INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN ECONOMICS & MANAGEMENT SCIENCES

OPEN ACCESS JOURNAL

Vol 15, Issue 1, (2026) E-ISSN: 2226-3624

Identifying Key Sectors in the Economies of Sabah, Sarawak, and Peninsular Malaysia: An Input–Output Analysis

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DOI Link: http://dx.doi.org/10.6007/IJAREMS/v15-i1/27333

Published Online: 11 January 2026

Abstract

This paper investigates the key economic sectors of Sabah, Sarawak, and Peninsular Malaysia using the input–output (I–O) framework based on the 2015 interregional input–output (IRIO) table. Linkage analysis is employed to assess both backward and forward linkages (weighted and unweighted approach) to identify sectors with the highest capacity to stimulate production across the economy. The findings indicate significant structural differences across regions. Sabah remains resource-driven with agriculture, forestry, and food processing as its dominant sectors; Sarawak is heavily reliant on resource-based industries, particularly oil, gas, and energy-intensive manufacturing. Meanwhile, Peninsular Malaysia demonstrates a more diversified economic structure, led by wholesale and retail trade, manufacturing, finance, and services. These results highlight the importance of region-specific policies to strengthen intersectoral linkages and achieve a more balanced national development.

Keyword: Input-Output Analysis, Key Sectors, Sabah, Sarawak, and Peninsular Malaysia

Introduction

Understanding the structural dynamics of regional economies is critical for designing effective development strategies and identifying sectors with the greatest potential to stimulate growth. The input–output (I–O) framework, pioneered by Leontief (1936), has long served as a powerful tool for mapping interindustry linkages, quantifying multiplier effects, and evaluating the role of different sectors within the economy. Within this framework, the identification of "key sectors" through backward and forward linkage analysis has become widely used in academic research and policy practice (Rasmussen, 1956; Hirschman, 1958; Chenery & Watanabe, 1958). Key sectors are those that not only contribute significantly to output and employment, but also generate strong spillover effects across other industries, thereby serving as strategic levers for structural transformation.

In the Malaysian context, most previous studies have concentrated on national I–O tables and the identification of key industries at an aggregate level (Chin & Kogid, 2011; Yusof & Bakar, 2012). While these studies provide important national perspectives, they overlook

interregional dynamics and the economic linkages among Sabah, Sarawak, and Peninsular Malaysia. Yet Malaysia is characterised by pronounced spatial differences in resource endowments, industrial capabilities, and infrastructure investment. Understanding how production linkages operate across regions therefore becomes essential for designing policies that promote balanced and inclusive development.

To address this gap, the present study employs an interregional input–output (IRIO) framework to examine the key sectors of Sabah, Sarawak, and Peninsular Malaysia for the base year 2015. Using both weighted and unweighted linkage measures, the analysis identifies sectors that hold strategic importance within each region as well as in their interregional interactions. The IRIO table is constructed by integrating national I–O data with regional statistics through non-survey techniques such as the RAS method (Chenery & Clark, 1959; Jackson & Murray, 2004), allowing for a more detailed and policy-relevant representation of regional structures. In doing so, the study contributes to the literature on regional development while providing practical insights for policymakers seeking to promote economic diversification, industrial upgrading, and more balanced national growth.

The motivation for this study arises from the persistent structural disparities between Sabah, Sarawak and Peninsular Malaysia while the limited empirical evidence on how interregional production linkages shape these differences. Despite ongoing national development initiatives, relatively little work has examined Sabah and Sarawak within a unified interregional analytical framework that can reveal how sectoral interactions transmit growth across regions. This paper contributes by constructing and applying a 2015 interregional input–output (IRIO) framework to provide a comparative assessment of sectoral linkages across Malaysia's major regions. Methodologically, it demonstrates how linkage analysis can identify sectors with the greatest potential to drive structural upgrading in resource dependent economies. Substantively, it offers policy relevant insights into how region-specific strategies can strengthen intersectoral connectivity and support more balanced and inclusive national development.

