionnaire help in the study. This study will find the effect of the salaried class savings and consumption Behaviour on investment decisions as inflow of money by their savings and retirement benefits towards living standards up to mark.

Scope and importance

This research is about solving the retirement planning issues and prevailing Investment scams in Pakistan; losing money/ savings primarily by the salaried class is a serious issue nowadays, even for the public. Therefore, this study will help the government and policymakers based on this study's recommendations to resolve the issue and take measurements and suggestions for better-salaried classes during and after retirement life.

Ethical consideration

This questionnaire will take 10 to 15 minutes only. It can be accessed from the link below, barcode scan, or attached hard-form. There is no need to show any identity in fulfilling this Questionnaire (Questionnaire copy attached for your review (Note: for BPS-11 to BPS-22 only).

Declaration

By fulfilling this questionnaire, individual declare that **No** burden, cost, and pressure are applied to data collection. All data usage and purpose are introduced and informed well.

Name signatures

Fakulti Ekonomi dan Perniagaan
Faculty of Economics and Business
Dekan / *Dean*

UNIMAS/NC-22/04-18 Jld.3(33)

23rd February 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

DATA COLLECTION: Waqar Munir (PhD in Economics)

Please be informed that Mr Waqar Munir is our PhD student, enrolled in 2019 under the supervision of Dr Jerome Kueh Swee Hui. Hisarea of research is Financial Economics. The title of his PhD thesis is "Effect of Saving and Consumption Patterns on the Investment Decision of Salaried Class; a Case of Federal Employees of Pakistan". He has passed his PhD Proposal Defense in August 2020.

If I can be of any further assistance, or provide you with any further information, please do not hesitate to contact me.

Thank you very much.

Warm Regards,

Associate Professor Dr Rossazana Ab Rahim
Dean

MSC-Status

94300 Kota Samarahan, Sarawak, MALAYSIA | Tel + 60 82 584 455 | Fax + 60 82 583 999

www.unimas.my

Annexure II

Original	*Adapted & adopted*
Investment Scams(Chariri, A., Sektiyani, W., Nurlina, N., & Wulandari, R. W. (2018).)	
Return on Investment:	***Return on Investment:***
1. Investments with unreasonably-high returns	1. Investments with unreasonably-high returns attracts me well to invest
2. Investment offering inconsistent return	2. Investment offering inconsistent return is fake
3. Investment offering tax-free return	3. Investment offering tax-free return is beneficial for me to invest
Investment Offering Styles:	**Marketing of Investment**
1. Investment offered individually with unreasonable promises	1. Investment offered individually with unreasonable promises attracts me well
2. Investment focusing on recruitment of new members	2. Investment focusing on recruitment of new members make me to invest.
3. Investment by which its member recruitment and activities is similar to multi-level marketing	3. Investment by which its member recruitment and activities is like multi-level marketing, and I will do surely.
4. Investment involving salespeople that tend to force potential investors to make an immediate decision about the investment	4. I get involved in the Investment involving salespeople that tend to force potential investors to make an immediate decision about the investment
Form of Investment:	**Procedure of Investment**
1. Investments without reasonable underlying cores of business, in accordance with principles of fairness and prudence in financial investment sectors	1. Investment is safe in the Investment do not carry their principals of fairness and prudence in the investment sectors
2. Investment in goods or commodities but the quality is not consistent with its prices	2. Investment is safe in the Investment in goods or commodities, but the quality is not consistent with its prices
3. Investment by which its products are not clearly registered	3. Investment is safe in the Investment by which its products are not clearly registered
4. Investment without any clear documentation	4. Investment is safe in the Investment without any clear documentation
Investment Management:	**Investment Management Information**
1. Investments with no clear explanation on how the investment funds are managed	1. Mostly any Investment is a scam with no clear explanation on how the investment funds are managed.
2. Investments without any information on the structure of management, ownership, and business, and the address of the companies	2. Mostly any Investments is a scam without any information on the structure of management, ownership, and business, and the address of the companies
3. Investment providing bonus and the payment of bonus depends on recruitment of new members	3. Mostly any Investment is a scam providing bonus and the payment of bonus depends on recruitment of new members

4. Investment offered by complex strategies that is difficult to understand	4. Mostly any Investment is a scam offered by complex strategies that is difficult to understand
Retirement Planning (Shanmugam & Abidin, 2019; Zabri et al., 2016).	
Goal Clarity	**Goal Clarity**
1. I set specific goals for how much I will need to save for retirement.	1. I set specific goals for how much I will need to save for retirement.
2. I think a great deal about quality of life in retirement.	3. I think a great deal about quality of life in retirement.
4. I have a clear vision of how life will be in retirement.	5. I have a clear vision of how life will be in retirement.
6. I set clear goals for gaining information about retirement.	7. I set clear goals for gaining information about retirement.
8. I discussed retirement plans with my spouse, friend or financial consultant.	9. I discussed retirement plans with my spouse, friend or financial consultant.
Attitude towards money	**Personal Needs (money)**
1. Payment for children's higher education	1. You consume on your health, children education a lot
2. I look forward to retirement	2. You consume less keeping the future needs
3. Cost of financial obligations	3. Your consumption are only your basic needs
4. Money allows one to access many luxuries	4. Your personal are fulfilled by your savings
Saving Behaviour (shanmugam & abidin, 2019), Shanmugam, A., & Zainal Abidin, F. (2013).	
Altinirmak, et al. (2017)	
1. I am always looking for ways to save money.	1. Expected future rise in prices is the cause of your savings for retirement.
2. I have spent all my savings in the past year.	2. You know future uncertainty to save more for retirement.
3. I have money available in the event of an economic depression.	3. Saving for the bad time is essential for life of a retiree.
4. I save to meet future social obligations	4. Inflation affects your saving goals after retirement.
Financial knowledge (Shanmugam, Arunagiri and Zainal Abidin, Faudziah (2013))	
1.I am aware that the value of money will depreciate over time	1. I am aware that the value of money will depreciate over time to my saving for retirement.
2.Employee Provident Fund (EPF) or Public Pension scheme is the only source of income during my retirement.	2. Employee Provident Fund (EPF) or Public Pension scheme is the only source of income during my retirement.
3.I am aware of other investment alternatives (stocks, properties, etc).	3. I am aware of other investment alternatives (stocks, properties, etc.) after retirement.

