

Agglomeration in Practice: The Malaysian Experience in Diversifying Manufacturing

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❖ **Highlighting the main factors contributing to Malaysia's successful diversification in manufacturing, key benefits and direction going forward**

❖ **Malaysia has transformed the economy from relying solely on the primary sector to a more diversified base, led by manufacturing and services**

Key findings

- Malaysia has achieved a unique agglomeration in manufacturing through diversification, unlike regional and advanced countries that moved up the value chain via specialisation
- Hence, Malaysia as a resource-based country has largely avoided the 'resource curse' and demonstrated better economic development relative to its peers (e.g. Venezuela, Nigeria, several Middle East economies)
- Evidence that agglomeration and comparative advantage can go hand-in-hand, as long the country practices normal agglomeration in diversifying within its boundary of factor endowment (Epifani, 2001)

Malaysia: A unique example of agglomeration in manufacturing

Malaysia successfully implemented the rarely-used agglomeration strategy for manufacturing by building capabilities and strengths in diverse industries

Key success factors

1

Abundant natural resources

2

Structural transformation across the country

3

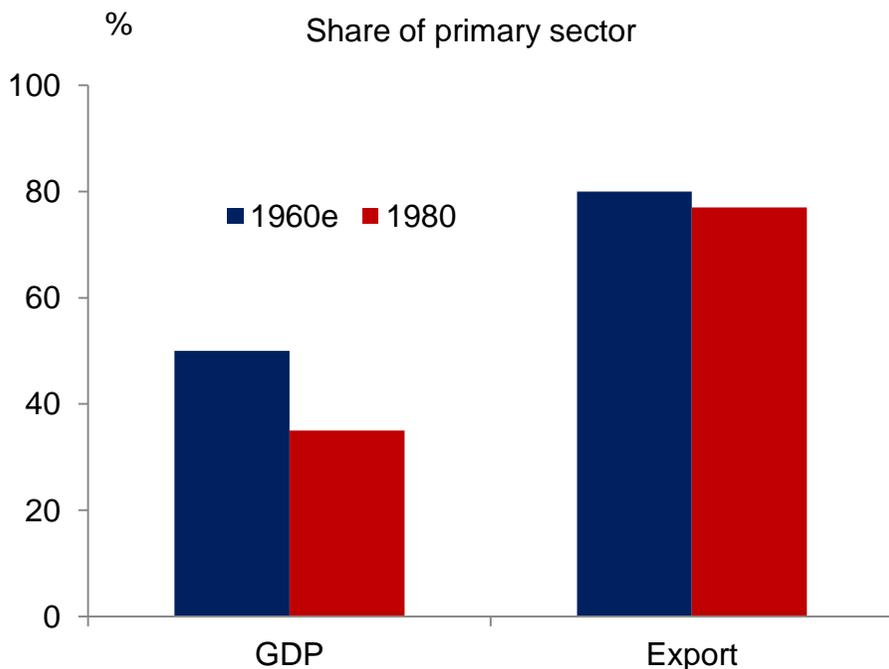
Export-oriented industrial base

Result: Consistent manufacturing growth and contribution to GDP and exports



From primary-driven 'niche industries' to 'multi-sector agglomeration'

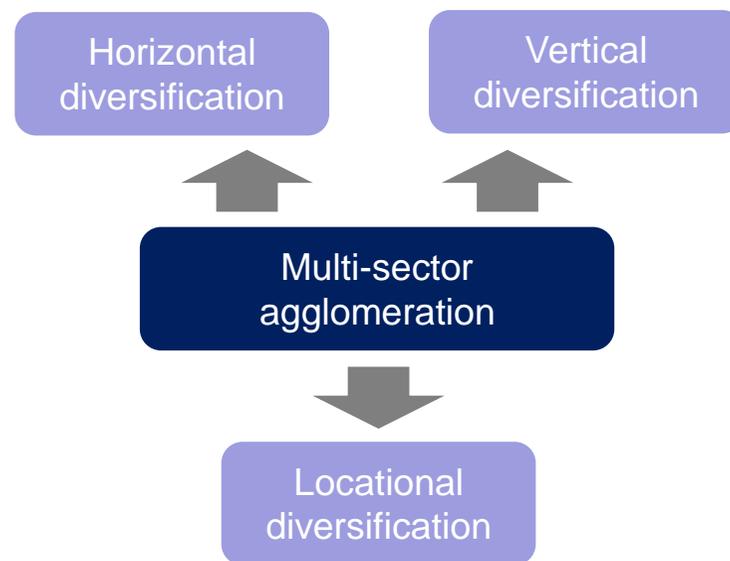
Heavy dependence on raw commodities until mid-1980s



