PN-ACX-582

AGENCY FOR INTERNATIONAL DEVELOPMENT
PPC/CDIE/DI REPORT PROCESSING FORM

ENTER INFORMATION ONLY IF NOT INCLUDED ON COVER OR TITLE PAGE OF DOCUMENT

1. Project/Subproject Number

2. Contract/Grant Number

Trade and Investment Reform Program (TIRP)
USAID Contract Number: 641-C-00-98-00229

3. Publication Date

August 2003

4. Document Title/Translated Title

A Trade Database for Policy Analysis

5. Author (s)

1. Mr. Jonathan Porter
2. Sigma One Corporation
3.

6. Contributing Organisation (s)

7. Pagination

44

8. Report Number

CLIN 2.37

9. Sponsoring A.I.D. Office

USAID. Mission to Ghana

10. Abstract (optional - 250 word limit)

11. Subject Keywords (optional)

1. Ghana
2. Trade Reform
3. Investment Reform
4. Trade and Tariff Data Reporting System
5. System Design
6. Policy Development

12. Supplementary Notes

13. Submitting Official

Barbara Pietuch

14. Telephone Number

(919)361-9800

15. Today's Date

May 5, 2004

.....DO NOT write below this line.....

16. DOCID

17. Document Disposition

DOCRD [ ] INV [ ] DUPLICATE [ ]

AID 590-7 (10/88)

PN-ACX-582

A Trade Database for Policy Analysis

August 2003

Sigma One Corporation

2

A Trade Database for Policy Analysis

Submitted to:

U.S. Agency for International Development
Mission to Ghana

for:

Trade and Investment Reform Program (TIRP)
Improved Policy Reform and Financial Intermediation
USAID Contract Number: 641-C-00-98-00229

by:

Mr. Jonathan Porter
Sigma One Corporation

In fulfillment of the following milestones:

2.37 Assist CEPS, MOTI, and MOF to design a trade and tariff data reporting system

August 2003 **Sigma One Corporation**

4

Trade Data Base Development Report

August 2003

Jonathan Porter

The Trade and Investment Reform Program calls for support to the government agencies with data development for information and policy analysis. A key area of data development is that of trade statistics.

Sigma One Corporation has been working on trade data and its sources in Ghana since June 2002. Based around the needs of the Bank of Ghana (BoG) and its reporting of the Balance of Payments (BoP), many different data sources have been considered and assessed for reliability, availability and longevity. A Work Shop was held on August 20th. 2003 at the Novotel to present the findings so far and discuss the way forward. The presentation is attached to this write-up.

This trade database development excise comes at a critical time. All activities were conducted during the transition of Ghana Customs Excise and Preventive Service (CEPS) from using the United Nations Commission on Trade and Development (UNCTAD) developed Automated System for Customs Data (ASYCUDA) software to the SGS based Ghana Community Network (GCNET) and Ghana Customs Management System (GCMS) software for imports. During the project all import data at CEPS has been captured via the Ministry of Trade and Industry (MOTI)/CEPS developed Custom Export Data Information System (CEDIS), although this will replaced in the main by GCNET/GCMS by the end of the year.

Staff at BOG, MOTI and CEPS have been trained in advanced spreadsheet techniques and numerical modeling in order to provide a sound basis for working with data sets in an efficient manner. The analysis and design work has been carried out with staff from these three agencies to ensure a degree of ownership and improve understanding of the data, the methodology, software used and differences in usages between the agencies.

Observations: It should be noted that no data is collected at present for the overland import of goods to Ghana and that reporting of overland exports is rather erratic and often subject to time lags, in some cases, of 6 months or more.

Research has shown that the data captured on ASYCUDA relating to crude oil imports is not currently reliable and hence direct access to the declarations of Tema Oil Refinery (TOR) and Volta River Authority (VRA) - the key importers of Crude Oil for processing and Thermal Power Generation - are substituted on the import data side. (Residual oil export data is also available more reliably from TOR than from CEPS.)

Export data capture has been rather erratic due to the non-revenue aspect of the activity and CEPS necessary prioritizations due to staff availability. However, by substituting the high value items of

Gold

Cocoa beans
Cocoa products
Bauxite
Manganese
Coffee
Diamonds
Aluminum ingots (for 2002)

with data from BoG we are able to adjust the figures accordingly.

[There is an alternative source of so-called 'non-traditional' data; i.e., exports of items not mentioned above, through Ghana Export Promotion Council (GEPC). However, all such data is entered at GEPC offices using CEPS forms sent from the various ports. It would seem more reliable to use data entered at the major ports in a timelier – and perhaps more complete – manner, from CEDIS to complement the BoG data. *Furthermore, GEPC uses its own classification methods for data entry in order to meet its own export monitoring needs.*]

Not all records in the databases are relevant to trade. Some records are marked as inactive, Customs Procedures Codes (CPCs) identify the type of transaction – import, export, warehousing, transshipment, etc. Consequently selection methodology has been needed to ensure only relevant data is transmitted to the trade database. Here BoG and MOTI (and eventually GSS) differ in their requirements. For example, personal effects are not considered for trade but are for the BoP. Hence, CPC codes are retained with a selection option through query. It should be noted that CEPS main interest is not in Trade but rather revenue for which the entire data set is of interest in addition to the trade subset.

Therefore, by combining the data from ASYCUDA, CEDIS and GCNET/GCMS, selecting only the relevant CPC items and carrying out substitutions from BoG data on key import/export items a trade database has been compiled that goes a long way to wards proving a working tool for BoP, trade and other analytical or predictive activities.

Adjustments :A couple of adjustments do need to be made to the dataset for completeness at this stage:-

BOG keeps diamonds weight in carats and Gold in Troy ounces hence diamond and gold weights need to be adjusted by the formulae

Diamonds Kg = Diamonds carat x 0.2 / 1000

Gold Kg = Gold Troy ounce x 31.1 / 1000

(Note: regular ounces are 35g troy ounces 31.1g)

Furthermore, certain entries need to be removed from the dataset:-

49070 Bank notes/ cheque books etc
71082 monetary gold
71189 legal tender coins
and any duplicate entries that BOG are providing data for.

Practical implementation: Once the substitutions for Crude Oil and the major exports have been substituted the resultant trade data base is provided at HS6 digit level and Basic Economic Classifications (BEC).Values are reported in Cedis and US Dollars, using US Dollar conversions based on the BOG mid rate for the month of transaction. For exports, Free On Board (FOB) values are declared. For imports Customs, Insurance and Freight (CIF) is declared. It should be noted that the 'count' field for the substituted items is not as reliable as one would have hoped for and experience has shown that the weight in Net Kgs is often erroneous due to poor documentation completion with tonnes, palettes or boxes being entered into the Kilogramme fields. The Net Weight in Kgs is however provided for information and rough comparison purposes. Finally, direction of trade is provided by declared country of origin or destination (mis-declaration demonstrates some 'home movements' and the BOG substitutions removes much of the high value trade items from the DoT report to other countries – this should be addressed in the future).

Cleaning of the data is currently very onerous and based on knowledge of the history of products in Ghana. Errors occur far too frequently – especially on exports and diplomatic items (no duty applies so errors 'cost' nothing). In some cases it is so hard to classify an entry it is best to remove it from the data set altogether.

For example, recently an 'HS code' was entered into a 'value in foreign currency' field giving a potential 32M$ error on vegetables for 2003H1. Screening picks up many errors like this (and errors by factors of 10, 100, and 1000), yet other errors slip through and one must always be aware of the imperfection of any dataset.

Global misclassification is an 'un-catchable' error for example HS 2903150000 (1,2-dichlorethane) was used to miscode a range of products from Live Reptiles, through vegetables to Furniture arts and books - 84 records were trapped, how many more were not. The use of the term 'food items' is a more common problem. There is no HS Code for 'food items', hence the goods are 'dumped' into Gari, or Pineapples or whatever seems most appropriate at the time. The values are not high but this is a practice that needs to be addressed in the future.

Access 'v' Excel: The resultant database is not perfect, but does form the basis for ongoing work and continued collaboration between CEPS, MOTI and BoG in the form of informal trade data workgroups and workshops. However, Access skills are limited – and repeatability is an issue, therefore the passage of 'refined' data into Excel (via queries in Access) for easier dissemination has been used to reduce the volume of data to be handled at any one time and provide a more widely practiced tool for relevant parties to work on. Currently the Excel tool only reflects the CPC selection set for BOP (as defined by BOG).

For the record....

> over 1.3 million entries have been incorporated into the final database, allowing for combinations of country and CPC code between ASYCUDA and GCMS and giving full control over CPC inclusion in reports (subject to a certain degree of training).

Timeliness: How timely can Ghana be in its reporting? Reporting time is currently realistic at 45 days End of Quarter (EoQ) but could be reduced to 30 or even 15 days EoQ with the exception of overland data. This would rely on vastly improved data capture and access to suitable equipment

within the timeframes targeted.

Immediate and Future needs of MOTI/CEPS/BoG:

1. The current database does not address the issue of tariffs. The principle reason for this is that at the time of writing the tariff extract from GCNET/GCMS is still undergoing refinement (i.e. the GCNET Tariff data is incomplete or inaccurate). The ASYCUDA tariff data has been extracted for analysis in a separate Excel file (used by Curtis Youngblood in his recent analysis of Tariffs). GCNET/GCMS tariff data *should* provide a great deal more opportunities for analysis and planning activities due to its more complete structure. Further developments of the Trade Database should work towards full incorporation of the GCNET Tariff data.

2. The manipulation of raw data sets from GCNET/GCMS and integration with ASYCUDA data is beyond the practical capabilities of Excel due to the sheer volume of raw data. Since most of the agencies are already provided with Microsoft Access database this has been the base engine used for the Trade Data base produced. Although staff at these agencies have gained some skills in Access in order to continue with the work in a comfortable manner a detailed course relating to Access is essential. Ideally a 10 day programme of training for each of two to three groups of 6 each involving classroom and on the job sessions would help to provide the skills set required.

3. MOTI needs to change the way it works with data. As CEDIS is scheduled to be retired from the main ports at the end of this year, only overland data will need to entered at MOTI HQ. The opportunity is present to move towards incorporating overland import data capture and to develop a more streamlined data entry method (CEDIS is nearly 10 years old and still runs in DOS). Further to the above Access training programme assistance with the development activity such as capture and reporting method and its integration to the main trade data set would be beneficial.

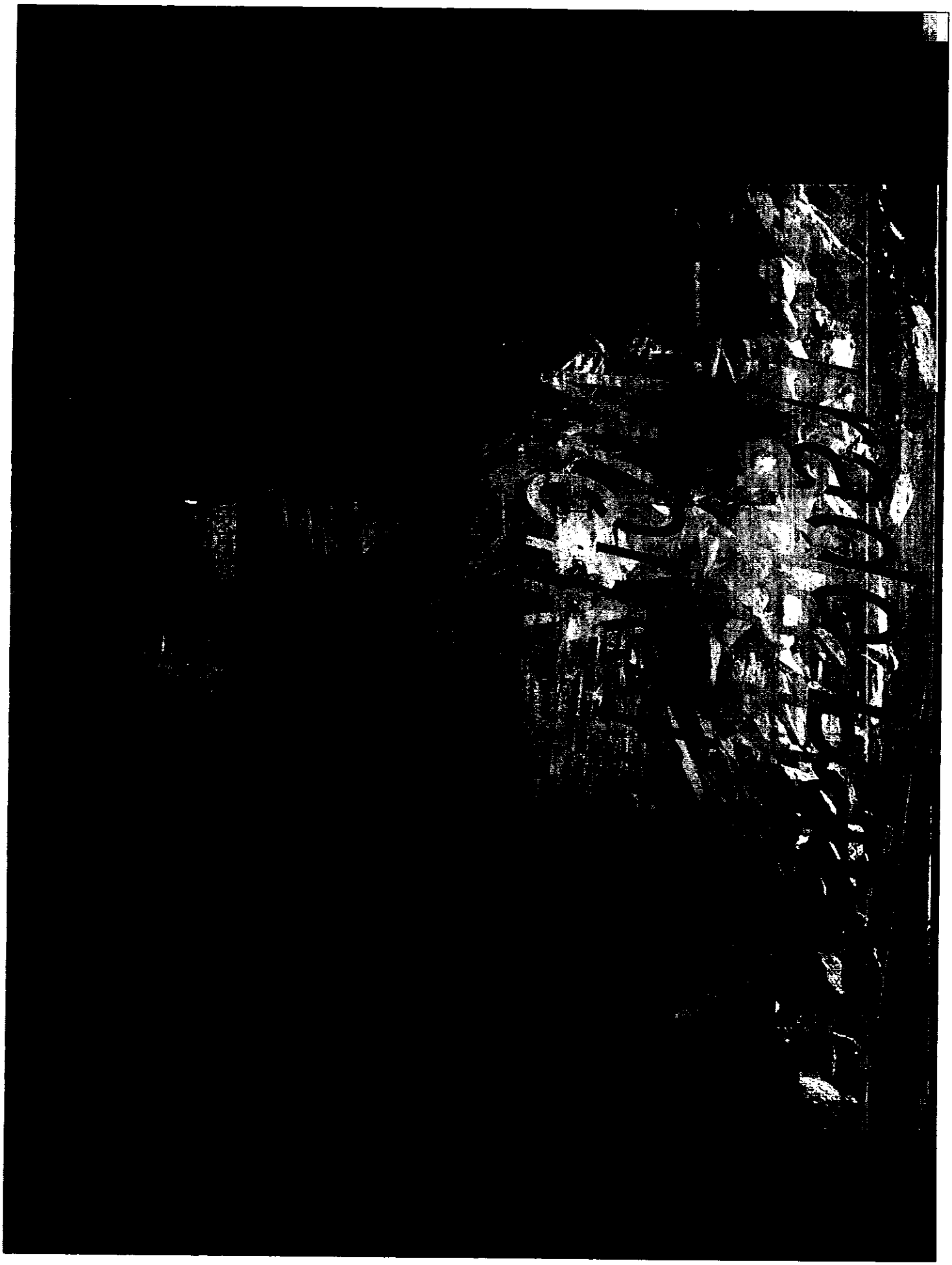
4. Ongoing support to all three agencies with regards to data issue identification, reporting methods, development of good practice and the productive development of an informal monthly trade data group set up between the three current agencies and to include Ghana Statistical Service (who are keen to get involved) and perhaps GEPC would help to ensure timely reporting and unified responses regarding trade.