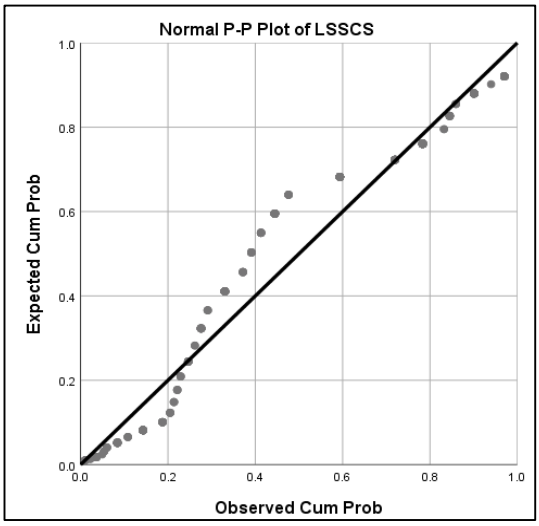
4.I don't know how the inflation rate is calculated.	4. I don't know how the inflation rate is calculated.
5.I understand the process of compound interest.	5. I understand the process of compound interest gain a return after retirement.
6.I am aware the participating in many different investments reduces my investment risk.	6. I am aware the participating in many different investments reduces my investment risk.
7. am not aware of my retirement benefits offered by my company/ government.	7. I am not aware of my retirement benefits offered by my company/ government.
8.I cannot clearly distinguish between retirement fund and other fund(s) (child education fund, medical fund etc)	8. I cannot clearly distinguish between retirement fund and other fund(s) (child education fund, medical fund etc.)
Behavior of Saving patterns Hamza N & Arif I (2019)	
1. Members of this household have good attitude towards saving money	1. I have good behavior towards saving money for future retirement plan.
2. Members of this household have good attitude towards spending money responsibly	2. I have good behavior towards spending money responsibly saving for retirement.
3. In this household, members find it easy to save money	3. I find it easy to save money from my salary.
4. In this household, members enjoy spending money	4. I enjoy like to save money.
5. Members of this household are always organized in regard to managing money	5. I am always organized about managing money for future.
6. Members of this household always keep aside some money for their future use	6. Saving regularly is beneficial (desirable)
7. Members of this household always choose financial products that suits their needs and	7. My saving regularly will result in a more secure future financial life for me and my family
Consumption patterns Hamza, N., & Arif, I. (2019).	
1. In this household, members are capable of evaluating the different financial products and services	1. I always read the terms and conditions on use of financial products/services
2. In this household, members have the ability to decide what financial services to choose	2. I always consume more on sale items or discounted items.
3. In this household, members can easily understand simple financial terms	3. I always look to spending money on my nonfood items.
4. In this household, we always read the terms and conditions on use of financial products/services	4. I always keep aside some money for future use retirement life.

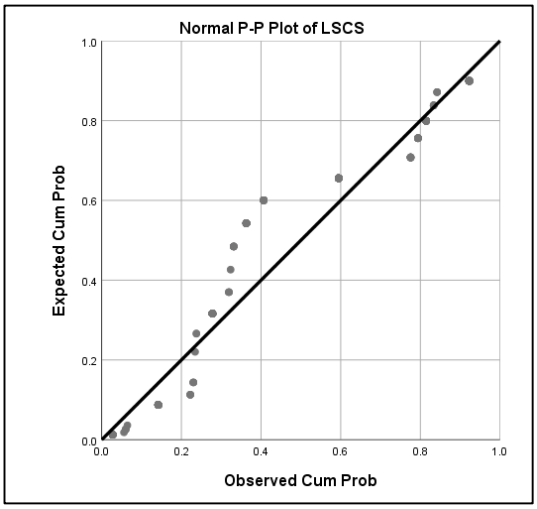
5. In this household, members always look to spending money	5. I always choose financial products that suits their needs and conditions
Inflation INFC	
1. I purchase less expensive products having similar features instead of expensive one.	1. Your consumption increases with change in inflation for expensive products
2. I have money available in the event of an economic depression.	2. You will consume more due to expected rise in future prices
3. I look at price before purchasing a product.	3. After retirement Consumption must be reduced on item when its price increases.
4. Inflation prevents me to purchase the mostly known branded products	4. After retirement for increase in prices, your consumption remains same.
Investment Decision Shanmugam and Abidin, F. (2013), Chavali and Mohanraj (2016), Islamoğlu, Apan and Ayvalı (2015).	
Personal Behavior of Investors Islamoğlu, Apan and Ayvalı (2015).	
1. Investors' family structure and social environment affect their investment decisions	1. yours's family structure and social environment affect their investment decisions
2. Publications with financial content presented with means of communication like internet and media positively influence investor behaviour	2. Publications with financial content presented with means of communication like internet and media positively influence investor behavior
3. Risk coverage is reason for investment	3. You tend to prefer low-risk investments as they get older.
4. Investors closely follow investment tools' performance of return	4. your closely follow investment tools' performance of return
5. Investors have high level of self-confidence in their investment decisions	5. you have high level of self-confidence in their investment decisions
6. Investors' religious and political views affect their investment decisions	6. your religious and political views affect their investment decisions
7. Investors make their payments (individual loan, credit card etc.) in time	7. You make payments (individual loan, credit card etc.) in time for investment.
8. People that are important to me think I should invest regularly	8. People that are important to me think I should invest regularly
9. Mostindividual like me to invest regularly	9. Mostindividual like me to invest regularly
Preferences and Knowledge Level of Investors Islamoğlu, Apan and Ayvalı (2015).	
1. You mostly reside in countryside	1. You mostly reside in countryside
2. Investors have sufficient information regarding investment tools	2. You have sufficient information regarding investment tools