Source: DOSM

Strategy: Import substitution

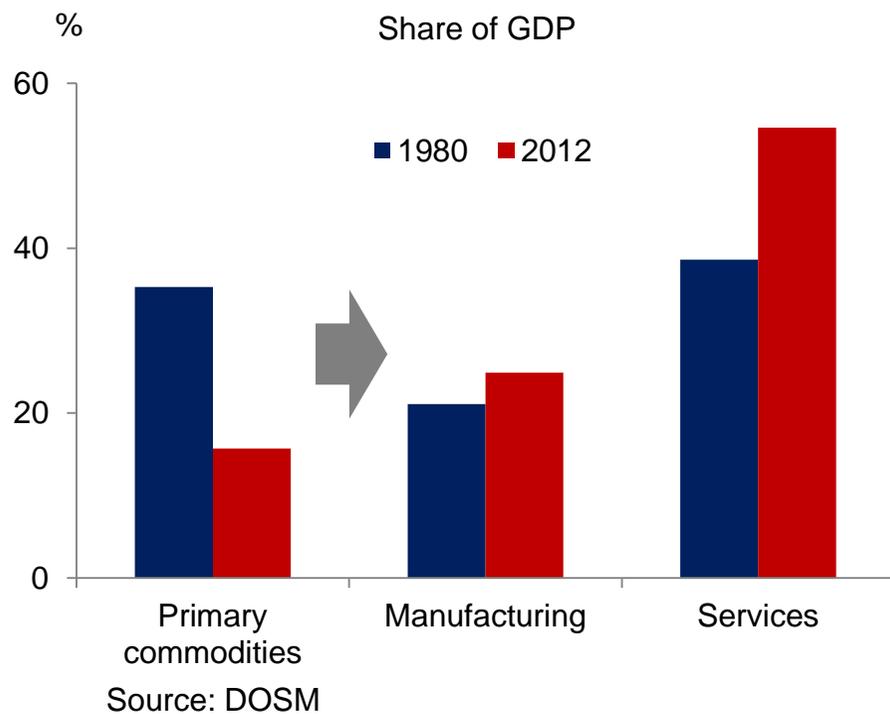
Policy-induced diversification since mid-1980s
(Malaysia Incorporated Policy, Promotion of Investment Act, Industrial Master Plans)



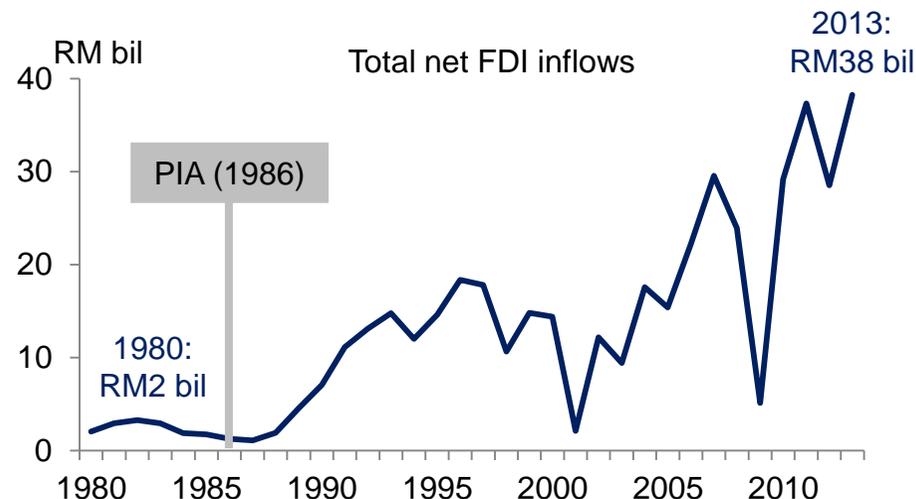
Strategy: Export orientation

Horizontal diversification to restructure the economic base

Structural transformation from primary sector to other sources of growth



Significant foreign direct investment inflows post-1980s particularly into manufacturing



