



**USAID**  
FROM THE AMERICAN PEOPLE

# US-THAILAND COOPERATION ON THE COLLECTION OF THAILAND'S SERVICE SECTOR STATISTICS

ANALYSIS OF THAILAND'S INTERNATIONAL TRADE IN SERVICES  
STATISTICAL SYSTEMS  
AND  
RECOMMENDATIONS FOR IMPLEMENTATION OF THE  
INTERNATIONAL STANDARDS ESTABLISHED BY THE  
UNITED NATIONS MANUAL ON STATISTICS OF INTERNATIONAL TRADE IN  
SERVICES

**Final Report**

**May 2006**

This publication was produced for review by the United States Agency for International Development.  
It was prepared by CARANA Corporation.

## ACKNOWLEDGEMENTS

This report is the result of the work of an extraordinary team of consultants, all of whom are experts in their respective fields. The CARANA project team consisted of Julian Arkell, the Senior Consultant, who commands an encyclopedic level of knowledge on this and other topics. Noel Boissiere the Balance of Payments Consultant, worked closely with the Bank of Thailand and provided sound advice to the project team in the area of National Accounts and Balance of Payments. Robert “Bob” Torene, the Survey and Sampling Consultant, carried a particularly heavy load in developing a user-friendly survey questionnaire, and advising the Thai officials on the pre-test, cognitive interview and sampling techniques. Hugh Henderson, the Classifications Consultant, has prepared the next generation of classifications guidance that should be used by the international community as a reference at the appropriate time. Wendell Thomas, Information Technology Consultant, brought expertise in services statistics and IT- a rare find indeed. We benefited tremendously from our sister Caribbean project that was conceptualized by Dr. Philomen Harrison of the CARICOM Secretariat. Each team member brought professionalism, and insights on the intersection of international trade in services and statistics, and an unusual dedication to a highly technical subject. I appreciate your dedication, especially the long days and nights invested in the project, both in the field, and in contributing to this report. The project team worked under extraordinary time constraints and made a Herculean effort to complete the work in a brief period of time.

We were impressed with our Thai counterparts, who were a pleasure to work with. They demonstrated their interest and commitment to the project by coming to the meetings well prepared, engaging in a high level dialogue, and who were actively engaged in the project throughout. We met nearly 100 Thai officials and private sector representatives, but the officials who were our most frequent intermediaries and who participated in the study tour deserve special mention for carving time out of their busy schedules and making this project a priority: Khun Chalermkwun Ciemprachanarokorn, Khun Benjaporn Chatrakul Na Ayudya, Khun Nuannute Thana-Anekcharoen, Khun Chatwaruth Musigchai, Khun Wanida Mahakit, Khun Pavana Hopisut. Our principle clients at the Ministry of Commerce, Khun Pimchanok Vonkhornporn, was an excellent chair and her team including Khun Kallaya Leewongcharoen, Khun Ron Sirivanasandha, played key roles facilitating our work and virtually seamless communication between our team and the Thai team.

This project is made possible through funding from the United States Agency for International Development (USAID). In particular, Brinton Bohling, in Washington D.C., who actively sought the project, asked CARANA to implement it under TESS, and has provided invaluable guidance. Skip Kissinger and Khun Chanyut Nitikitpaiboon in Thailand were of particular assistance during the Study Tour Phase. Khun Chanyut’s persistence personally walking the paperwork through the proper channels helped keep Phase II of the project on schedule, particularly when the window of opportunity to obtain visas was closing very quickly.

I would also like to thank my colleagues at CARANA, particularly, Eduardo Tugendhat for asking me to take on this project. Bob and Mary Beth Otto, for opening up their home to welcome the Thai delegation during their visit to Washington. Joyjit Debroy for his advice on Thailand. Ayana Young Marshall, for her guidance at the start up of this project. Masha Braslavskaya not only for guiding me with her encyclopedic knowledge of USAID procedures but also for being the interlocutor with USAID on the visas for the study tour. Roman Ponos, Marcela Correa, Khalilah Karim, Stephen Harris, Bryce LaPierre, Michael Youssef, Lindsey Kordis, Ara Khachatryan, Brad Dryer and Antoinette Baldwin for backstopping me on the many demands this project brought.

Ann M. Casanova,  
Project Manager and CARANA Corporation’s Vice-President, Trade Practice.

## LIST OF ACRONYMS

AFTA	ASEAN Free Trade Agreement
ASEAN	Association of South East Asian Nations
APEC	Asia-Pacific Economic Cooperation
BOP	Balance of Payments
BOT	Bank of Thailand
BPM5	IMF Balance of Payments Manual, Fifth Edition
CPC v. 1.0	Central Product Classification Version 1.0
DMS	Data Management System
EBOPS	Extended Balance of Payments Services (Classification)
FATS	Foreign Affiliates Trade in Services (hence ‘FATS statistics’)
FDI	Foreign Direct Investment
FISIM	Financial Intermediation Services Indirectly Measured
FTA	Free Trade Agreement
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDDS	General Data Dissemination Standards (of the IMF)
GDP	Gross Domestic Product
GNS/W/120	GATS Services Sectoral Classification
ICFA	ISIC Categories for Foreign Affiliates
ICT	Information and Communication Technology
IIP	International Investment Position
IMF	International Monetary Fund
ISIC, Rev.3	International Standard Industrial Classification, Revision 3
ITRS	International Transactions Reporting System
MOC	Ministry of Commerce
MOC/DBD	Ministry of Commerce/Department of Business Development
MOC/DTN	Ministry of Commerce/Department of Trade Negotiations
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOL	Ministry of Labor
MOT	Ministry of Transport
NESDB	National Economic and Social Development Board
NSO	National Statistical Office
OECD	Organization for Economic Co-operation and Development
OMT	World Tourism Organization
RTK	Royal Thai Kingdom
SBTS	Survey of Business Trade and Services
SIPA	Software Industry Promotion Agency
SNA93	System of National Accounts, 1993
TAT	Tourism Authority of Thailand
TEBOPS	Thailand version of EBOPS
TICFA	Thailand ISIC Categories for Foreign Affiliates
TSIC	Thailand Standard Industrial Classification
The <i>Manual</i>	Manual on Statistics of International Trade in Services
TSA	Tourism Satellite Account
UBO	Ultimate Beneficial Owner (used in respect of foreign affiliates)
UN	United Nations
WTO	World Trade Organization