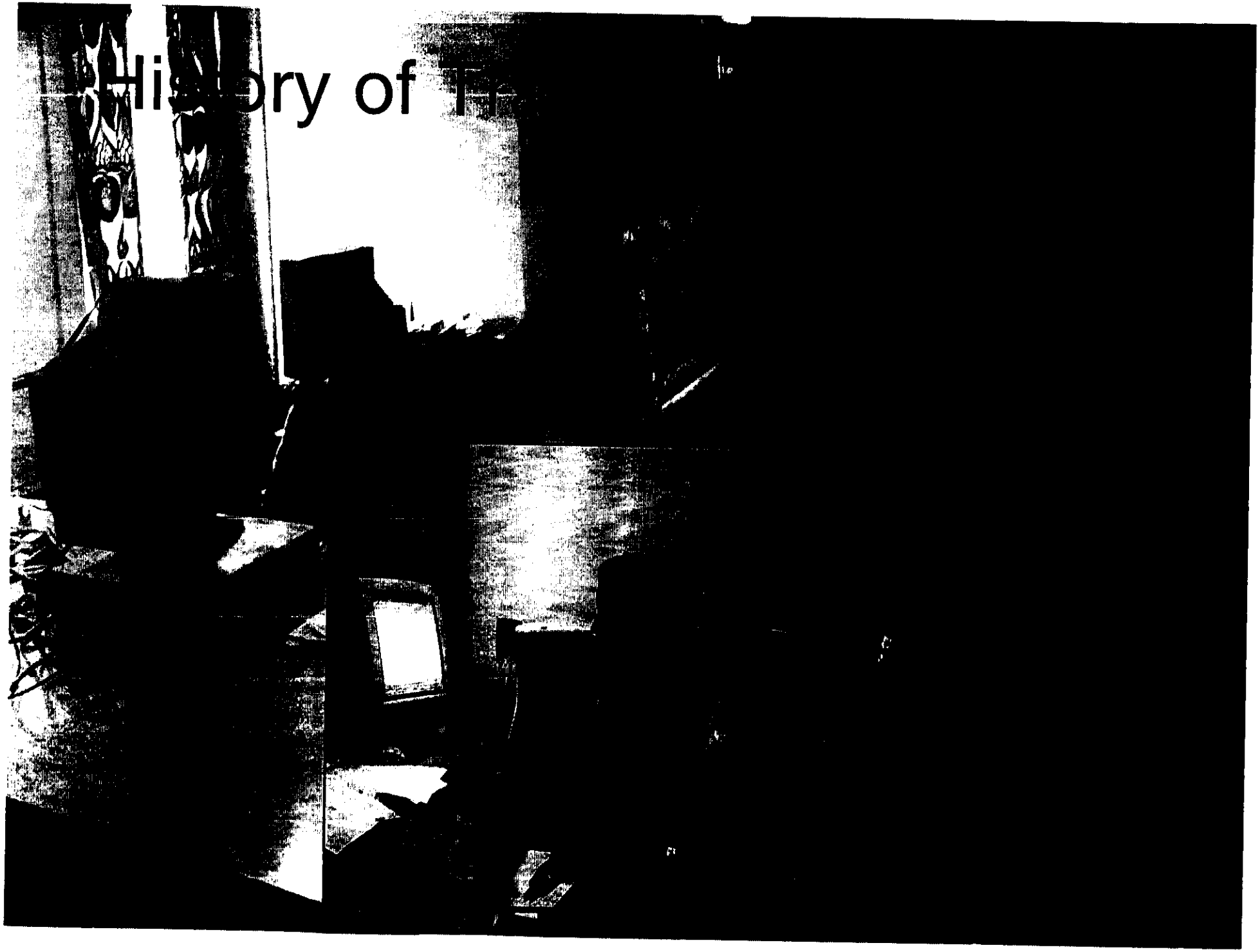
Next Steps:

The follow-up activity should continue assistance to the GoG counterparts in the enhancement, update and refinement of the trade database developed. Continued assistance should be aimed at:

1. Updating the trade database on a quarterly basis as new data becomes available.
2. Adding the tariff handles to the trade database.
3. Assisting MOTI to develop an alternate (to CEDIS) method to capture overland data so that it feeds the new trade database directly in a more efficient manner.
4. Providing ongoing support to the three agencies (BoG, MoTI, CEPS) on data identification issues, reporting methods as per item 4.
5. Providing Access training using the trade database as a learning tool. The intent is to maximize the facility of the staff in the use of Access to enable maximum utility of the database.

b




History of Th

Trade Data Speak

ASYCUDA

Automated **Sy**stem for **Cu**stoms **Da**ta: developed in Switzerland by UNCTAD, works in PROLOGUE operating system.

CEDIS

Customs **E**xport **D**ata **I**nformation **S**ystem: developed in Ghana by CEPS and MOTI, assisted by Sigma One/USAID, works in DOS operating systems.

GCNET/GCMS

Ghana **C**ommunity **Net**work/**G**hana **C**ustoms **M**anagement **S**ystem: based on the Mauritius customs system developed by SGS, works in UNIX operating system using TELNET.

Trade data collection in Ghana 1994 - 2003

Kotoka Tema Takoradi

Imports ASYCUDA

Exports ASYCUDA CEDIS GCMS

Overland
(Exports Only)

CEDIS

1994

2003

Data Sources and Methodology for the development of a working trade and tariff database

SAD

Single Administrative Document

Entered into ASYCUDA or CEDIS by CEPS data entry staff

NTE

For non-trade exports – increased access to exports

Entered into CEDIS by CEPS/MOTI data entry staff –

introduced in 1995 through facilitation of Sigma One / USAID

GCNET on-line form

– only available to authorised agents – incurs processing charges based on FOB value (0.4% for imports and 0.2% for exports)

Data entry online by authorised agent

Data Sources and Methodology for the development of a working trade and tariff database

ASYCUDA

GCNET/GCMS

CEDIS

1. Data Capture
2. Data Cleaning
3. Data Extraction
4. Data Cleaning
5. Data Integration
6. Data Cleaning
7. Data Analysis
8. Data Cleaning

Trade Data extraction

ASYCUDA import data is extracted from Kotoka, Tema and Takoradi to a DBIII file format and managed by Isaac Apronti at CEPS.

CEDIS export data is extracted from Kotoka, Tema and Takoradi and added to overland export data keyed at MOTI to a Clarion database form and managed by Ntim Donkoh and Pat Poku at MOTI.

GCMS data is extracted from common data audit trail to an ACCESS database format (provision for direct access to data via telnet is provided for in the GCNET system)

Now to integrate them all...

Integration problems

- CPC – Customs Procedure Codes
- Country Codes
- Data format – flat 'v' relational
- Data entry errors
  - Currency
  - Country
  - HS Codes/Classification
  - Exchange Rates
  - 'Food Items'
  - New codes
  - Kg/Ounces/Containers/Carats/Boxes/Loads/etc
- Missing data
  - Incomplete
  - Absenteeism

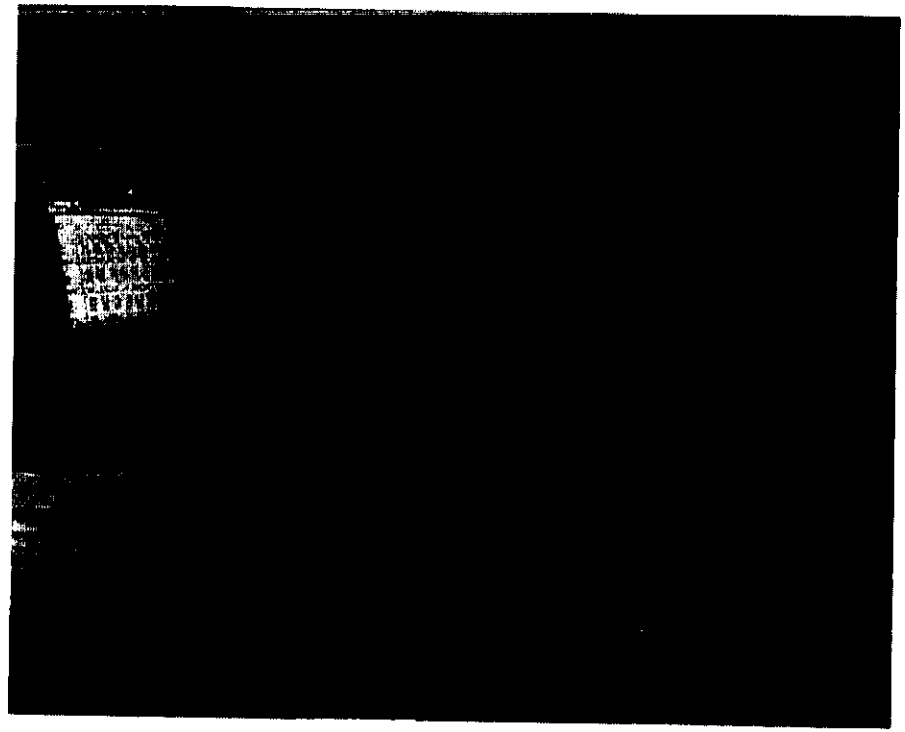
BANK OF GHANA and the BOP

Balance of Payments

Using data from a range of sources, staff in the research department work on the BOP.

Part of the BOP concerns Exports and Imports – hence the use of CEPS and MOTI data.

However, comparisons with data of trade partners and values form major agencies – Bauxite / Manganese / Gold / Timber / TOR / VRA / COCOBOD - show varying degrees of inconsistencies with CEPS/MOTI captured data.



Furthermore, the CPC (Customs Procedure Codes) used for the BOP vary from those used by MOTI for Trade and CEPS for Revenue data.

Angles of View

[redacted]w can we

pro[redacted]ffective

w[redacted]

Trade Data[redacted]

Trade (and Tariff) Database

Data Dictionary and ERD

(Entity Relationship Diagram)

Year

Month

Source (A, C, G, B)

Country (using GCMS codes)

HS Code (6)

CPC (ASYCUDA *and* GCMS)

