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STATISTICS DIVISION



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FOR AFRICA

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International Merchandise Trade Statistics, 12-16 November 2007, Addis Ababa**

Country Presentation
Statistics Turkey

Item 17: Calculation of Export and Import Price Indices

External Trade Indices in Turkey

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Introduction

- External trade indexes are calculated for use as a measurement of price and quantity changes in external trade.
- Many users need more information than trade values by countries or by commodities, and require information on prices and volumes as well.
and if there is change of ownership
- They are used a short term indicators of inflation trasmission, to measure changes in a country's terms of trade, and as deflator of export and import value to yield measures of changes in export and import volumes.

Introduction

- In most countries, unit value indices have been used more widely.
- Unit value indices can cover relatively a larger proportion of commodities than price indices
- Unit value indices are derived from administrative data of the customs office. and if there is change of ownership
- Low resource cost
- One of the defects of unit value indices is that they lack the quality change adjustment in commodities.
- Chain indices can be easily adopted in unit value indices. to change the weight regularly requires burdens of work force and time in price indices

UN Recommendation

- It is recommended that all countries produce and publish volume indices and either unit value or price indices for their total imports and exports on a monthly, quarterly and annual basis.

Main Users

- National Accounts
- Central Bank
- Undersecretariat of Treasury
- Undersecretariat of Foreign Trade
- United Nations
- OECD
- EU (Eurostat)
- Universities and researchers
- Other government organisations

Selection criteria

- More detailed (lowest level) commodity description (12-digit)
- Threshold for total value of products
- Data available at least 8 months
- Homogeneity test: ClossnessPercentage ≥ 60

$$CP = ((\text{Mean} - \text{Standard deviation}) / \text{Mean}) * 100$$

- Coverage $\geq 75\%$ (representative ratios) and enough number of items under sectors/sub-sectors

Indices in Turkey

- Sources:
 - Customs records
 - Survey for some goods
 - Crude petroluem & natural gas & electricity
- Unit value, Quantity and terms of trade,
- Monthly, quarterly, annaul

Indices in Turkey

- Chain index method,
- Fisher formula,
- Classification:
 - ISIC Rev.3 & SITC Rev.3 & BEC & CPA
- Currency for unit value:
 - US Dollar & TL (Turkish Lira)
- Coverage:
 - Export » 1,304 items and 82%,
 - Import » 1,851 items and 83%.
- SAS / Oracle databases and MS Access is used

Relations among indices

Unit Value index X Quantity index = Value index

$$\text{Value Index} = \sum (V_t / V_o) * 100$$

$$\text{Quantity index} = \frac{\text{Value index}}{\text{Unit value index}}$$

Terms of Trade

- Simply, the ratio of export unit value index to import unit value index

$$\text{ToT} = (\mathbf{I}_{\text{ExportUnitValue}} / \mathbf{I}_{\text{ImportUnitValue}}) * 100$$

Encountered Problems

- Poor quality of quantities
- Misclassification / Incorrect commodity coding
- Changes in commodity codes
- Heterogeneous commodities
- Quality changes
- Extreme unit value relatives

Encountered Problems

- Poor quality of quantities

Number of line corrected

Error Type	Flow	
	Ex	Im
	N	N
Quantity-1	3,460	3,207
Supp.Unit	4,955	1,704

Commodity	Description	StatValue	Old-Quantity	New-Quantity	Old-UV	New-UV
391721900000	Tubes, pipes	642,126	322,933,958	322,933	0.002	1.99

Encountered Problems

- Misclassification / Incorrect commodity coding

Number of line corrected

Error Type	Flow	
	Ex	Im
	N	N
Commodity	123	146

Encountered Problems

- Changes in commodity codes

2006		}	2007	
Dried figs			Dried figs	
0804.20.90.00.11	Extra class	} →	0804.20.90.00.00	
0804.20.90.00.12	First class			
0804.20.90.00.13	Second class			
0804.20.90.00.14	Dried and natural			
0804.20.90.00.19	Others			

2006		}	2007	
Fluorides and iodides			Fluorides and iodides	
2903.30.80.10.00		} →	2903.39.90.10.12	Flormetan
			2903.39.90.10.13	Diflormetan
			2903.39.90.10.14	Triflormetan
			2903.39.90.10.15	Difloretan