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>6</b>
STRUCTURE AND OVERVIEW OF THIS REPORT .....	7
<b>CHAPTER 1. REQUEST FOR TECHNICAL ASSISTANCE AND METHODOLOGY.....</b>	<b>9</b>
A. REQUEST BY THAILAND FOR TECHNICAL ASSISTANCE .....	9
B. THE FOUR PHASES OF THE PROJECT.....	9
<b>CHAPTER 2: IMPORTANCE OF SERVICES STATISTICS AND ASSESSMENT .....</b>	<b>11</b>
A. WHY ARE INTERNATIONAL TRADE IN SERVICES STATISTICS IMPORTANT FOR THAILAND? .....	11
B. THE <i>MANUAL</i> AND THE CURRENT POSITION IN THAILAND .....	12
C. SUMMARY .....	16
<b>CHAPTER 3: LEGAL FRAMEWORK AND ITS IMPLICATIONS FOR IMPLEMENTATION .....</b>	<b>17</b>
A. INTRODUCTION .....	17
PART I: CURRENT LEGAL FRAMEWORK .....	17
A. LEGAL AUTHORITY AND POWERS.....	17
B. INFORMATION SHARING ACROSS GOVERNMENT AND THE DUTY OF CONFIDENTIALITY ...	18
C. DUTIES OF THE RESPONDENT/PENALTIES.....	20
D. IMPLEMENTATION / BUDGETARY NEEDS .....	21
PART II: OTHER HORIZONTAL ISSUES – CONSIDERATIONS FOR CHANGES TO THE NATIONAL STATISTICS SYSTEM.....	21
A. INTRODUCTION .....	21
B. STATISTICAL DATA SHARING.....	22
C. THE BUSINESS REGISTER – A RICH SOURCE OF BUSINESS INFORMATION.....	24
D. STATISTICAL ORGANIZATION AND CONTROL.....	27
E. IMPROVING RESPONDENT COOPERATION.....	29
E. RECOMMENDATIONS .....	31
<b>CHAPTER 4: THE EXTENDED BALANCE OF PAYMENTS SERVICES (EBOPS) CLASSIFICATION .....</b>	<b>33</b>
INTRODUCTION.....	33
B. PROJECT OBJECTIVE, KEY GOALS AND GAPS TO FILL.....	33
C. STATISTICAL REQUIREMENTS .....	34
D. THE <i>MANUAL</i> – AN OVERVIEW .....	36
E. ISSUES AND RECOMMENDATIONS .....	36
<b>CHAPTER 5: THE COLLECTION AND COMPILATION OF FOREIGN DIRECT INVESTMENT (FDI) DATA AND FOREIGN AFFILIATES TRADE IN SERVICES (FATS) STATISTICS.....</b>	<b>45</b>
A. INTRODUCTION .....	45
B. THE CURRENT POSITION.....	46
C. RECOMMENDED ACTION.....	47

<b>CHAPTER 6: SURVEY AND SAMPLING TECHNIQUES.....</b>	<b>49</b>
A. THE INTERNATIONAL TRANSACTIONS REPORTING SYSTEM (ITRS) LIST AS A SAMPLE FRAME.....	49
B. PRETEST OF THE INTERNATIONAL TRANSACTIONS IN COMMERCIAL SERVICES QUESTIONNAIRE.....	49
C. COGNITIVE INTERVIEW.....	50
D. BRIEF OVERVIEW OF RESPONSES TO THE COGNITIVE SURVEY PRE-TEST RESPONSES .....	50
E. SELECTED ISSUES ON THE “SURVEY OF BUSINESS TRADE AND SERVICES” .....	51
F. RECOMMENDATIONS.....	56
<b>CHAPTER 7: CLASSIFICATIONS FOR TRADE IN SERVICES .....</b>	<b>58</b>
A. CURRENT POSITION: USE OF INTERNATIONAL GUIDELINES.....	58
B. ASSESSMENT OF THE CURRENT SITUATION .....	58
C. RECOMMENDATIONS FOR CLASSIFICATIONS.....	60
<b>CHAPTER 8: INFORMATION TECHNOLOGY SYSTEMS.....</b>	<b>73</b>
A. INTRODUCTION.....	73
B. ASSESSMENT OF IT ENVIRONMENT OF SELECTED AGENCIES.....	73
C. OVERALL ASSESSMENT OF IT CAPACITY OF AGENCIES INTERVIEWED.....	82
D. RECOMMENDATIONS.....	84
E. CONCLUSION.....	85
<b>CHAPTER 9: CONCLUSIONS.....</b>	<b>86</b>
A. INTRODUCTION.....	86
B. HORIZONTAL ISSUES .....	86
C. IMPLEMENTATION: PHASE I – INTER-AGENCY COOPERATION.....	88
D. IMPLEMENTATION: PHASE II – FULL IMPLEMENTATION OF SURVEY MECHANISMS.....	89
<b>ANNEXES.....</b>	<b>92</b>
<b>ANNEX A: COMPILATION NOTES .....</b>	<b>93</b>
A. 1. SELECTION OF SERVICES FROM THE BOP CURRENT ACCOUNT FOR EBOPS .....	93
A. 1.1 EBOPS TABLE.....	118
A. 2. INVESTMENT AND ENTERPRISE DEFINITIONS .....	121
A. DEFINITIONS.....	121
B. COMPILING FATS STATISTICS .....	121
<b>ANNEX B: SURVEY FORMS.....</b>	<b>125</b>
B.1: THE EBOPS SURVEY FORM.....	125
B. 1.2 THE COGNITIVE QUESTIONNAIRE.....	136
B.2. THE FATS SURVEY FORM.....	139
B.2.1. SURVEY PROCEDURES FOR FATS SURVEYS.....	141
<b>ANNEX C: CLASSIFICATION LINKAGES .....</b>	<b>146</b>
C. 1. READERS’ GUIDE TO CLASSIFICATIONS FOR THAI SERVICES TRADE .....	146
C.2.: TEBOPS – LINKAGE FORMAT FOR EBOPS.....	150
C. 3: TICFA – THAILAND CLASSIFICATION FOR FATS AND FDI.....	165
TICFA/ ICFA / ISIC DESCRIPTION.....	165
C.4. TGATS – THAI CLASSIFICATION FOR GATS STATISTICS .....	175
C.5. TGATS-SC – THAILAND’S SPECIFIC COMMITMENTS.....	181

## EXECUTIVE SUMMARY

In the context of the negotiations of US-Thailand Free Trade Agreement, the Royal Thai Kingdom (RTK) requested technical assistance to advise the Thai agencies in setting up an efficient statistics collection system for the services sector, that would integrate well with their already established statistics systems, would correctly reflect the relative importance of diverse services, and provide statistical support to the decision making by government and business. The project focused on institutional capacity building across agencies and also dealt with the legal framework. The project team advised the Thai agencies on the international standards established by the Manual of Statistics of International Trade in Services (the *Manual*), and on prioritizing and implementing the *Manual's* recommendations. Work included an assessment of Thai statistical collection activities, a study tour of US statistical systems for 6 Thai officials, design of two special survey questionnaires to collect international services data, a pre-test of one questionnaire, discussion of the pre-test experience and presentation of the draft final report containing the team's findings and recommendations for future implementation, as well as compilation notes on how to compile data for most of the services sectors. Once implemented, Thailand will have services trade data that is internationally comparable and its trade negotiators will have more accurate data from which to make policy decisions.

