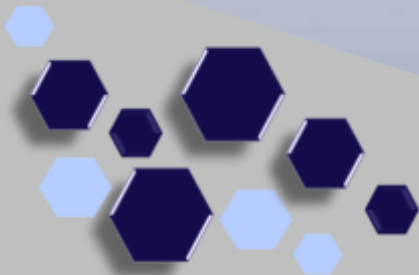


Social Accounting Matrix:

The compilation and construction of Malaysia framework

Presentation by:

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



Why SAM is needed?

Input-Output
Analysis
1930



LEONTIEF

1900



MARSHALL

Modern
economic
theories



MARX

1800



RICARDO



SMITH

1700



QUESNAY



PETTY

Theory
of economic
interdependence

Source: <http://www.economicmodelling.com>

Input-Output Model



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:

- ✗ Interrelationship between value-added & final expenditures
- ✗ Linkages among Industrial output, household income distribution & consumption

Social Accounting Matrix (SAM)

Extension of
IO

Social accounting
and economic
models

Stone, Richard

Sir Richard Stone



SAM is a powerful tool to show:

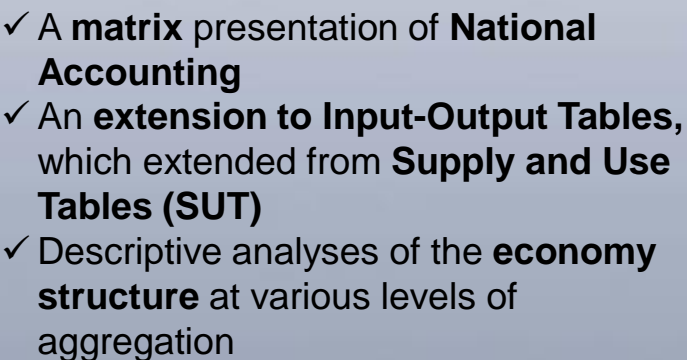
- ✓ Links between the supply and use tables (SUT) & institutional accounts.
- ✓ Entire circular flow of income at the macro level.
- ✓ Patterns of income received & expenditures incurred.
- ✓ Economic structure.



Advantages of SAM over IO:

- ✓ Provides additional information on the composition of employment.
- ✓ Households statistics can be analysed in a more consistent way.
- ✓ Monitor Sustainable Development Goals (SDG) indicators
 - 10.1 Reduce Inequality

Source: European Systems of Accounts (ESA) 2010



- 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**



The usefulness of SAM

Target 10.1 : By 2030, growth rate of B40 household expenditure > national average