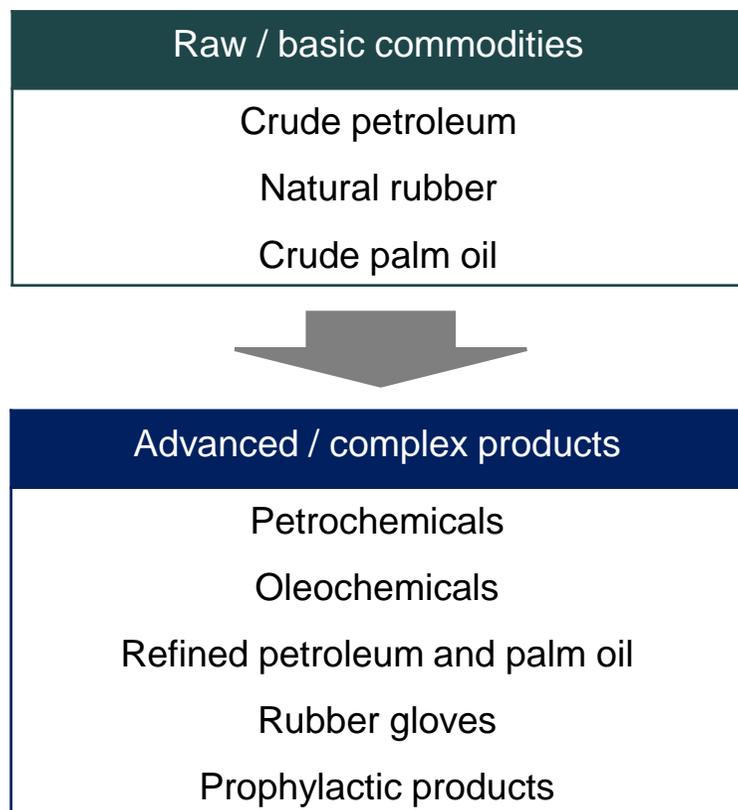
By sector (%)	1990-1999	2000-2009	2010-2013
Manufacturing	63	41	45
Services	15	37	29
Oil and gas	17	17	24
Others	5	5	2