For many years, countries have reported services as a part of goods statistics but with the advent of trade negotiations that included legally binding commitments on 155 services sectors, a better way to collect data on services in a way that separated the two was needed. The Manual on Statistics of International Trade in Services (the *Manual*), developed by six international organizations including the International Monetary Fund (IMF), the United Nations (UN), and the World Trade Organization (WTO), establishes the internationally agreed framework for the compilation and reporting of statistics of international trade in services that will enable countries to progressively expand and structure the information they compile on services trade in an internationally comparable way. The implementation of the recommendations set forth in the *Manual* are comprehensive, yet takes into consideration the constraints under which statistical compilers operate and seeks not to burden data providers unduly. The international community plans to develop a compilation guide in the future but has not yet done so. To that end, the project team developed an abbreviated compilation guide for most of the 11 EBOPS services sectors and FATS statistics for the Thai authorities.

The case of Thailand is not unique, in that its trade negotiators seek additional statistical detail of services for transactions that Thailand's residents purchase and sell, or trade, with its international partners, yet the collection of statistical information is within the purview of other government agencies. Thus, to implement the recommendations established in the *Manual*, support from the key agencies, particularly the Bank of Thailand (BOT) and the National Statistical Office (NSO), which already collect a certain degree of information on services traded internationally will be required. In the course of its work, the project team also encountered horizontal issues that if addressed, will greatly enhance Thailand's ability to improve the quality and quantity of the data it reports on other surveys it implements.

This final report is intended to be used in conjunction with the *Manual* and should be used as reference when implementing recommendations found in the *Manual*. The report describes Thailand's current situation and discusses some possible options and corresponding drawbacks where relevant, on how to implement the *Manual's* recommendations.

Thailand already collects some information related to trade in services, but in a decentralized system, with several agencies collecting information for various technical and administrative purposes, the data is not as meaningful to the trade negotiators for analytical purposes as they could be, had it been gathered within the framework of a unified statistical system; therefore, the project team strongly recommends implementation of the Manual's recommendations in the following two phases: Phase I – Inter-Agency Cooperation and Phase II – Full Implementation of Survey Mechanisms. Phase I would allow MOC/DBD to have faster access to a portion of the data needed. The MOC/DTN would need to reach an agreement with the BOT and other relevant government agencies to obtain services data even though this

information is only available in an aggregate form. The MOC/DTN may need to adopt a duty of confidentiality before it can access the data. It is recommended that the MOC/DTN and the NSO implement Phase II, survey collection, as soon as possible in order to obtain the most detailed level of information. These surveys include adoption of the special EBOPS survey that was designed for the pre-test as the most effective way to collect the level of detailed information required. At the appropriate time, the second FATS survey should also be adopted. These survey forms are found in Annex B. Certain aspects of data sharing across agencies will need to continue from Phase I into Phase II to cover areas and sectors not included in the survey questionnaires.

The project team also highly recommends modifications to the legal and regulatory framework that (1) would allow for sharing of administrative data between government agencies, (2) each government agency that would have access to said data would have a legal requirement to protect the contents and report the information in a way that would not identify the source and (3) that a violation of the duty of confidentiality would be punishable by a stiff penalty. One of the findings of the cognitive survey is that the members of the public have concerns that the information would not be kept confidential and expressed a desire that the government make their systems more secure. The information sought in the questionnaires is extremely sensitive business information and the response rates should improve if this fear can be mitigated.

Once the statistics collection system is effectively implemented, it is likely that a number of outcomes will be achieved in future years. First, once steps 1-5 (of 10 steps) of the Manual are implemented, the RTK will have data that is internationally comparable. Better data would be used by a variety of audiences including trade negotiators, other countries who are trading partners, policy makers, the private sector, private enterprises, and academics. With more accurate data, the RTK will be able to develop services policies that better reflect sector realities. Improved policies will strengthen domestic service sectors while facilitating cross-border trade in services. If the government uses its enhanced services statistics capabilities to guide trade negotiations, the negotiated outcomes are more likely to enable Thailand's private service providers take advantage of bilateral, regional and multilateral trade agreements. Finally, an increase in accurate, timely and internationally compatible sector data will help provide critical market data that is necessary for both domestic and foreign service providers and investors to make informed decisions and respond to opportunities in services markets.

## **STRUCTURE AND OVERVIEW OF THIS REPORT**

Chapter 1 describes the origins and the methodology for the implementation of the project. Chapter 2 provides a brief explanation as to why improved collection of services statistics is important for Thailand and provides a brief assessment of the implementation of the *Manual's* 10 recommendations and the current situation in Thailand. Chapter 3 provides insights into the present statistical legal framework in Thailand and also draws some comparisons to U.S. and model U.N. laws, where relevant. Chapter 4 discusses the framework under which EBOPS data is collected. Chapter 5 provides insights into the collection of FDI and FATS data. Chapter 6 describes survey and sampling techniques and discusses the pre-test questionnaire and the cognitive interview. Chapter 7, Classifications for Trade in Services, provides cutting edge information as it picks up where the *Manual* leaves off and provides a greater level of detailed orientation. Chapter 8 assesses the information technology hardware systems, software, databases and communications employed by the key agencies. The Annexes provide additional notes on the compilation of EBOPS and FATS data, together with the proposed EBOPS and FATS Survey forms, and extensive classifications correspondence tables on the linkages between the services classification systems of the IMF, the *Manual* and GATS. The last table is tailored to the needs of the services policy makers and negotiators.

Please note that EBOPS features significantly at separate places in this report, which merits an explanation:

- (a) Chapter 4 describes the EBOPS framework, its provenance and uses.

- (b) Chapter 7 sets out detailed notes on the coverage of each service sector in the EBOPS classification.
- (c) Annex A includes:
  - a. detailed compilation notes for the collection and analysis of EBOPS data for service sectors.
  - b. the EBOPS classification table reproduced from the *Manual*, for convenience.
- (d) Annex B includes descriptions of selected sectors, written so as to be understandable to general respondents of future EBOPS surveys. This is found in Schedule C of the pre-test EBOPS Survey Form.
- (e) Annex C includes the “TEBOPS” table, which gives fuller detail on EBOPS sub-sectors of relevance to Thai priorities, together with supplementary notes on certain sectors.

