Accounts, Indicators and Policy Use with 2008 SNA Framework

Regional Seminar on Developing a Programme for the Implementation Programme of the 2008 SNA and the Implementation Strategy for the SEEA Central Framework in the Pacific Region

20-23 August 2013 Apia, Samoa
Outline of Presentation

- SNA as demand driven response
- Location of 2008 SNA for policy analysis
- Advantages of economic indicators approach to macroeconomic analysis
- Analysis of scope of implementation of Supply and Use Table (SUT)
- Analysis of scope of implementation of Integrated Economic Accounts (IEA)
- Scope of macro-economic analysis by implementation of Supply and Use Table (SUT) and Integrated Economic Accounts (IEA)
- Selected economic performance indicators
- Satellite extensions of the 2008 SNA
SNA as demand driven response

* SNA is demand driven and a statistical response of market economies to address macroeconomic issues with macroeconomic theory

* The SNA provides a frame of reference for the development of a capacity to analyze macroeconomic challenges and to monitor progress, e.g. growth and macroeconomic stability

* Economic theory and SNA interact in the development of concepts and definitions, accounts and tables, classification, etc. to analyze the economy in an integrated framework
The Central Framework of the SNA embodies basic distinctions as required by economic theory such as:

* **production** (aggregate supply) and **use** (aggregate demand) with prices

  - factors of production such as labor, capital, technology

* **transactions** such as income, consumption, investment, exports, imports, transfers, financial assets and liabilities ..

* **balance sheets** with positions of assets and liabilities

* (institutional) **sectors** such as household sector, corporate sector, monetary sector, government sector, external sector
Advantages of economic indicators approach to macroeconomic analysis

* **Simple and understandable** economic constructs that summarize the development of the economy and the economic and financial vulnerabilities over time.
* Economic indicators within a balanced system of national accounts are **mutually consistent**.
* Economic indicators use the real and financial **interconnectedness** within sectors, between sectors and their counterparties in the rest of the world.
* Economic indicator analysis improve the **use** of national accounts and its quality and **reveal data gaps**.
## Integration of Industry Data in SUT

<table>
<thead>
<tr>
<th></th>
<th>OUTPUT</th>
<th>OUTPUT</th>
<th>OUTPUT</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Agriculture, hunting, forestry and fishing</td>
<td>Mining, manufacturing, electricity, gas, water, construction</td>
<td>Services industries</td>
</tr>
<tr>
<td>Agriculture, forestry and fishery products</td>
<td>87</td>
<td>87</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mineral, manufacturing, electricity, gas, water and construction products</td>
<td>2,153</td>
<td>2</td>
<td>2,112</td>
<td>39</td>
</tr>
<tr>
<td>Services products</td>
<td>1,364</td>
<td>0</td>
<td>11</td>
<td>1,353</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,604</td>
<td>89</td>
<td>2,123</td>
<td>1,392</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Value added</th>
<th>Value added</th>
<th>Value added</th>
<th>Value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compens. employees</td>
<td>762</td>
<td>9</td>
<td>407</td>
<td>346</td>
</tr>
<tr>
<td>Taxes less subsdies on production and imports</td>
<td>58</td>
<td>-2</td>
<td>49</td>
<td>11</td>
</tr>
<tr>
<td>Consumption of fixed capital</td>
<td>222</td>
<td>11</td>
<td>92</td>
<td>119</td>
</tr>
<tr>
<td>Operating surplus / mixed income, net</td>
<td>679</td>
<td>24</td>
<td>317</td>
<td>338</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,721</td>
<td>42</td>
<td>865</td>
<td>814</td>
</tr>
</tbody>
</table>

The data presentation in the present exercise is based on the assumption of full allocation of FISIM to industries and sectors using those services. If the allocation is to a nominal sector, negative adjustments to GDP are needed in the cells indicated.

<table>
<thead>
<tr>
<th></th>
<th>Final consumption expenditure</th>
<th>Gross capital formation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Government</td>
<td>Households</td>
</tr>
<tr>
<td>Agriculture, forestry and fishery products</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Mineral, manufacturing, electricity, gas, water and construction products</td>
<td>365</td>
<td>986</td>
</tr>
<tr>
<td>Service products</td>
<td>540</td>
<td>1,258</td>
</tr>
</tbody>
</table>

*)
Refining SNA scope through classifications into the SUT

**CPC**
- Imports
- Exports
- Value added
- Employment
- Gross capital formation (=investments)

**ISIC*Sectors**
- Output
- Intermediate Consumption
- Gross capital formation (=investments)
- GOV final consumption
- HH final consumption
- NPISH final consumption

**Gender**
- Gross fixed capital formation

**BEC** (SNA Broad Economic Categories)
- Intermediate consumption
- HH final consumption
- Gross fixed capital formation

