

Estimating Singapore's Dependency on Exports Using the Singapore Supply, Use and Input-Output Tables

by Ng Dong Yang
Input-Output Tables Division
Singapore Department of Statistics

Introduction

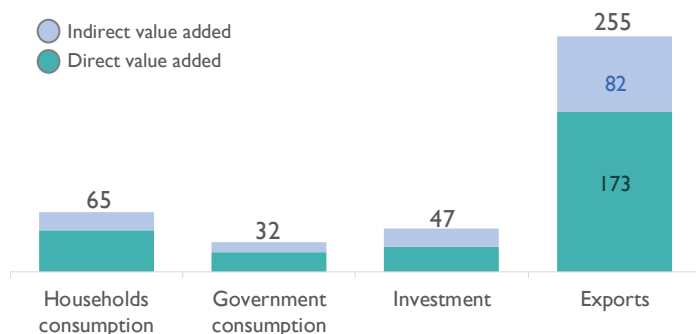
Production arrangements have become more complex with globalisation and greater fragmentation of the production processes across many countries worldwide. Singapore, as an open economy, hosts many companies that contribute to the production of goods and services in this global value chain. This article examines the impact of globalisation on the Singapore economy using the Singapore Supply, Use and Input-Output Tables (SU-IOTs) 2015 to measure Singapore's dependency on exports based on the value added contribution of exports.

Estimating the Value Added Contribution of Exports

Production of Exports Contributed \$255 billion of Value Added

Singapore's exports of goods and services contributed \$255 billion of value added in 2015 (Chart 1). Households consumption, government consumption and investment accounted for the remaining \$144 billion of value added.

CHART 1
TOTAL VALUE ADDED
BY FINAL DEMAND (\$ BILLION), 2015

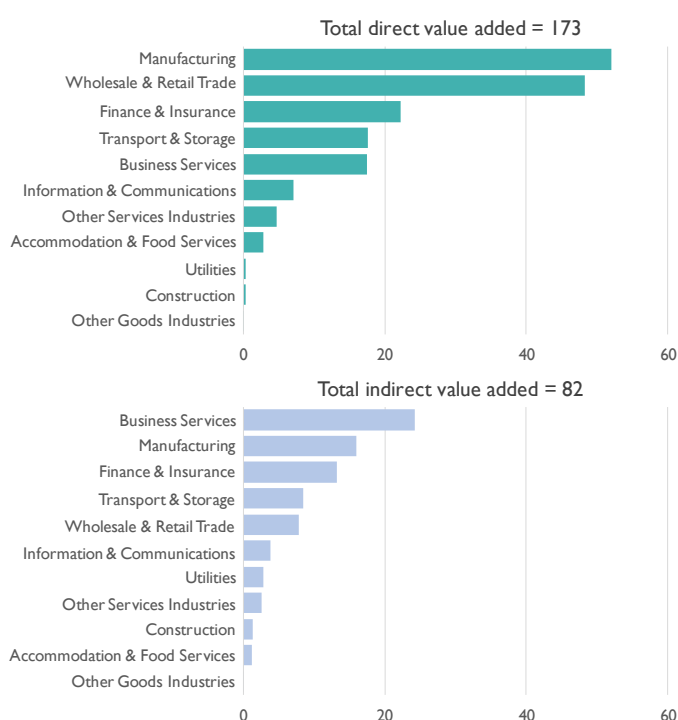


The SU-IOTs measure both the direct effect of exports on the exporting industries, and the indirect effect of exports on the other industries supporting the production of the exporting industries. The value added of \$255 billion comprised the direct value added¹ of \$173 billion generated from the production of exports from the exporting industries and the indirect value added² of \$82 billion generated from the increased production by all industries supporting the exporting industries.

The Manufacturing Industry was the Largest Contributor to Direct Value Added

Exports of the Manufacturing industry contributed the highest direct value added of \$52 billion in 2015 (Chart 2).

CHART 2
DIRECT AND INDIRECT
VALUE ADDED (\$ BILLION) BY INDUSTRY, 2015



¹ Direct value added refers to the value added generated directly by an industry in response to the demand for its exports.