## CHAPTER 1. REQUEST FOR TECHNICAL ASSISTANCE AND METHODOLOGY

### A. REQUEST BY THAILAND FOR TECHNICAL ASSISTANCE

In the context of the negotiations of the United States - Thailand Free Trade Agreement (FTA), the Royal Thai Kingdom (RTK) requested assistance to establish an efficient statistics collection system for the Thai services sector. This recognized that trade in services statistics are an important indicator of a country's economic performance, that good statistics facilitate the formulation and planning of public policy and its implementation, and that data needs to be provided to base trade negotiations in the domain of services.

Services statistics in Thailand are currently collected by various government agencies, but these data do not accurately quantify either domestic transactions or cross border trade. Furthermore, data on the import and export of services, in each service sector that are collected, are often not adequate for analysis. When technical assistance for the project was requested, it was believed that approximately 45% of the Thai GDP was attributable to services. Nevertheless, at project initiation, several agencies acknowledged a need to collect more and better data on services but lacked the know-how. There was a belief that current GDP figures under-reported services imports and exports and yet, there are no doubts of the growing importance of services trade to the Thai economy. To help address this situation, the Government of RTK requested assistance of the US Government to refine its capacity to capture, classify and analyze services trade data efficiently, while building upon existing systems.

### B. THE FOUR PHASES OF THE PROJECT

The project was undertaken in four phases:

*Phase I: Diagnostic, Research, Prioritizing and Planning Phase*

*Phase II: Study Tour of US Services Sector Statistical Systems*

*Phase III: Program Design and Survey Development*

*Phase IV: Pilot and Implementation Phase*

Phase I was carried out by a two person team from June 6-10, 2005. Over the course of one week, the project team met extensively with 8 agencies and private sector representatives that produce and use services data with a view to learning about what type of information, if any, was collected by which agency, under what legal authority, and with what frequency. Each meeting served as a mini-training session for each agency and its officials on *the Manual* and its international standards. Furthermore, officials from the non-trade negotiating agencies developed a better understanding of the work of services trade negotiators and the type of information they seek.

Phase II (rescheduled to take place after Phase III) was completed the week of September 19-23, 2005. Six Thai officials from the NSO, BOT, NESDB and the MOC/DBD participated in a one-week study tour of US statistical and other agencies in Washington D.C. Thai officials met with U.S. Government officials from the Census Bureau, the Bureau of Economic Analysis, the Bureau of Labor Statistics, the International Trade Administration, & the International Trade Commission. In addition, Thai officials met with representatives of the International Monetary Fund, the World Bank, the Center for Trade Policy and Law, and the Brookings Institution.

Phase III was completed over 2 weeks between August 29 – September 9, 2005. A number of Thai government agencies are involved in collecting the underlying data for services estimates and must together develop an approach to meet international standards. An expanded team conducted further in depth interviews and also examined the IT systems of the official agencies.

During the final plenary session under Phase III, three options for implementation were discussed with the core statistical agencies and the Ministry of Commerce. It was agreed that the ICT sector would test

a newly designed survey questionnaire. The NSO, with the help of BOT, in identifying the universe of firms that would participate in the pre-test exercise, would take the lead for implementation of Phase IV. The NESDB and the MOC/DBD agreed to also cooperate in the test of the survey questionnaire.

Between Phases III and IV, the EBOPS questionnaire that would be used during the pre-test and a cognitive interview questionnaire to gauge perceptions of the National Statistical Office were developed by the project team and implemented by the Thai authorities.

During Phase IV, a reduced team returned once more to Bangkok between November 7-11, 2005 to analyze the results of the EBOPS survey questionnaire pre-test exercise and to present the draft final report to the relevant officials. The pre-test gave an opportunity to apply the knowledge that had been learned during the assessment phase, the study tour and the design stage. The project team observed increased coordination and communication between the different government agencies. The study tour participants from the four different agencies forged deeper personal bonds, which facilitated implementation of the pre-test that was conducted within weeks after their return from Washington. The project team had expected that the Thais would select one agency to conduct the pretest and yet the implementation of the pre-test was divided amongst all four agencies. The Bank of Thailand identified establishments from its ITRS data that were targeted for participation from various sectors and provided the sample frame of businesses for purposes of the pre-test. This was a critical step. All four agencies contacted their respective establishments and conducted the survey. Additionally, the four RTK agencies decided to carry out the pre-test of a broader representation of the services sector and surveyed establishments involved in ICT, construction, telecommunications, hotel management, oil drilling rigs, energy related services and real estate rental. Lastly, each step of the pre-test experience was reviewed, through to the allocation of to the four modes of supply.

Building upon the pre-test experience, additional institutional strengthening and technical assistance work was requested by the NSO aimed at strengthening their sampling techniques. This is expected to be funded by an existing UNDP project.

Also during Phase IV, a draft of this final report and recommendations for implementation was presented to the Thai officials during the last plenary session where approximately 40 officials participated in the discussion. Comments that were provided and subsequent discussions with the MOC concerning next steps for implementation have been incorporated into this version of the final report.

## CHAPTER 2: IMPORTANCE OF SERVICES STATISTICS AND ASSESSMENT

### A. WHY ARE INTERNATIONAL TRADE IN SERVICES STATISTICS IMPORTANT FOR THAILAND?

Promoting international trade and investment is a priority for Thailand. This is evidenced by Thailand's open trade policy, which has stimulated economic performance. Thailand has been at the forefront of international trade negotiations for some time and was a founding member of the WTO a decade ago. The Government of Thailand supports free trade, and is committed to multilateral liberalization. As an APEC member, Thailand is also committed to "open regionalism" as a means of achieving free and open trade and investment by 2020. It engages in regional trade liberalization and, in addition to AFTA, is now actively seeking to negotiate a network of bilateral preferential trading arrangements. Thailand is also pursuing greater regional trade links in ASEAN, including the establishment of an ASEAN-China Free Trade Area within ten years, the formation of an East Asia Free Trade Area between ASEAN members, China, Japan and Korea ("ASEAN plus Three"), and an ASEAN-Japan Economic Partnership. Thailand believes regional FTAs can be an effective catalyst for free trade and is complementary to multilateralism. Additionally, Thailand is engaged in negotiating bilateral Free Trade Agreements such as the US-Thailand Free Trade Agreement, which is where the request for technical assistance for this project arose. It is expected that Thailand will continue to be actively engaged in other bilateral and regional trade negotiations and as more agreements are negotiated, the need for an increased level of statistical data will be needed. In essence, without such improved specificity in the trade data, negotiators will be at a disadvantage in negotiating commitments. To a certain extent, it could be said that developing countries have been flying without the necessary instruments in the course of trade negotiations and could liberalize or protect certain sectors more effectively if they had better, more detailed, data.