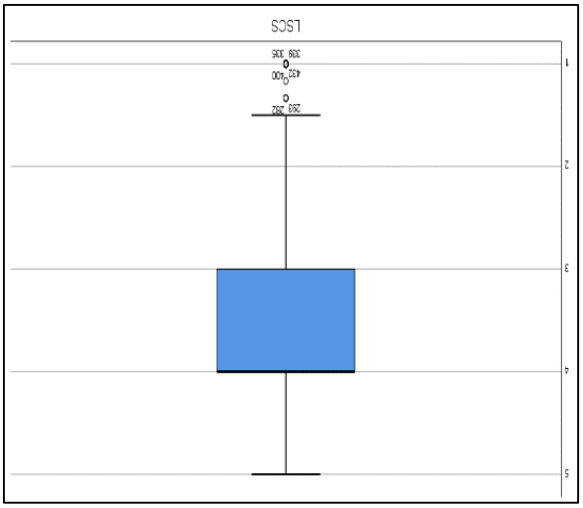
3. Investors discriminate between domestic and foreign banks in their bank preference	3. You discriminate between domestic and foreign banks in their bank preference
4. Investors prefer long-term investments rather than short-term investments	4. You prefer long-term investments rather than short-term investments
5. Investors prefer traditional investment tools (real estate, gold etc	5. You prefer traditional investment tools (real estate, gold etc.)
6. You prefer less risky investment tools (bank deposit, bond, etc.) to risky investment tools (stock certificate, etc.)	6. You prefer less risky investment tools (bank deposit, bond, etc.) to risky investment tools (stock certificate, etc.)
7. Investors tend to reduce risk through portfolio diversification	7. you tend to reduce risk through portfolio diversification
8. Gold accounts presented by the banks attract the attention of investors	8. Gold account presented by the banks attract the attention of investors
General Factor Affecting Investment Decisions Islamoğlu, Apan and Ayvalı (2015).	
1. Government policies (contributions, tax reductions etc.) affect investor behavior in a positive way	1. Government policies (contributions, tax reductions etc.) affect investor behavior in a positive way
2. Investors attach importance to innovations in banking and financial services	2. Investors attach importance to innovations in banking and financial services
3. Increase in income level raises investor interest in financial instruments	3. Increase in income level raises investor interest on financial instruments
4. Investors' income levels affect the maturity date of the investments they make	4. Investors income levels effect the maturity date of the investments they make
5. Investors consider their past investment experiences while taking investment decisions	5. Investors consider their past investment experiences while taking investment decisions
6. Investors are influenced by experts' (consumer or investment representatives) and other investors' decisions while taking investment decisions	6. Investors are influenced by expert (consumer or investment representatives) and other investors' decisions while taking investment decisions
7. Economic stability is a key element affecting investment decisions for investors	7. Economic stability is a key element effecting investment decision for investors
Living Standards Zabri et al. (2016)	
Social cost	
1. Money makesindividual respect you	1. Money matters for your respect in society.
2. Money allows me to buy certain things to impress people	2. People get impress by you when u have new things.
. I pay my bills on time to avoid penalty 2.	3. Your standards of living make you proud in society,

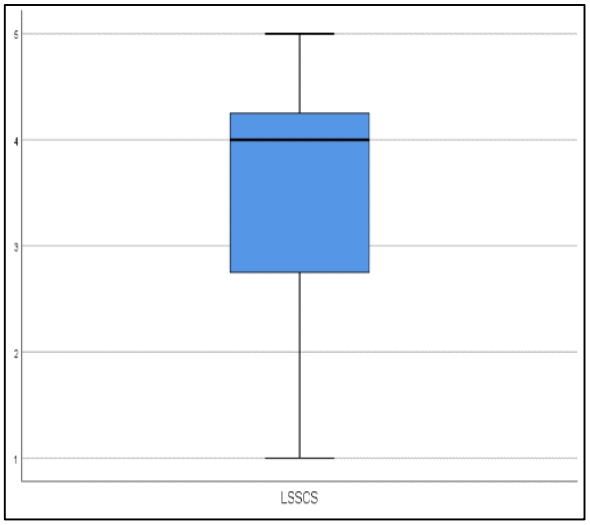
3. b. d. Cost of financial obligations	4. Social behavior of others affects your savings
4. Keeping up to current standard of living	5. Your standards of living are up to the mark of society
5. b. The more money I have, the easier for me to get along	6. Your social behavior affects the social cost
6. d. Retirement enables me to pursue my unfulfilled dreams	7. People that are important to me think I should save regularly for retirement
. c. I am proud of my ability to save money	8. Mostindividual like me save regularly
Culture Saving	
1. I bargain about the cost of almost everything I buy	1. I bargain about the cost of everything I buy
2. I often have difficulty making decisions about spending	2. I often have difficulty making decisions about spending on culture.
3. b. Living expenses after retirement	3. Your social behavior affects the savings for culture.
4. a. I set specific goals for how much will I need to save for retirement	4. Your savings are for cultural adaptations
5. a. I am proud of my financial victories	5. Cultural cost affects your savings
6. b. I think a great deal about quality for life in retirement	6. It is necessary for cultural living and save for it.