Encountered Problems

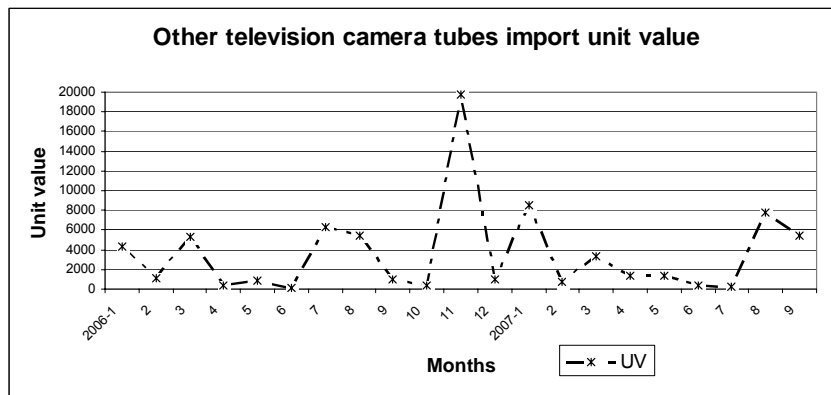
➤ Changes in commodity codes

Number of	2006	2007	Diff
GTIP (12 Digits)	18,827	18,275	-552
CN (8 Digits)	9,855	9,735	-120
HS (6 Digits)	5,237	5,058	-179

Number of Changes in	N
GTIP (12 Digits)	2063
CN (8 Digits)	820
HS (6 Digits)	325

Encountered Problems

➤ Heterogeneous commodities



Encountered Problems

- Quality changes
 - Quality change is common problem
 - The commodities are a mix of products
 - Solution: collect the prices from establishment?

Encountered Problems

- Extreme unit value relatives

Commodity	Description	Processing Fee	GrossValue StatValue	Quantity	CPC	Old-UV	New-UV
760511000000	Aluminium wire	40,502	609,739	201,500	6121	0.20	3.03
760511000000	Aluminium wire	31,017	466,951	154,313	6121	0.20	3.03
760511000000	Aluminium wire	25,740	339,666	128,057	6121	0.20	2.65
760511000000	Aluminium wire	20,028	310,985	99,643	6121	0.20	3.12
760511000000	Aluminium wire	18,234	283,136	90,720	6121	0.20	3.12
760511000000	Aluminium wire	14,532	225,648	72,300	6121	0.20	3.12
760511000000	Aluminium wire	10,539	162,589	52,431	6121	0.20	3.10

Revision Policy

- External trade indices which are calculated by the provisional trade data, are revised for previous year, with a view to reflect updated foreign trade data.

- The revisions are revealed in January bulletin by month, quarter and annual.

Dissemination

- Monthly news release (ISIC Rev.3)
 - Hard Copy and Internet with methodology
 - Foreign Trade Statistics Yearbook (Hardcopy and CD-Rom)
- Excel tables on Web (www.turkstat.gov.tr)
- Dinamic database on Web (www.turkstat.gov.tr)
- Advanced release calender

Name	Period	Date
Foreign Trade Indices	December 2007	08/02/2008
Foreign Trade Indices	November 2007	07/01/2008
Foreign Trade Indices	October 2007	07/12/2007
Foreign Trade Indices	September 2007	07/11/2007
Foreign Trade Indices	August 2007	09/10/2007
Foreign Trade Indices	July 2007	06/09/2007
Foreign Trade Indices	June 2007	07/08/2007
Foreign Trade Indices	May 2007	06/07/2007
Foreign Trade Indices	April 2007	07/06/2007
Foreign Trade Indices	March 2007	08/05/2007

Dissemination

External Trade Indices

Base year
 2003

Table Selection
General Foreign Trade Indices
Foreign Trade Indices by ISIC Rev.3
Foreign Trade Indices by BEC
Foreign Trade Indices by SITC Rev.3

Sectors
 Main Sector Main and Sub-sector

Time Interval
 Yearly Monthly Quarterly

Year
<< All years >>
2007
2006
2005
2004
2003

Index Numbers/changes
 Index Numbers
 Change by the previous year (%)

Index Types Selection
Export unit value index_USD
Export unit value index_TL
Import unit value index_USD
Import unit value index_TL
Export volume index
Import volume index
Terms of trade_USD
Terms of trade_TL

Table format: Information and remarks:

Clean Screen Make Report

Thank you
for your attention!