This paper is structured as follows. Section 2 reviews the theoretical foundations of input–output analysis and the concept of key sectors. Section 3 describes the methodological approach and data construction. Section 4 presents and discusses the empirical results. Section 5 concludes with key findings and policy implications.

Literature Review

The concept of key sectors has long been central to input–output analysis, particularly in examining economic interdependencies and informing policy prioritisation. Early works by Rasmussen (1956) and Hirschman (1958) emphasised the significance of backward and forward linkages in identifying industries with strong multiplier effects capable of stimulating broader economic activity. Rasmussen's linkage indices provided a normalised, unweighted measure of sectoral interdependence, while Hirschman stressed the strategic importance of sectors that could generate dynamic spillovers through investment and industrialisation. Chenery and Watanabe (1958) further advanced the analysis by introducing weighted linkage measures, incorporating the scale of sectoral output to reflect practical economic relevance. These foundational approaches continue to underpin contemporary studies in both regional and national I-O frameworks.

In Malaysia, the application of I–O techniques to identify key sectors has expanded considerably. Studies such as Ismail and Mahyideen (2015) and Rasiah (2011) documented Malaysia's structural transformation since 1980s, as its economic base shifted from agriculture toward manufacturing and services, with electronics, transport equipment, and financial services emerging as significant drivers. For Sabah and Sarawak, however, the regional economies remain more resource-dependent, with agriculture, forestry, and extractive industries dominating the structure (DOSM, 2016; BNM, 2016). Input–output-based studies on East Malaysia highlight the dominance of oil, gas, and energy in Sarawak (Chin & Kogid, 2011), while in Sabah, agriculture and palm oil production remain critical for both output and employment multipliers (Yusof & Bakar, 2012). These findings emphasise the heterogeneity of regional economic structures within Malaysia, underscoring the importance of conducting disaggregated key sector analyses.

Internationally, methodologies for identifying key sectors have also evolved alongside advancements in I-O techniques. Miller and Blair (2009) refined I–O techniques by integrating multiplier analysis and structural decomposition, enabling researchers to trace sectoral contribution to both growth and structural change. Recent applications in developing economies (e.g., Oosterhaven, 2012; Temurshoev & Oosterhaven, 2014) emphasise the usefulness of combining unweighted and weighted measures to balance structural importance with economic scale. Weighted approaches provide more policy-relevant insights since they capture the relative contribution of each sector to overall output and value-added.

Despite these strengths, the literature also recognises the limitations of I–O analysis in identifying key sectors. Issues such as data aggregation, static assumptions, and the exclusion of price effects may affect the accuracy of results (Ten Raa, 2005). In Malaysia, the lack of detailed regional data for Sabah and Sarawak further complicates the analysis, often requiring the use of non-survey techniques such as the RAS method for estimation (Chenery & Clark, 1959; Jackson & Murray, 2004). These challenges call for careful interpretation, especially when applying empirical findings for policy design.

Overall, the literature demonstrates both the theoretical robustness and practical relevance of key sector analysis within the I–O framework. For Malaysia, the diversity in regional economic structures between Peninsular Malaysia, Sabah, and Sarawak reinforces the need for region-specific identification of key sectors. This ensures that industrial policies, investment strategies, and fiscal allocations can be more effectively tailored to leverage the distinct strengths and challenges of each region.

Methodology

The study employs the 2015 national input–output (I–O) table published by the Department of Statistics Malaysia as the primary reference. This table was disaggregated into regional tables for Sabah, Sarawak, and Peninsular Malaysia using non-survey techniques, particularly the RAS method. Therefore, the input–output table provides a reasonable basis for subsequent analyses and can serve as a reference for future research (Pang, 2025). Backward and forward linkage (weighted and unweighted approaches) indices were computed to measure the production interdependencies across 30 aggregated sectors. Sectors with linkage indices greater than unity were identified as key sectors, as they demonstrate above-

average capacity to stimulate other industries or supply critical inputs within the regional economy.