SITC

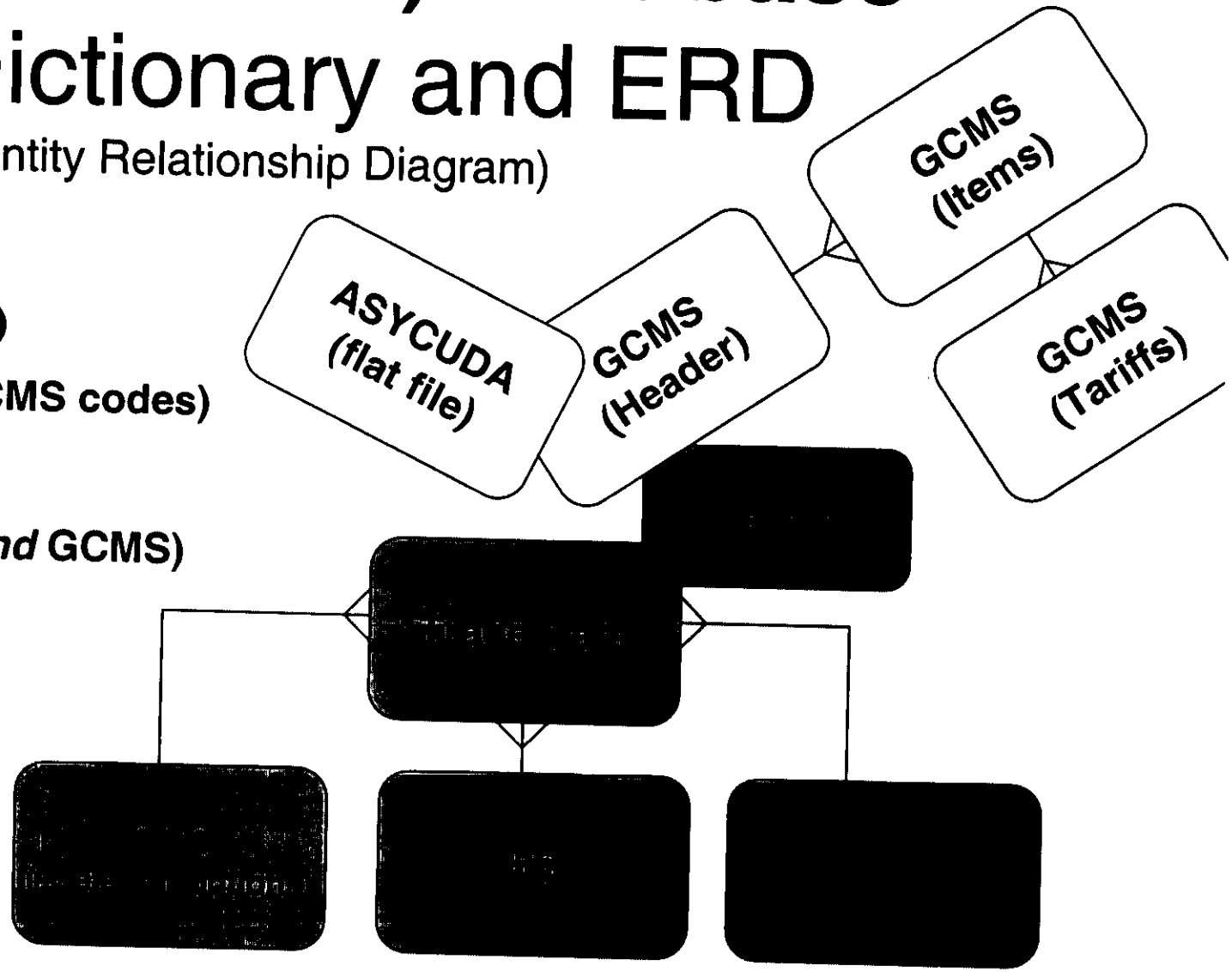
BEC

Kgs

Import CIF

Export FOB

Number of Entries

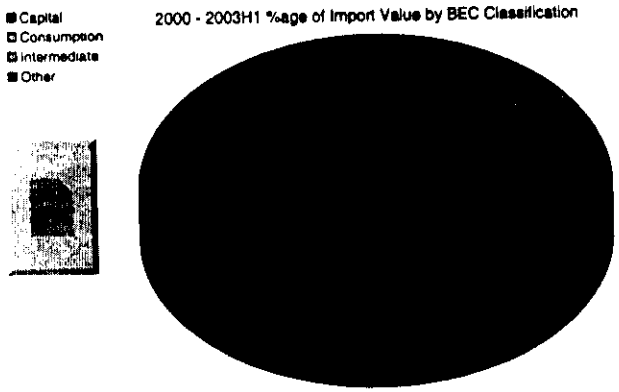


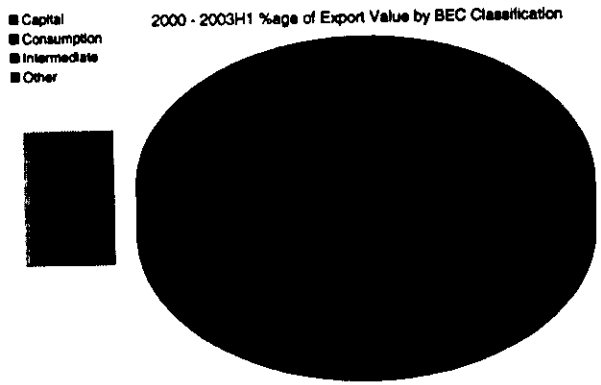
Interactive Insights

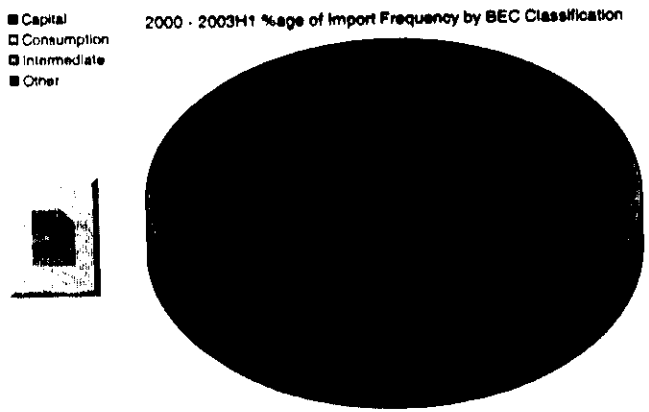
BEC using BOP CPC selection for 2000 - 2003 H1

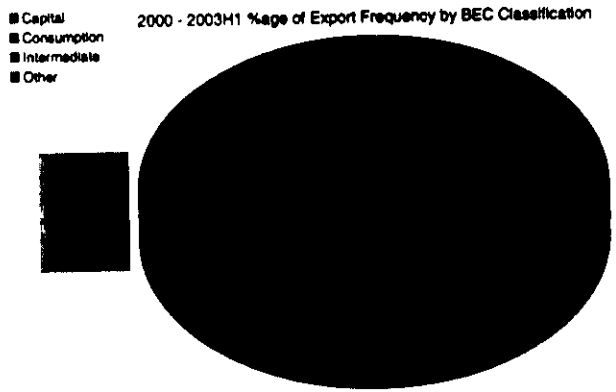
Source: Trade Data Workshop 27 August 2003

Capital	2000-2003H1	1,281,022,644	13.1	25,694,218	0.4	146,186	14.1	1,577	0.9
Consumption	2000-2003H1	1,674,733,825	17.1	558,834,158	8.6	320,571	30.9	120,971	67.1
Intermediate	2000-2003H1	6,165,476,447	62.8	5,911,214,161	91.0	479,549	46.3	57,785	32.0
Other	2000-2003H1	692,848,465	7.1	466,488	0.0	89,949	8.7	42	0.0
Totals	**2000-2003H1**	**9,814,081,381**	**100.0**	**6,496,209,026**	**100.0**	**1,036,255**	**100.0**	**180,375**	**100.0**







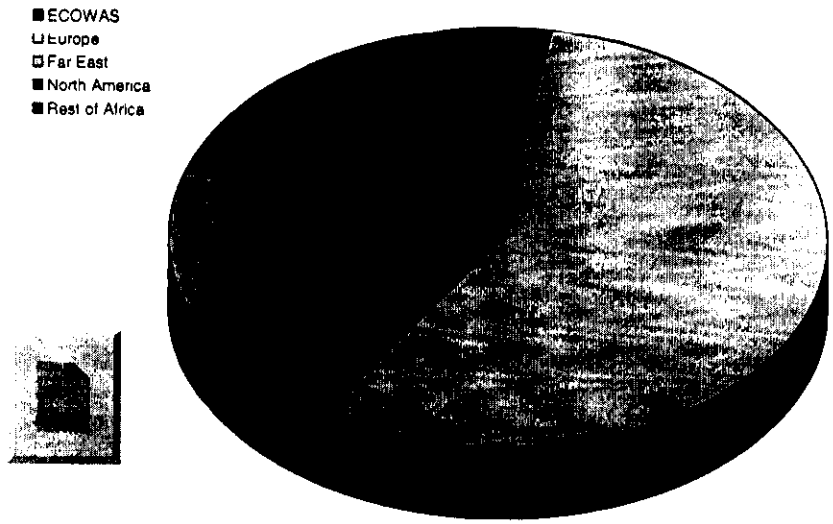


Analysis of Direction of Trade by Region using BOP CPC selection for 2000 - 2003 H1

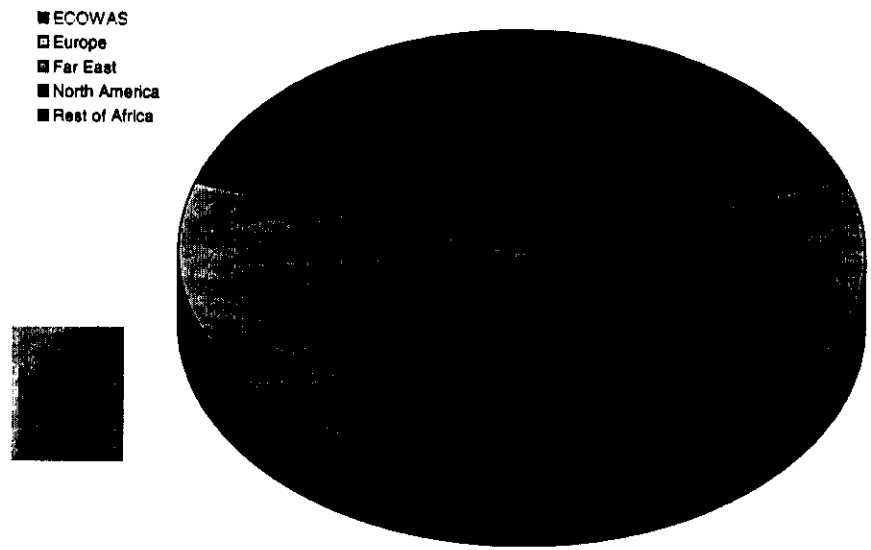
Source: Trade Data Workshop 27 August 2003

ECOWAS	2000	40,636,624	1.5	63,408,638	3.7	2,234	0.8	15,027	28.0
	2001	47,346,614	1.7	81,351,502	4.5	1,981	0.7	18,100	29.3
	2002	58,178,904	2.1	120,922,494	6.4	2,344	0.8	15,447	30.3
	2003H1	22,922,310	1.5	16,129,043	1.5	1,183	0.8	563	4.0
ECOWAS	**2000-2003H1**	**169,084,452**	**1.7**	**281,811,677**	**4.3**	**7,742**	**0.7**	**49,137**	**27.2**
Europe	2000	1,168,405,733	42.3	288,944,285	16.7	196,298	66.9	31,663	58.9
	2001	1,140,070,933	41.4	242,625,608	13.3	202,969	67.9	37,015	60.0
	2002	1,134,149,539	40.6	225,423,942	11.9	186,647	64.1	28,556	55.9
	2003H1	602,849,757	40.1	123,077,227	11.7	94,761	62.0	10,035	72.1
Europe	**2000-2003H1**	**4,045,475,963**	**41.2**	**880,071,062**	**13.5**	**680,675**	**65.7**	**107,269**	**59.5**
Far East	2000	408,505,608	14.8	34,754,479	2.0	37,077	12.6	811	1.5
	2001	403,832,743	14.7	39,694,104	2.2	32,887	11.0	541	0.9
	2002	443,981,642	15.9	29,576,387	1.6	36,099	12.4	660	1.3
	2003H1	242,474,172	16.1	21,112,807	2.0	21,469	14.0	360	2.6
Far East	**2000-2003H1**	**1,498,794,164**	**15.3**	**125,137,776**	**1.9**	**127,532**	**12.3**	**2,372**	**1.3**
North America	2000	274,209,231	9.9	35,141,874	2.0	29,982	10.2	3,996	7.4
	2001	275,777,405	10.0	39,471,965	2.2	29,044	9.7	4,047	6.6
	2002	284,456,401	10.2	45,790,110	2.4	32,906	11.3	4,146	8.1
	2003H1	157,672,827	10.5	21,461,399	2.0	15,908	10.4	1,889	13.6
North America	**2000-2003H1**	**992,115,863**	**10.1**	**141,865,348**	**2.2**	**107,840**	**10.4**	**14,078**	**7.8**
Rest of Africa	2000	113,974,001	4.1	5,574,099	0.3	10,823	3.7	949	1.8
	2001	126,831,400	4.6	4,577,703	0.3	10,078	3.4	974	1.6
	2002	131,073,512	4.7	10,374,185	0.5	11,544	4.0	1,080	2.1
	2003H1	69,688,564	4.6	4,274,431	0.4	5,801	3.8	484	3.5
Rest of Africa	**2000-2003H1**	**441,567,477**	**4.5**	**24,800,418**	**0.4**	**38,246**	**3.7**	**3,487**	**1.9**

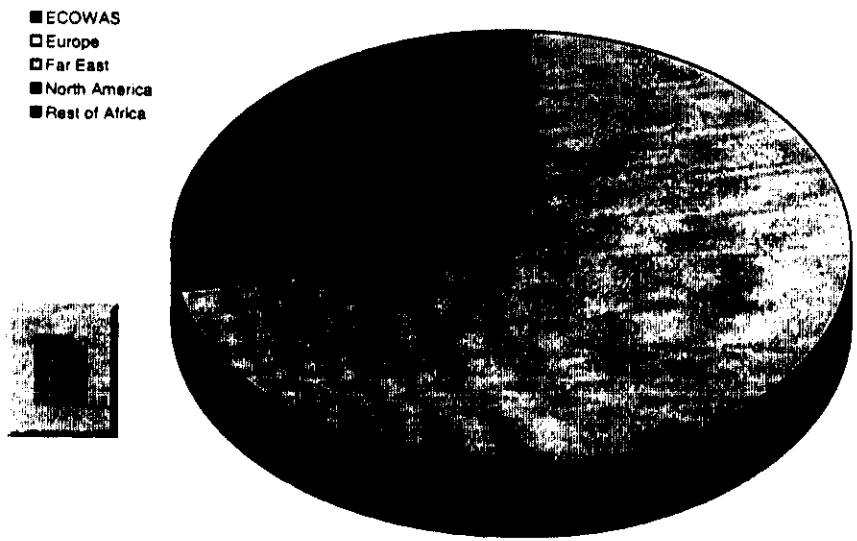
%age of Imports by Value from Key Regions 2000-2003 H1
(excluding Crude Oil)



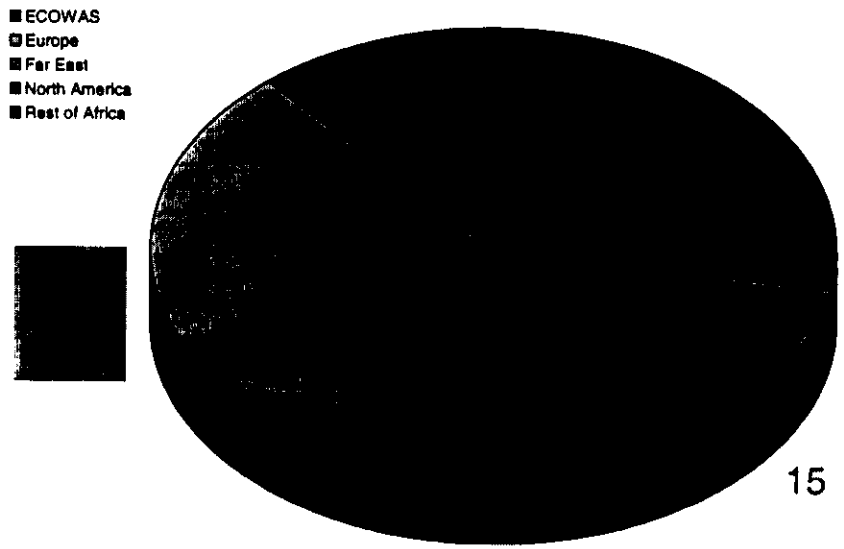
%age of Exports by Value from Key Regions 2000-2003 H1
(excluding Crude Oil)



%age of Imports by Freq. from Key Regions 2000-2003 H1
(excluding Crude Oil)



%age of Exports by Freq. from Key Regions 2000-2003 H1
(excluding Crude Oil)



