DEPARTMENT OF STATISTICS
M A L A Y S I A

Kolokium Statistik

Tarikh : **4 dan 5 Oktober 2018** (Khamis dan Jumaat)
Masa : **2.30 petang - 5.00 petang (Khamis)**
8.00 pagi - 12.30 tengah hari (Jumaat)
Tempat : **Dewan Sigma**
Institut Latihan Statistik Malaysia,
Sungkai, Perak Darul Ridzuan.

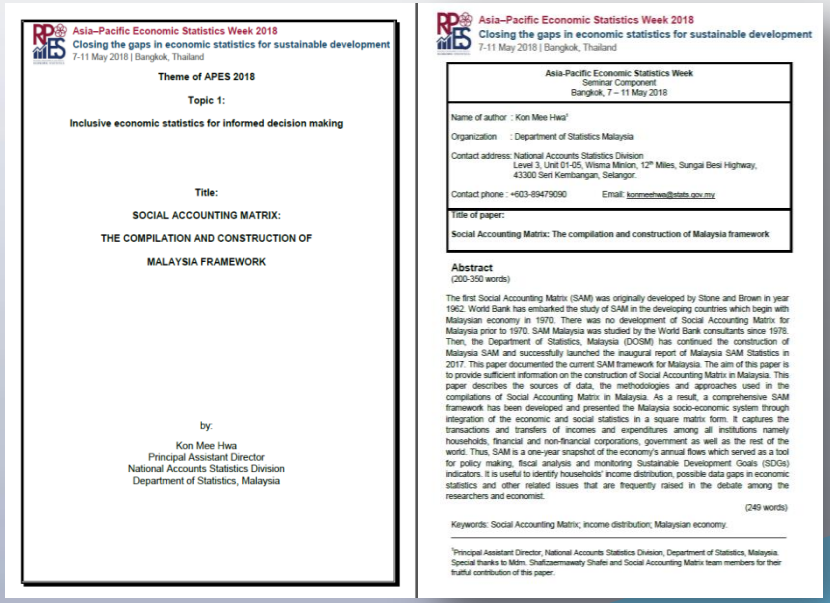
Presentation by:

Kon Mee Hwa
Principal Assistant Director
National Accounts Statistics Division
Department of Statistics, Malaysia

Topic 1: Inclusive economic statistics for informed decision making

Social Accounting Matrix:

The compilation and construction of Malaysia framework



Asia–Pacific Economic Statistics Week 2018
Closing the gaps in economic statistics for sustainable development
7-11 May 2018 | Bangkok, Thailand

Theme of APES 2018

Topic 1:

Inclusive economic statistics for informed decision making

Title:

SOCIAL ACCOUNTING MATRIX:

THE COMPILATION AND CONSTRUCTION OF

MALAYSIA FRAMEWORK

by:

Kon Mee Hwa
Principal Assistant Director
National Accounts Statistics Division
Department of Statistics, Malaysia

Asia–Pacific Economic Statistics Week 2018
Closing the gaps in economic statistics for sustainable development
7-11 May 2018 | Bangkok, Thailand

Asia-Pacific Economic Statistics Week
Seminar Component
Bangkok, 7 – 11 May 2018

Name of author : Kon Mee Hwa[1]
Organization : Department of Statistics Malaysia
Contact address: National Accounts Statistics Division
Level 3, Unit 01-05, Wisma Minlon, 12th Miles, Sungai Besi Highway,
43300 Seri Kembangan, Selangor.
Contact phone : +603-89479090 Email: konmeehwa@stats.gov.my

Title of paper:

Social Accounting Matrix: The compilation and construction of Malaysia framework

Abstract
(200-350 words)

The first Social Accounting Matrix (SAM) was originally developed by Stone and Brown in year 1962. World Bank has embarked the study of SAM in the developing countries which begin with Malaysian economy in 1970. There was no development of Social Accounting Matrix for Malaysia prior to 1970. SAM Malaysia was studied by the World Bank consultants since 1978. Then, the Department of Statistics, Malaysia (DOSM) has continued the construction of Malaysia SAM and successfully launched the inaugural report of Malaysia SAM Statistics in 2017. This paper documented the current SAM framework for Malaysia. The aim of this paper is to provide sufficient information on the construction of Social Accounting Matrix in Malaysia. This paper describes the sources of data, the methodologies and approaches used in the compilations of Social Accounting Matrix in Malaysia. As a result, a comprehensive SAM framework has been developed and presented the Malaysia socio-economic system through integration of the economic and social statistics in a square matrix form. It captures the transactions and transfers of incomes and expenditures among all institutions namely households, financial and non-financial corporations, government as well as the rest of the world. Thus, SAM is a one-year snapshot of the economy's annual flows which served as a tool for policy making, fiscal analysis and monitoring Sustainable Development Goals (SDGs) indicators. It is useful to identify households' income distribution, possible data gaps in economic statistics and other related issues that are frequently raised in the debate among the researchers and economist.

