



Mathematical Population Studies

An International Journal of Mathematical Demography

ISSN: 0889-8480 (Print) 1547-724X (Online) Journal homepage: www.tandfonline.com/journals/gmps20

Determinants of life expectancy in OIC countries: a new evidence using threshold regression

Noorazeela Zainol Abidin, Rosmah Nizam, Nurliyana Mohd Basri, Zulkefly Abdul Karim, Hafizah Abdul Rahim & Mohd Shahidan Shaari

To cite this article: Noorazeela Zainol Abidin, Rosmah Nizam, Nurliyana Mohd Basri, Zulkefly Abdul Karim, Hafizah Abdul Rahim & Mohd Shahidan Shaari (17 Jun 2026): Determinants of life expectancy in OIC countries: a new evidence using threshold regression, *Mathematical Population Studies*, DOI: [10.1080/08898480.2026.2687370](https://doi.org/10.1080/08898480.2026.2687370)

To link to this article: <https://doi.org/10.1080/08898480.2026.2687370>



Published online: 17 Jun 2026.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Determinants of life expectancy in OIC countries: a new evidence using threshold regression

Noorazeela Zainol Abidin^a, Rosmah Nizam^b, Nurliyana Mohd Basri^c,
Zulkefly Abdul Karim^d, Hafizah Abdul Rahim^a, and Mohd Shahidan Shaari^e

^aFaculty of Business & Communication, Universiti Malaysia Perlis, Arau, Perlis, Malaysia; ^bFaculty of Business and Management, Universiti Teknologi MARA, Pahang Campus, Jengka, Malaysia; ^cFaculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia; ^dFinance, Monetary and Banking Research Group, Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia; ^eFaculty of Economics and Business, Universiti Malaysia Sarawak (UNIMAS), Kota Samarahan, Sarawak, Malaysia

ABSTRACT

This study employs a dynamic panel threshold regression technique to explore the potential threshold effect in the relationship between determinants of life expectancy. Analyzing a sample of 50 member nations of the Organisation of Islamic Cooperation (OIC) from 2000 to 2021, the findings reveal that the total years of schooling have a substantial and non-linear impact on life expectancy. Specifically, the threshold effect of years of schooling is positive and more pronounced in high-income OIC countries compared to low-income ones. These results suggest that policymakers in low-income OIC nations need to carefully manage their educational initiatives to improve education without adversely affecting life expectancy. Balancing the expansion of educational opportunities to maintain or increase life expectancy should be a top priority for policymakers in these countries. Achieving these objectives requires a carefully designed policy approach.

KEYWORDS

High income; life expectancy; OIC countries; panel threshold; years of schooling

JEL CLASSIFICATION

I25; I100; I140; C23; C500

1. Introduction

A newborn's life expectancy at birth is determined by its average age when exposed to any period's inherently high mortality rates (Kefeli, Zaidi, and Wahab, 2018; World Health Organization, 2014). Furthermore, it offers information on lifespan and related health indicators for people of various ages, allowing us to keep track of specific age groups' health (Rabbi Fazle, 2013; Sharma, 2018; World Health Organization, 2014). Poor nutrition, clean water and sanitation, and access to primary healthcare are the main factors influencing life expectancy at birth in a country (Statistical, Economic and Social Research and Training Centre for Islamic Countries SESRIC, 2019). In assessing the overall socioeconomic status of any country or region, the average life expectancy of that country is an essential

CONTACT Zulkefly Abdul Karim ✉ zak1972@ukm.edu.my 📧 Finance, Monetary and Banking Research Group, Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia.

© 2026 Taylor & Francis Group, LLC