Top Import Values using BOP CPC selection for 2000 - 2003 H1

Source: Trade Data Workshop 27 August 2003

HSc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000 - 2003H1					
2709000000	Petroleum oils and oils obtained from bituminous minerals, crude		-	1,896,360,179	19.32
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	88,705,598	67,758	551,147,421	5.62
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	45,641,234	-	222,545,907	2.27
6309000000	Worn clothing and other worn articles	221,386,413	960,163	183,141,080	1.87
2523100000	Cement clinkers	3,414,217,655	16,635,420	172,072,371	1.75
2818200000	Aluminium oxide (excl. artificial corundum)	168,925,954	-	170,039,532	1.73
1006400000	Broken rice	625,594,990	-	159,947,241	1.63
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	264,616,863	377,385,377	152,634,665	1.56
1001900000	Spelt, common wheat and meslin	522,195,220	3,103,014	129,578,321	1.32
0303740000	Frozen mackerel	220,370,884	90,000	100,560,855	1.02
2000					
2709000000	Petroleum oils and oils obtained from bituminous minerals, crude		-	535,315,198	19.40
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	26,150,509	-	141,717,586	5.14
6309000000	Worn clothing and other worn articles	46,968,909	558,835	63,950,828	2.32
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	13,944,384	-	63,708,212	2.31
2818200000	Aluminium oxide (excl. artificial corundum)	77,234,796	-	59,382,273	2.15
2523100000	Cement clinkers	1,101,423,330	16,625,420	46,533,012	1.69
8431490000	Parts of machinery of 84.26, 84.29 and 84.30, nes	2,902,111	-	39,172,967	1.42
1001900000	Spelt, common wheat and meslin	98,815,646	-	32,711,869	1.19
0303420000	Frozen yellowfin tunas	328,794,439	2,751,277	31,266,283	1.13
1006400000	Broken rice	112,296,820	-	30,919,878	1.12
2001					
2709000000	Petroleum oils and oils obtained from bituminous minerals, crude		-	529,687,531	19.23
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	24,887,851	6,000	155,253,529	5.64
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	12,293,643	-	62,046,921	2.25
6309000000	Worn clothing and other worn articles	66,302,958	301,297	59,142,327	2.15
2818200000	Aluminium oxide (excl. artificial corundum)	52,301,851	-	58,796,592	2.13
2402200000	Cigarettes containing tobacco	3,192,381	2,315,816	56,623,770	2.06
2523100000	Cement clinkers	997,885,276	-	51,925,992	1.89
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	74,384,444	96,737,594	45,887,310	1.67
1006400000	Broken rice	147,355,507	-	39,579,777	1.44
1001900000	Spelt, common wheat and meslin	130,694,813	2,700,000	33,233,813	1.21

Most frequent imports using BOP CPC selection for 2000 - 2003 H1

Source: Trade Data Workshop 27 August 2003

2000 - 2003H1				
6309000000	Worn clothing and other worn articles	221,386,413	99,377	9.59
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	88,705,598	73,932	7.13
6405100000	Footwear, nes, with leather or composition leather uppers	1,387,463	18,810	1.82
8708990000	Parts and accessories, nes, for vehicles of 87.01 to 87.05	31,910,105	18,386	1.77
8528120000	Colour tv receivers,whether/not with radio/sound/video recordng/reprod.app	14,856,650	18,256	1.76
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	45,641,234	17,977	1.73
4012200000	Used pneumatic tyres of rubber	31,029,201	12,831	1.24
8703220000	Vehicles with spark-ignition engine of cylinder capacity 1000-1500cc	13,209,472	12,208	1.18
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	264,616,863	10,535	1.02
8431490000	Parts of machinery of 84.26, 84.29 and 84.30, nes	7,141,109	9,724	0.94
2000				
6309000000	Worn clothing and other worn articles	46,968,909	26,655	9.09
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	26,150,509	21,001	7.16
6405100000	Footwear, nes, with leather or composition leather uppers	277,582	6,451	2.20
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	13,944,384	5,725	1.95
8708990000	Parts and accessories, nes, for vehicles of 87.01 to 87.05	8,338,538	5,237	1.79
8528120000	Colour tv receivers,whether/not with radio/sound/video recordng/reprod.app	3,479,614	5,200	1.77
8703220000	Vehicles with spark-ignition engine of cylinder capacity 1000-1500cc	5,459,311	4,715	1.61
8431490000	Parts of machinery of 84.26, 84.29 and 84.30, nes	2,902,111	3,423	1.17
4012200000	Used pneumatic tyres of rubber	7,766,770	3,378	1.15
7615100000	Table, kitchen, household articles, parts thereof... of aluminium	225,599	2,853	0.97
2001				
6309000000	Worn clothing and other worn articles	66,302,958	29,510	9.87
8703230000	Vehicles with spark-ignition engine of cylinder capacity 1500-3000cc	24,887,851	21,684	7.25
6405100000	Footwear, nes, with leather or composition leather uppers	542,995	5,738	1.92
8708990000	Parts and accessories, nes, for vehicles of 87.01 to 87.05	8,929,032	5,390	1.80
8528120000	Colour tv receivers,whether/not with radio/sound/video recordng/reprod.app	4,434,720	5,335	1.78
8704220000	Goods vehicles, with diesel or semi-diesel engines, gvw 5-20tonnes	12,293,643	5,056	1.69
4012200000	Used pneumatic tyres of rubber	9,424,516	3,834	1.28
8703220000	Vehicles with spark-ignition engine of cylinder capacity 1000-1500cc	3,670,476	3,587	1.20
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	74,384,444	2,889	0.97
8431490000	Parts of machinery of 84.26, 84.29 and 84.30, nes	1,417,949	2,728	0.91

Top export values using BOP CPC selection for 2000 - 2003 H1

Source: Trade Data Workshop 27 August 2003

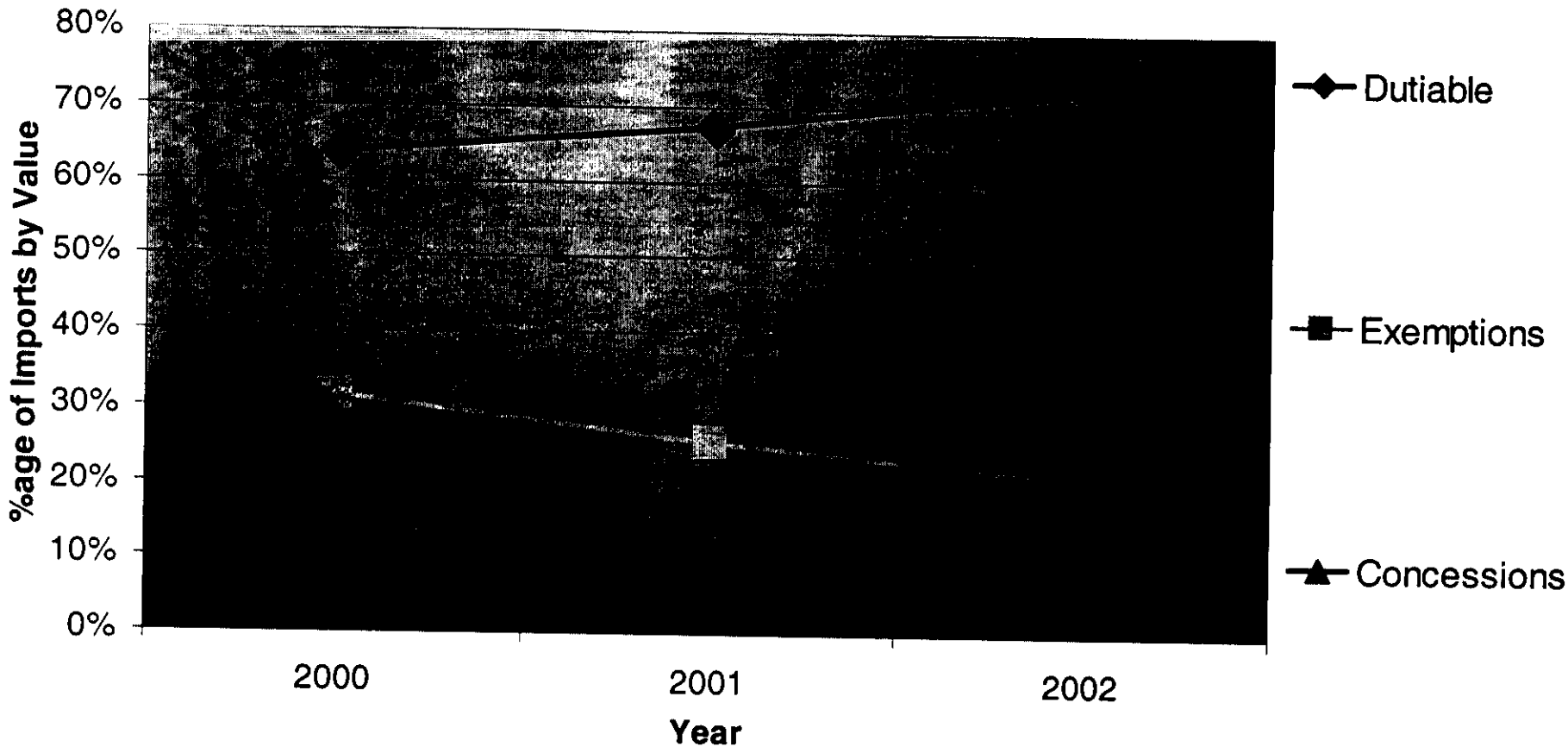
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000 - 2003H1					
7108000000	Gold, unwrought or in semi-manufactured forms, or in powder form	251,018	-	2,388,100,000	36.76
1801000000	Cocoa beans, wholeor broken, raw or roasted	1,164,784,000	-	1,479,470,000	22.77
7601200000	Aluminium alloys, unwrought	244,344,941	42,654	440,577,184	6.78
1803X00000	Cocoa Products (from BOG includes 1804 - cocoa paste and butter)	187,163,000	-	235,110,000	3.62
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	377,385,377	152,634,665	217,953,868	3.36
1604140000	Prepared or preserved tuna, skipjack and atlantic bonito	79,663,606	1,107,450	183,709,985	2.83
2710000000	Petroleum oils, etc, (excl. crude); preparations thereof, nes	1,085,980,000	45,377,553	168,970,000	2.60
7601000000	Unwrought aluminium		-	157,810,000	2.43
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	201,372,385	70,930,826	157,697,418	2.43
2602000000	Manganese ores and concentrates, with a manganese content of >20%	3,869,804,000	10,963,440	110,470,000	1.70
2000					
7108000000	Gold, unwrought or in semi-manufactured forms, or in powder form	77,870	-	702,040,000	40.46
1801000000	Cocoa beans, wholeor broken, raw or roasted	348,031,000	-	380,910,000	21.95
7601200000	Aluminium alloys, unwrought	127,796,303	5,274	140,375,294	8.09
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	116,885,114	71	59,219,320	3.41
1803X00000	Cocoa Products (from BOG includes 1804 - cocoa paste and butter)	57,729,000	-	56,240,000	3.24
1604140000	Prepared or preserved tuna, skipjack and atlantic bonito	25,086,175	858,975	54,648,299	3.15
2710000000	Petroleum oils, etc, (excl. crude); preparations thereof, nes	257,173,000	14,919,018	51,100,000	2.95
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	56,712,997	-	32,619,874	1.88
2602000000	Manganese ores and concentrates, with a manganese content of >20%	929,502,000	-	29,020,000	1.67
2606000000	Aluminium ores and concentrates	503,825,000	-	13,380,000	0.77
2001					
7108000000	Gold, unwrought or in semi-manufactured forms, or in powder form	70,748	-	617,840,000	33.95
1801000000	Cocoa beans, wholeor broken, raw or roasted	310,477,000	-	316,920,000	17.42
7601200000	Aluminium alloys, unwrought	116,548,638	2,498	300,201,890	16.50
1803X00000	Cocoa Products (from BOG includes 1804 - cocoa paste and butter)	59,142,000	-	64,200,000	3.53
1604140000	Prepared or preserved tuna, skipjack and atlantic bonito	25,353,399	36,132	58,816,241	3.23
2710000000	Petroleum oils, etc, (excl. crude); preparations thereof, nes	398,055,000	15,616,401	57,540,000	3.16
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	96,737,594	45,887,310	53,072,172	2.92
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	46,502,156	-	41,309,150	2.27
2602000000	Manganese ores and concentrates, with a manganese content of >20%	1,109,561,000	5,556,046	36,670,000	2.02
2402200000	Cigarettes containing tobacco	2,315,816	56,623,770	22,808,275	1.25