(249 words)

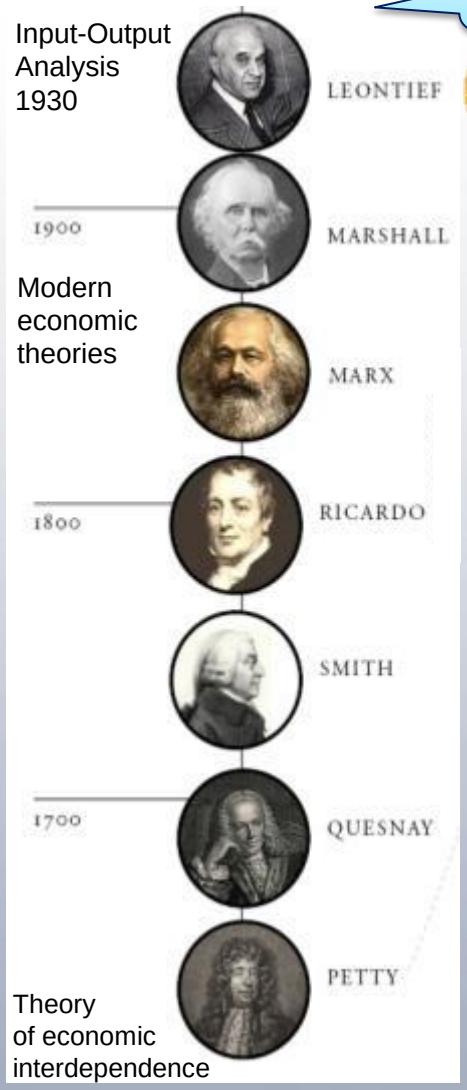
Keywords: Social Accounting Matrix; income distribution; Malaysian economy.

[1]Principal Assistant Director, National Accounts Statistics Division, Department of Statistics, Malaysia. Special thanks to Mdm. Shafizaermawaty Shafei and Social Accounting Matrix team members for their fruitful contribution of this paper.

Source: http://communities.unescap.org/asia-pacific-economic-statistics/apes-2018-featured-papers

Why SAM is needed?

Input-Output Model → **Extension of IO** → **Sosial Accounting Matrix (SAM)**



Source: http://www.economicmodelling.com

Input-Output (IO) Tables demonstrate multi-dimensional structure of economic analysis:

- ✓ Production & Demand
- ✓ Investment & Capital
- ✓ Imports & Exports

IO has been commonly used in:

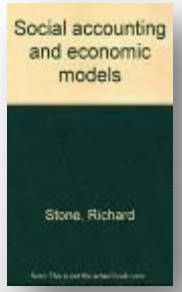
- ✓ national economy planning (Tia et al, 2006)
- ✓ regional analysis (Pietroforte et al, 2000)
- ✓ trade issues (Machado et al, 2001)

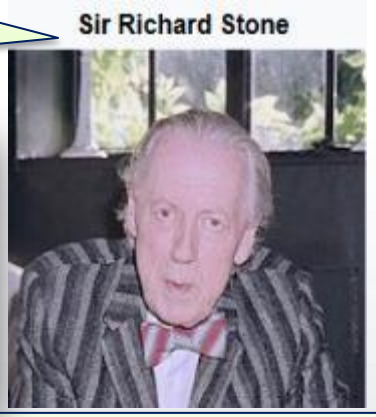
Limitation of Input-Output model:

IO does not show:

X Interrelationship between value-added & final expenditures

X Linkages among Industrial output, household income distribution and consumption





SAM is a powerful tool to show:

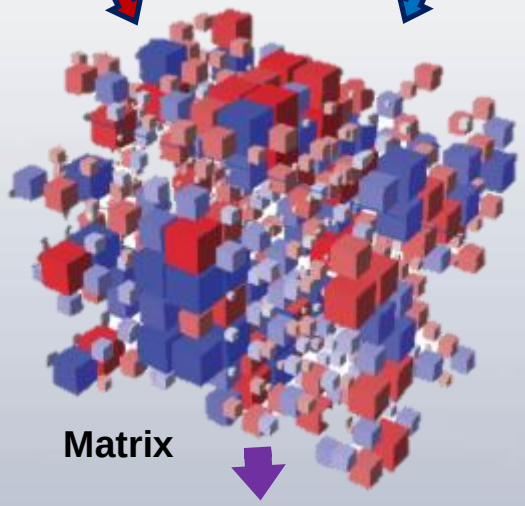
- ✓ Links between the supply and use tables (SUT) & institutional accounts.
- ✓ Entire circular flow of income at the macro level.
- ✓ Patterns of income received & expenditures incurred.
- ✓ Economic structure.

Advantages of SAM over IO:

- ✓ Provides additional information on the composition of households income and expenditure
- ✓ Households statistics can be analysed in a more consistent way.
- ✓ To measure the effectiveness of policy implementation that affecting the economy

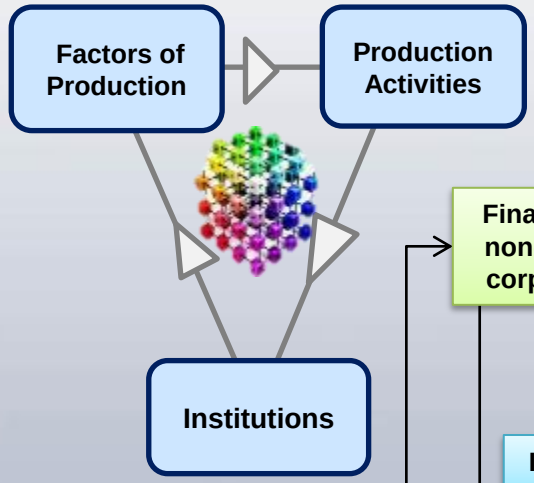
Source: European Systems of Accounts (ESA) 2010

What is SAM?