It is also worth noting that Thai officials have filled prominent roles on the international stage. Thais should be proud that, Supachai Panitchpakdi, a Thai, who presently is Director General of UNCTAD, was until September 2005, the Director General of the World Trade Organization. When speaking at Business Week magazine's 14th Annual Asia Leadership Forum, in Bangkok on 14 June 2005 he stated that "significant efforts ... have been made to integrate Asian and other developing countries into the multilateral trading system through technical assistance and capacity building, and through their own increasingly active participation to ensure the negotiations serve their interests."

Services are presently estimated to be about half of GDP of the Thai economy, including governmental services; however, this figure is expected to be revised upwards when the recommendations of this *Manual* are implemented and response rates to survey questionnaires improve. Once these figures more accurately represent the activities undertaken in the services sector of the economy, the government will have a better picture of the nation's overall economic performance.

Trade Negotiators need better statistical information from which to base their negotiations and agreements. Modern day trade agreements are legally enforceable, and are subject to dispute settlement, thus negotiators must be very careful with the commitments they undertake. Any country that is a party to the agreement and which suffers injury, may bring forth a complaint to the dispute settlement body. For Thailand, this means that it may register a complaint or it may be the subject of a complaint, in any area covered by the WTO Agreement, including Services. Better statistical information is an important tool that will help make, or defend, its legal case before a WTO Panel.

In addition to negotiating the text of the GATS trade agreement, services negotiators must also negotiate their schedule of specific commitments for market access in up to 155 service sectors multiplied by the four modes of supply (Mode 1: Cross Border, Mode 2: Consumption Abroad, Mode 3: Commercial Presence and Mode 4: Presence of Natural Persons), multiplied by two disciplines (Most Favored Nation and National Treatment). Since the schedule of specific commitments determines the level of access to its domestic market that Thailand will give to its trading partners, trade negotiators must have a negotiating position for potentially up to 1,240 possible legal situations. Thailand's GATS schedule covers major service sectors, except health. Foreign equity limitations of 49% on commercial presence

are scheduled for a range of professional services, such as legal, accounting, and architecture, as well as for certain construction, education, environmental, tourism, recreational, cultural and sporting, maritime, rail and road transport services. In other sectors, foreign equity limitations range from 20% to 49% for telecommunication services, and 25% to 49% for most banking and non-banking financial services (including insurance). This means that Thailand has scheduled some liberalization in almost all "major" sectors, however, the investment framework (Mode 3 - commercial presence) is still highly restrictive.

Modern day air travel has changed the way that business is conducted and has led to an increase in services that are bought and sold across borders; this also has led to the need to think differently about how services are traded. It is now easier than ever for the resident of one country to travel into the jurisdiction of another and consume or produce a service, or establish a business that supplies services. Services are often absorbed by statistical reporting of goods traded internationally, yet the services are generally of higher value than goods. Take for example the production of a car, an industry which the Thai authorities would like to promote further internationally. Many services are involved such as research and development, design, production, engineering and management, distribution, marketing, advertising, financing the purchase of the car and its maintenance and repair.

Services are taking on greater importance in many economies. According to the WTO, in 2002, worldwide services, including construction, accounted for about 55% of GDP and about 40% of employment; commerce (wholesale and retail trade) dominates (16.3% of GDP), followed by transport, storage, and communications (8.4%). A large share of FDI goes into services, especially finance and retail trade. As Thai nationals obtain higher levels of education, the importance of services is expected to increase. Additionally, Thais seek to actively promote the exports of certain services such as ICT, health care and educational services.

Services statistics are necessary for analyzing the increasingly important phenomenon of globalization, which is a concept that usually entails the internationalization of both production and sales, as well as for monitoring the performance of services industries. It can aid businesses and others that need to assess developments in international services markets. This need for statistical data has fueled demand for the development of a more comprehensive and better-integrated approach to statistical issues pertaining to trade in services.

## **B. THE *MANUAL* AND THE CURRENT POSITION IN THAILAND**

Thailand conducts two principal surveys that already collect a significant amount of services information trade information. Most of this data comes from the BOT's IIP survey and the ITRS. The NSO's survey of Business Trade and Services also collects some information but the BOT's IIP is more complete. This is discussed further below and throughout the report.

Taking into consideration limitations faced by countries, the *Manual* recommends that the 10 recommended elements be implemented over the long term. Once fully implemented the detail of information on trade in services would be considerable. The Manual recommends that priority be given to the first five core elements and that the other five elements be implemented incrementally thereafter. The first five core elements would provide a basis for a common internationally comparable basic data set are the principal focus of the analysis of this report. The 10 recommended elements are reproduced in their entirety below for ease of reference<sup>1</sup> and each recommendation is followed by a short description of the current situation in Thailand.

### I. *BPM5*

Implement the BPM5 recommendations, including the definition, valuation, classification and recording of service transactions between residents and non-residents.

---

<sup>1</sup> The *Manual*, para. 1.18-1.28.

For purposes of preparing the Balance of Payments account, the BOT already collects data in accordance with the IMF BPM5. Commercial Banks regularly report to the BOT, through the International Transactions Reporting System (ITRS), all transactions greater than US\$50,000 between residents and non-residents. Certain information however is confidential and is held by the BOT. This is discussed further in Chapter 4 and in the compilation notes in Annex A of this report.

## 2. EBOPS: First Part – Disaggregation

Compile balance of payments data according to EBOPS, which involves disaggregating the BPM5 standard components for services into EBOPS subcomponents. Where the compilation of the main EBOPS classification is developed and carried out in stages, compilers should commence with the disaggregation of services of major economic importance to their own economies. Where data for related memorandum items are available as part of this compilation process, these memorandum items should also be compiled.

Thailand presently collects services BOP data at the level of detail established by BPM5, which is much more aggregated than the level needed by trade negotiators. The Extended Balance of Payments Classification (EBOPS) is considerably more detailed than BPM5. While there are several options for collecting this level of data, it is recommended that Thailand move to a modern day survey system, similar to the one conducted during the pre-test phase, to collect this type of information. This is discussed further in Chapter 4 of this report.

## 3. Foreign Direct Investment Statistics

Collect complete statistics on foreign direct investment (FDI) (i.e., the flows, income, and period end positions) classified by ISIC Rev.3 activities to be complementary to the FATS statistics. For those countries that must delay the implementation of FATS statistics, FDI statistics provide an alternative interim indicator of commercial presence.