Most frequent exports using BOP CPC selection for 2000 - 2003 H1

Source: Trade Data Workshop 27 August 2003

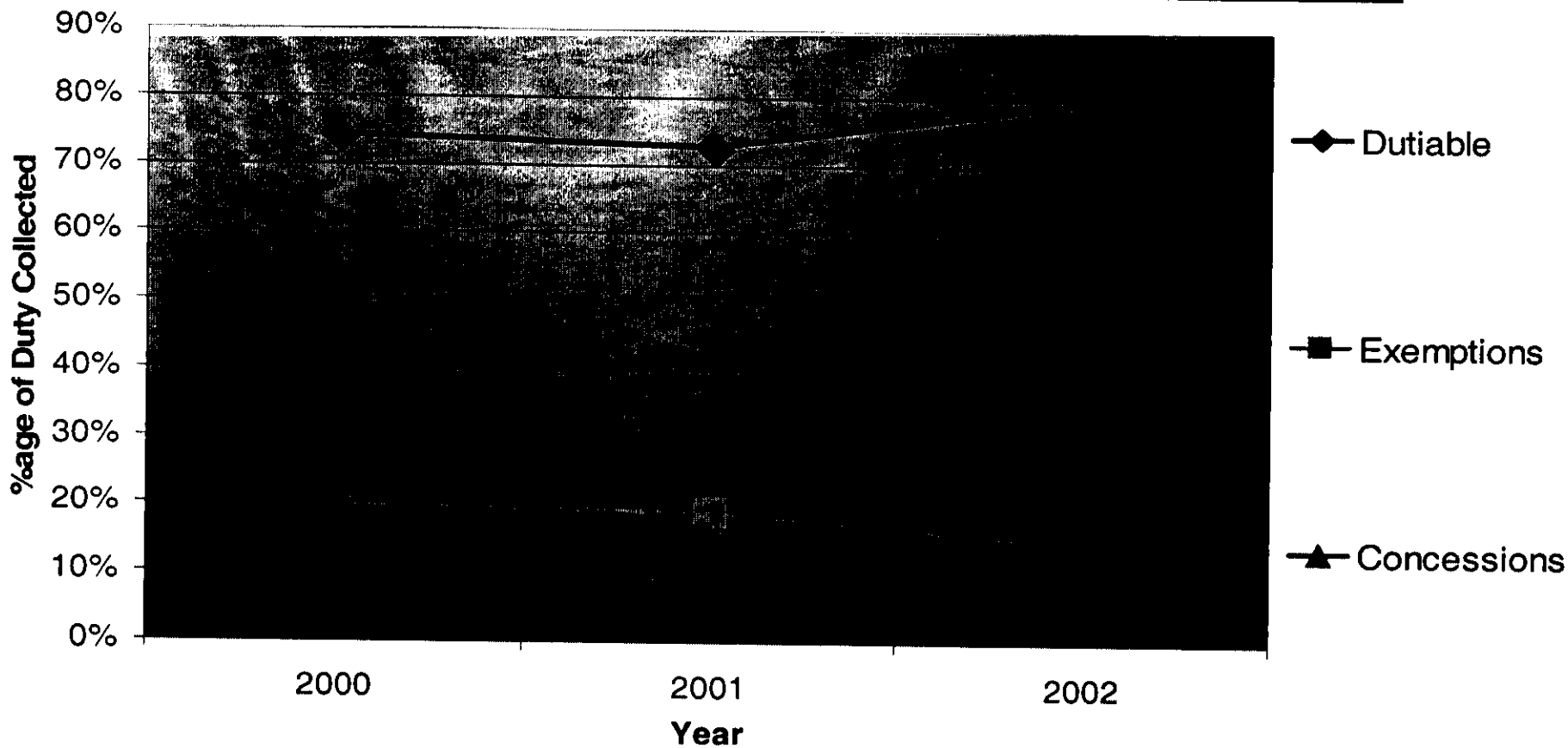
[illegible]	Description	[illegible]	[illegible]	[illegible]	[illegible]
2000 - 2003H1					
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	264,616,863	377,385,377	10,535	15,082
0804300000	Pineapples, fresh or dried	13,205	121,511,657	10	12,534
0904110000	Dried pepper (excl. crushed or ground)	3,358	9,578,707	28	12,019
0708900000	Leguminous vegetables, fresh or chilled, nes	7,317	3,239,852	7	9,828
0709300000	Aubergines, fresh or chilled	577	3,428,086	1	8,238
0714300000	Yam	-	35,528,842	-	6,464
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	83,300,758	201,372,385	3,035	6,166
3924900000	Household and toilet articles of plastics, nes	3,088,127	4,919,916	3,665	5,272
0803000000	Bananas, including plantains, fresh or dried	-	34,505,418	-	4,640
0709900000	Other vegetables, fresh or chilled, nes	11,588	1,495,170	56	3,835
2000					
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	1	116,885,114	1	4,773
0904110000	Dried pepper (excl. crushed or ground)	372	2,383,895	9	4,047
0804300000	Pineapples, fresh or dried	-	26,381,877	-	3,026
0708900000	Leguminous vegetables, fresh or chilled, nes	2,773	917,574	1	2,905
0709300000	Aubergines, fresh or chilled	-	850,634	-	2,581
0714300000	Yam	-	11,917,987	-	2,248
3924900000	Household and toilet articles of plastics, nes	906,824	783,681	1,149	1,541
0709900000	Other vegetables, fresh or chilled, nes	906	298,365	9	1,360
2501000000	Salt and pure sodium chloride; sea water	545,241	46,269,730	91	1,335
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	-	56,712,997	-	1,318
2001					
0904110000	Dried pepper (excl. crushed or ground)	1,329	3,920,497	12	4,756
0708900000	Leguminous vegetables, fresh or chilled, nes	4,440	1,203,402	3	4,021
4407990000	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm thick	74,384,444	96,737,594	2,889	3,857
0804300000	Pineapples, fresh or dried	250	35,757,074	1	3,209
0709300000	Aubergines, fresh or chilled	-	947,064	-	3,142
3924900000	Household and toilet articles of plastics, nes	792,480	2,038,075	1,014	2,282
0714300000	Yam	-	9,439,053	-	2,207
0803000000	Bananas, including plantains, fresh or dried	-	9,374,391	-	1,874
4408200000	Specified tropical wood veneer sheets and for plywood, =<6mm thick	-	46,502,156	-	1,543
0708200000	Beans, fresh or chilled	20	287,396	1	1,505
2002					

Classification of Imports by Duty Status



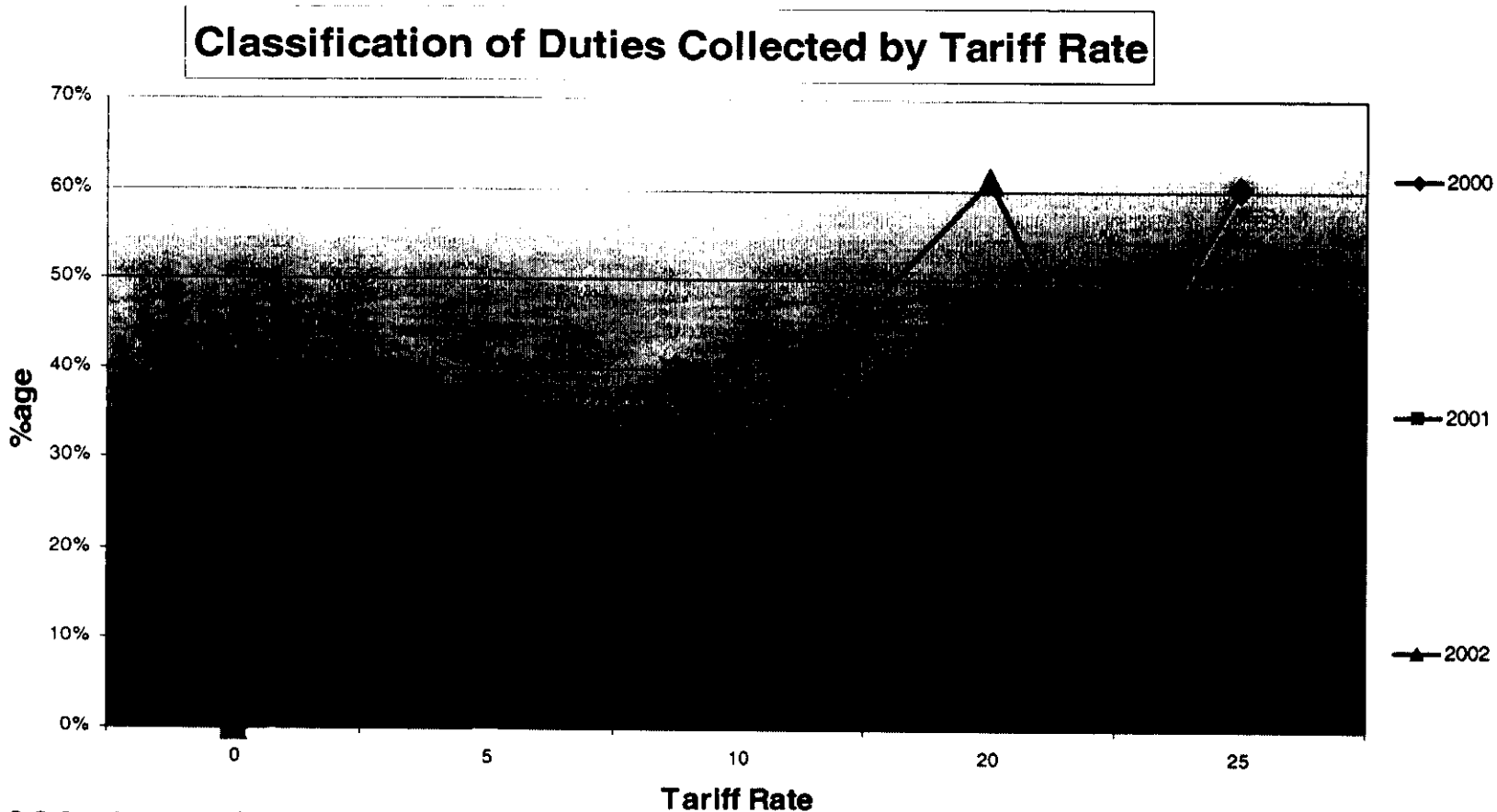
- Goods brought in under exemptions have declined from 31% of total imports in 2000 to 21% in 2002
- Goods that are not exempted or brought in under concessions ("dutiable goods") have increased from 64% of total imports in 2000 to 72% in 2002

Classification of Tariff Collections by Duty Status



•Dutiable goods (those not coming in under exemptions or concessions) are generating a larger percentage of total duties collected, increasing from three-fourths of the total in 2000 to almost 80% in 2002

•Contribution of exempted goods has declined from 20% of total duties collected in 2000 to 14% in 2002 as a result of the decline in the share of imports allowed in under exemptions

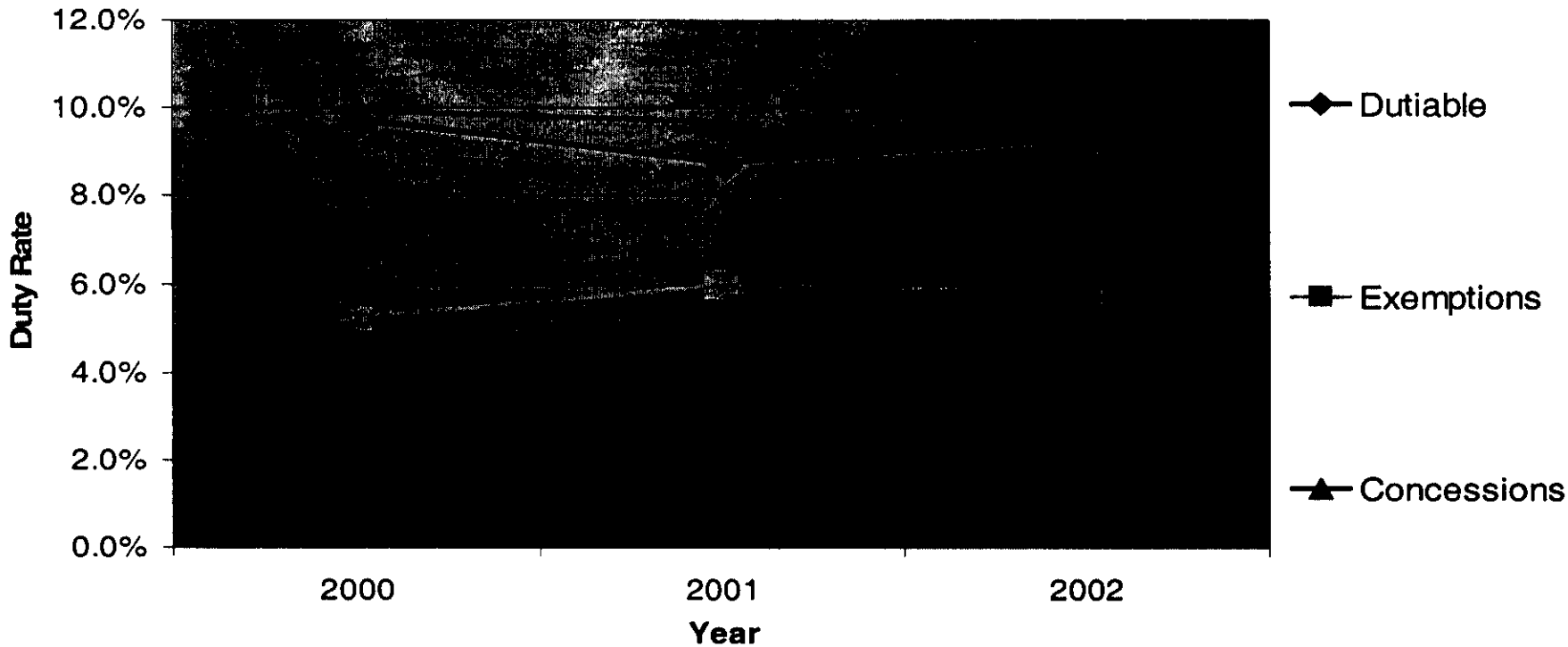


•In 2000, 60% of total duties were collected from goods with a statutory rate of 25% (such goods accounted for 40% of total imports); an additional 25% of duties were collected on goods taxed at 10% (these goods accounted for 29% of total imports by value)

•In 2001, 42% of duties collected came from goods with a statutory rate of 10% and 44% of duties collected were from goods taxed at 20%; combined, these two categories of goods accounted for over three-fourths of imports by value

•In 2002, goods taxed at 20% accounted for 61% of total duties collected; an additional 32% came from goods taxed at 10%; these two groups of goods accounted for 83% of total imports by value

