Income-Based Gross Domestic Product: Key Concepts and Principles

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Introduction

The Gross Domestic Product (GDP) is compiled from three approaches viz. production, expenditure and income. Since 2017, Singapore releases the income-based GDP or GDP(I) by industry at current prices on a quarterly basis[1]. The quarterly production-based and expenditure-based GDP at current prices were released in 2000 and 2016 respectively. Similar to the other approaches, the compilation of GDP(I) is based on the conceptual framework underpinning the System of National Accounts[2] (SNA). GDP(I) can be measured by the sum of income flows, i.e.,

GDP(I) = *Compensation of Employees (CoE)*
+ *Gross Operating Surplus (GOS)*
+ *Taxes less Subsidies on Production and on Imports (TSPI)*

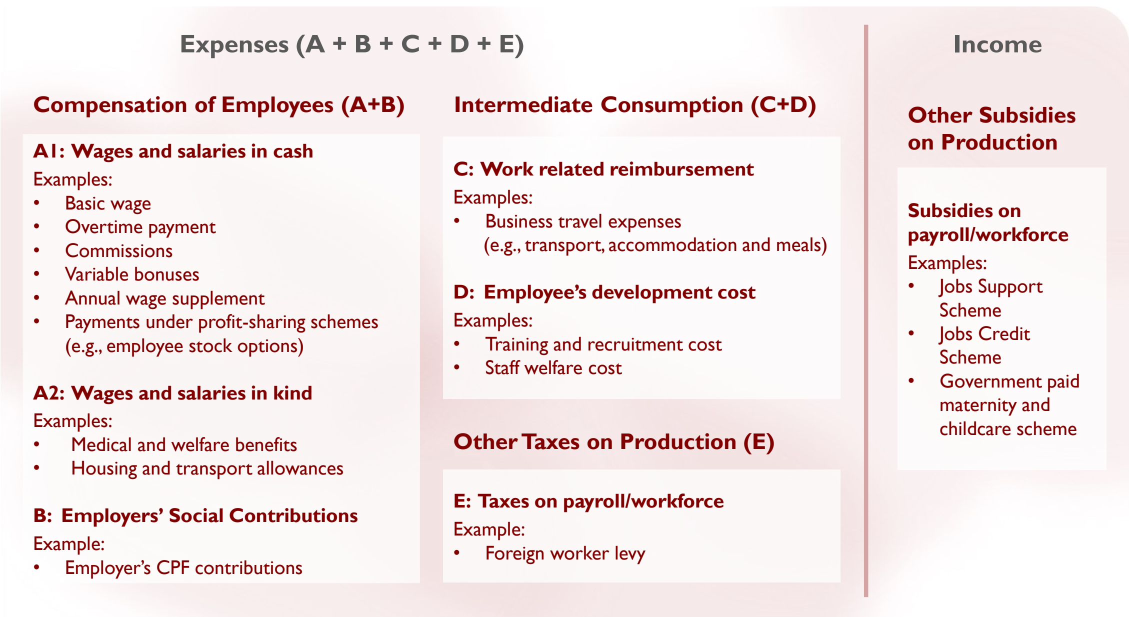
This article discusses the key concepts and principles underlying the compilation of GDP(I) and analyses the impact of government's fiscal support to help businesses and workers during COVID-19 on GDP(I).

Compensation of Employees

Compensation of employees (CoE) in the national accounts broadly refers to remuneration received by employees for the provision of labour services in the production of goods and services. CoE is a subset of employee-related expenses and comprises two components viz. wages and salaries (in cash and in kind) and employers' social contributions (Figure 1).

Wages and salaries in cash include gross salary paid to employees (i.e., before deduction of personal income tax and employees' contributions to the Central Provident Fund (CPF)), as well as bonuses, commissions, gratuities and tips paid directly to

FIGURE 1 EMPLOYEE-RELATED EXPENSES AND INCOME



1 Quarterly income-based GDP data are available from the Ministry of Trade and Industry's Economic Survey of Singapore (https://www.mti.gov.sg/Resources/Economic-Survey-of-Singapore) and on the SingStat Website (https://www.tablebuilder.singstat.gov.sg).