Source: DOSM, World Bank, BNM estimates

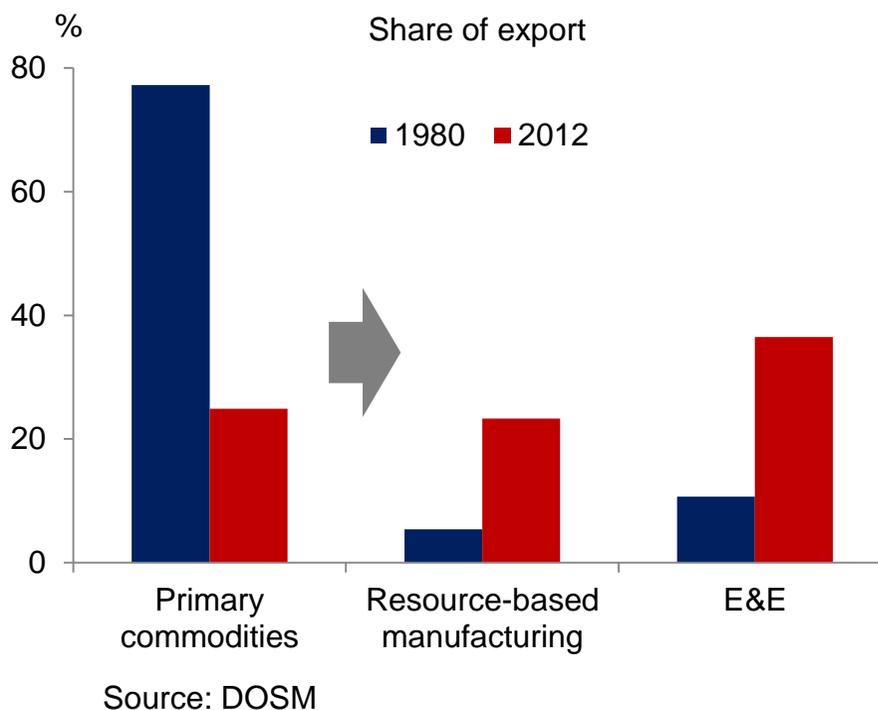


Vertical diversification to move up the value chain

Shift from upstream to downstream production



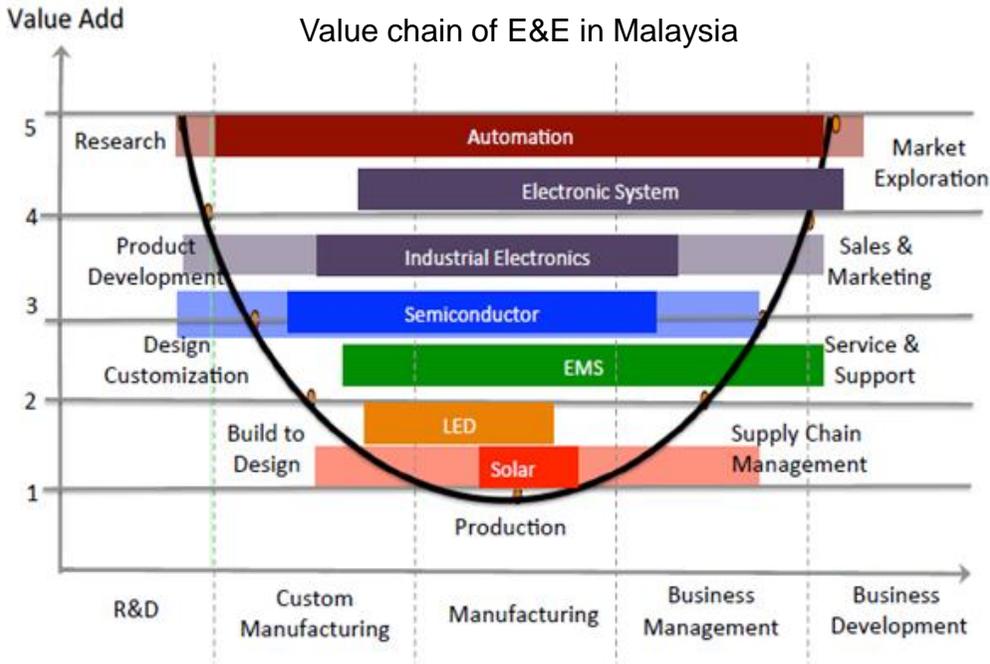
Export diversification toward resource-based and E&E industries



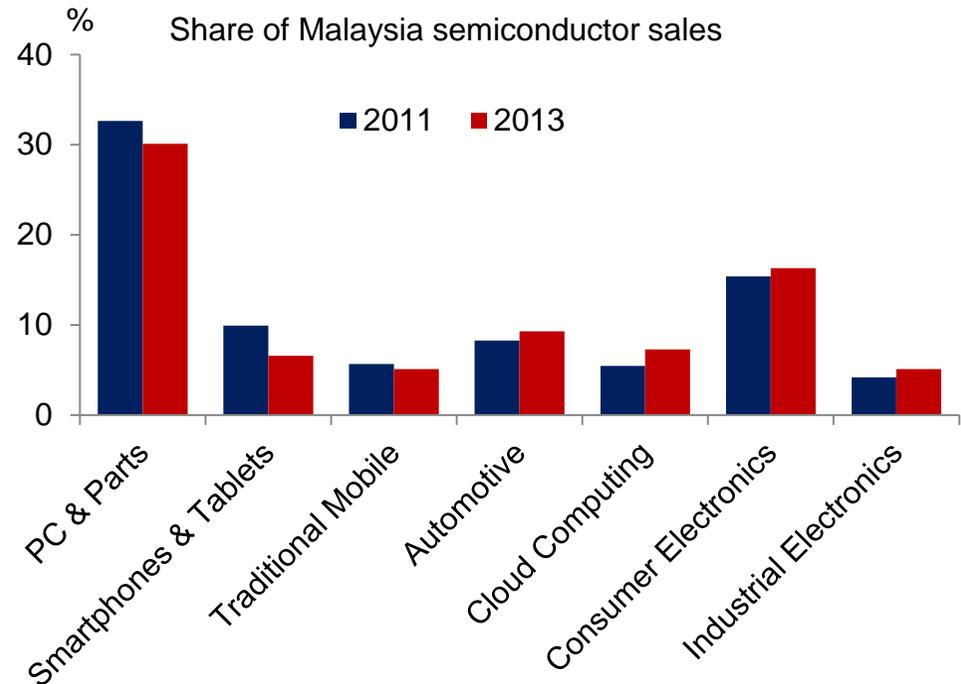
Higher technology attained through development of E&E industries