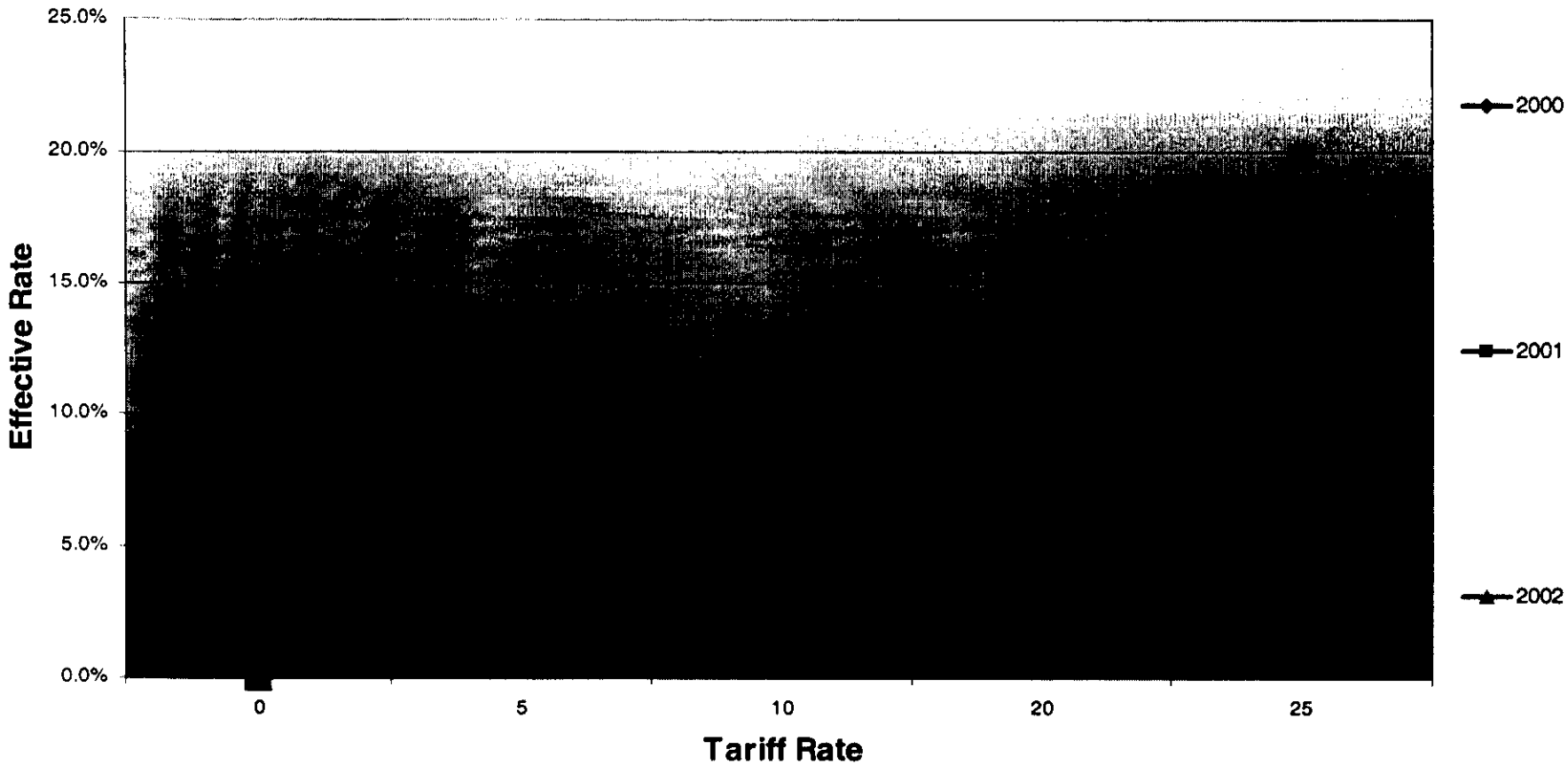
Effective Duty Rate by Duty Status



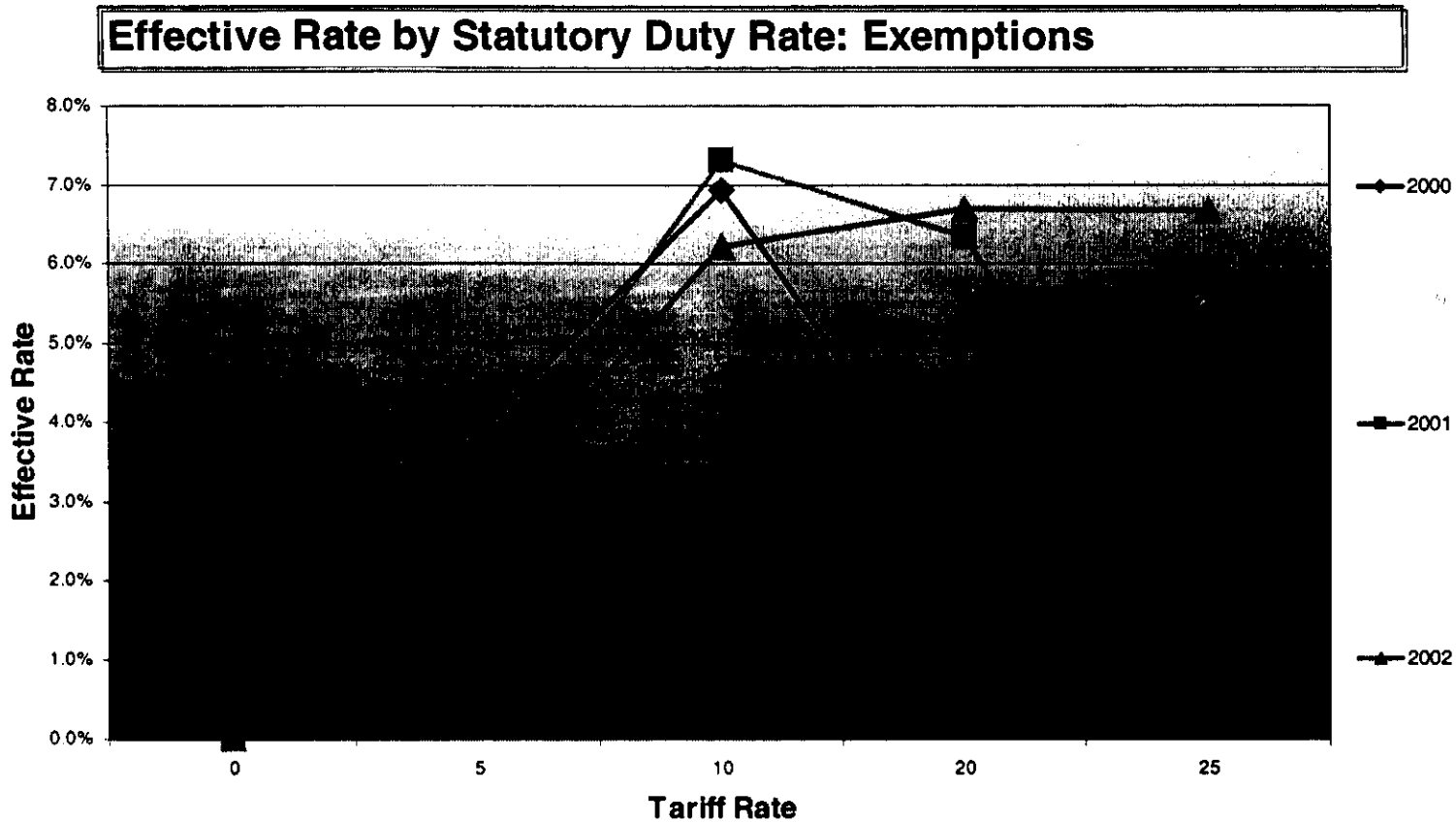
- Every good has a statutory duty rate, but a different duty rate can apply if that good is allowed in under exemption or under concession
- For 2000-2002, statutory duty rates have ranged from 0% to 25%; depending on the values of goods imported at each rate, the effective (or average) rate for dutiable goods will fall somewhere in this range
- Effective rate for dutiable goods declined slightly from 9.7% in 2000 to 9.3% in 2002, in part reflecting a reduction in the maximum statutory tariff from 25% to 20%
- Average rate on exempted goods increased from 5.3% in 2000 to about 6% in 2001 and 2002

- Overall, the average duty on *all* imports rose slightly from 8.3% in 2000 to 8.5% in 2002

Effective Rate by Statutory Duty Rate: Dutiable Goods



- If the system is working as it should, effective rate should be equal to the statutory rate for each statutory rate
- But goods with statutory rate of 10% are coming in around 7.5%
- Goods with statutory rate of 20% are getting charged less than half that on average, e.g., effective rate is 12.2% in 2002
- This indicates a significant revenue leakage, *if the correct statutory rate has been assigned to each type of good*



•Divergences between effective rates are particularly large for this category of goods, as is to be expected

•The higher the statutory rate, the greater the difference between the statutory rate and the effective rate

•For example, in 2000 goods with a statutory rate of 10% came in at around 7% (gap of 3 percentage points); goods with a statutory rate of 20% came in at 2.5% (gap of 17.5 percentage points); goods with a rate of 25% came in at 5.7% (gap of 19.3 percentage points)

•This pattern repeats in 2001 and 2002

Trade

Why
you do

Where to next? 2004 and beyond...

1. CEPS/GCNET is planning to capture all import and export at Kotoka, Tema and Takoradi. It is hoped that they might start operations at Aflao and Elubo, later on spreading to other overland points (ASYCUDA and CEDIS be ready to retire).
2. Consideration should be given to developing a streamlined overland data capture system for exports and imports (perhaps at MOTI since they have been capturing overland exports?).

HOW? Creation of common working trade database for use by MOTI/CEPS/BOG/GSS/GEPC and, of course, policy makers

Consideration for a web source of up-to-date working trade data

Establish regular report at 45 ... 30 ... 15 day EOQ/EO

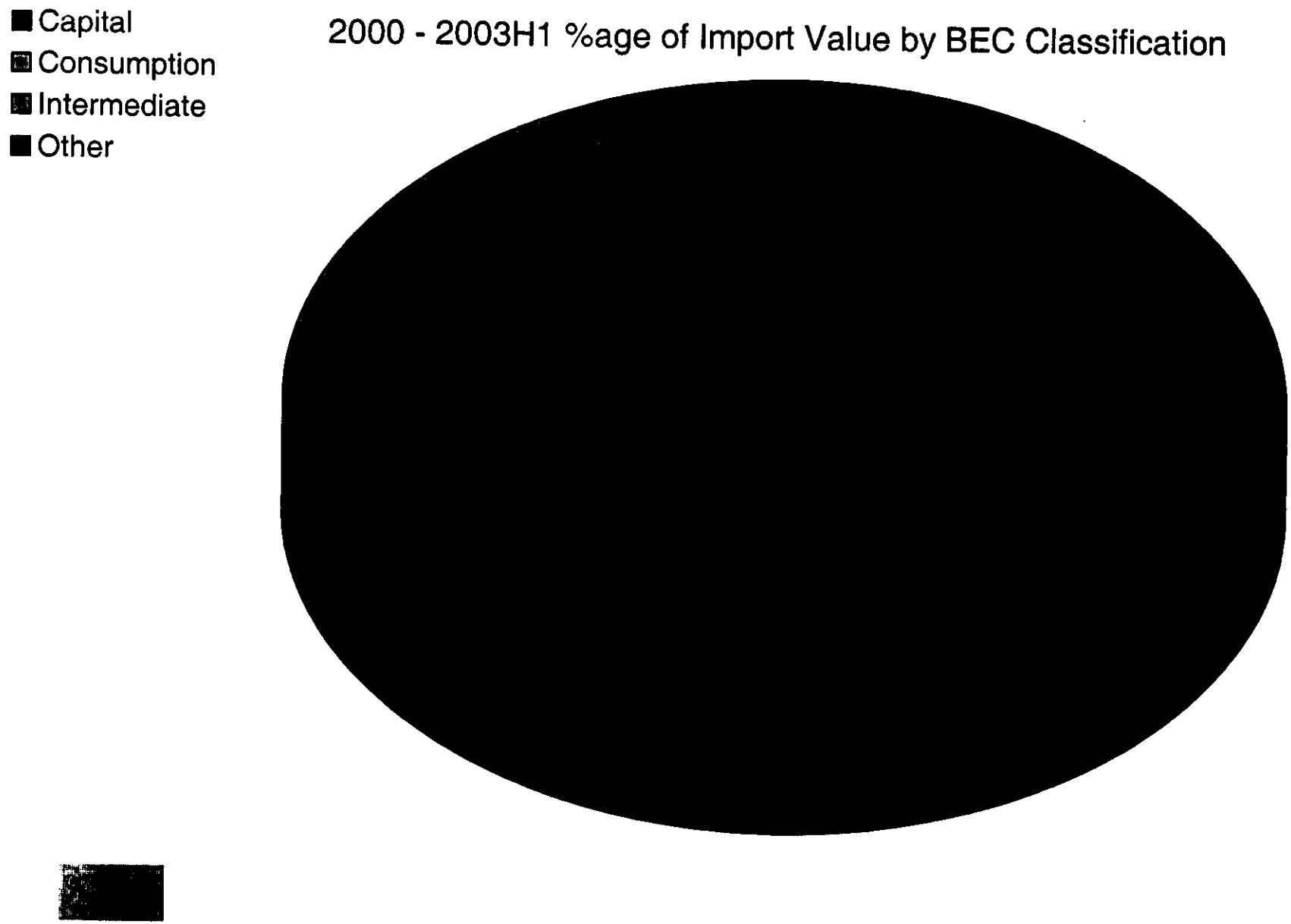
Considerations:

- Staff training
- Allocation of staff time to meet together across agencies
- Suitable equipment for working with large data sets
- On-the-job staff training
- Upgrading of MS Access skills
- On-going support and encouragement
- Integration of Tariff component into the working trade data
- How to best capture overland data