The BOT presently collects this type of data through the 26 page “Survey of International Investment Position” (IIP) Form 40, however, the data collected are subject to a confidentiality clause which limits the use to the State’s purpose of collection. The type of data collected includes “information on foreign financial assets/liabilities outstanding between Thai residents and Non-Residents. The survey also serves as a tool for assessing the financial position of the country, compilation of international investment position, and as an input in formulating relevant economic policies including an external warning system.” The data are collected by the BOT in accordance with ISIC Rev.3. This is discussed further in Chapter 5 of this report.

## 4. FATS: Basic Variables

Record certain basic FATS statistics, such as sales (turnover) and/or output, employment, value added, exports and imports of goods and services, and number of enterprises. For achieving comparability when reporting to international organizations, these are classified by specified activity categories based on ISIC Rev.3, i.e., ICFA.

The BOT presently collects data on the exports and imports of goods and services, and the number of enterprises, through the IIP Survey but is subject to the same confidentiality limitations stated above. In the NSO Survey of Business Trade and Services, data on sales (turnover) and/or output, employment and value-added are collected. It is recommended that Thailand collect this information through a separate FATS survey questionnaire that is reproduced in Annex B. This is discussed further in Chapter 5 and in the compilation notes in Annex A of this report.

## 5. Trade in Services by Partner Country

Compile statistics on trade in services by partner country. For transactions between residents and non-residents, the aim would be to report partner country detail at the level of services trade as a whole and for each of the main types of services in BPM5. In the case of FATS and FDI, it would be to report partner country detail both in the aggregate and for the major industry categories within ICFA. In both cases, it is recommended that countries give a higher priority to providing data with respect to their most important trading partners. To the extent possible, countries should use a common geographical basis for all three sets of statistics.

Some data are collected on services traded with partner countries through the BOT's IIP, however, they are collected under TSIC categories, and are subject to confidentiality limitations. This type of data should be collected by the EBOPS survey questionnaire reproduced in Annex B, though it was noted that respondents encountered some difficulty in supplying some of the requested data, therefore, the survey forms may be adapted slightly to accommodate suggestions for even greater simplification. This is discussed further in Chapters 4 and 6 of this report.

## 6. EBOPS: Second Part—Completion

Complete the implementation of EBOPS to the extent relevant to the compiling economy, including the memorandum items. As above, memorandum items should be compiled where the data necessary for this purpose are available as part of the data collection process for the related EBOPS components. Other memorandum items should be compiled where there is a demand for these data in the compiling economy. An elaboration of the full EBOPS classification and its memorandum items together with their correspondence to CPC, Version 1.0 is shown in Annex III of the *Manual*.

Thailand does not presently collect data for the EBOPS memorandum items, but it should first examine them and identify if there is any need to collect this type of data. This information should eventually be collected by the EBOPS questionnaire. This is discussed further in Chapter 7 and in the compilation notes in Annex A of this report.

## 7. FATS: Further Details

Augment the basic FATS statistics by compiling data on additional aspects of the operations of foreign affiliates, such as assets, net worth, operating surplus, gross fixed capital formation, taxes on income, research and development expenditures, and compensation of employees.

Detail of sales by product is desirable, not least because of the potential comparability between FATS data and trade between residents and nonresidents. While compilation on this basis may well have to remain a long-term goal for most countries, as a first step toward a product basis, countries may wish to disaggregate sales in each industry as between services and goods. In addition, countries that are building their statistical systems for FATS on existing data systems that already include product detail may wish to use this detail from the outset because it could help them in monitoring commitments under GATS that are specified in terms of services products. Similarly, countries that are building their FATS data systems from the ground up should consider the feasibility of providing for a product dimension.

Thailand collects information on assets, net worth, operating surplus, gross fixed capital formation and taxes on income through the BOT IIP. Data are not presently collected on research and development expenditures and compensation of employees, but a question is included in the FATS questionnaire that would facilitate capturing this type of data. Since this recommendations builds on number 4 above, it is not expanded upon in great detail in the report but the analysis found in Chapter 5 and in the compilation notes in Annex A are equally applicable.

## 8. Persons Working Abroad

Collect statistics on natural persons under the GATS framework, both those from the compiling economy working abroad and foreign natural persons working in the compiling economy, taking into account the needs, resources, and special circumstances of the compiling country. In this process, the framework, and definitions set out in Annex I of the *Manual* should be used as a guide.

This type of information is not presently collected in Thailand, and there is no international standard to guide the compilation of resident and non-resident transactions data related to persons supplying services, or working in services firms, abroad. A UN technical working group is exploring possible approaches to guide WTO Members, which is expected to be incorporated in the next revision of the *Manual*. This involves consideration not only of the BOP services transactions, but also of the relevance of supplementary data from migration and labor market statistical systems and on remittances, for example. Under GATS there are two distinct categories: (a) services transactions related to the supply of services by the self-employed and employees while they are temporarily abroad, and (b) covering those who take up employment in a foreign affiliate abroad (related to Mode 3), or in other service enterprises abroad. As a first step it is recommended that Thailand implement the simplified approach set out in the *Manual*, paragraphs 2.79, 2.80, 2.81 and 3.41.

## 9. Trade Between Related and Unrelated Parties

Within the statistics on trade in services between residents and non-residents, separate out the trade with related parties from that with unrelated parties.

Although the *Manual* cites the identification of trade between related parties as a low priority, the pre-test EBOPS Survey included a sub-set of these transactions considered of interest to Thailand, being those between affiliated parties where ownership is over 50% level (i.e. the FATS definition). The *Manual* recommends separate identification of trade flows between related parties where the ownership is 10% or more of the capital (i.e. for the whole FDI category). The *Manual* suggested that it may be difficult to identify separately the service products so traded, and thus at first, only the total values of these services transactions would be recorded. However, if the nature of the services can be ascertained, they can be so allocated, but where not they would be allocated to the EBOPS component “Services between affiliated enterprises n.i.e” (285), together with any charges for general management and contributions to overheads. In the pre-test survey form, where only the transactions between majority-owned affiliates was being called for, a selection of EBOPS components was made, to reduce respondent burden, and this did not include (285) nor transport and travel, for example. This level of collection can be reviewed by Thailand after some experience has been gained with the EBOPS Survey. This is discussed further in Chapters 4, 5 and 6 of this report.

## 10. GATS Modes of Supply

Allocate the transactions between residents and non-residents over the GATS modes of supply. The simplified procedure set out in paragraphs 3.41-3.49 [of the *Manual*] may be used as a starting point in compiling a first approximation of this allocation.