**CPC**
- NFC
- FC
- GOV
- HH
- NPISH

**ISIC Revision 4**
- A - Agriculture, forestry and fishing
- B – Mining and quarrying
- C - Manufacturing
- D - Electricity, gas, steam and air conditioning supply
- E – Water supply; sewerage, waste management, etc
- F - Construction
- G - Wholesale and retail trade; repair of motor vehicles, motorcycles
- H – Transport and storage
- I – Accommodation and food service activities
- J – Information and communication
- K - Financial and insurance activities, etc.
Extending the SUT to Socio-Economic Analysis

- **CPC** * BEC
- **Imports**
- **Output**
- **Intermediate Consumption**
- **Value added**
- **Complement**
- **HH Sub-sectors**
- **Social dimensions** (social indicators)
- **Classification by Purpose** (social protection)
- **Exports**
- **Intermediate Consumption**
- **Value added**
- **Employment**
- **Normalised BEC**
- **HH Actual final consumption & capital formation**
- **Final consumption**
- **Classification by Purpose (COICOP, COFOC, social protection categories)**
  - Of which:
    - Outlays for social protection: education, health, nutrition, housing
  - **ISCO/ICSE Gender Nationals/ non-Nationals**
  - Compensation of employees
  - Mixed income
  - Employment
  - Workers Remittances to ROW
- **Other sectors:**
  - **FC, GOV, NPISH**
## Integrated Accounts Framework

### Production Account

<table>
<thead>
<tr>
<th>Description</th>
<th>Output</th>
<th>Production</th>
<th>Production</th>
<th>Production</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Output</td>
<td>3604</td>
<td>1753</td>
<td>102</td>
<td>440</td>
<td>1269</td>
</tr>
<tr>
<td>1.1 Intermediate consumption</td>
<td>1883</td>
<td>899</td>
<td>29</td>
<td>252</td>
<td>694</td>
</tr>
<tr>
<td>1.2 Consumption of fixed capital</td>
<td>222</td>
<td>137</td>
<td>10</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>2. Taxes less subsidies on products</td>
<td>133</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Value Added/ Domestic Product, Net</td>
<td>1632</td>
<td>717</td>
<td>63</td>
<td>158</td>
<td>533</td>
</tr>
</tbody>
</table>

### Income Generation Account

<table>
<thead>
<tr>
<th>Description</th>
<th>Income Generation</th>
<th>Income Generation</th>
<th>Income Generation</th>
<th>Income Generation</th>
<th>Income Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compensation of employees, payable</td>
<td>762</td>
<td>545</td>
<td>15</td>
<td>140</td>
<td>39</td>
</tr>
<tr>
<td>2. Taxes less subsidies on production and imports</td>
<td>191</td>
<td>51</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3. Mixed income, net</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
</tr>
<tr>
<td>4. Operating surplus, net</td>
<td>247</td>
<td>121</td>
<td>45</td>
<td>16</td>
<td>60</td>
</tr>
</tbody>
</table>

### Distribution of Income Account

<table>
<thead>
<tr>
<th>Description</th>
<th>Distribution of Income</th>
<th>Distribution of Income</th>
<th>Distribution of Income</th>
<th>Distribution of Income</th>
<th>Distribution of Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compensation of employees, receivable less payable</td>
<td>766</td>
<td>6</td>
<td>2</td>
<td>766</td>
<td>24</td>
</tr>
<tr>
<td>2. Property income, receivable less payable</td>
<td>391</td>
<td>416</td>
<td>63</td>
<td>38</td>
<td>135</td>
</tr>
<tr>
<td>3. Taxes less subsidies on production and imports</td>
<td>191</td>
<td>0</td>
<td>0</td>
<td>191</td>
<td>178</td>
</tr>
<tr>
<td>4. Current taxes on income</td>
<td>212</td>
<td>213</td>
<td>1</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>5. Social transfers</td>
<td>654</td>
<td>654</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>6. Other current transfers</td>
<td>269</td>
<td>239</td>
<td>9</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>7. Disposable income, net</td>
<td>1632</td>
<td>766</td>
<td>6</td>
<td>2</td>
<td>766</td>
</tr>
</tbody>
</table>

### Use of Income Account

<table>
<thead>
<tr>
<th>Description</th>
<th>Use of Income</th>
<th>Use of Income</th>
<th>Use of Income</th>
<th>Use of Income</th>
<th>Use of Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Final consumption expenditure</td>
<td>1399</td>
<td>368</td>
<td>1015</td>
<td>3</td>
<td>108</td>
</tr>
<tr>
<td>2. Savings, net</td>
<td>233</td>
<td>-11</td>
<td>0</td>
<td>11</td>
<td>160</td>
</tr>
</tbody>
</table>