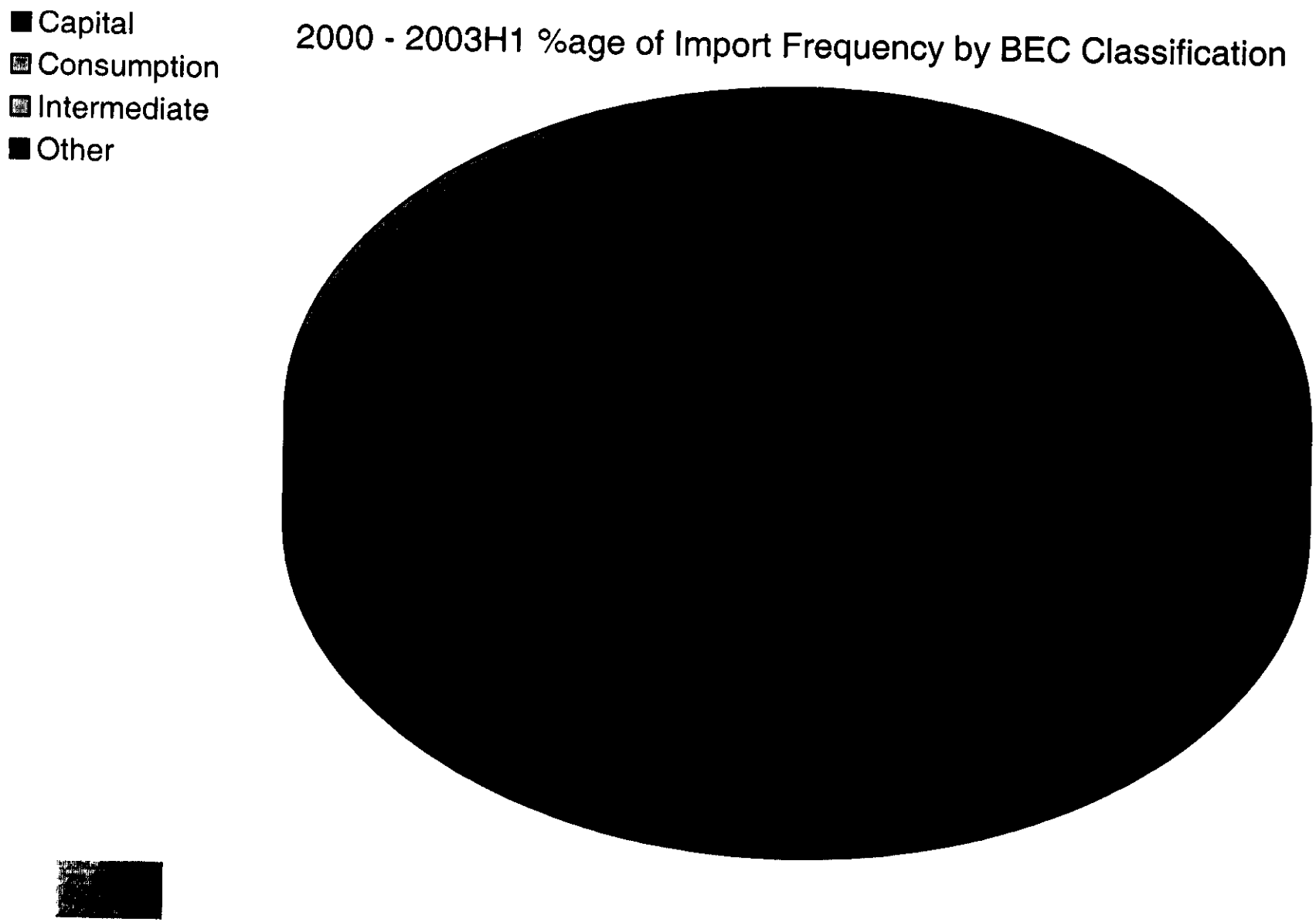
REMEMBER:

- Trade data issues are **organic** – they grow! In order to grow properly they need to be tended, pruned, harvested, processed, packaged and distributed!
- Trade Data will <u>never</u> be perfect – there is a point at which it is more valuable being available now with errors rather than waiting longer (months or years) to give finalised data.
- Finalised Data (GSS) is important and should be worked towards.
- **Indicative data sets allow informed policy choices. How long should we wait? 45 days EOQ should be the initial target.**

2000 - 2003H1 %age of Import Value by BEC Classification

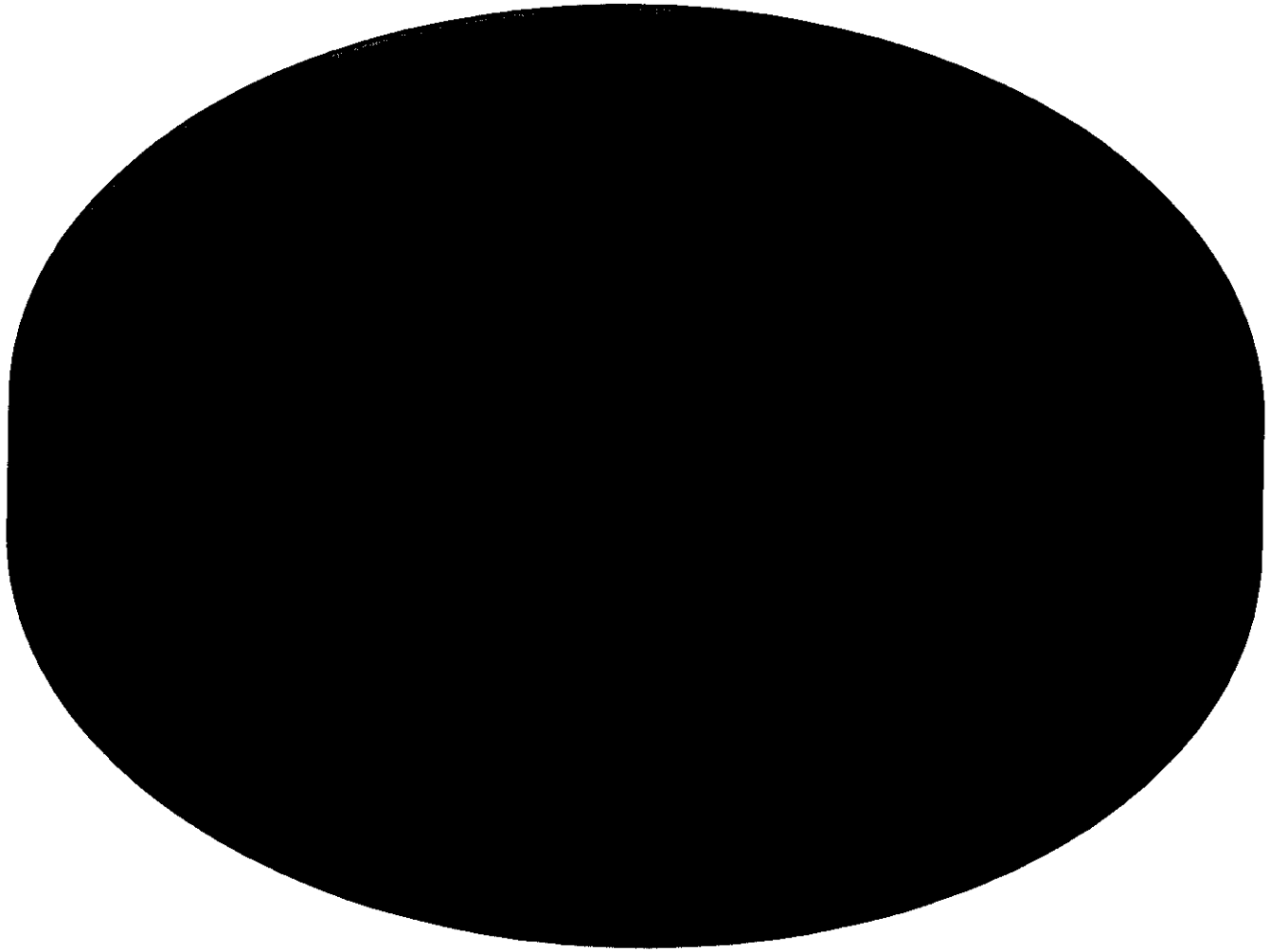


2000 - 2003H1 %age of Import Frequency by BEC Classification

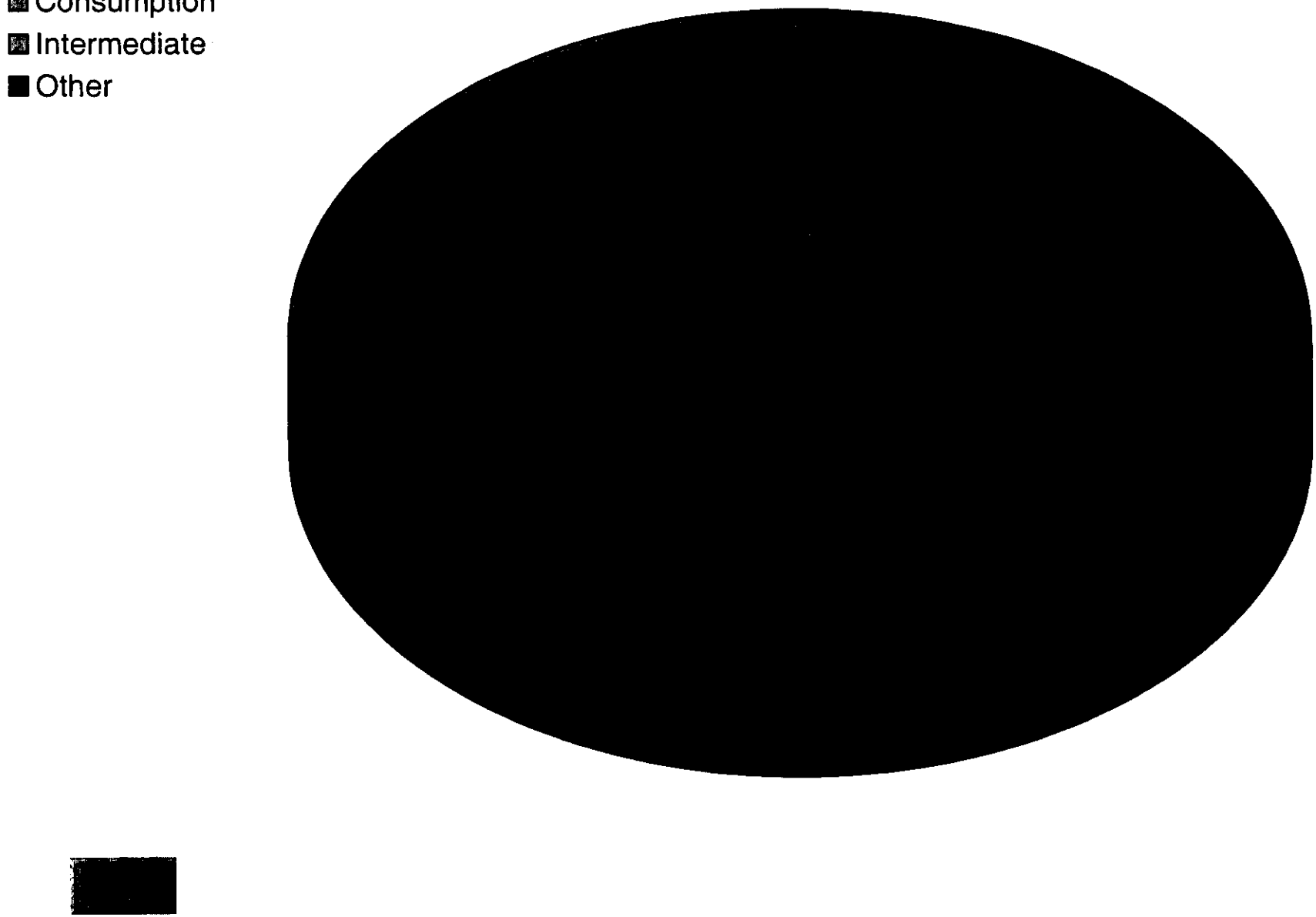


Capital
Consumption
Intermediate
Other

2000 - 2003H1 %age of Export Value by BEC Classification



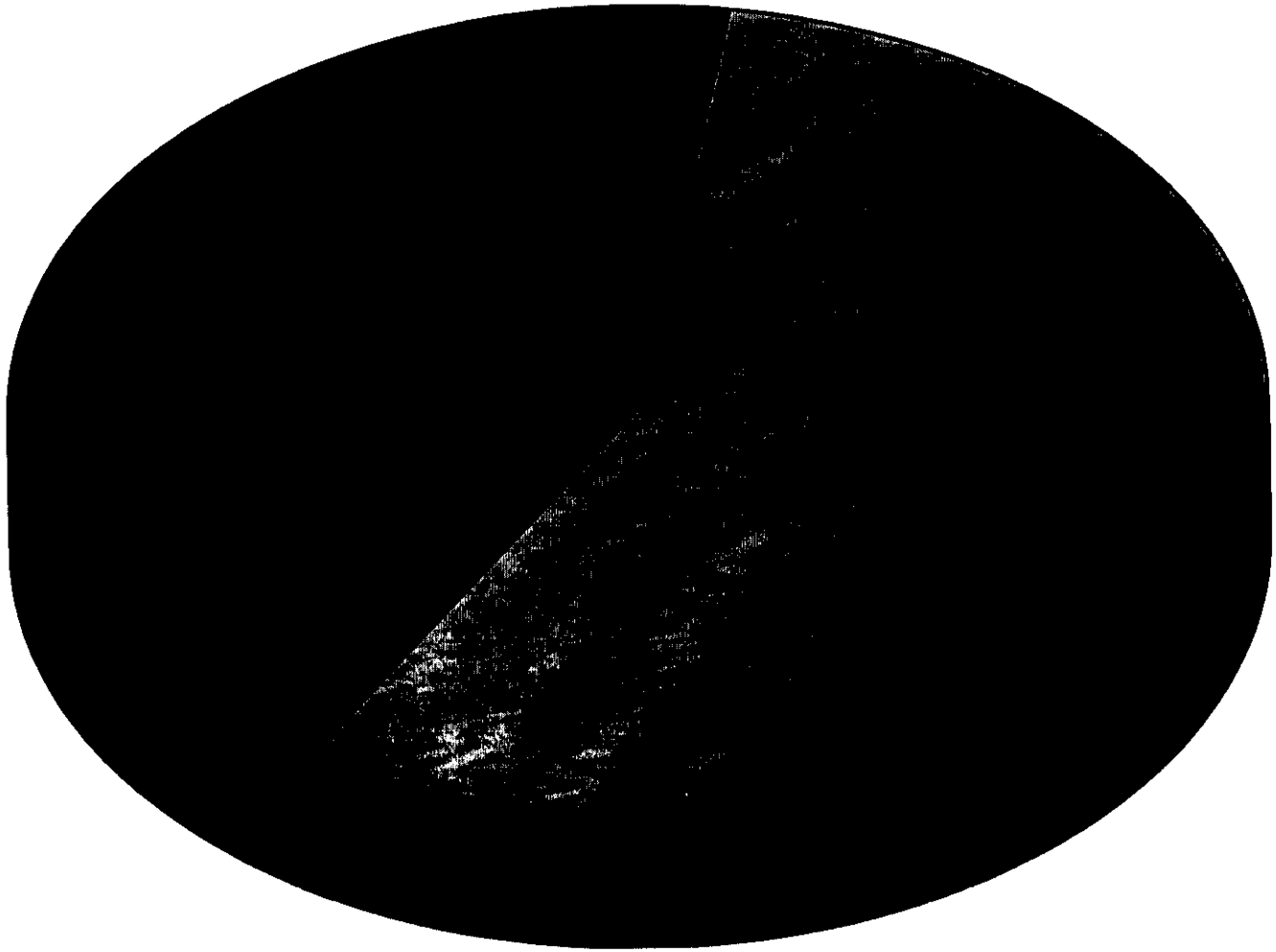
2000 - 2003H1 %age of Export Frequency by BEC Classification