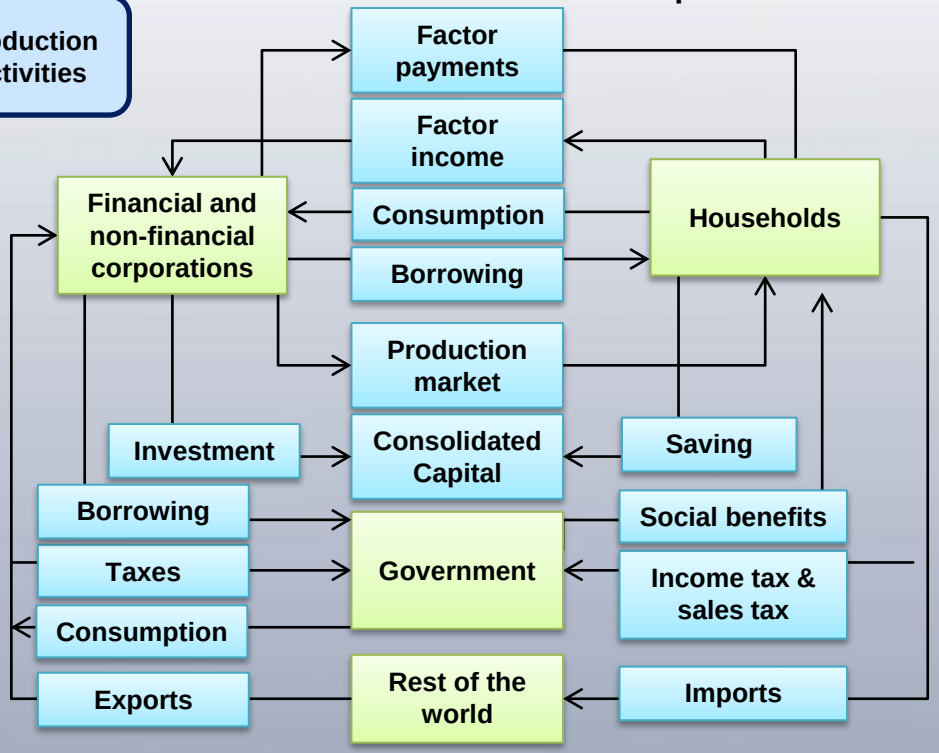
Social Accounting Matrix (SAM)

- is a detail framework that portrays **comprehensive data** for an economy in a matrix form;
- integrates the economic and social statistics;
- captures production linkages as well as other linkages among the institutions in the economy.
- extension of IO Tables which extended from SUT.
- Theme: **Income Distribution**



- ❑ Households
- ❑ Financial & non-financial corporations
- ❑ Government

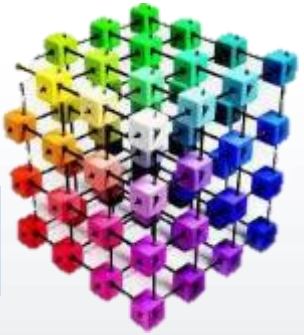
Circular flow of income and expenditure



- ✓ A **matrix** presentation of **National Accounting**
- ✓ An **extension to Input-Output Tables,** which extended from **Supply and Use Tables (SUT)**
- ✓ Descriptive analyses of the **economy structure** at various levels of aggregation

The usefulness of SAM

Important tool for policy analysis



Inter-sector link analysis

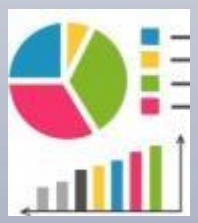
as an input to the parameters and coefficients of Computable General Equilibrium (CGE) models

Social Accounting Matrix

Exogenous & endogenous accounts structure analysis

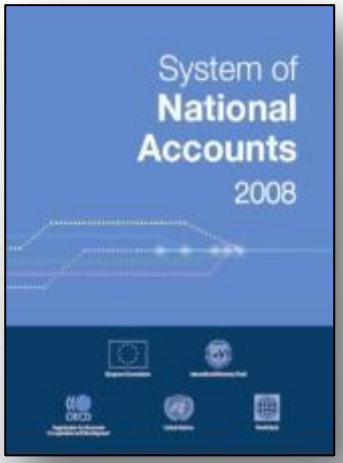
as a one-year snapshot of the economy's annual flows

Keynesian multiplier analysis



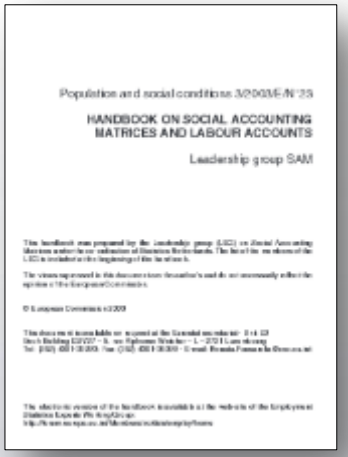
Integration of social-economic statistics and building indicators for policy making