Shift from low value-added to high value-added activities (front- and back-end operations)

Innovation of semiconductors beyond PCs (tablets, mobile, automotive, cloud storage, IoT)



Source: MAEI



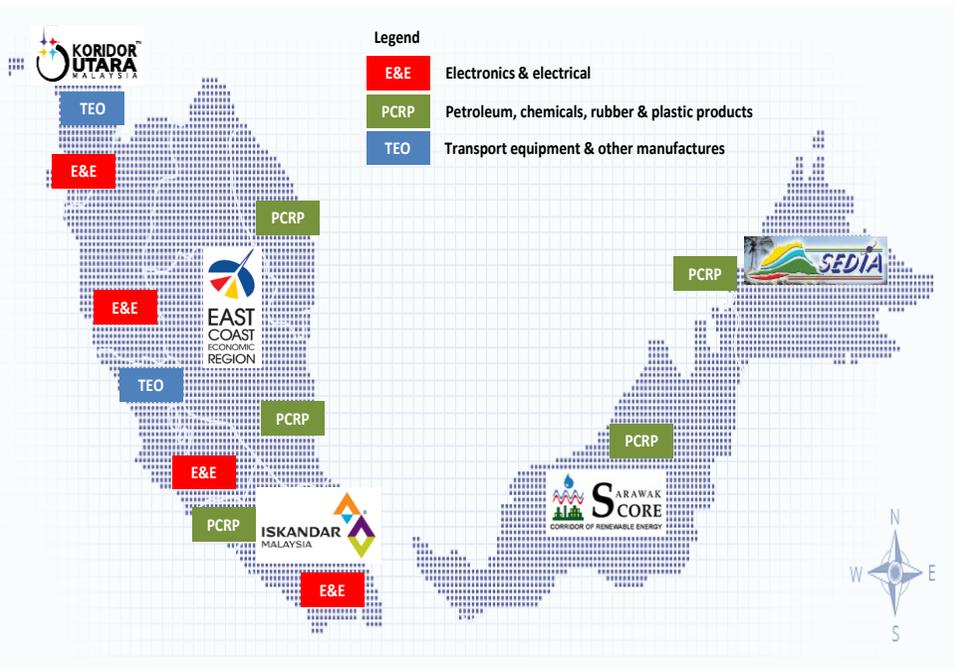
Source: Gartner

Locational diversification to spread the benefits evenly

Establishment of economic corridors, with no industries concentrated in a particular corridor

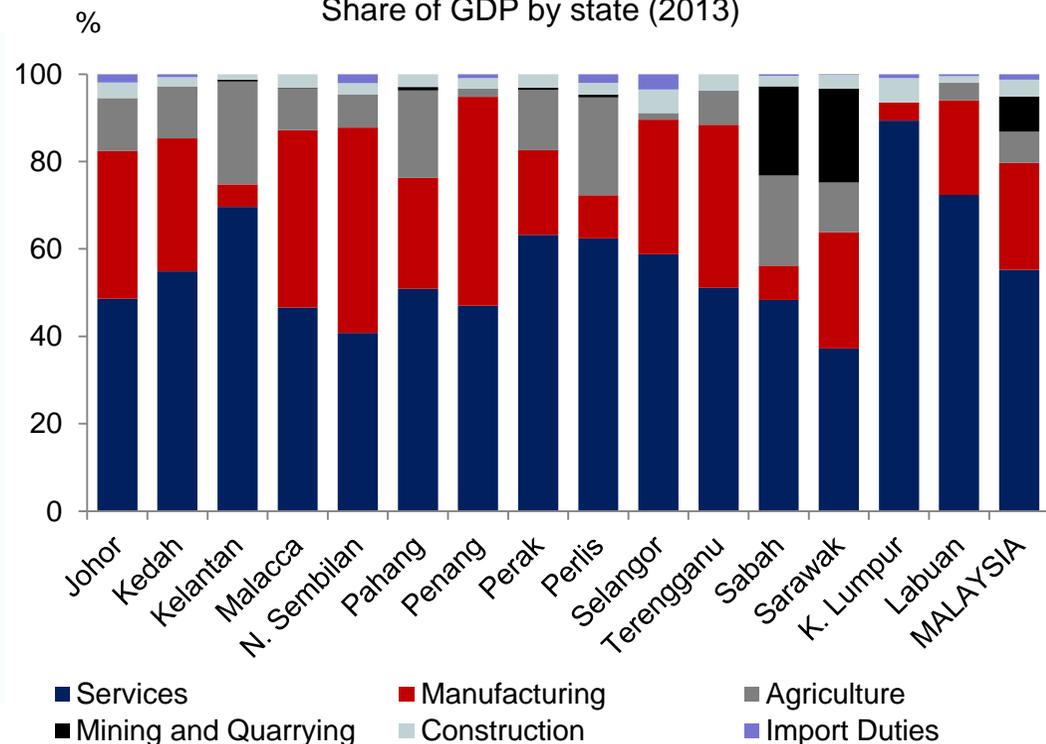
Presence of manufacturing in almost every state ensured income distribution across country