### Capital Account

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gross capital formation</td>
<td>414</td>
<td>278</td>
<td>9</td>
<td>40</td>
<td>68</td>
</tr>
<tr>
<td>1.1 Of which: additions to the value of non-produced assets</td>
<td>22</td>
<td>20</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1.2 Less: consumption of fixed capital</td>
<td>-222</td>
<td>-137</td>
<td>-10</td>
<td>-30</td>
<td>-42</td>
</tr>
<tr>
<td>1.3 Acquisition less disposal of non-produced assets, net</td>
<td>0</td>
<td>0</td>
<td>-7</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2. Capital transfers, receivable less payable</td>
<td>65</td>
<td>62</td>
<td>1</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>3. Changes in net worth due to savings and capital transfers</td>
<td>38</td>
<td>-38</td>
<td>-69</td>
<td>5</td>
<td>-50</td>
</tr>
</tbody>
</table>
Refining SNA scope through classifications: Sub-sectoring the IEA

Integrated Economic Accounts (IEA)

Exports of goods and services
Imports of goods and services
EXTERNAL BALANCE OF GOODS AND SERVICES

Intermediate consumption
Consumption of fixed capital
Taxes less subsidies on products
VALUE ADDED/ DOMESTIC PRODUCT, NET
Compensation of employees, payable
Taxes less subsidies on production and imports
Mixed income, net
Operating surplus, net

Disposables INCOME, NET
Final consumption expenditure
Adjustment for the change in net equity of households in pension funds
SAVINGS, NET
CURRENT EXTERNAL BALANCE

NFC/FC - Public non-financial corporations
NFC/FC - National private non-financial corporations
NFC/FC - Foreign controlled non-financial corporations

ISIC - main economic activity

Capital flows

Central bank
Deposit-taking corporations except central banks
Money market funds (MMF)
Non-MMF investment funds
Other financial intermediaries, except insurance corporations and pension funds
Financial auxiliaries
Captive financial institutions and money lenders
Insurance corporations
Pension funds

Central government
State government
Local government
Social security funds
- Central government social security funds
- State government social security funds
- Local government social security funds

HH by regions
Agric. vs. non-agric. HH
Urban vs. rural HH
Level of education of Head of HH
Age groups of Head of HH
Disposable income per capita/ HH
Status of employment of Head of HH.

NPISH’s by function:
Education,
Health,
Rural Development,
Environment, etc.
## Financial Instruments in a From-Whom-to-Whom Framework by Residency and Resident Sector of Creditor and Debtor

<table>
<thead>
<tr>
<th>Debtor by residency and resident sector and by financial instrument</th>
<th>Creditors by residency and resident sector</th>
<th>Resident</th>
<th>Non-resident</th>
<th>All creditors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>Non-financial corporations</td>
<td>Monetary gold and SDRs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currency and deposits</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debt securities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equity and investment fund shares or units</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insurance, pension and standardized guarantee schemes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial derivatives and employee stock options</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other accounts receivable/payable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial corporations</td>
<td>Monetary gold and SDRs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currency and deposits</td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General government</td>
<td>Monetary gold and SDRs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currency and deposits</td>
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<td></td>
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<td></td>
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<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Households and npish</td>
<td>Monetary gold and SDRs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currency and deposits</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non residents</td>
<td>Monetary gold and SDRs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Currency and deposits</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>...</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| All debtors | Monetary gold and SDRs | | | | 12
Scope of Macro-economic Analysis by Milestones and Minimum Required Data Set (MRDS)

- Milestone 1. GDP by Industry and Expenditure in current and constant –
  Growth analysis

- Milestone 2. GNI from Total Economy and Balance of Payments (current, capital and financial accounts) and GFS transaction accounts
  Growth analysis and BOP analysis

- Milestone 3. Production and generation of income accounts for institutional sectors and general government (including IIP for BoP and GFS transactions and stock in assets and liabilities)
  Growth analysis, BOP analysis, productivity analysis and fiscal analysis

- Milestone 4. Production, generation, distribution, redistribution and use of income accounts and capital accounts for all institutional sectors (upto net lending)
  Growth analysis, BOP analysis, productivity analysis, fiscal and income distribution analysis
  Minimum required macroeconomic data set, annual institutional sector accounts upto net lending and quarterly GDP and quarterly BoP

- Milestone 5. Production, income and use accounts, capital accounts and financial accounts for institutional sectors
  Growth analysis, BOP analysis, productivity analysis, fiscal, income distribution analysis and investment-financing analysis

- Milestone 6. All transaction and flows accounts plus balance sheets
  Growth analysis, BOP analysis, productivity analysis, fiscal income distribution analysis, financing-debt analysis (Flow of funds) and vulnerability analysis (currency mismatches, maturity mismatches (roll-over of debt), capital structure (equity vs debt), solvency (assets over liabilities)
Does the present scope, detail and quality of National Accounts for your country meet present policy demands in an interconnected economic and financial domestic and global economy?