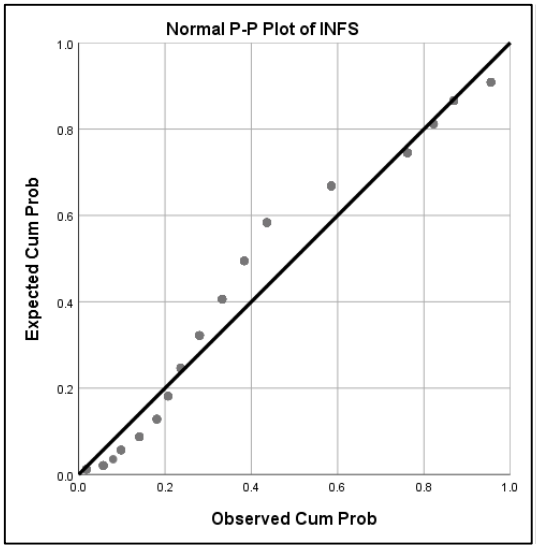
P-P and Q-Q Plots

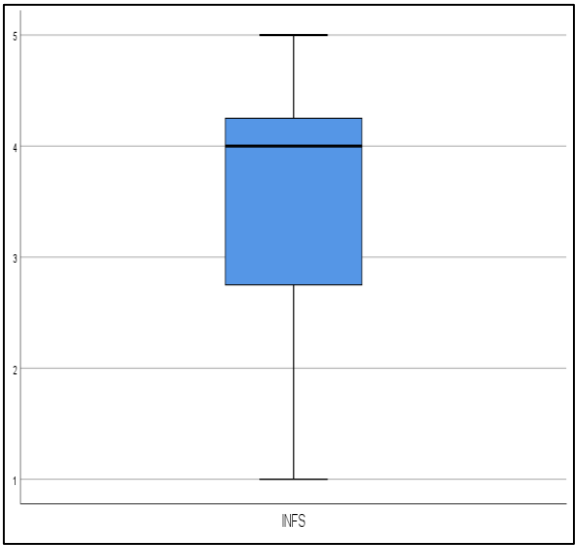


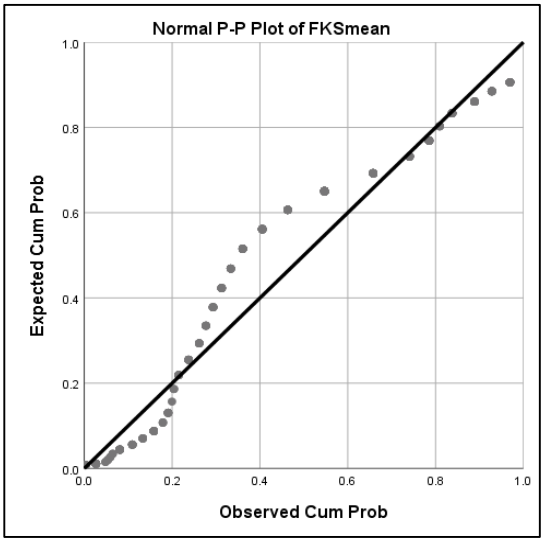


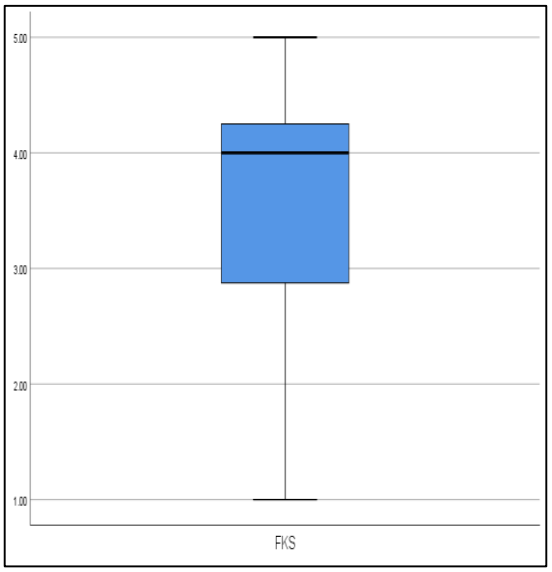


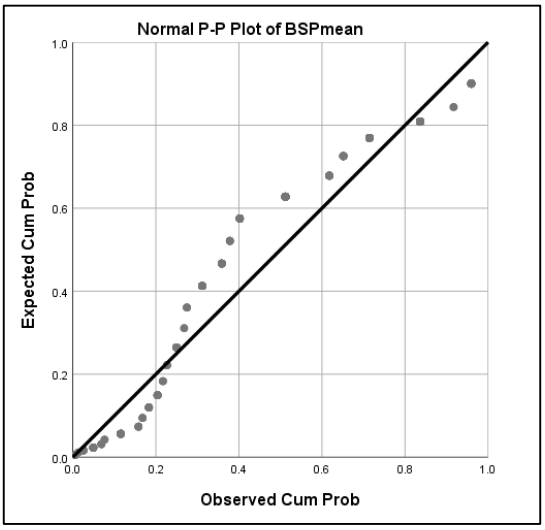


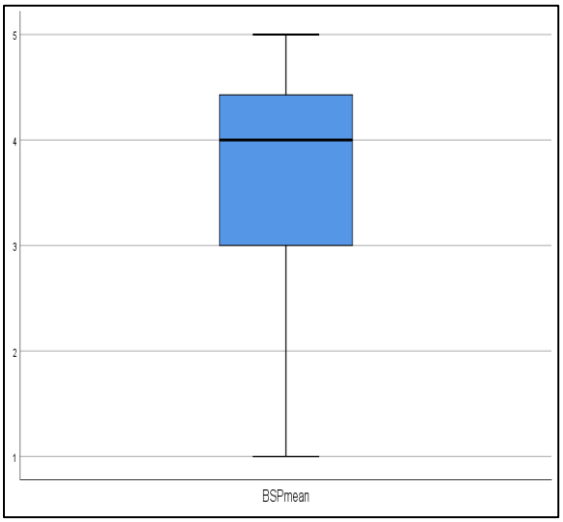

Normal P-P Plot of INFS
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

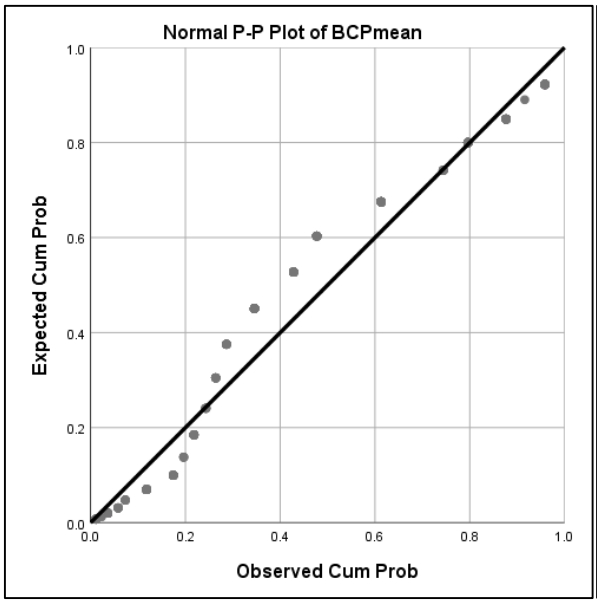

5
4
3
2
1
INFS

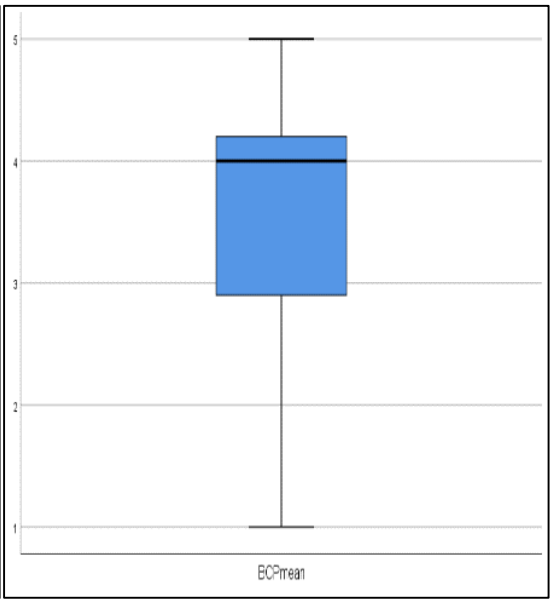

Normal P-P Plot of FKSmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