Five economic corridors across Malaysia



Source: DOSM, MIER

Share of GDP by state (2013)



Source: DOSM



Key benefits of manufacturing diversification in Malaysia

1

Deepening the forward and backward linkages in the overall supply chain

- Ensuring inter-dependence and inter-connectedness between upstream and downstream activities
- Higher value-added output produced and retained within domestic economy

3

Participation in the global value chain (GVC)

- Tradable industries benefited from regional comparative advantage and access to global markets
- Opportunities to leverage on geographical and agglomeration dynamics in Asia-Pacific

2

Efficient reallocation of surplus labour from upstream agriculture to downstream manufacturing

- Increase in labour productivity
- Higher income and consumption for rural and urban workers

Average (RM)	1980-1990	2000-2010
Avg mfg sales per worker	54,036	309,596
Disp income per cap	3,448	12,004

4

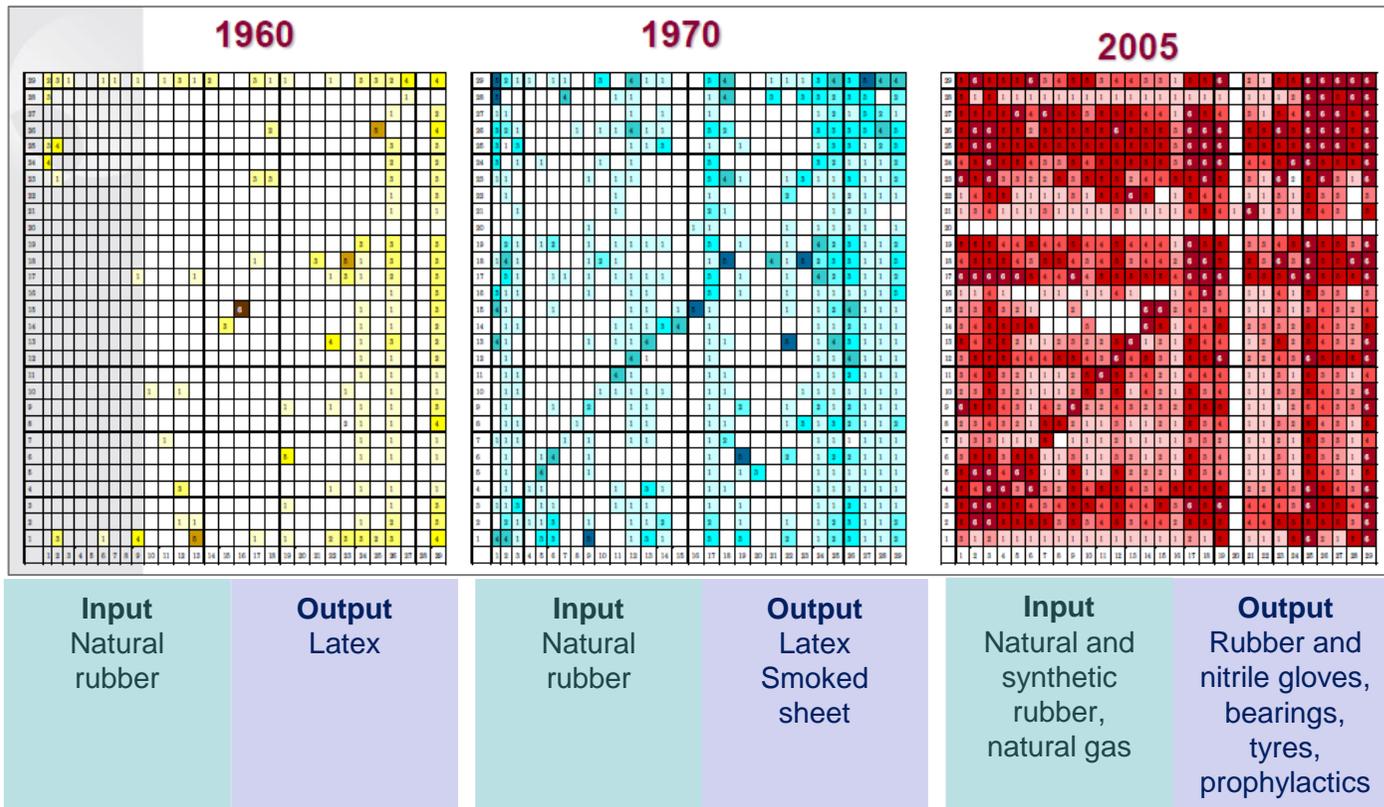
Moderating the impact of commodity price volatility