It was agreed that the information collected for EBOPS and FATS purposes would be transferred to the Thailand Ministry of Commerce/Department of Trade Negotiations for allocation of the data to the four modes of supply. This is discussed further in Chapter 4 of this report

### **C. SUMMARY**

In summary, Thailand already collects much information related to services but the trade negotiators require an additional level of disaggregation than is currently available and there are legal hurdles that need to be overcome so that the MOC/DTN would have access to this data. Some of these issues are discussed further in the next Chapter.

## **CHAPTER 3: LEGAL FRAMEWORK AND ITS IMPLICATIONS FOR IMPLEMENTATION**

### **A. INTRODUCTION**

This Chapter is divided into two principal sections. Part I discusses the current legal framework presently in operation in Thailand, the proposed new legislation and the implications for effectively adopting the recommendations established in the Manual. Part I will focus on 4 principle issues for the collection of statistics: 1) legal authority and powers 2) information sharing across government and the duty of confidentiality 3) duties of the respondents and 4) implementation/budgetary needs.

Part II discusses horizontal issues that affect the ability to efficiently collect statistics of any type in Thailand. The key areas discussed focus on (1) statistical data sharing amongst governmental agencies, (2) development of a central business register, (3) statistical organization and control and finally, (4) improving respondent cooperation. The section then draws comparisons to U.S. Law and U.N. Model Laws, were applicable, and suggests changes to the national statistical system.

### **PART I: CURRENT LEGAL FRAMEWORK**

#### **A. LEGAL AUTHORITY AND POWERS**

The statistical system of Thailand is decentralized and is principally governed by the Statistics Act, B.E. 2508 (1965) and is complemented by the Official Information Act, B.E. 2540 (1997). The Statistics Act is currently being revised and the accompanying regulations such as the Statistical Master Plan are currently being developed by the NSO.

At present, the NSO is the core organization responsible for collecting and compiling both economic and social statistics through the conduct of censuses and large-scale surveys. Other governmental agencies, such as the BOT, the NESDB, MOC, MOH, MOE, MOL, MOT and the TAT also conduct surveys for their own purposes, although some do so without legal backing. It is anticipated that the new Statistical Act will further decentralize collection of statistics and shift the burden of collection to the ministry best suited to the technical use of the data. This would mean that the Ministry of Commerce as the primary user of the data may one day be responsible for collection of trade in services statistics.

The Statistics Act, B.E. 2508 (1965) also establishes the duties of the government, duties of respondents, and enforcement of such laws. As part of its governmental function, the NSO is authorized, *inter alia*, to perform the following statistical activities:

- Compile statistics from all statistical agencies.
- Plan and conduct all censuses.
- Collaborate with and participate in the coordination of the work of all statistical agencies in the assembling, compilation, and analysis of statistics.
- Make recommendations, or advise other statistical agencies on plans, methodology, forms, questionnaires, and other documents, such as handbooks, and instructions which are to be used for statistical purposes.
- Conduct or direct sample surveys, or collect abstract, compile and analyze statistics relating to the basic conditions of the country obtained from censuses and surveys.

The NSO is also responsible for filling gaps of statistical information not gathered by other governmental departments. Therefore, in accordance with this Act, the NSO has the present legal authority to conduct surveys, similar to the questionnaires that were prepared for the pre-test under Phase IV of this project, for purposes of collection of international trade in services statistics.

The Statistics Act of 2508 (1965) is in the process of being revised. Early during Phase IV of the project, the team was provided with a copy of the draft Statistics Act that had already been approved by the cabinet and is awaiting parliamentary approval. It is expected that the revised Statistical Act will come into effect once the Master Plan is completed, in approximately 3-5 years. The analysis herein is, therefore, based on a draft of the legislation. The new Act would repeal the existing law and restructure the work of the NSO by further decentralizing the collection of statistical information in Thailand and will in effect shift much of the burden of conducting surveys to the agencies seeking the statistical data, while the NSO will establish the general statistical standards and methodology.

The Master Plan is being prepared in phases and at present, the social part of the statistical Master Plan has been crafted for Labor and Social Security Statistics. Due to the specialized nature of the information to be collected for international trade in services statistical purposes, when the Master Plan is developed for the areas encompassing international trade in services, the NSO and the MOC/DTN would be well placed to consult this report, as well as the materials gathered during the study tour. Other useful sources are found in the *Manual* and other national legislative examples.

## **B. INFORMATION SHARING ACROSS GOVERNMENT AND THE DUTY OF CONFIDENTIALITY**

In order to effectively collect services trade statistics, two key issues must be overcome: 1) sharing data between agencies 2) establishment of a duty of confidentiality once the collected information is shared across government agencies.

In order to maximize value to the government and reduce the burden on the respondent, there are certain types of information that should be shared across government agencies. The first concerns the development of the business registry and universe lists, (discussed further in Part II) which includes identification data but not necessarily responses to questionnaires. In order to develop a national business registry, the NSO should collect data from the MOC/DBD, the Revenue Department and the Social Security Administration. During interviews conducted during Phase III, the Revenue Department indicated that it already shares certain data, through its intranet, with other agencies and that arrangements could be made with the NSO for access to certain data. The Social Security Administration was not interviewed; however, as discussed in Part II of this Chapter, data sharing may be possible under the existing legal framework. For development of the universe list for the specific EBOPs and FATS surveys, the BOT's ITRS database should be updated and maintained by cross referencing the MOC/DBD data in the near term. Once the national business registry is instituted the NSO should cross-reference their data with the BOT and the MOC/DBD.

Note that at present, the draft Statistical Act and the Master Plan are silent on the existence of a National Business Registry. In order to maintain the integrity of standards, the NSO should establish itself as the central agency responsible for the development and maintenance of the National Business Registry and provide guidance to other agencies on how to develop universe lists from the national registry.

The second pertains to sharing the results of the survey, which does not necessarily require identification of the respondent. The nature of the information that is sought for purposes of collection of international trade in services statistics is predominantly corporate financial information, which is extremely sensitive information and companies resist providing this unless they have a legal obligation to provide it and they have been given assurances that the content will be held strictly in trust and publication will not in any way disclose the identity of the firm.