Manual and methodology



System of National Accounts (SNA) 2008

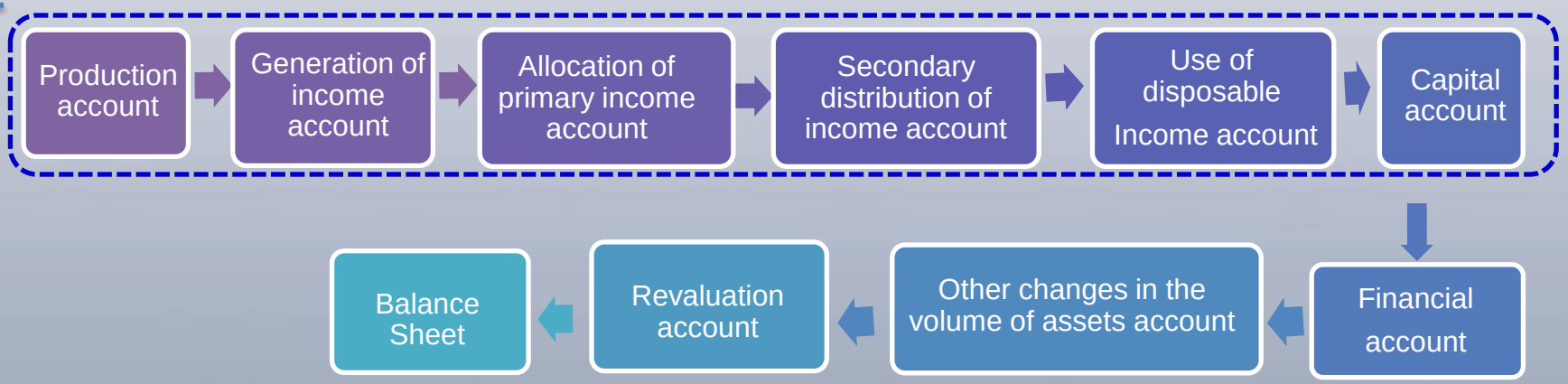
European System of Accounts 2010



Handbook on Social Accounting Matrices and Labour Accounts 2003 by European commission

Flow of income and expenditure in matrix form

Sequence of Account



Data Sources

Balance of Payments (BOP)

Input-Output Tables

Distribution & Use of Income Accounts and Capital Account (DUIACA)

Annual GDP & GDP Income Approach

SAM

Household Expenditure Survey (HES)

Salary & Wages Survey

Labour Force Survey (LFS)

LHDN MALAYSIA

BURSA MALAYSIA

Jabatan KEBAJIKAN Masyarakat

Inland Revenue Board, Dept. of Social Welfare, Listed Companies' annual report, etc.

Household Income Survey (HIS)

Concept & Definition: Simulation on the construction of SAM

Macro: 10 x 10

disaggregate

Compilation: 158 x 158

Tabulations SAM

	1	2	3	4	5	6	7	8	9	10	Total
1											A
2											B
3											C
4											D
5											E
6											F
7											G
8											H
9											I
10											J
Total	A	B	C	D	E	F	G	H	I	J	

	i1	i2	i3	.....	I156	i157	i158	Total
j1								a1
j2								a2
j3								a3
j4								a4
. . .								. . .
j156								x
j157								y
j158								z
Total	a1	a2	a3	....	x	y	z	

Macro Matrix

10 x 10

Micro Matrix (Aggregated Level)

67 x 67

27 x 27

Institutions

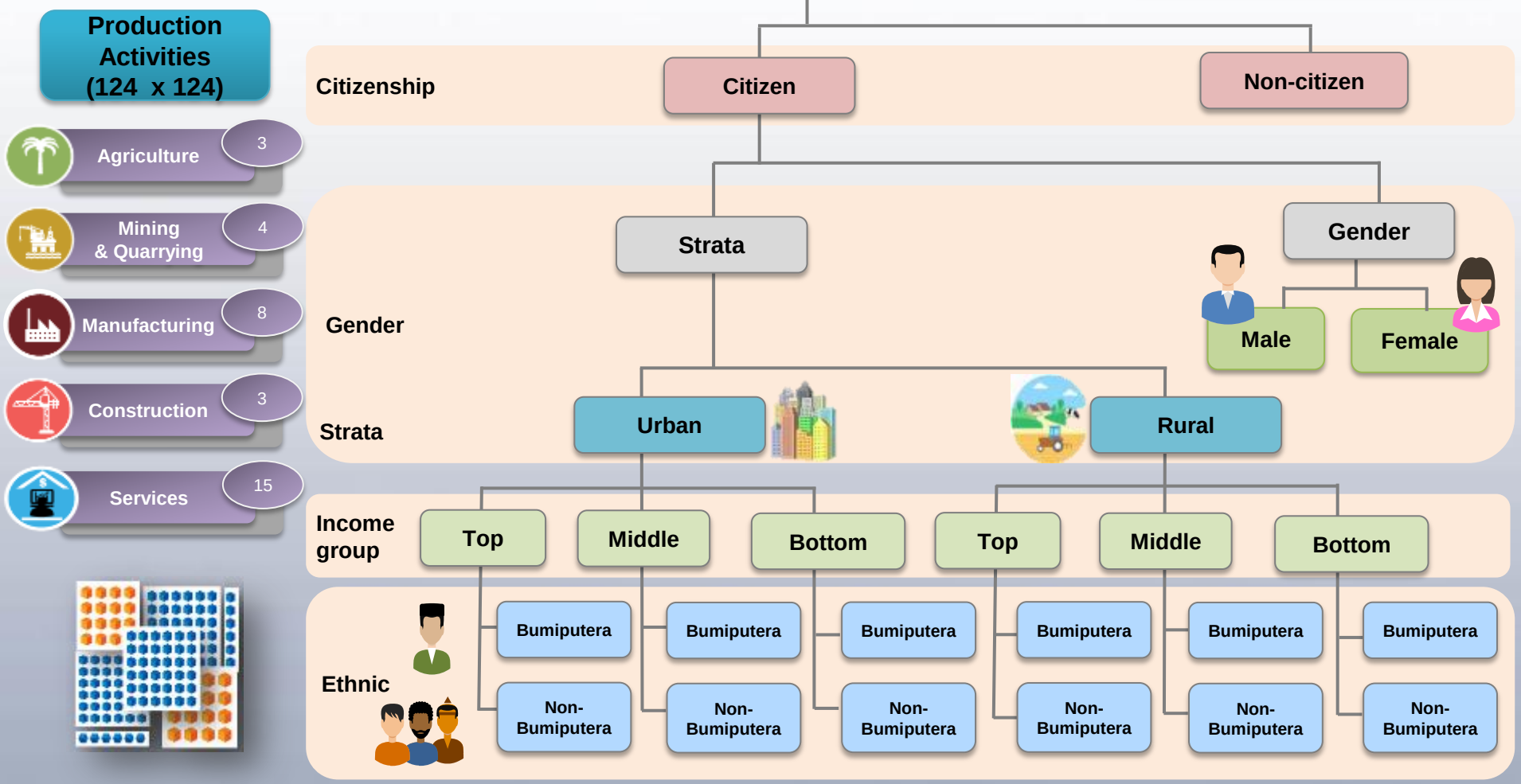
- an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities
- households, financial & non-financial corporations, government and rest of the world.

