

International Workshop on Supply and Use Tables

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Presentation Outline

- Background
- Sources and Methods
- Challenges and Strategy Implemented
- Some Results and Finding
- Conclusion and Way Forward



Background

- Nepal has published first Supply and Use tables in 2013 taking the 2004/05 as the reference year of the size 51 by 32.
- The first SUTs was prepared based on the benchmark surveys year 2004/05 when around 40 different surveys, censuses and studies were conducted
- International Standard Industrial Classification (ISIC 3.1) for industry classification, Central Product Classification (CPC 1.1) for product classification and harmonized system (HS) scheme for international trade classification had been followed



Background (Continued.)

- Nepal has published second Supply and Use tables in 2016 taking the 2010/11 as the reference year of the size 81 by 60.
- Nepal has adopted base year 2010/11 for the Second SUTs in the ground of data availability.
 - More than 30 economic surveys and studies were conducted in around 2010/11.
 - Census of Manufacturing Establishment was conducted in fiscal year 2011/12.
 - Nepal Living Standard Survey was conducted in 2010/11.
 - Agriculture and Population census were conducted in 2011.



Background (Continued.)

- Size of Matrix for Second SUTs

Gross Output : $81*60$

Intermediate Consumption : $81*60$

Final Demand : $81*11$

Valuation Adjustment : $81*4$

- Classification Adapted

ISIC Revision 4.0

CPC 2.0

HS Scheme for international trade



Sources and Methods

➤ Supply Table (2010/11 SUTs)

– Domestic Production by Industry

- Data sources varies from administrative records to enterprise financial statements. Besides these BMS(2010/11), CME(2006/07 & 2011/12), SSME(2008/09), DTS(2007/08), NLSS(2010/11) are major sources.
- 81 products in row and 60 Industries in column forming 81X60 output matrix.
- Output are measured in basic price.
- Outputs are concomitant with published ones.



Sources and Methods (Cont.)

- Supply Table : Import Matrix (2010/11 SUTs)
 - Imports of Goods and Services
 - Data source: Department of Customs
 - Change of HS(Harmonized System) Code to CPC using the correspondence mechanism.
 - Establishment of Imports (goods) Matrix
 - Establishment of Matrix of Imports of Services based on BOP statistics
 - CIF/FOB adjustment on imports
 - Adjustment has been done based on Central Bank Data Source



Sources and Methods (Cont.)

- Supply Table: *Margins* (2010/11 SUTs)

Trade

- Data source: Distributive Trade Survey, 2008
- This is Nepal's ever first survey on Distributive Trade. We have used the trade margin from this survey.
- We have almost 116*2 margin matrix.
(116: products, 2: Retail and wholesale trade)

Transport

- Data Source: Freight margin survey, 2011



Sources and Methods (Cont.)

- Supply Tables (2010/11 SUTs):

Tax

- Data Sources: Department of Customs (International Trade Statistics :HS code), Department of Inland Revenue(Inland Revenue Tax Database).
- But, there are some problem on the correspondence between the standard CPC classification and the Nepal's Tax classification.

Subsidy

- Data source: Ministry of Finance (at very aggregated level only)



Sources and Methods(Cont.)

- Use Table (2010/11 SUTs)
 - Intermediate Consumption by Industry
 - Data sources: 2010/11 benchmark surveys, Nepal Living Standards Survey(2010/11), Cost of production (Agriculture Statistics), Enterprise financial statements,
 - ICs are measured in purchasers' price.
 - ICs are concomitant with published ones.



Sources and Methods(Cont.)

Final Consumptions (2010/11 SUTs)

- HHs final consumption is based on Nepal Living Standards Survey 2010/11
- Government final consumption is based on government finance statistics
 - Collective
 - Individual: component of actual HHs final consumption
- Final consumption expenditure of NPISH is based on CBS Survey on NGOs and INGOs conducted in 2008/09
 - » Individual: component of actual HHs final consumption



Sources and Methods(Cont.)

Components of GCF (2010/11 SUTs)

- **GFCF**
 - **Changes in inventories**
 - **Acquisition less disposal of valuables**
- GFCF has been estimated by commodity flow method. The output of the construction has also been adjusted.
 - Attempt has been made for Change in stocks.
 - We have done some attempt for valuables from NLSS survey and international trade statistics.