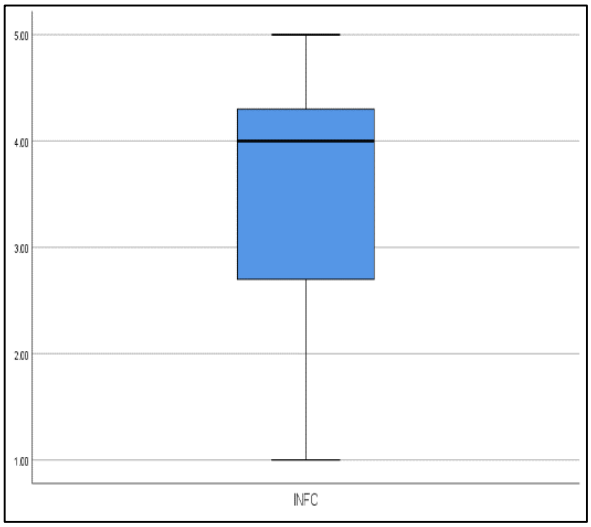

5.00
4.00
3.00
2.00
1.00
FKS

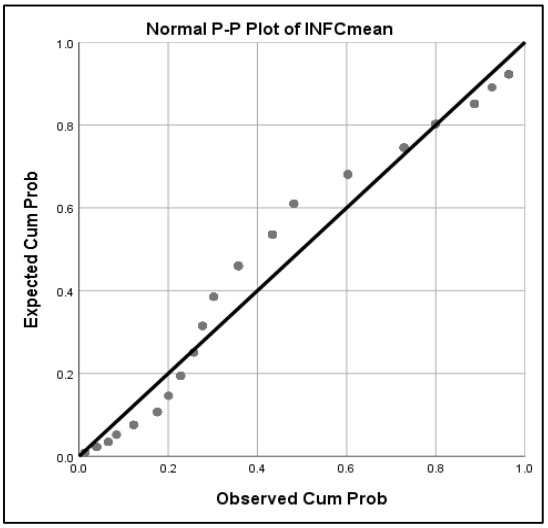

Normal P-P Plot of BSPmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

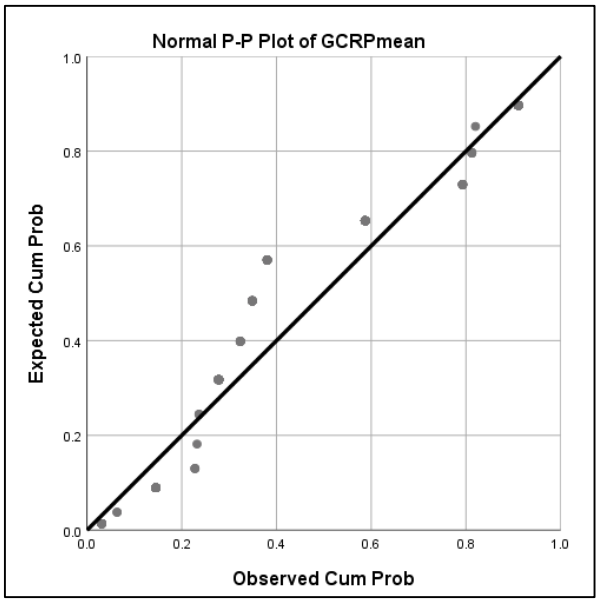

5
4
3
2
1
BSPmean

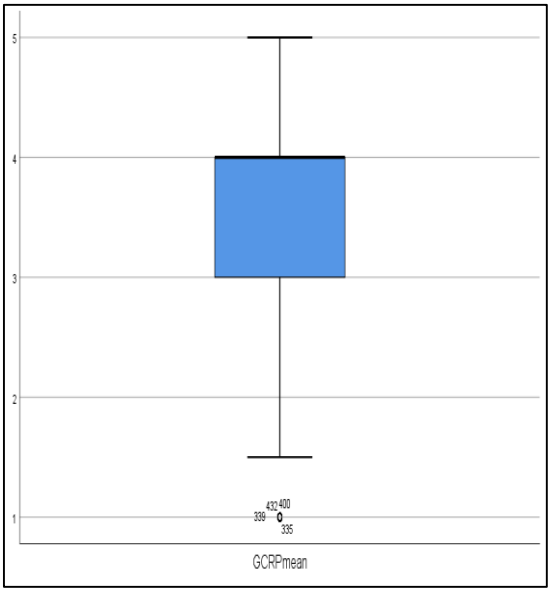

Normal P-P Plot of BCPmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

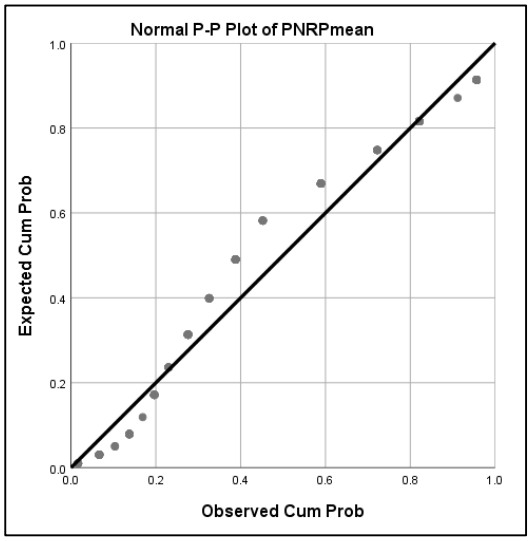

BCPmean
1
2
3
4
5

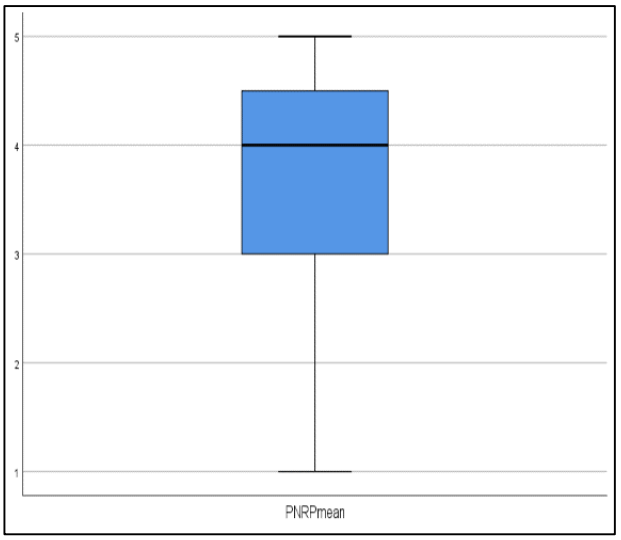

INFC
1.00
2.00
3.00
4.00
5.00

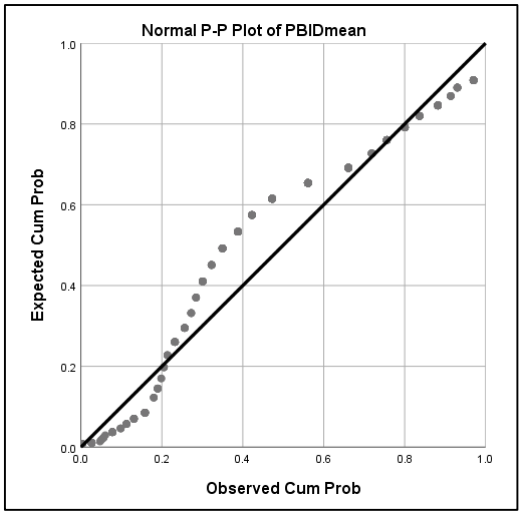