SAM's Framework: Macro Matrix 10 x 10

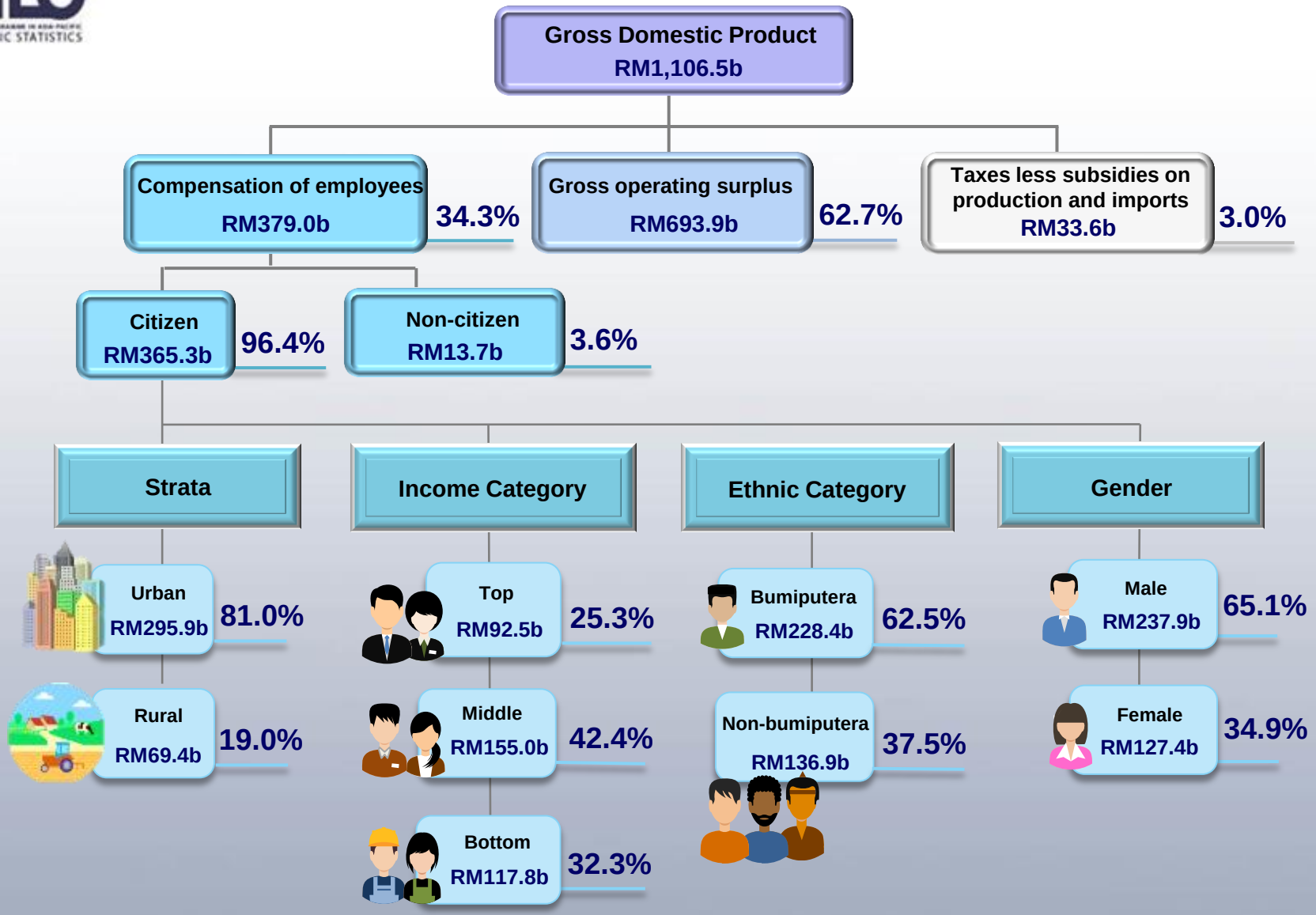
SAM at Macro Level 10 x 10			1	2	3	4	5	6	7	8	9	10	Total Income
					Institutions					Rest of the world			
			Factors of production	Production activities	Households	Financial & non-financial corporations	Government	Consolidated capital	Financial	Goods and services	Income and transfer	Capital	
1	Factors of production			Value added [1,2]							Factor income received from abroad [1,9]		Total factor incomes
2	Production activities			Raw materials of domestic commodities [2,2]	Consumption on domestic commodities [2,3]		Final consumption [2,5]	Gross capital formation for domestic commodities [2,6]		Exports [2,8]			Gross output
3	Institutions	Households	Compensation of employees & unincorporated business profits [3,1]		Current transfers [3,3]	Distributed profits [3,4]	Social benefits and periodical payments [3,5]		Households borrowing [3,7]		Social benefits received from abroad [3,9]		Total households incomes
4	Institutions	Financial & non-financial corporations	Gross operating surplus [4,1]			Current transfers [4,4]			Corporate borrowing [4,7]		Non-factor income received from abroad [4,9]		Total financial & non-financial corporations incomes
5	Institutions	Government		Commodity taxes [5,2]	Income tax and sales tax [5,3]	Corporate tax [5,4]		Taxes on capital goods [5,6]	Government borrowing [5,7]	Exports duty [5,8]	Non-factor income received from abroad [5,9]		Total government revenues
6	Consolidated capital				Households saving [6,3]	Corporate saving [6,4]	Government saving [6,5]						Total saving
7	Financial					Lending [7,4]							Total lending
8	Rest of the world	Goods and services		Imports of raw materials [8,2]	Consumption on imported commodities [8,3]		Consumption on imported commodities [8,5]	Imports of capital goods [8,6]				Balance of goods and services [8,10]	Total imports
9	Rest of the world	Income and transfer	Factor income paid to abroad [9,1]		Non-factor income paid to abroad [9,3]	Non-factor income paid to abroad [9,4]	Non-factor income paid to abroad [9,5]						Total income and transfer paid to abroad
10	Rest of the world	Capital						Balance of capital and financial account [10,6]			Balance of income and transfer [10,9]		Total capital paid to abroad
Total Expenditure			Total factor payments	Gross input	Total households expenditures	Total financial & non-financial corporations expenditures	Total government expenditures	Total investments	Total borrowing	Total exports	Total Income and transfer received from abroad	Total capital received from abroad	

