Compiling Supply and Use Tables
The Jordanian experience
Overview

• National accounts in Jordan
• 2016 Jordan SUT project
• Classification framework
• Information processing and management system
National accounts in Jordan, 2008-2016

- **GDP by production** at current and constant prices (21 activities)
- **GDP by expenditure** at current prices (6 categories)
- **GDP by income** at current prices (5 categories)
- **Supply and use tables** in 2006, 2010, 2013
  - Not used to benchmark GDP; Only 2006 completed; Not published
2016 SUTs project
Objectives and resources

• Objectives
  • Provide a benchmark for GDP
  • Improve the statistical infrastructure
  • Compile input-output tables for economic modelling

• Duration
  • March 2019 – November 2019

• Resources and technical assistance
  • 5 staff (Jordanian Input-Output Unit)
  • 1 expert for 4 missions (METAC)
  • Computer hardware and MS Office software
2016 SUTs project

Workplan

Gather data (Feb-Mar)
- Take stock of source data from survey and administrative records
- Evaluate data gaps and establish plan to collect missing data

Set up infrastructure (Mar)
- Develop classification framework
- Develop load file templates

Process source data (Mar-Apr)
- Develop concordance tables (source-to-SUT)
- Generate initial estimates
- Create structured files; load to dBase

Balancing (May-Sep)
- Estimate margins, taxes, and subsidies by product to match control totals
- Product-by-product balancing
- Analysis of estimates
- Document balancing rationale

SUT@BP & IOT (Oct)
- Estimate margins by industry and final use category
- Convert SUT to basic prices
- Develop of input-output tables

Dissemination (Oct-Nov)
- Set up final files for dissemination
- Document: 1) balancing methodology; 2) sources and methods; 3) analytical write-up
- Release; Post-release meetings with major users
2016 SUTs project
Recommendations / Lessons learned

• Have clear objective
• Strong management support
• Revision policy in place
  • GDP annual and quarterly time series
• Detailed work schedule
  • ≈ 25% pre-balancing; ≈ 60% balancing; 15% post-balancing
SUTs: Classification framework

- Jordan Industry Classification (JIC)
  - 41 industries
  - ISIC-based
  - Split of highest ISIC level when detail available and significant
  - Education, Health split into market and non-market

- Jordan Product Classification (JPC)
  - 102 products
  - CPC-based
  - Special products for FISIM, Non-market output, Imputed rent, Fictives (?)

- Jordan Margins Classification (JMC)
  - Separate columns for retail, wholesale, and transportation
  - 5 columns for the different types of taxes

- Jordan Final Uses Classification (JFC)
  - 13 categories, including 5 for exports, 3 for imports

- Working level has more detail than published
SUTs: Classification framework

Recommendations / Lessons learned

• ISIC-based industries and CPC-based products
• Create concordances: ISIC-JIC and CPC-JPC
• Deviations that facilitate balancing are acceptable
  • E.g. FISIM, non-market, Fictive/Virtual products
Information system

- Excel- and Access-based information system
- Data stored in dBase format
- Fields include:
  - JPC,
  - JIC/JFC/JMC
  - IOTable
  - AdjustmentType
  - Analyst
  - Date
  - Comment
- View through Excel pivot table reports
- Edit dBase using Excel
- SUTBal linked to dBase
- SUTBal → Valuation matrix → SUT@BP → IOT
Information system
Recommendations / Lessons learned

• SUT compilation systems recommended features:
  • More than one simultaneous user/balancer
  • Multiple adjustments
  • Documentation of adjustments

• SUT Balancing Tool (SUTBal) extremely helpful
  • Automatic balancing
  • Very fast and allows for late changes
  • Covered in next presentation

• Need to increase system robustness
  • Involve IT section
  • Loader module done in a few days
  • Editor module to follow

• Construct dBase for source data holdings, especially DOS surveys
  • Adds analytical depth through time series analysis
  • Saves time looking up during balancing phase
Organizational issues
Recommendations / Lessons learned

• Documentation very important
  • Methodology | Processing | Adjustments | How to use
  • Departmental action plan to address data gaps

• Capacity development
  • Time investment required to build SUT
  • But annual compilation helps develop expertise, shorten time required to compile, and improve national accounts
  • Presence of expert required in a sustained way during the first compilation initiative
Lessons learned and recommendations

• Objectives and schedule
  • Have clear objective for compiling SUT
  • Work with a schedule
  • Revision policy
  • Strong management support

• Information system
  • SUTB save time and allows for late changes
  • IT involvement required to make system more robust
  • Data holdings need to be set up for IOT team use

• Documentation very important
  • Methodology | Processing | Adjustments | How to use
  • Departmental action plan to address data gaps

• Capacity development
  • Annual compilation to develop expertise
  • Sustained technical assistance initially