%age of Imports by Value from Key Regions 2000-2003 H1

(excluding Crude Oil)

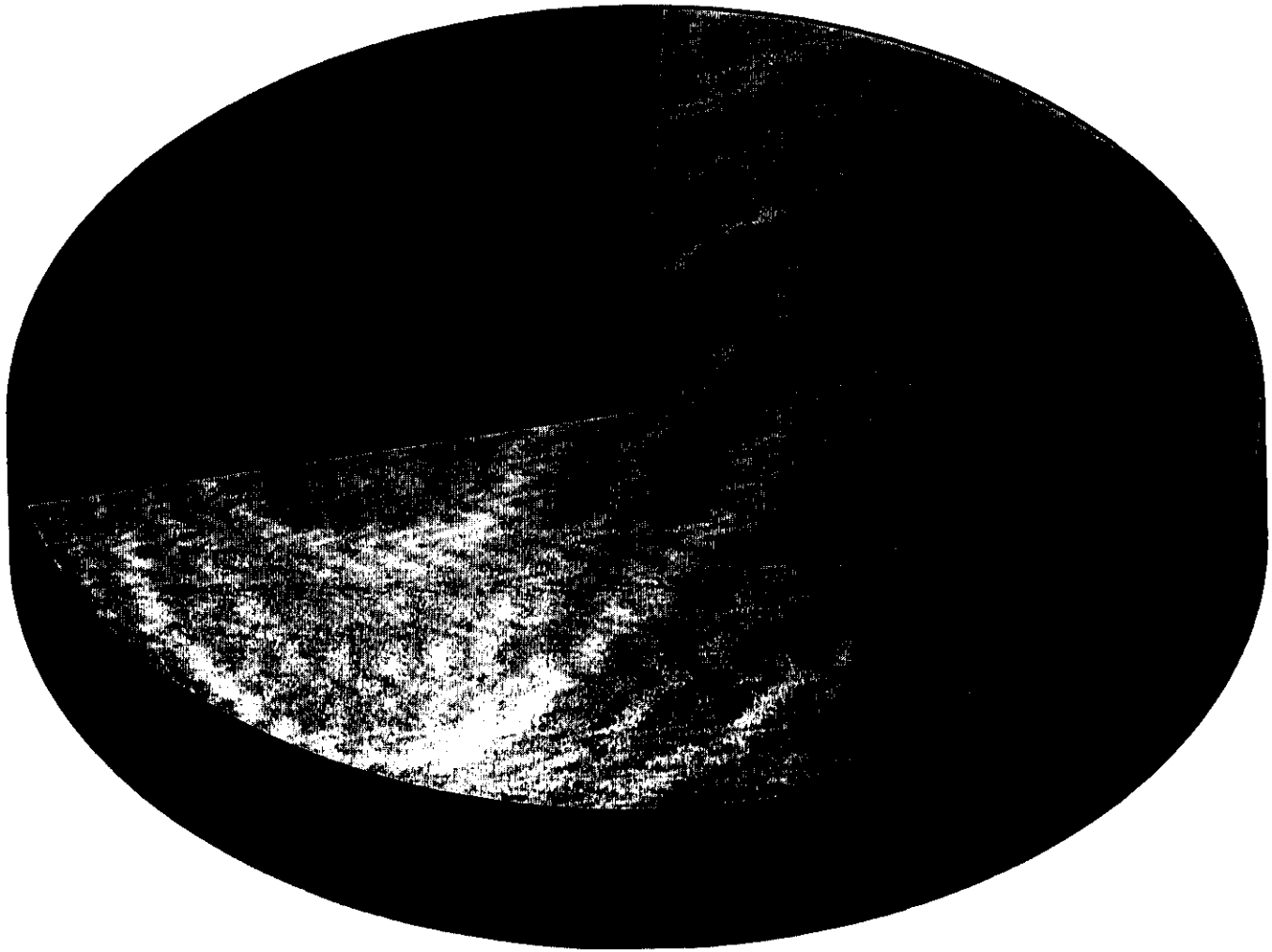
- ECOWAS
- Europe
- Far East
- North America
- Rest of Africa



%age of Imports by Freq. from Key Regions 2000-2003 H1

(excluding Crude Oil)

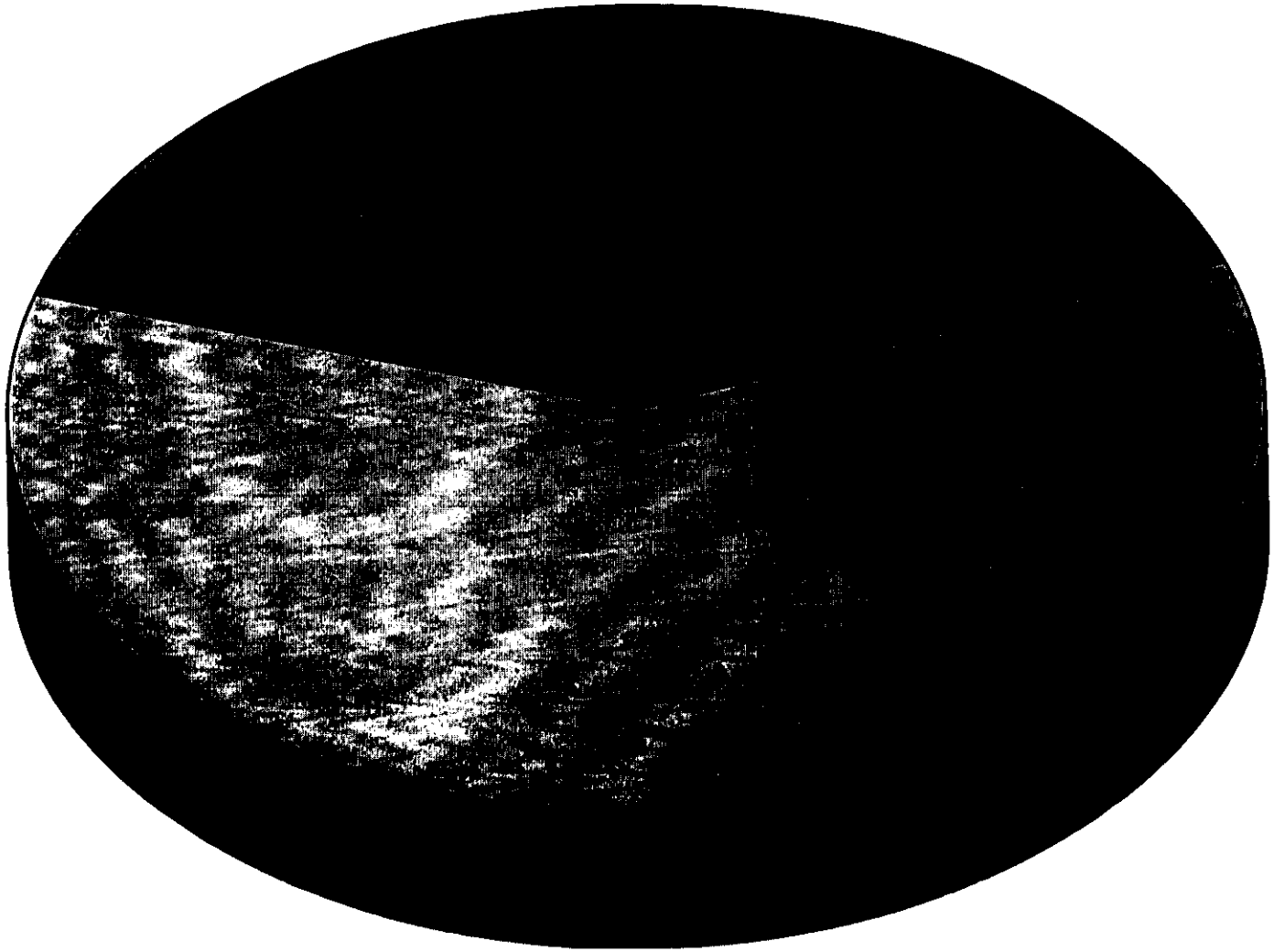
- ECOWAS
- Europe
- Far East
- North America
- Rest of Africa

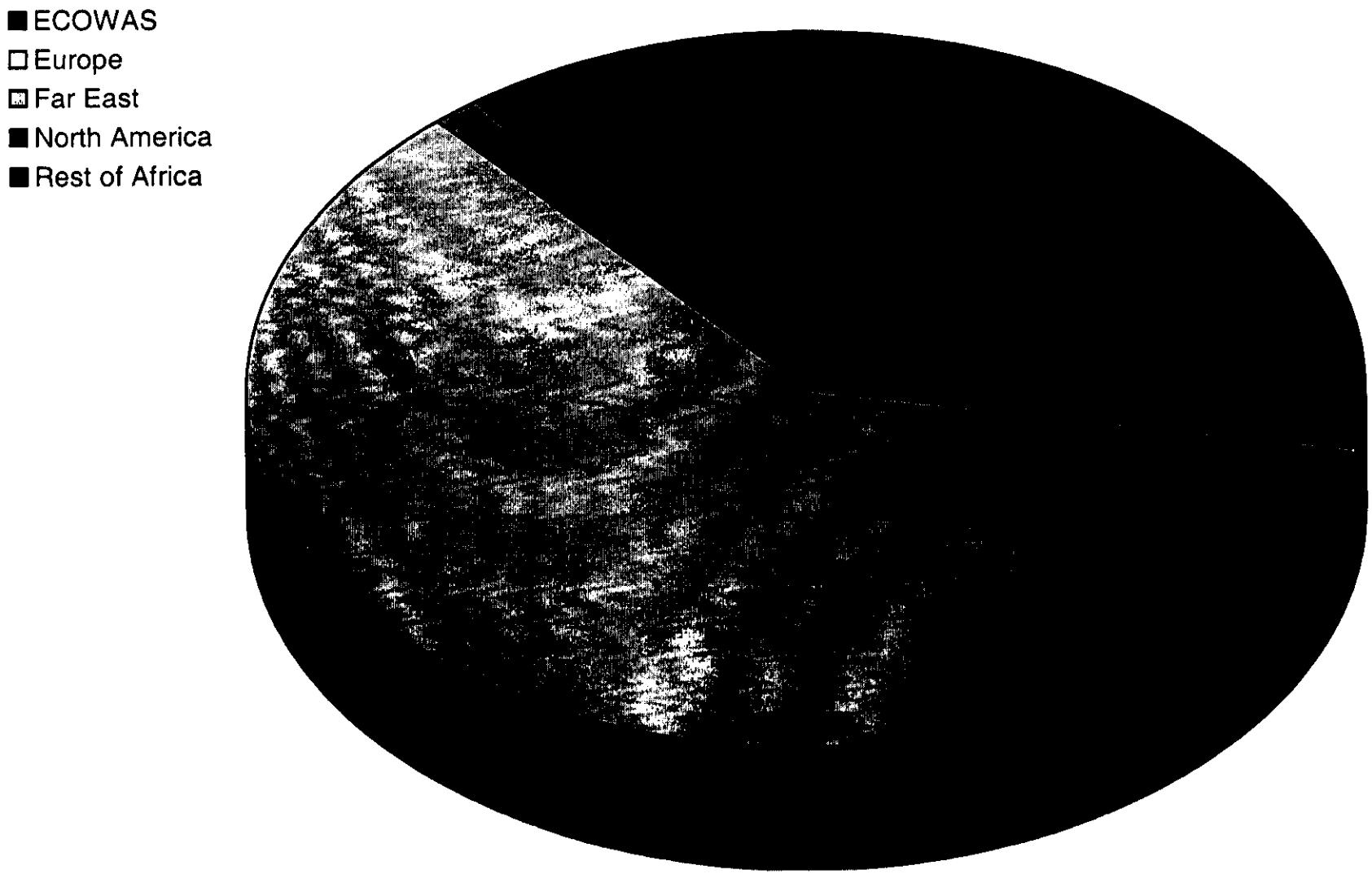


%age of Exports by Value from Key Regions 2000-2003 H1

(excluding Crude Oil)

- ECOWAS
- Europe
- Far East
- North America
- Rest of Africa



%age of Exports by Freq. from Key Regions 2000-2003 H1

(excluding Crude Oil)