Reduced
inequalities

In monitoring
Sustainable
Development Goals
(SDGs) indicators

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

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

Important tool
for policy analysis



Inter-sector link
analysis



Exogenous &
endogenous
accounts structure
analysis



Keynesian
multiplier analysis



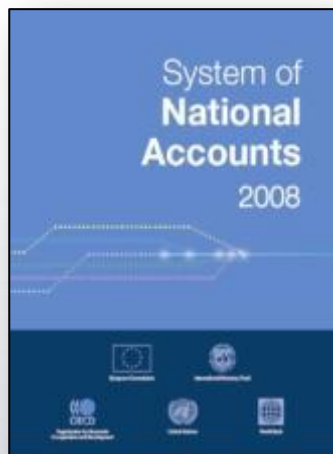
Social Accounting Matrix



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



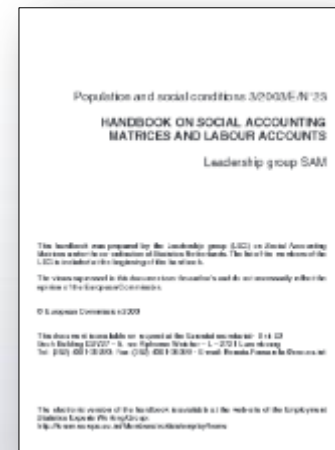
Manual and methodology



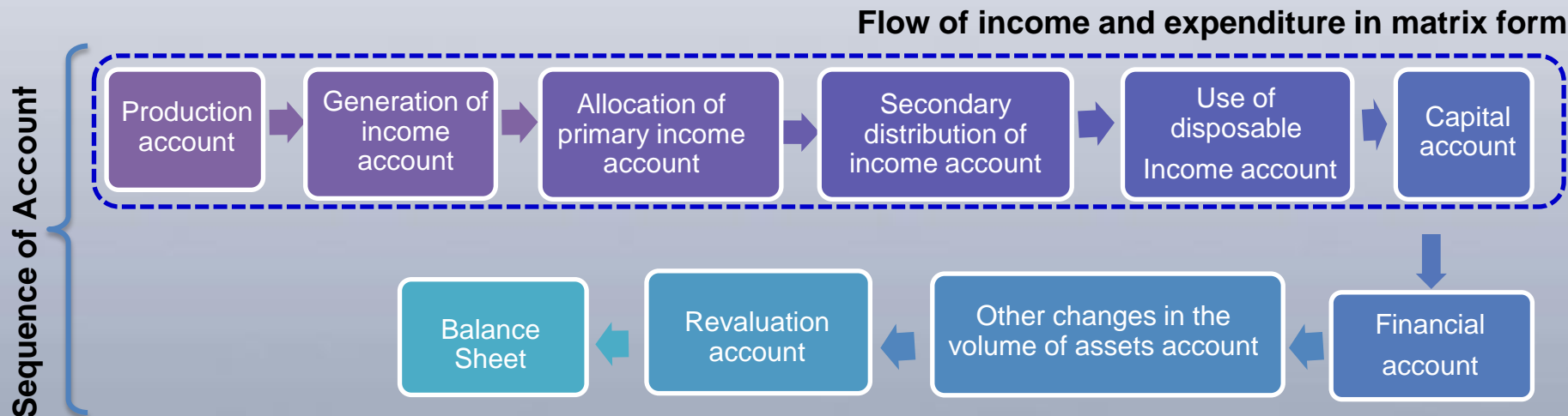
System of National Accounts (SNA) 2008



European System of Accounts 2010



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



Data Sources

Balance of Payments (BOP)



Input-Output Tables