² Indirect value added refers to the value added generated by an industry to support the production of exports for the entire economy. The size of the indirect value added varies across industries, depending on the inputs composition of each industry.

The next two highest contributors were the Wholesale & Retail Trade and Finance & Insurance industries, generating \$48 billion and \$22 billion of direct value added respectively.

In terms of indirect value added, the largest contribution of \$24 billion came from the Business Services industry.

Services Producing Industries were Important to Production of Exports

In 2015, the services producing industries played a significant role in the production of exports, generating \$182 billion of value added, comprising

\$120 billion and \$62 billion of direct value added and indirect value added respectively (Table 1).

Of the \$62 billion of indirect value added originating from the services producing industries, \$11 billion and \$51 billion were generated to support the Goods Producing and Services Producing industries respectively.

In contrast, a lower indirect value added of \$20 billion was generated by the goods producing industries. This comprised \$15 billion and \$5 billion of indirect value added to support the production of exports by the Goods Producing and Services Producing industries respectively.

TABLE 1
IMPACT OF EXPORTS IN TERMS OF VALUE ADDED (\$ MILLION), 2015

	Direct Value Added	Indirect Value Added	Indirect Value Added to Support Production of	
			Goods Producing Industries	Services Producing Industries
Goods Producing Industries	52,812	20,211	15,332	4,879
Other Goods Industries	91	31	15	16
Manufacturing	51,956	15,975	12,669	3,305
Utilities	407	2,859	1,791	1,068
Construction	359	1,347	857	489
Services Producing Industries	120,342	61,679	11,163	50,516
Wholesale & Retail Trade	48,230	7,878	3,846	4,032
Transport & Storage	17,651	8,475	642	7,833
Accommodation & Food Services	2,896	1,289	108	1,180
Information & Communications	7,092	3,858	400	3,458
Finance & Insurance	22,193	13,262	1,064	12,198
Business Services	17,519	24,259	4,886	19,373
Other Services Industries	4,759	2,659	216	2,443
Total	173,154	81,890	26,494	55,395

Note: Figures may not add up due to rounding.

Statistics to Better Understand Globalisation

The SU-IOTs of an economy play a key role in the development of statistics related to globalisation. For example, the inter-country IOTs and Trade in Value Added (TiVA) indicators can be used to better understand globalisation and its impact on economic activities across the different economies.

The compilation of such international statistics require national SU-IOTs to be internationally comparable. For the recently released 2015 SU-IOTs, the Singapore Department of Statistics made several improvements which helped to enhance the tables' international comparability (Table 2).

At the same time, the 2010 benchmark SU-IOTs were revised to incorporate the same improvements.

TABLE 2
SUMMARY OF IMPROVEMENTS TO THE 2015 SU-IOTS

	2015 Benchmark Tables	2014 Annual Tables
Industry and Product Breakdown	105 industries and products	71 industries and products
Product Balancing of SUTs	Total use is balanced at purchasers' prices to derive domestic and import use	Domestic and import use are balanced simultaneously at basic prices
Valuation of Total Supply, Intermediate, Final and Total Use	Purchasers' and basic prices	Basic prices only
Recording of Imports for Re-exports, and Re-exports	SUTs include imports for re-exports, and re-exports	SUTs exclude imports for re-exports, and re-exports
Recording of Non-residents' Expenditure Locally	Expenditure is recorded as Exports of Goods and Services at product level	A row adjustment is recorded under Private Consumption Expenditure in the Import Use table to exclude this expenditure
Recording of Residents' Expenditure Abroad	Expenditure is recorded as Household and Non-Profit Institutions serving Households (NPISHs) final consumption expenditure at product level	A row adjustment is recorded under Private Consumption Expenditure in the Import Use table to include this expenditure



More information are available for downloading:

[Publication on Singapore Supply, Use and Input-Output Tables 2015](#)

[Full set of tables for Singapore Supply, Use and Input-Output Tables 2015](#)