Rasmussen Unweighted Approach

The Rasmussen unweighted approach is widely used to measure backward linkages and forward linkages. It assumes that all sectors operate at the same production scale, which can lead to the underestimation of larger sectors. The unweighted approach does not account for the differences in production scale, GDP contribution and employment rates. The formula of forward linkages is calculated as follow:

$$F_j = \left(\frac{\sum_i a_{ij}}{\frac{1}{n}\sum_i \sum_j a_{ij}}\right)$$

Where F_j represents the backward linkages of sector j, n is the total sectors of the regional input-output table, $\sum_i a_{ij}$ is the total Leontief inverse value in sector j, and $\sum_i \sum_j a_{ij}$ is total Leontief inverse value sum up by all the sectors. In this research, the backward linkages measure the level of integration of government expenditure in affecting output from other sectors. Under Leontief demand-driven model, the backward linkages sum up the column elements in sector j that could be calculated following this formula:

$$B_i = \left(\frac{\sum_j l_{ij}}{\frac{1}{n}\sum_i \sum_j l_{ij}}\right)$$

Where, B_j denotes the backward linkages of sector j, n is the total sectors of the regional input-output table, $\sum_i l_{ij}$ is the total Leontief inverse value in sector j, and $\sum_i \sum_j l_{ij}$ is total Leontief inverse value sum up by all the sectors.

Rasmussen Weighted Approach

The Rasmussen weighted approach incorporates differences in production scale, GDP contribution and employment rates to calculate backward and forward linkages. Hence, this approach provides a more accurate representation of sectoral importance, particularly when comparing large and small production sectors. The forward linkages measure the level of integration of other sectors in affecting output of government expenditure. In short, Rasmussen weighted approach could portray a better situation of the key sector performance in an economy. The forward linkage index under the Ghosh supply-driven model is calculated as:

$$F_j^w = \left(\frac{\sum_i a_{ij} \times W_j}{(\frac{1}{n})\sum_i \sum_j a_{ij} \times W_j}\right)$$

Where F_j denotes the forward linkages of sector j, n is the total sectors in the regional input-output table, $\sum_j a_{ij}$ is the total Ghosh inverse value in sector j, $\sum_i \sum_j b_{ij}$ is the total Ghosh inverse value for all the sectors, W_j is the weighted value for production, GDP, and employment.

$$B_i = \left(\frac{\sum_j a_{ij} \times W_j}{(\frac{1}{\sum W_i})\sum_i \sum_j a_{ij} \times W_j}\right)$$

Where F_j denotes the forward linkages of sector j, n is the total sectors in the regional input-output table, $\sum_j a_{ij}$ is the total Ghosh inverse value in sector j, $\sum_i \sum_j a_{ij}$ is the total Ghosh

inverse value for all the sectors, W_j is the weighted value for production, GDP, and employment.

Findings and Discussion

Table 1 presents the backward and forward linkages for Sabah, Sarawak, and Peninsular Malaysia in 2015, based on the Rasmussen unweighted approach applied to the interregional input–output framework. The results highlight notable regional differences in sectoral interdependence.

Sabah

In Sabah, the strongest backward linkages are found in Fishing and Aquaculture (1.2127), Public Administration and Defence (1.1729), and Human Health and Social Work (1.1682), indicating strong demand-side multipliers. On the forward linkage side, Repair and Installation of Machinery and Equipment (1.5294), Agriculture and Livestock (1.5080), and Forestry and Logging (1.3968) emerge as key supply-oriented sectors.

Sarawak

For Sarawak, Manufacturing of Wearing Apparel and Leather Products (1.4768), Manufacturing of Furniture (1.4452), and Printing and Reproduction of Recorded Media (1.3726) demonstrate the strongest backward linkages, reflecting the role of manufacturing in driving regional demand. Conversely, forward linkages are dominated by Forestry and Logging (1.6731), Manufacturing of Petroleum Products (1.4755), and Mining and Quarrying (1.5441) reflecting Sarawak's resource-oriented economy.