2 SNA 2008 is available for reference at http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf.

the employees by a third parties. Wages and salaries in kind refer to the cost incurred by employers for the provision of goods and services to the employees for free or at a discount (e.g., housing allowances).

Employers' social contributions are payments or contributions made by employers to provide social benefits for their employees. An example of employers' social contributions in Singapore is the employers' contributions to CPF on behalf of their employees.

CoE, however, excludes reimbursements of work-related expenses incurred by employees (e.g., transportation expenses incurred on business travel). Such work-related reimbursements are treated as operating expenses (or intermediate consumption) incurred by employers for their employees to carry out their work duties.

Taxes payable by employers in the wage and salary bill (e.g., foreign worker levy) are excluded from CoE. Such taxes are treated as other taxes on production in the national accounts, similar to taxes on buildings, land and any other assets used in the production process. The remuneration of self-employed individuals (e.g., working owners of unincorporated enterprises or sole proprietors) is considered as mixed income under gross operating surplus, rather than CoE.

Gross Operating Surplus

The Gross Operating Surplus (GOS) refers to income generated by enterprises from the production of goods and services. GOS is a measure of the surplus accruing to owners from production before deducting any explicit or implicit interest charges, rent[3] or other property incomes payable on financial assets, land and other natural resources.

GOS in national accounts differs from the concept of profit and loss in business accounting[4]. For example, unlike company's business profits, GOS excludes incomes from capital gains and property incomes (e.g., interest and dividend) as these do not accrue from the company's production of goods and services. Likewise, capital losses and property incomes paid are excluded from GOS.

Taxes Less Subsidies on Production and on Imports

Taxes less subsidies on production and on imports (TSPI) comprise taxes on products and other taxes less subsidies on production.

TSPI = *Taxes on Products (TOP)*
+ Other Taxes less Subsidies on Production (OTSP)

TOP are taxes payable per unit of goods or services when they are produced, delivered, sold, transferred, or disposed of by their producers. Examples of TOP include Goods & Services Tax (GST) and Custom & Excise Tax (Figure 2).

OTSP consist of taxes payable (and subsidies receivable) on the land, assets, labour, etc., employed in production that are independent of the quantity or value of the goods and services produced. Examples of other taxes on production include foreign worker levy and property tax payable by enterprises. On the other hand, an example of other subsidies on production is the Jobs Support Scheme (JSS), which entail wage support by the government that help employers retain their local employees amidst the economic downturn caused by COVID-19. Notably, not all taxes levied by the government are treated as TOP or other taxes on production as described above. For example, personal and corporate income taxes are treated as current taxes levied on the incomes of households and corporations while development charge is treated as capital taxes.

FIGURE 2

CLASSIFICATION OF TAXES IN THE SNA

Taxes on Products
Examples:
- Goods and Services Tax (GST)
- Custom and excise tax
- Certificate of Entitlement (COE)

Other Taxes on Production
Examples:
- Property tax
- Foreign worker levy

Capital Taxes
Example:
- Development charge *

Current Taxes on Income, Wealth, etc
Examples:
- Personal income tax
- Corporate income tax

* Development charge is a tax that is levied when planning permission is granted to carry out development projects that increase the value of the land. For instance, (i) rezoning to a higher value use or (ii) increasing the plot ratio.

3 Based on the SNA, a distinction is made between rent and rental. Rent is a form of property income derived from non-produced assets such as land, while rental is payable under operating leases relating to produced assets, including dwellings and buildings.

4 Refer to details in Chapter 7 of the OECD's Understanding National Accounts on 'Profits and Gross Operating Surplus: Not to be Confused' at https://www.oecd.org/sdd/UNA-2014.pdf.