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



Household Expenditure Survey (HES)



Annual GDP & GDP Income Approach



Household Income Survey (HIS)



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

Salary & Wages Survey



Labour Force Survey (LFS)

Concept & Definition: Simulation on the construction of SAM

Macro: 10 x 10

	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	

disaggregate

Compilation: 158 x 158

	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	

**Tabulations
SAM**

**Macro
Matrix**

10 x 10

**Micro
Matrix
(Aggregated
Level)**

67 x 67

27 x 27

Institutions

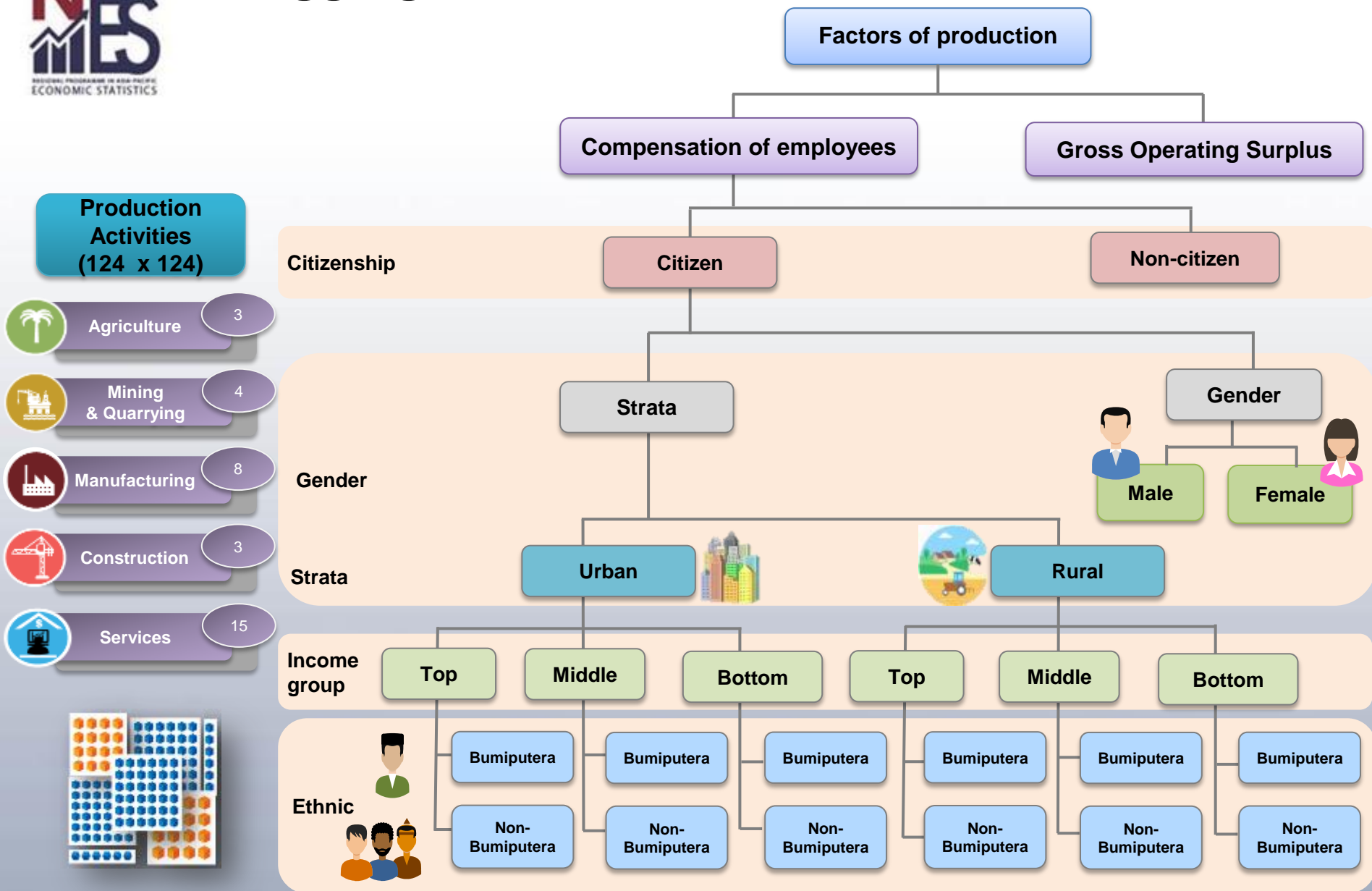
- an economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities
- households, financial & non-financial corporations, government and rest of the world.