- Balanced investment between productive non-commodity and commodity sectors
- Reducing risks of price and terms-of-trade shocks emanating from natural resources



Results of diversification seen in the increasing degree of intensity across industries

Evidence from the evolution of Malaysian Input-Output Tables over the years



Source:
JICA, DOSM

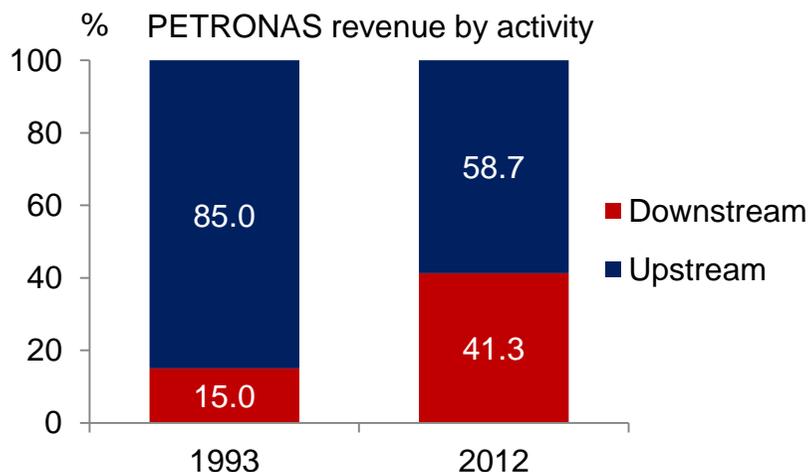
Example:
Rubber
industry

- Through the decades, the **intensity** of economic activities had risen significantly and shifted from being concentrated to become more diverse across **inter-connected industries**
- The increasing darker shades correspond to **higher value-added** generated from **inter-linkages** among industries, highlighting the extent of diversification

Degree of diversification, however, varies across industries - some better than others

✓ Oil and gas industry

- Significant diversification into downstream manufacturing (1980s-1990s)
 - Low crude oil and natural gas prices
 - Higher post-tax profits
- **PETRONAS:** Championing investment
- Evolution from basic upstream to complex products
- Moving toward resource-based services



Source: PETRONAS

✓ Rubber industry

- Initially driven by SMEs who eventually became world leaders in rubber gloves and prophylactic products
 - Top Glove, Supermax, Kossan, Hartalega, Karex
 - Low input costs
 - Availability of low-cost foreign labour

✗ Palm oil industry

- Lagged in venturing into downstream production relative to regional competitors

✗ Heavy industries (steel and automotive)

- Lack of comparative advantage
- Dependent on import substitution policy to remain competitive

Moving forward...

Broad-based impact of diversification

- Fundamental catalyst for greater value-added, job creation and capital accumulation in Malaysia

Key challenges remain

- Human capital (talent shortage)
- Depletion of natural resources
- Increasing pressure from regional and global competitors

Malaysia could not afford to rest on its laurels

- Continued investment in knowledge capital imperative to move up the value chain
 - Attract and develop high-skilled labour force
 - Automation as substitute for labour-intensive production
- Differentiation into higher value-added products
- Further progress critical for Malaysia to advance toward high-income nation status by 2020



Thank you