Peninsular Malaysia

Peninsular Malaysia displays a more diversified economic structure. Backward linkages are strongest in Manufacturing of Food and Beverage (1.4097), Construction (1.2158), and Manufacturing of Wood and Paper Products (1.2049), revealing a diversified industrial base with emphasis on both traditional and modern manufacturing. On the forward side, Repair and Installation of Machinery and Equipment (1.6153), Forestry and Logging (1.4172), and Manufacturing of Petroleum Products (1.4049) stand out as the most influential supply sectors.

Overall, these unweighted results highlight clear regional contrasts. The findings demonstrate that Sabah's economy is highly linked to primary activities and public services. Sarawak is dominated by natural resource–based sectors, while Peninsular Malaysia reflects a more balanced composition with strong multipliers in manufacturing and construction. These regional differences underscore the importance of tailored development policies to strengthen interregional complementarities and enhance national economic integration.

Table 2 reports the weighted Rasmussen backward and forward linkages for Sabah, Sarawak, and Peninsular Malaysia in 2015, offering deeper insights into sectoral interdependencies across regions. The weighted approach corrects for sectoral scale effects, enabling the identification of genuinely key sectors rather than those driven by sheer size (Rasmussen, 1956; Miller & Blair, 2009).

Table 1
Backward and Forward Linkages in Sabah, Sarawak and Peninsular Malaysia (Rasmussen Unweighted Approach), 2015 (Interregional)

Sectors	Sabah				Sarawak				Peninsular Malaysia			
	Backward linkages		Forward linkages		Backward linkages		Forward linkages		Backward linkages		Forward linkages	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Agriculture and Livestock (ANL)	1.1609	5	1.5080	2	1.0577	10	1.0864	11	0.7180	27	1.1045	13
Forestry and Logging (FNL)	0.9883	20	1.3968	3	1.1876	7	1.6731	1	0.6139	29	1.4172	2
Fishing and Aquaculture (FNA)	1.2127	1	1.3065	7	1.0384	13	0.6513	29	0.6290	28	0.8834	20
Mining and Quarrying (MNQ)	1.1193	10	0.8930	21	0.6526	27	1.5441	2	0.6109	30	1.2529	6
Manufacturing of Food and Beverage (MFB)	0.7131	27	0.5896	27	1.3041	4	0.7022	28	1.4097	1	0.9551	17
Manufacturing of Textiles (MOT)	1.0015	19	0.7361	22	1.2948	5	1.1613	5	0.8028	26	0.8657	21
Manufacturing of Wearing Apparel and Leather Products (MWL)	1.0822	12	1.3258	6	1.4768	1	1.0408	12	0.9193	21	0.6167	27
Manufacturing of Wood and Paper Products (MWP)	0.9683	21	0.6072	26	1.2703	6	0.9229	17	1.2049	3	1.0117	14
Printing and Reproduction of Recorded Media (PRM)	1.0576	16	0.9445	18	1.3726	3	1.1139	10	0.9407	20	1.1160	12
Manufacturing of Petroleum Products (MOP)	0.9356	22	1.1298	10	0.8932	22	1.4755	3	1.1303	10	1.4049	3
Manufacturing of Chemical and Pharmaceutical Products (MCP)	0.8331	24	0.9263	20	0.8944	21	0.9367	16	1.1676	6	1.2097	8
Manufacturing of Rubber and Plastic (MRP)	0.6904	29	0.6585	25	1.0468	11	0.8353	24	1.1094	12	0.9695	16
Manufacturing of Metal and Other Non-Metallic Mineral Products (MMM)	0.7023	28	1.1719	9	0.5714	29	0.8859	19	1.1737	4	1.3346	4

Table 1
Backward and Forward Linkages in Sabah, Sarawak and Peninsular Malaysia (Rasmussen Unweighted Approach), 2015 (Interregional)