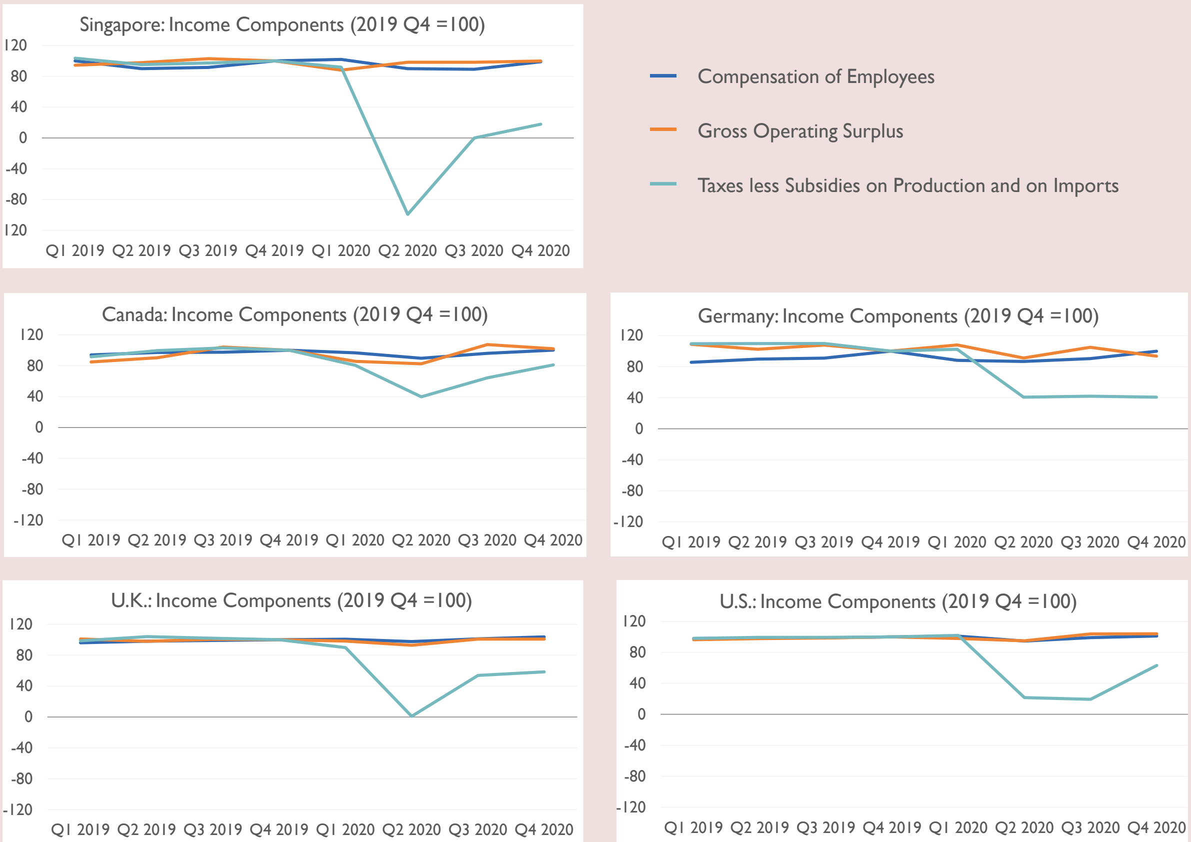
Did You Know?

The onset of COVID-19 had seen governments around the world deploying large fiscal stimulus to support workers and businesses. This was also the case in Singapore. The Government's strong response to the crisis in the form of five Budgets was the largest in Singapore's history. The unprecedented level of income support provided by the Government was reflected in the taxes less subsidies on production and on imports (TSPI) turning negative in 2Q 2020 for the first time since the series began (i.e., subsidies outstripped taxes on production and on imports).

To facilitate a cross-country comparison of the changes in TSPI since COVID-19, the TSPI series in Singapore and selected countries (i.e., Canada, Germany, U.K., U.S.) were normalised to their pre-crisis levels (i.e., 4Q 2019).

Singapore's TSPI showed a significant dip into negative territory in 2Q 2020. This was due to the strong fiscal support provided to businesses and workers in Singapore in the form of large subsidies or reduction in taxes on production (e.g., Jobs Support Scheme, foreign worker levy rebates/waiver, property tax rebates, rental rebates etc.). Similarly, taxes on products (TOP) fell significantly in 2Q 2020 due the circuit breaker measures imposed to reduce movements and interactions during COVID-19.

Like Singapore, the TSPI series for the selected countries plunged, given the sizeable amounts of subsidies that their respective governments had provided in face of COVID-19. The collections of TOP were also lowered due to lockdown measures, resulting in further declines in their TSPI, which nonetheless remained in the positive territory.



Source: Official statistical publications and websites