SAM's Framework: Macro Matrix 10 x 10

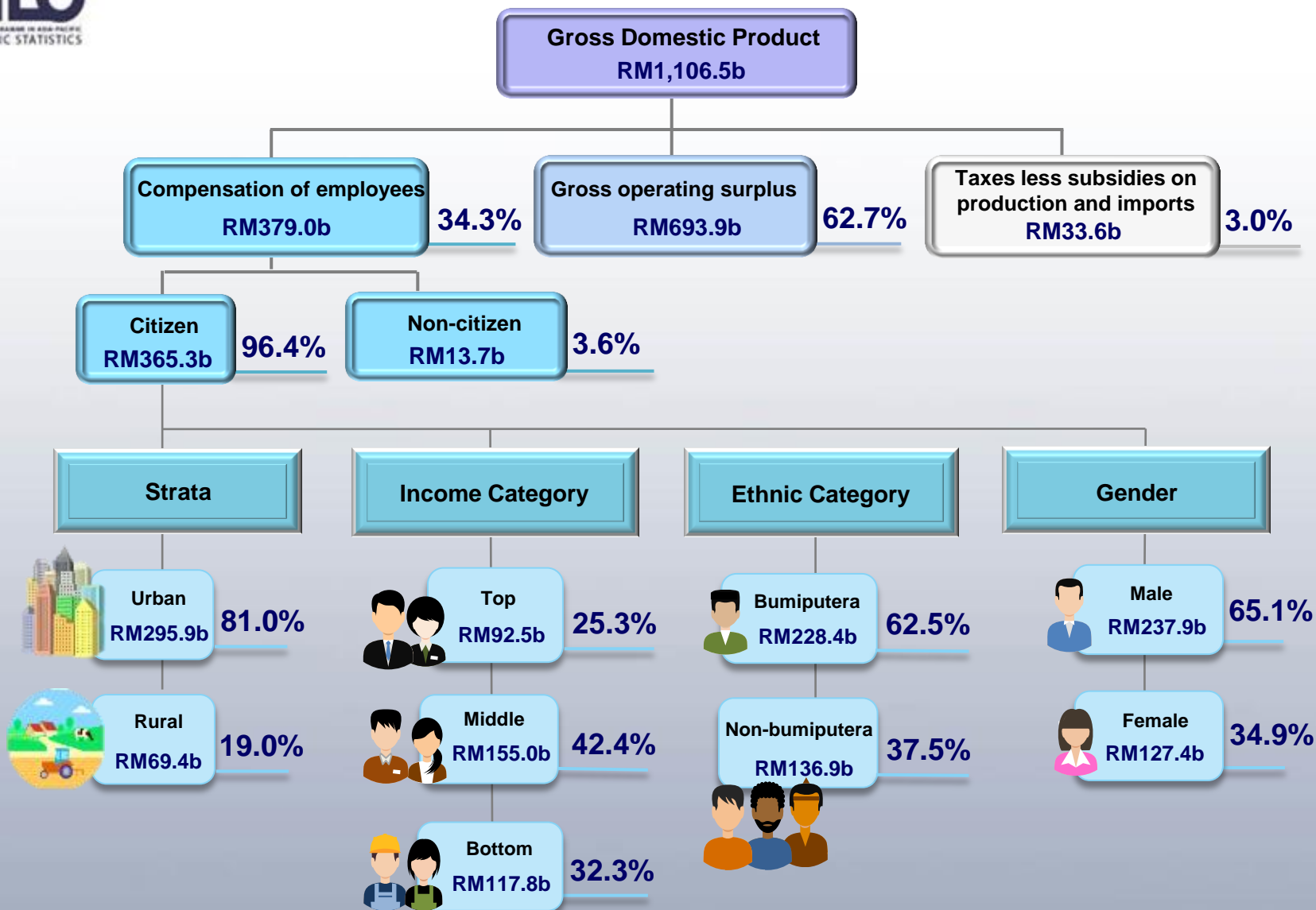
SAM at Macro Level 10 x 10			1	2	3	4		5	6	7	8	9	10	Total Income	
			Factors of production	Production activities	Institutions			Consolidated capital	Financial	Rest of the world					
					Households	Financial & non-financial corporations	Government			Goods and services	Income and transfer	Capital			
1	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										Corporate borrowing [4,7]		Non-factor income received from abroad [4,9]		Total financial & non-financial corporations incomes	
		Financial & non-financial corporations	Gross operating surplus [4,1]			Current transfers [4,4]									
5			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		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		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