Note: The sum of component figures may not tally with the total figures due to rounding

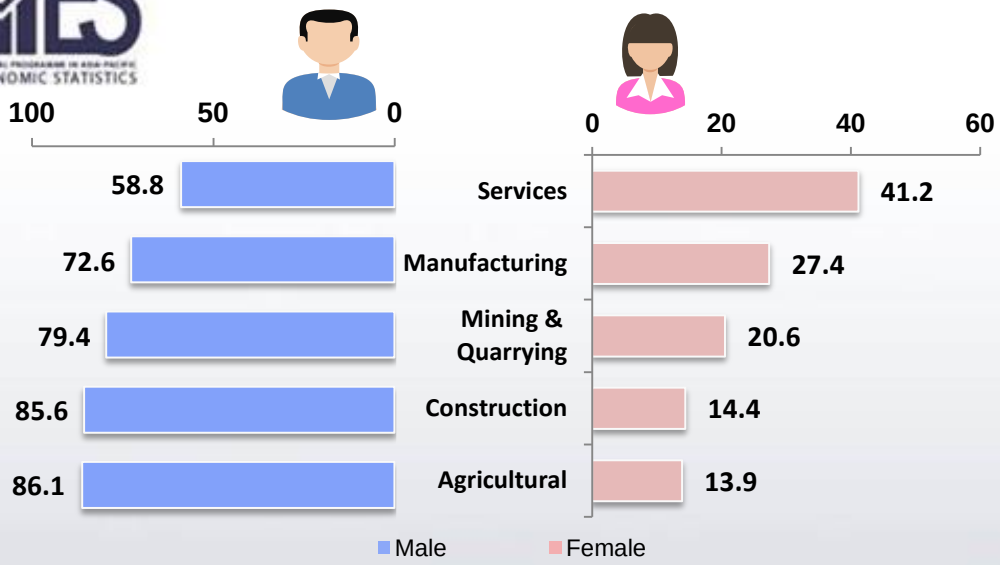
Disaggregation of SAM at Micro level

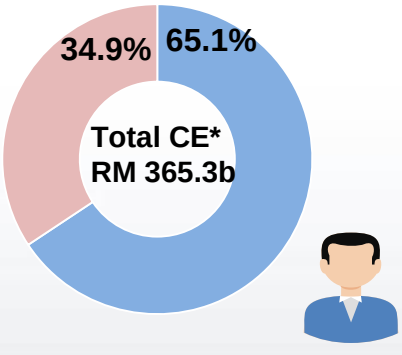


SAM 2014 Data Analysis : Income Distribution



Compensation of employees by Gender



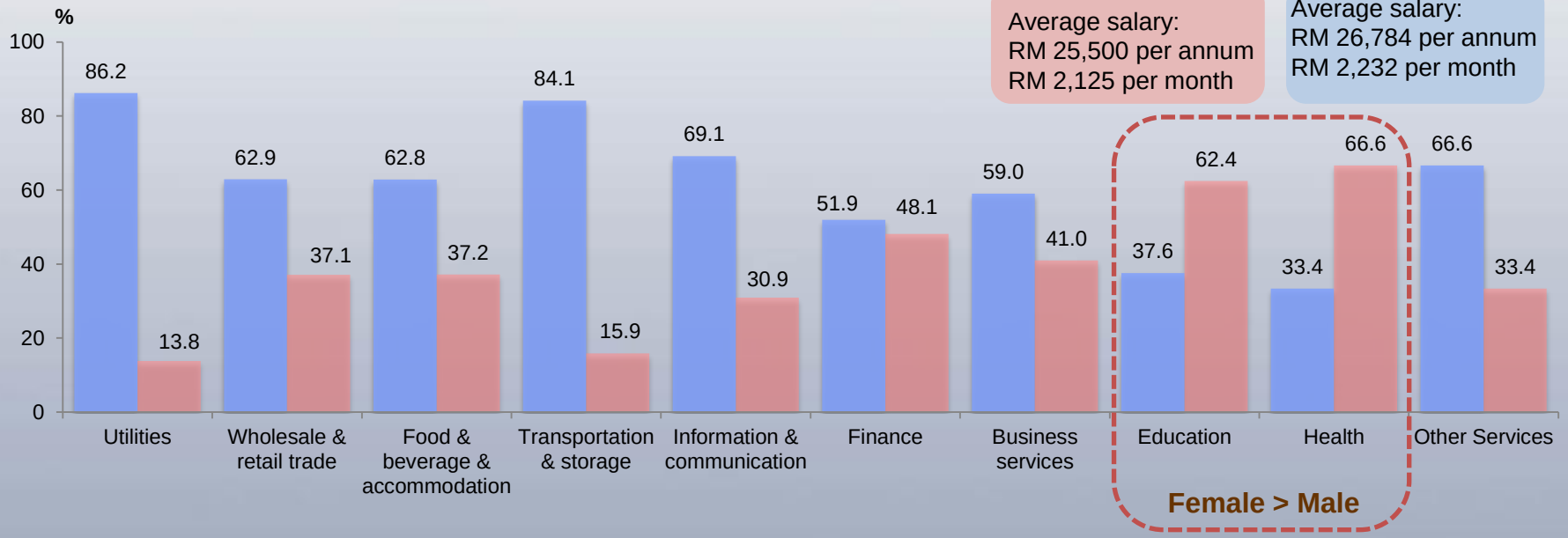


No. of employees: 4,656,800

Average salary: RM 25,500 per annum RM 2,125 per month

No. of employees: 7,093,000

Average salary: RM 26,784 per annum RM 2,232 per month



* Exclude non-citizen and unincorporated business profit

Households: Income & Expenditure (Value and percentage share)

Income

- **72.3%** RM461.6b — Compensation of employees & unincorporated business profits
- **14.5%** RM92.6b — Distributed profits
- **8.4%** RM54.1b — Social benefits and periodical payments
- **4.3%** RM27.5b — Households borrowing
- **0.5%** RM3.0b — Current transfers
- **0.0%** RM0.4m — Social benefits received from abroad