Manufacturing of Electric and Electronic Products (MEE)	0.5731	30	0.7123	24	0.9413	19	0.7195	27	1.0984	13	0.9295	19
Manufacturing of Transport Equipment (MTE)	1.0884	11	0.5769	29	0.9295	20	0.8555	22	0.8245	25	0.9892	15
Manufacturing of Furniture (MOF)	1.0694	14	0.7236	23	1.4452	2	0.9923	14	1.1622	7	0.5895	28
Repair &Installation of Machinery and Equipment (RNI)	1.0507	17	1.5294	1	0.8528	23	1.1140	9	1.1238	11	1.6153	1
Other Manufacturing (OMA)	0.7829	26	1.0285	14	0.8056	24	0.9156	18	1.1714	5	1.1605	9
Construction (CON)	0.9068	23	0.9797	17	0.9915	16	1.0037	13	1.2158	2	0.7476	23
Electricity and Water Supply (ENW)	1.0485	18	1.3320	5	0.9460	18	1.1789	4	0.9770	17	1.3199	5
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles (WRT)	1.1493	7	1.3502	4	0.6517	28	0.6427	30	0.9633	18	1.1464	11
Transportation and Storage (TNS)	1.0760	13	1.1032	11	1.0118	15	0.8405	23	1.0978	14	1.1465	10
Accommodation and Food Service Activities (AFS)	1.1548	6	1.2230	8	1.0458	12	0.9638	15	1.1366	9	0.7258	24
Information and Communication (INC)	1.1235	8	1.0340	13	0.7222	26	0.7700	26	1.0571	15	0.9433	18
Financial and Insurance/Takaful Activities (FIT)	0.8188	25	1.0991	12	1.1494	9	0.8287	25	0.8929	23	1.2168	7
Real Estate Activities (RSA)	1.1213	9	1.0027	16	0.5394	30	0.8734	20	0.9108	22	0.7921	22
Education (EDU)	1.0632	15	0.5757	30	1.0255	14	0.8605	21	0.8544	24	0.5877	29
Human Health and Social Work Activities (HHS)	1.1682	3	0.5894	28	0.9597	17	1.1520	6	1.1434	8	0.6989	25
Public Administration and Defence; Compulsory Social Security (PAD)	1.1729	2	0.9302	19	1.1500	8	1.1366	7	0.9560	19	0.5849	30
Other Service Activities (OSE)	1.1668	4	1.0162	15	0.7717	25	1.1229	8	0.9843	16	0.6640	26

(continued)

Source: Input-Output Table for Sabah, Sarawak and Peninsular Malaysia, 2015. **.4 Sabah**

In Sabah, Mining and Quarrying (2.1198; rank 1), Wholesale and Retail Trade (1.7794; rank 2), and Education (1.7500; rank 3) demonstrate the highest backward linkages, indicating their strong capacity to stimulate demand across other industries. On the forward side, Financial and Insurance/Takaful Activities (4.4154; rank 1), Wholesale and Retail Trade (4.3067; rank 2), and Agriculture and Livestock (2.6873; rank 3) emerge as dominant supply-side sectors.

Sarawak

For Sarawak, the weighted results confirm the pivotal role of natural resources and manufacturing. Manufacturing of Electric and Electronic Products (2.1351; rank 1), Mining and Quarrying (1.8520; rank 2), and Construction (1.7123; rank 3) dominate backward linkages, while forward linkages are led by Mining and Quarrying (16.0136; rank 1), Manufacturing of Petroleum Products (3.7797; rank 2), and Wholesale and Retail Trade (1.6432; rank 3). This suggests Sarawak's economy is highly resource-intensive, with downstream spillovers primarily concentrated in extractive and energy-related activities.

Peninsular Malaysia

Peninsular Malaysia shows a more diversified structure. The strongest backward linkages appear in Manufacturing of Electric and Electronic Products (3.0271; rank 1), Manufacturing of Food and Beverage (2.3520; rank 2), and Wholesale and Retail Trade (2.1648; rank 3), reflecting the industrialized nature of the region. On the forward side, Wholesale and Retail Trade (5.8550; rank 1), Financial and Insurance/Takaful Activities (5.2970; rank 2), and Agriculture and Livestock (2.0448; rank 3) dominate, highlighting the region's role as both a production and distribution hub with strong financial intermediation capacity.