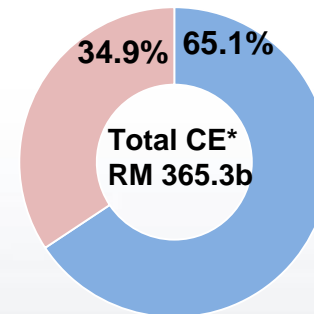
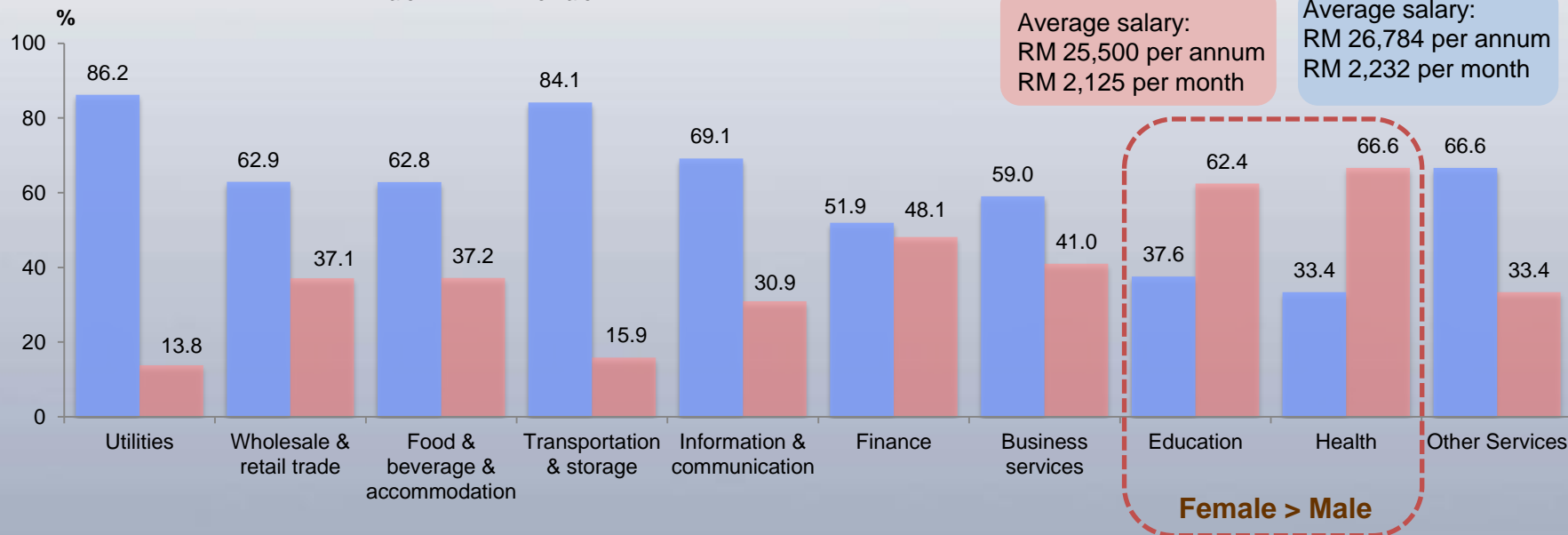
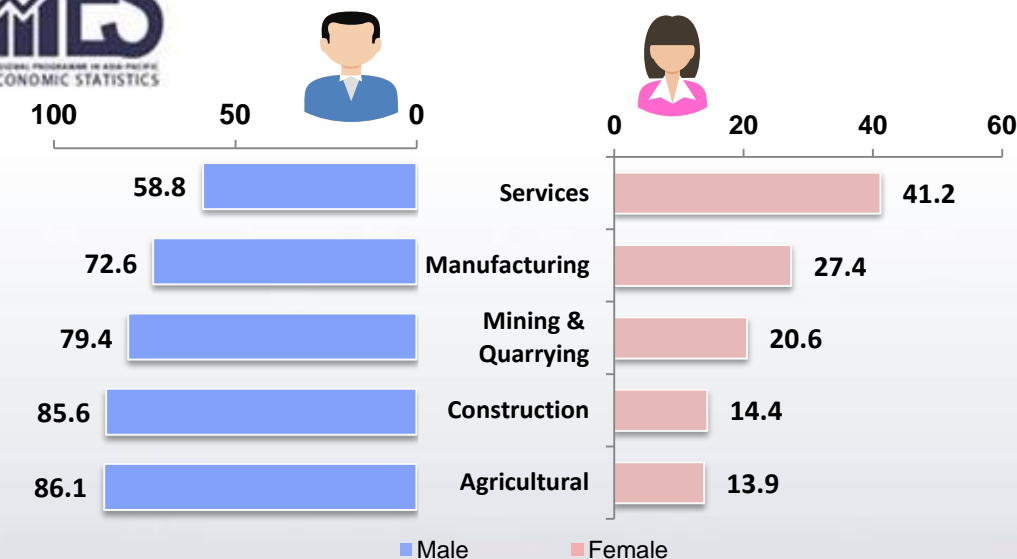
Disaggregation of SAM at Micro level