2014

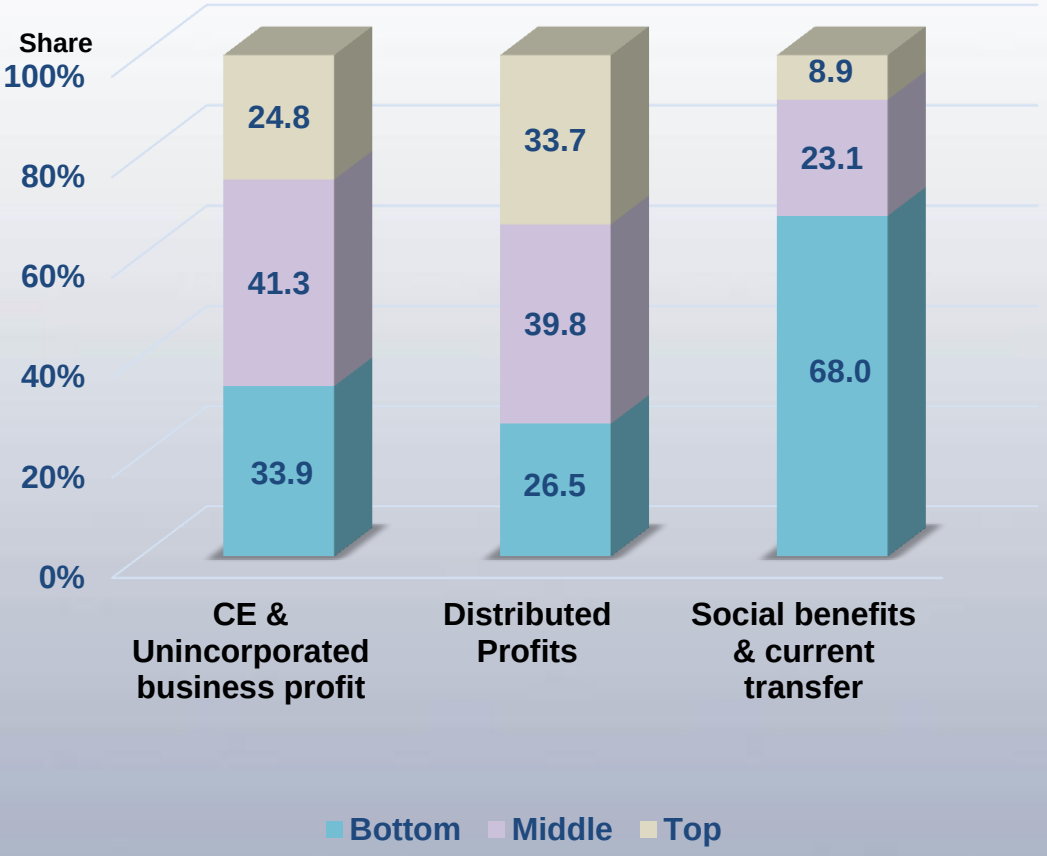
RM638.8b

Expenditure

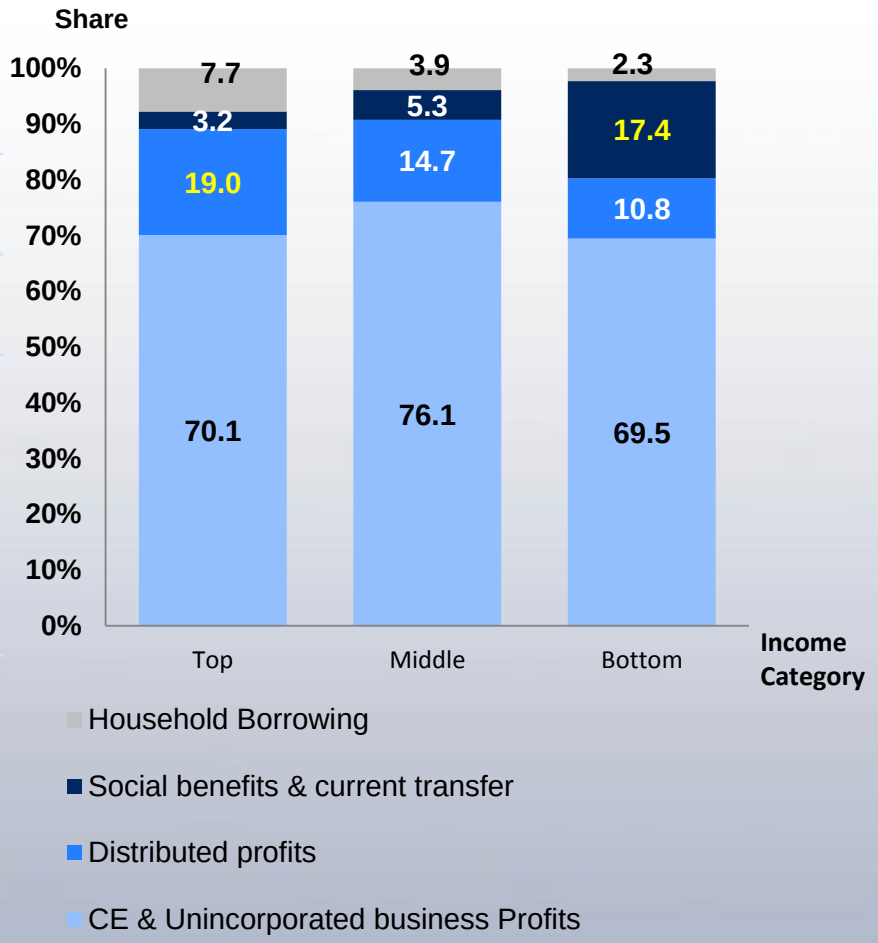
- **83.3%** RM532.2b — Consumption on domestics commodities
- **6.2%** RM39.5b — Consumption on imported commodities
- **5.5%** RM34.8b — Income tax and sales tax
- **3.6%** RM23.3b — Non-factor income paid to abroad
- **0.9%** RM6.0b — Households saving
- **0.5%** RM3.0b — Current transfers

Households: Sources of Income

by Types of Income



by Income Category



Total Households Income 2014
RM638.8b

News Article:
The launched of SAM

theSundaily

theSun epaper Read your favouri mobile devices

Local | World | Business | Sports | Style/Life | Opinion | Property | Education

Malaysia's Social Accounting Matrix launched

Posted on 20 November 2017 - 09:08pm

sunbiz@thesundaily.com

PETALING JAYA: The Department of Statistics Malaysia (DOSM) today launched the inaugural report on Malaysia's Social Accounting Matrix (SAM).

It said in a statement that SAM is a detailed framework that portrays comprehensive data for a particular year and it integrates the economic and social statistics as well as linkages among the institutions in Malaysia, namely households, financial and non-financial corporations, government and the rest of the world.