Normal P-P Plot of INFCmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

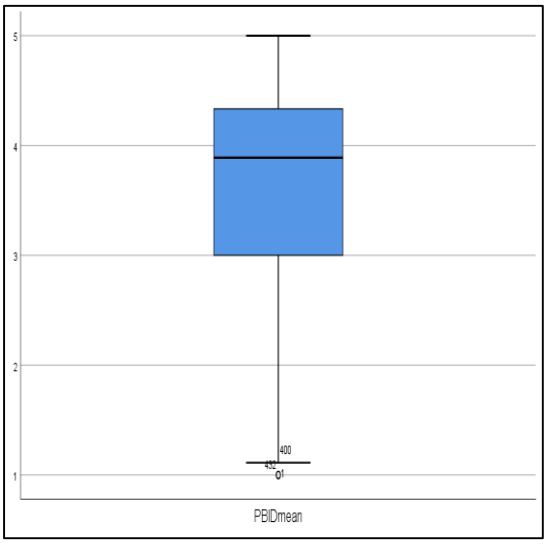

Normal P-P Plot of GCRPmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

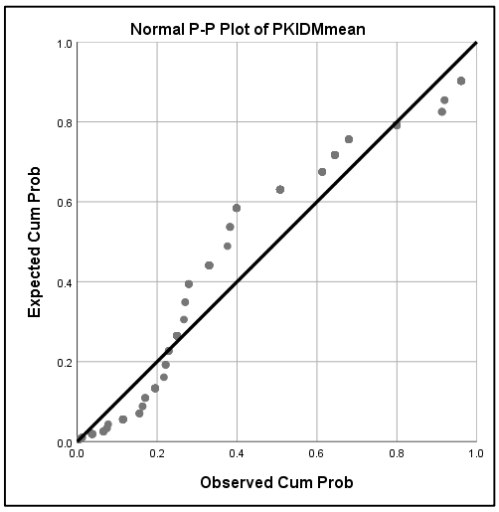

5
4
3
2
1
432
400
339
335
GCRPmean

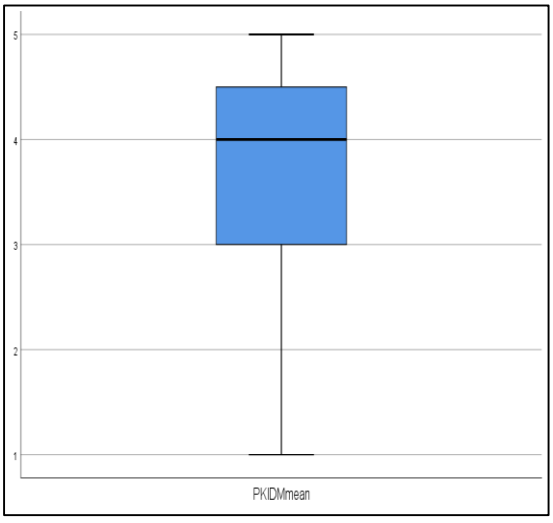

Normal P-P Plot of PNRPmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

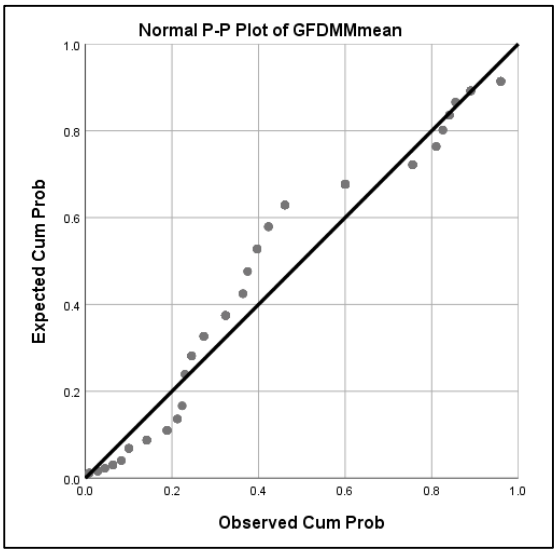

5
4
3
2
1
PNRPmean

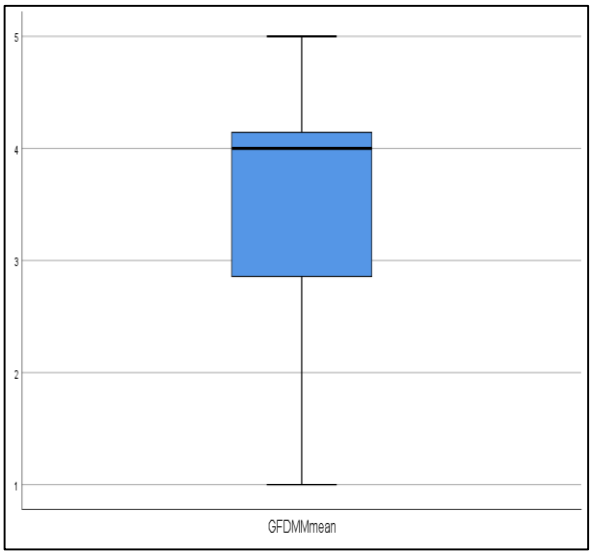