To conclude, the weighted Rasmussen analysis reveals that Sabah's economy is driven by extractive industries and distributive services. Sarawak remains deeply resource-dependent with limited diversification, whereas Peninsular Malaysia demonstrates a broader mix of industrial and service-based key sectors. These findings underscore the uneven structural composition of Malaysia's regional economies and suggest that policies aimed at fostering interregional integration must be carefully tailored to the distinct economic bases of each region.

Table 2
Backward and Forward Linkages in Sabah, Sarawak and Peninsular Malaysia (Rasmussen Weighted Approach), 2015 (Interregional)

Sectors	Sabah				Sarawak				Peninsular Malaysia			
	Backward linkages		Forward linkages		Backward linkages		Forward linkages		Backward linkages		Forward linkages	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Agriculture and Livestock (ANL)	1.0845	11	2.6873	3	0.9384	15	0.7597	6	0.5355	24	2.0448	3
Forestry and Logging (FNL)	0.5005	29	0.2504	23	0.8141	23	0.2752	16	0.0291	30	0.2473	24
Fishing and Aquaculture (FNA)	0.9650	15	0.4099	19	0.8479	20	0.0140	29	0.1236	29	0.2991	22
Mining and Quarrying (MNQ)	2.1198	1	2.3141	4	1.8520	2	16.0136	1	0.3104	26	1.9193	4
Manufacturing of Food and Beverage (MFB)	0.6852	24	0.3518	20	1.6667	4	0.0449	25	2.3520	2	0.6122	16
Manufacturing of Textiles (MOT)	0.5901	26	0.0437	29	1.0365	10	0.0857	23	0.2635	28	0.0480	29

Manufacturing of Wearing Apparel and Leather Products (MWL)	0.6879	23	0.1029	26	1.0202	12	0.0344	26	0.4259	25	0.0495	28
Manufacturing of Wood and Paper Products (MWP)	0.7288	22	0.1564	25	0.9085	18	0.0301	27	0.9099	16	0.2793	23
Printing and Reproduction of Recorded Media (PRM)	0.7945	19	0.0793	27	1.0863	8	0.0138	30	0.5584	23	0.1002	26
Manufacturing of Petroleum Products (MOP)	1.0418	14	0.9064	14	1.3471	6	3.7797	2	0.9261	15	0.7794	12
Manufacturing of Chemical and Pharmaceutical Products (MCP)	0.7964	18	0.6846	15	0.7720	24	0.0909	22	1.0961	9	0.9578	10
Manufacturing of Rubber and Plastic (MRP)	0.5222	28	0.2553	22	0.9763	13	0.2259	18	0.9640	13	0.3762	20
Manufacturing of Metal and Other Non-Metallic Mineral Products (MMM)	0.4018	30	0.6155	17	0.3429	28	0.6661	8	0.8628	17	0.6379	15
Manufacturing of Electric and Electronic Products (MEE)	1.4724	4	1.2311	7	2.1351	1	1.2191	4	3.0271	1	1.5518	5

Table 2
Backward and Forward Linkages in Sabah, Sarawak and Peninsular Malaysia (Rasmussen Weighted Approach), 2015 (Interregional)
(continued)