The balanced structure of SAM provides important input for the distribution of income and expenditure in fiscal analysis.

At macro level, SAM gives a snapshot on the Malaysia economy's flows in a year, while at micro level, it focuses on the income distributions for households, particularly compensation of employees by strata, income category, ethnic category and gender.

The chief statistician of Malaysia, Datuk Seri Dr Mohd Uzir Mahidin, noted SAM is one of the statistical product that is commonly used by the policy maker and researcher to measure the effectiveness factors of policy implementation that is affecting the economy of the country, including the flow of income sources and spending patterns for institutions.

"For the nation to achieve its vision, statistics for planning is very important"

YBhg. Dato' Sri Dr. Mohd Uzir Bin Mahidin
Chief Statistician Malaysia
-The Borneo Post, 31st Oct. 2017-

62nd ISI World Statistics Congress

ISI 2019 Kuala Lumpur

Welcoming 62nd ISI WORLD STATISTICS CONGRESS 2019

18 – 23 AUGUST | KUALA LUMPUR

http://www.isi2019.org

Thank You

DEPARTMENT OF STATISTICS, MALAYSIA
Block C6, Complex C,
Federal Government Administrative Centre,
62514, PUTRAJAYA
Tel : 03-8885 7000
Fax : 03-8888 9248
Email : jpbkkp@dosm.gov.my
Website : https://www.dosm.gov.my