Sources and Methods(Cont.)

- Exports of Goods and Services(2010/11 SUTs)
 - Establishment of Exports (goods) Matrix based on customs data maintained in HS scheme.
 - Change of HS to CPC using the correspondence mechanism.
 - Establishment of Matrix of Exports of Services based on BOP statistics



Sources and Methods(Cont.)

- Purchases of abroad by residents and Nonresidents in domestic market(2010/11 SUTs)
 - The purchase made directly by resident abroad is based on Balance of Payment Statistics and NLSS.
 - *No adjustment has been done for purchases made by nonresidents in domestic market*



Use of Value Added

- **Compensation Of employee(2010/11 SUTs)**
 - Compensation has been estimated for all the SUTs required industries.
 - Data sources vary from government finance to administrative records to enterprise financial statements. Results of the Bench Mark Surveys. Censuses of Manufacturing Establishment 2011/12 are the major source of manufacturing sector.



Use of Value Added

- Other taxes on production net of subsidies(2010/11 SUTs)
 - It incorporates the net taxes on products as well as net taxes on production process i.e. other taxes on production. Taxes on product basically constitute the VAT, excise duty and import tax. The rate of VAT in Nepal is 13%. Government finance statistics is the major data source.
 - We do have subsidy at very aggregated level only.



Use of Value Added

- Gross operating surplus/Mixed income (2010/11 SUTs)
 - There is no independent estimate of operating surplus/mixed income.
 - It is residually estimated by deducting the compensation and taxes less subsidies from GVA.



Sources and Methods(Cont.)

- Balancing method (2010/11 SUTs):
- SUT has been balanced manually.
 - Output, intermediate consumption, government final expenditure, gross fixed capital formation are concomitant to the published ones.
 - Great discrepancy between the published and residually estimated changes in inventories leads to rethink the level of published household consumption.

Published HH consumption (based on 2003/04 NLSS)	SUTs HH Consumption	2010/11 NLSS HH Consumption (independent)
1,022,126	1,217,418	1,294,850
	19.13%	6.36%



Challenges and Strategy Implemented(2010/11 SUTs)

Issues/Challenges	Resolutions/Action taken
Coding of various surveys are not compatible with CPC ver 2.0	<ul style="list-style-type: none"> • recoding • applying expert views • conducting small studies • applying ratios from other sources or old sources
Classification of imported commodities as IC, FC or capital formation was difficult	<ul style="list-style-type: none"> • analyze the HH consumption data from NLSS • applying expert view by observing the nature of goods
Freight margin estimation is ambiguous since freight rate is known but distance travelled is unknown	<ul style="list-style-type: none"> • for imported goods, the average distance from the most busy port to capital city was considered • For domestic goods manual adjustment was used
No COFOG classification of government expenditure in 2010/11	<ul style="list-style-type: none"> • Converted into COFOG classification



Challenges and Strategy Implemented(2010/11 SUTs)

Issues/Challenges	Resolutions/Action taken
CPC wise tax is not available for domestic tax	<ul style="list-style-type: none">VAT rate was applied to the output and manual adjustment was done
Conversion from ISIC Rev 3.1 to ISIC Rev. 4.0 was tedious (information from some surveys are available in ISIC Rev. 3.1 and some in 4.0)	<ul style="list-style-type: none">Manual adjustment was done
Lack of capacity building	<ul style="list-style-type: none">In house training and workshop were conducted