SAM 2014 Data Analysis : Income Distribution



Compensation of employees by Gender



No. of employees:
4,656,800

No. of employees:
7,093,000

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

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

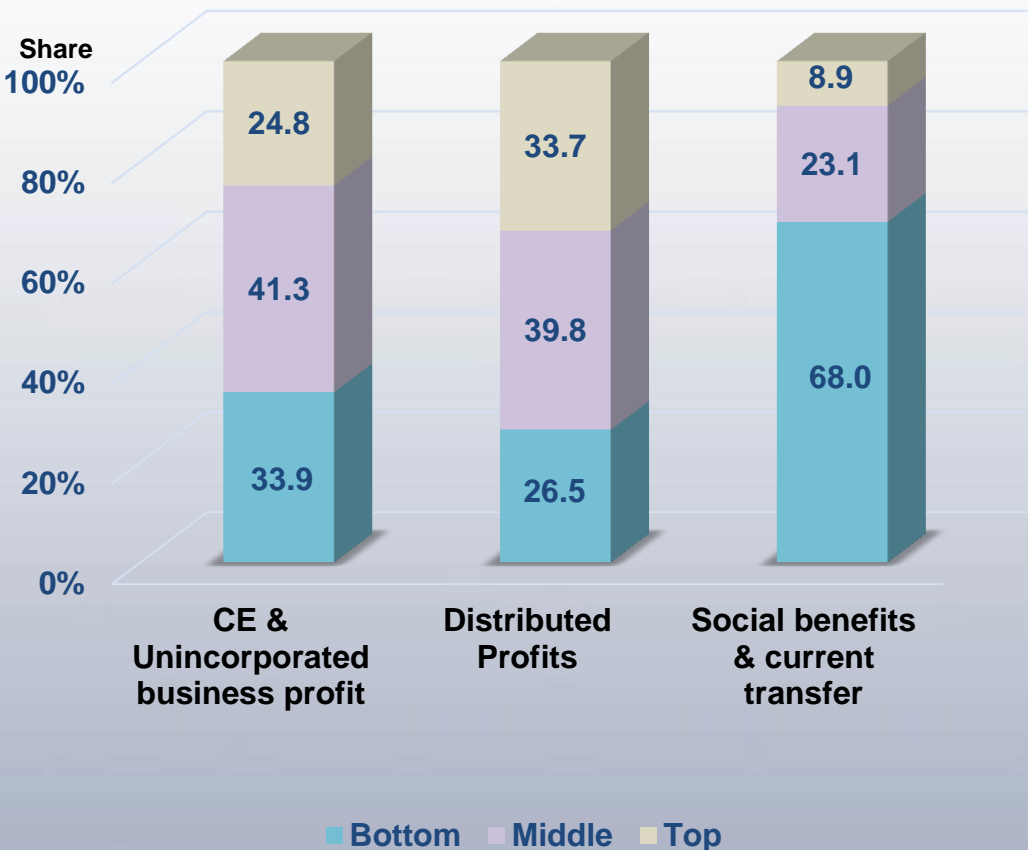
0.5%

RM3.0b

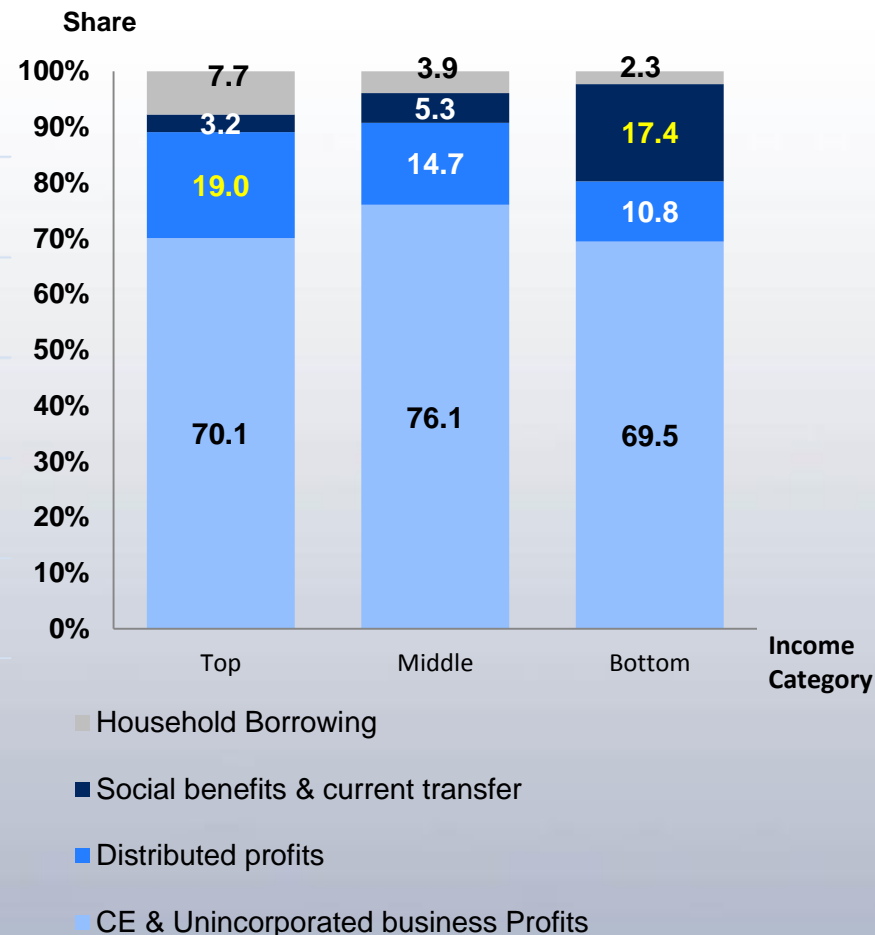
Current transfers

Households: Sources of Income

by Types of Income



by Income Category



Total Households Income 2014
RM638.8b

News Article: The launched of SAM



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-



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 : jpbkcp@dosm.gov.my
Website : <https://www.dosm.gov.my>



www.dosm.gov.my



@StatsMalaysia @DrUzirMahidin



@StatsMalaysia @Dr_Uzir