Manufacturing of Transport Equipment (MTE)	0.7621	20	0.0096	30	1.0215	11	0.0635	24	0.2743	27	0.0088	30
Manufacturing of Furniture (MOF)	0.7360	21	0.0703	28	0.9345	16	0.0259	28	0.7047	20	0.0603	27
Repair &Installation of Machinery and Equipment (RNI)	0.6815	25	0.1817	24	0.9392	14	0.1374	20	0.7008	21	0.1840	25
Other Manufacturing (OMA)	0.5259	27	0.4815	18	0.8365	21	0.1568	19	1.0074	12	0.5663	17
Construction (CON)	1.1552	10	1.3467	6	1.7123	3	1.0594	5	2.1013	4	1.0198	9
Electricity and Water Supply (ENW)	0.8314	17	1.0887	10	0.8186	22	0.3229	14	0.6437	22	1.1285	8
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles (WRT)	1.7794	2	4.3067	2	1.2533	7	1.6432	3	2.1648	3	5.8550	1
Transportation and Storage (TNS)	1.0509	13	1.0861	11	1.0379	9	0.2471	17	1.0259	11	1.1857	7
Accommodation and Food Service Activities (AFS)	0.8696	16	1.0681	12	0.9154	17	0.4123	11	1.4150	6	0.6509	14
Information and Communication (INC)	1.3943	6	1.5501	5	0.6486	26	0.6707	7	1.3434	7	1.4361	6
Financial and Insurance/Takaful Activities (FIT)	1.3949	5	4.4154	1	1.4524	5	0.1069	21	1.4159	5	5.2970	2
Real Estate Activities (RSA)	1.0581	12	0.6223	16	0.1977	30	0.4491	10	0.7048	19	0.4841	18
Education (EDU)	1.7500	3	1.1254	9	0.7449	25	0.3724	12	0.9382	14	0.6707	13
Human Health and Social Work Activities (HHS)	1.1619	9	0.3118	21	0.2996	29	0.4524	9	1.0315	10	0.3680	21
Public Administration and Defence; Compulsory Social Security (PAD)	1.2136	8	1.1987	8	0.8721	19	0.3372	13	1.2945	8	0.7982	11
Other Service Activities (OSE)	1.2444	7	1.0481	13	0.5714	27	0.2897	15	0.8494	18	0.3835	19

Source: Input-Output Table for Sabah, Sarawak and Peninsular Malaysia, 2015.

Policy Implications

The findings highlight the need for region-specific development strategies to address the structural disparities among Malaysia's regional economies. In Sabah, industrial diversification beyond agriculture and forestry is essential to reduce dependence on primary sectors and enhance resilience against external shocks. In Sarawak, policies should focus on balancing its resource dependence with greater promotion of downstream value-added industries and renewable energy. Meanwhile, Peninsular Malaysia should continue strengthening innovation-driven sectors to sustain its competitive edge in global markets

while supporting inclusivity in regional development. Collectively, these strategies can strengthen interregional complementarities and contribute to more balanced and sustainable national growth.

Conclusion

Malaysia provides a unique context for key sector analysis due to its diverse regional economic structures. Peninsular Malaysia, Sabah, and Sarawak exhibit substantial variations in sectoral compositions and development trajectories. Peninsular Malaysia has experienced significant industrialisation and structural transformation driven by manufacturing and services (Ismail & Mahyideen, 2015; Rasiah, 2011). In contrast, Sabah remains predominantly resource oriented, while Sarawak continues to rely heavily on energy and heavy industries. Peninsular Malaysia, by comparison, is characterised by a diversified structure encompassing services and high-value manufacturing.

This study underscores the heterogeneity of Malaysia's regional economies and the significance of identifying key sectors through input output analysis. Recognising these sectoral dynamics is crucial for designing effective policies to foster balanced growth and strengthen interregional economic integration. Future research could integrate dynamic input output models or computable general equilibrium (CGE) models to capture technological change, sustainability concerns, and long-term structural shifts in Malaysia's regional economies.

From a policy perspective, several strategic directions emerge. First, region-specific industrial policies are needed to enhance productivity in key sectors, particularly by supporting technological upgrading and value-added diversification in resource-dependent states such as Sabah and Sarawak. Second, strengthening interregional supply chain linkages can reduce structural imbalances and promote more integrated national growth. Third, investments in human capital, digital infrastructure, and green technologies are essential to prepare regional economies for emerging industry shifts and sustainability-oriented development. Finally, coordinated fiscal and development planning across federal and state governments is necessary to ensure that policy interventions address both structural vulnerabilities and long-term regional competitiveness.

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