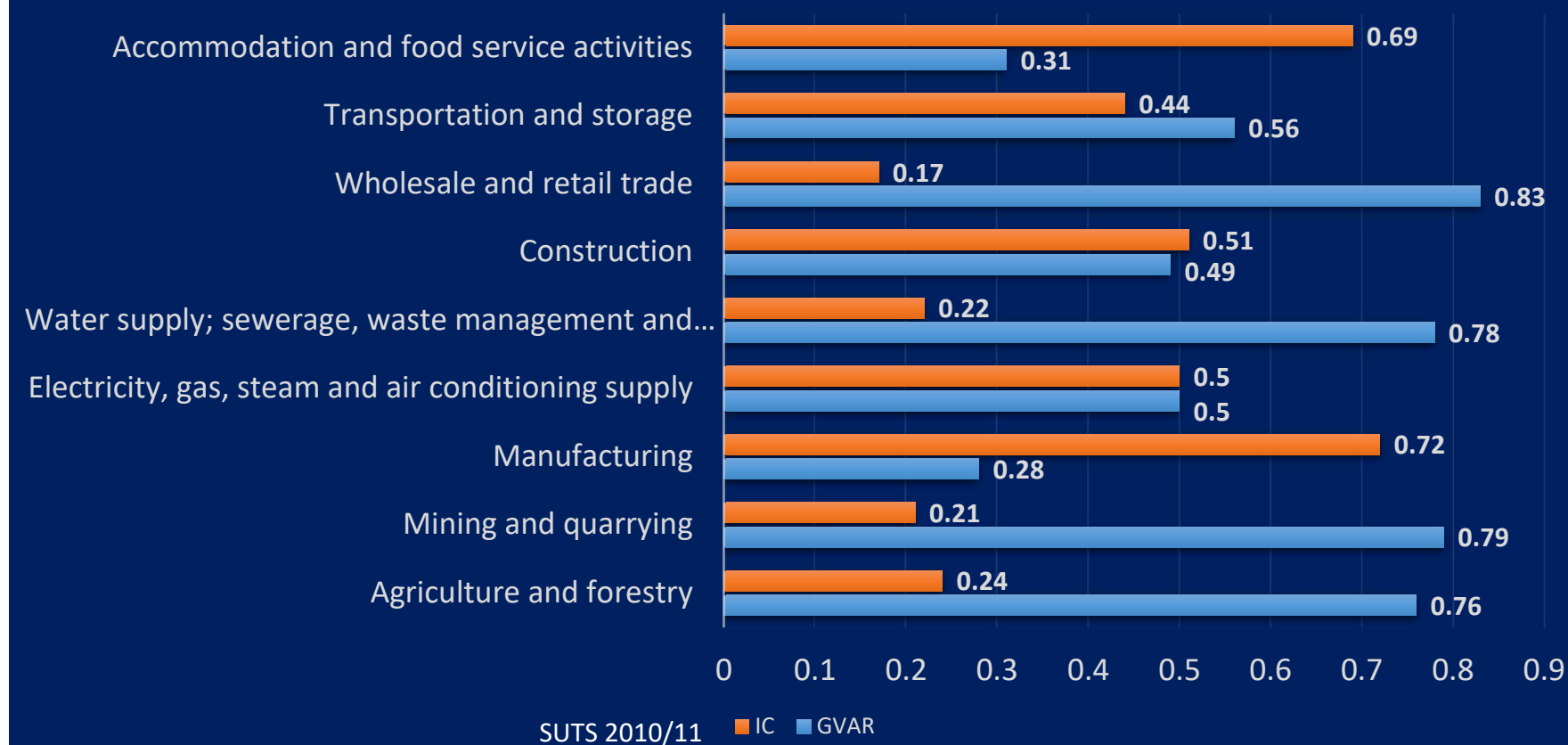
Some Results and Findings 1

Description	Published 2010/11	SUT 2010/11	Difference (%)
Output	2,052,228	2,052,228	0.00
Imports of goods	388,371	393,631	1.35
Imports of services	61,687	61,687	0.00
Intermediate Consumption	762,086	762,085	0.00
Household Consumption	1,022,126	1,217,418	19.13
Government Consumption	130,917	165,126	26.13
NPISH Consumption	22,987	21,604	-6.02
GFCF	292,730	292,731	0.00
Change in Stocks	226,538	44,850	-80.20
Exports of Goods	68,702	62,566	-8.93
Exports of Services	53,013	53,013	0.00



Some Results and Findings 2

Gross Value Added and Intermediate Consumption Ratio to Gross Output



Conclusion and Way Forward

- Plans for annual SUT estimation
 - Administrative records and surveys
 - Annual Household Survey
 - Government expenditure, agriculture, fishery, forestry, electricity, water, financial intermediation, import export,
 - CBS has set estimation of SUTs in constant price and first IO table in next step. CBS is Seeking support from donor communities for this purpose
 - Cost of production survey and economic census