Normal P-P Plot of PBIDmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

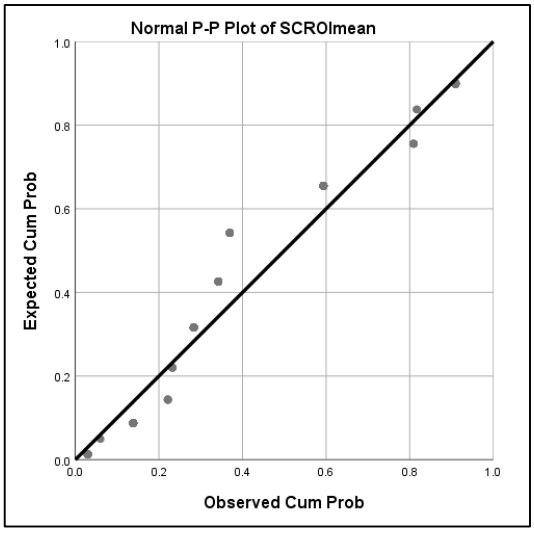

PBIDmean
1
2
3
4
5

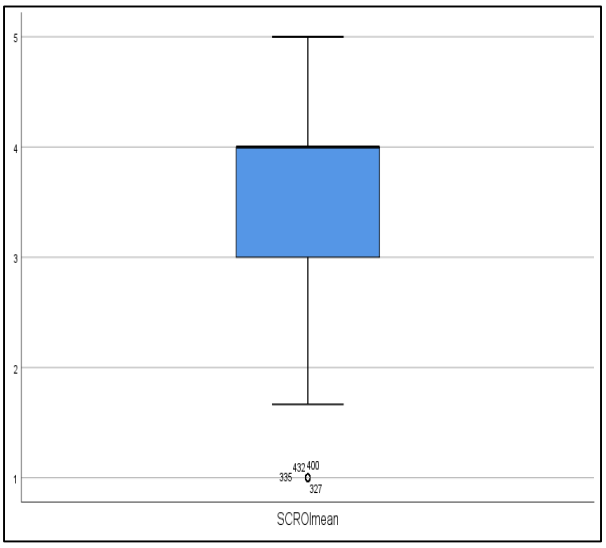

Normal P-P Plot of PKIDMmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

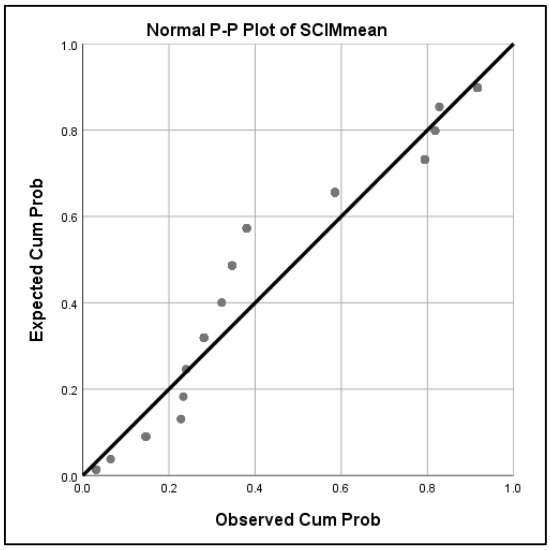

PKIDMmean
1
2
3
4
5

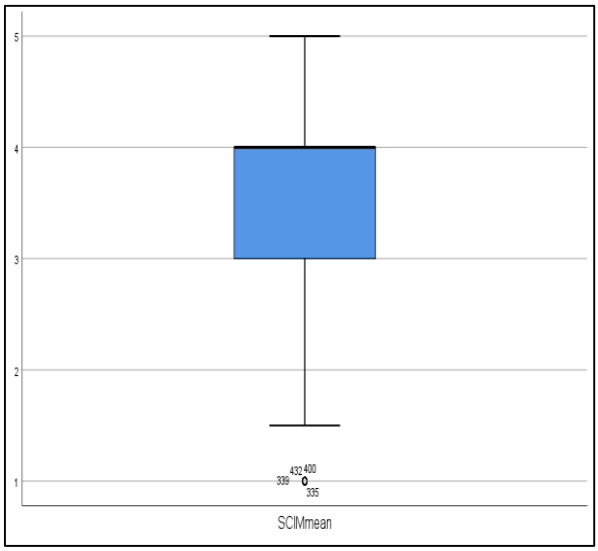

Normal P-P Plot of GFDMMmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

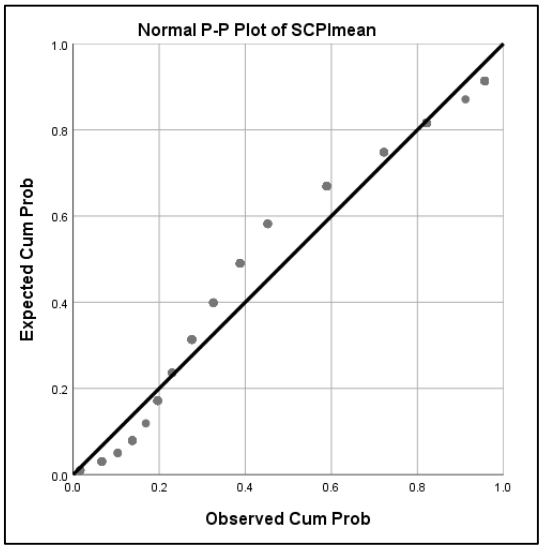

5
4
3
2
1
GFDMMmean

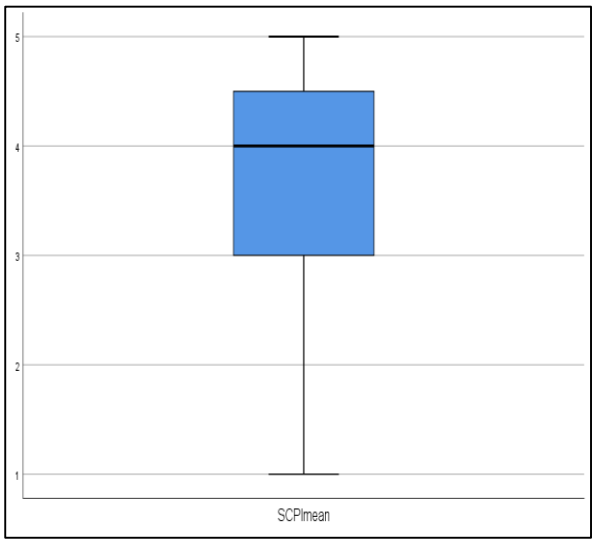

Normal P-P Plot of SCROImean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0

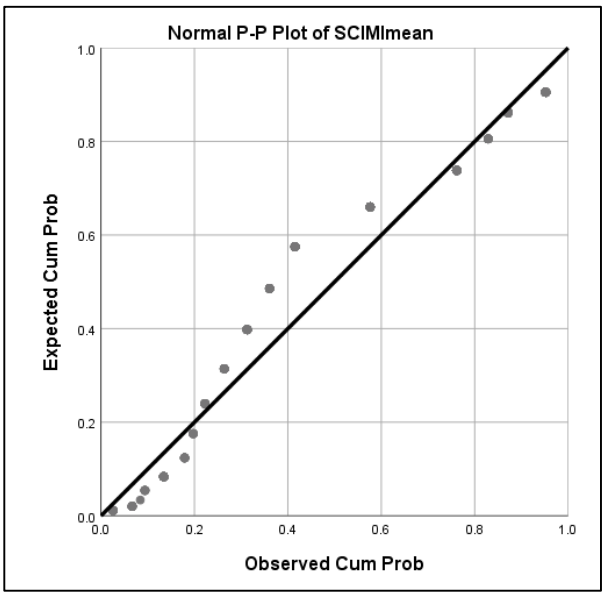

5
4
3
2
1
432
400
335
327
SCROImean

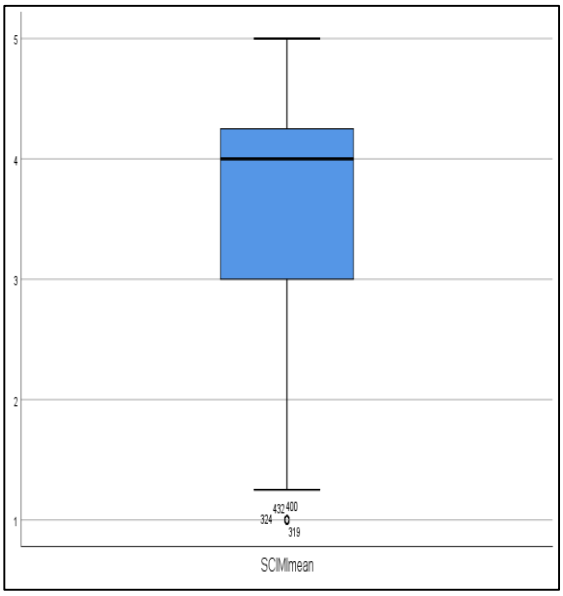

Normal P-P Plot of SCIMmean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


SCIMmean
1
2
3
4
5
432
400
339
335


Normal P-P Plot of SCPImean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


SCPImean
1
2
3
4
5


Normal P-P Plot of SCIMImean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


5
4
3
2
1
432
400
324
319
SCIMImean