While the MOC/DTN should anticipate conducting surveys such as the ones prepared for the pretest, in the interim phase, MOC/DTN could benefit from services trade data that is partially collected in the BOT's IIP and the ITRS. The Bank of Thailand collects statistical information for the purposes of reporting the balance of payments and national accounts position to IMF, but these data are collected on a voluntary basis and the BOT states that they have no legal authority to conduct surveys, notwithstanding

the requirement to report it to the IMF. The BOT is also concerned that its information is subject to confidentiality requirements<sup>2</sup> that prohibit it from sharing highly sensitive information with other government agencies. These confidentiality requirements do not appear to be grounded in the law but rather are internal policy adopted by the BOT. Furthermore, present law does not explicitly provide for data sharing between governmental agencies with some exceptions as discussed below.

The present Statistical Act already establishes some provisions for sharing of data amongst governmental agencies; however, this is limited to sharing with the NSO. According to Section 20, “statistical agencies<sup>3</sup> shall send copies of every statistical item which is compiled to the National Statistical Office.” This could be understood to mean that BOT is under an obligation to share the “statistical items” of the IIP and others with the NSO.

The draft Statistical Act would maintain this obligation to submit the information to the NSO. According to Section 15, “the agency shall submit all kinds of statistics that it has prepared to the National Statistical Office within 30 days of the date they are completed.” In addition, the information shall be submitted through an electronic process and shall not disclose the name of the person providing the information, unless consent has been given in writing or is already accessible to the public. (Section 15)

It is worth mentioning that the draft Statistical Act; however, does provide for disclosure of “personal information” obtained under this Act in cases where “such disclosure is for the use of agencies in the preparation, analysis or research of statistics provided that such disclosure does not cause damage to the information owner.” (Section 16)

While the Statistical Act of 2508 (1965) is silent on sharing of data with other government agencies, Section 24 (3) of the Official Information Act, B.E. 2540 (1997), provides an exception which allows disclosure of “*personal* information” between State agencies when it is shared with those [State agencies] which operate in the field of planning, statistics or censuses and who also have the duty not to disclose personal information. Additionally, disclosure is allowed for studies and research, though without revealing personal information. While the treatment of corporate financial information is not explicitly mentioned in the Official Information Act, the intent of the law does allow for information sharing between government agencies when there is a duty to protect the data and the identification of the respondent is suppressed. Therefore, it could be argued that this provision allows for the sharing of confidential information across agencies.

By way of example, in the case of the United States, separate specific legislation was passed to collect international investment and trade in services data. Title 22, Chapter 46, of the US Code, entitled the “International Investment and Trade in Services Survey Act” authorizes the President to collect information on international investment and US foreign trade in services. Reporting in the surveys is mandatory under the Act, which then protects the confidentiality of the data of the companies that report. The assurance of confidentiality is essential to securing the cooperation of reporters and thus to maintaining the integrity of the statistical system. Except by the prior written permission of the reporter, the data collected in the surveys cannot be published or released in any form that would enable identification of the reporter. The Act specifies that the data collected in the surveys may only be used for statistical and analytical purposes. Access to the data is limited to officials and employees (including

---

<sup>2</sup> The IIP states “Information received will remain strictly confidential and will be used internally for the purposes stated above. (Purpose of Collection: This survey collects information on foreign financial assets/liabilities outstanding and transactions between Thai residents and non-residents. This survey also serves as a tool for assessing the financial position of the country, compilation of international investment position, and as an input in formulating relevant economic policies including external sector early warning system.) Only data in aggregate form would be disclosed to the public, for academic purposes.”

<sup>3</sup> Under Section 4 of the Statistical Act of 2508 (1965) “Statistical Agencies” are defined as “**any** Ministry, ... Department office or other government Agency... which performs work of a statistical nature.” “Statistics” is defined as data indicating total number of collected from censuses, surveys, records, registration, reports of other documents.”

consultants and contractors) of government agencies that are designated by the President to perform functions under the Act. Certain other government agencies may be granted access to data under the Foreign Direct Investment and International Financial Data Improvements Act of 1990, but only for limited statistical purposes. BEA is prohibited from granting another agency access to data for tax, [legal] investigative, or regulatory purposes. As seen above, Title 22 provides the US BEA with explicit authority to collect and share information with other governmental agencies.

Since the BOT collects this information without legal backing, it does not want to jeopardize the ability to capture data by passing the results to other government agencies. This situation is unusual and the respective legal departments should be consulted to remedy this situation. Because the BOT conducts its surveys in the absence of legal authority, the information collected by the BOT is not necessarily protected from legal process and it could be compelled to turn the data over to law enforcement. Furthermore, at present, there are no legally stipulated penalties associated with disclosure of confidential information obtained by the BOT. The BOT should seek legal backing to conduct its surveys to 1) legally protect those that are submitting the information and 2) protect the BOT from misuse of data.

Until such time as a law is enacted addressing the above issues, BOT policy could be amended to allow for limited information sharing in the spirit of inter-agency cooperation, increased cost effectiveness to the government and in consideration of the burdens on respondents. The information that would be shared with the MOC/DTN would not enable identification of the respondent. This would be followed by a Memorandum of Understanding (MOU) that would be agreed to between the BOT and the MOC/DTN establishing 1) the sharing of limited data and 2) procedures for safeguarding the data and procedures that would establish a duty of confidentiality inside the MOC/DTN and that are satisfactory to the BOT. Presumably the MOC/DTN is already under a duty to protect confidential government information but this may need to be expanded to include receipt of confidential survey information. Next, the BOT could introduce a few modifications to the survey questionnaire to provide notice to the respondents. The wording on the questionnaire could include language such as the following proposed sentences: *“With the aim of reducing the burden on respondents, some data may be shared with other government agencies for trade policy making purposes. The data that is shared will not in any way enable identification of the survey respondents.”* The BOT has the advantage that the universe for which it is collecting data is rather small and that they have been able to forge personal relationships with respondents to achieve a high response rate. The BOT may need to explain to the respondents the spirit and the protection of this data under the inter-agency cooperation agreement.

As soon as possible, the NSO under the new Statistical Act or under the Master Plan should also include provisions that would: 1) allow for formal sharing of information between government agencies and 2) ensure that the receiving Ministry is under the same duty to protect of confidentiality of the data.

Lastly, it is worth noting that respondents expressed concerns about the safeguarding of the information provided to the government. Seven out of twenty cognitive survey respondents believe that the information collected in the survey would not be kept confidential and most wanted the government to make their systems more secure. This project presents an opportunity to review present procedures and upgrade them. These improvements would then need to be communicated to the public.

Once the MOC/DTN adopts the survey method in Phase II of implementation of this final report it will need to take the above discussion into consideration.

### **C. DUTIES OF THE RESPONDENT/PENALTIES**

Under the Statistics Act of 2508 (1965), the respondent has two principal duties (1) to complete and return the forms or questionnaires within the period stipulated and cooperate with the authorities and (2) to provide truthful information or more specifically, avoid knowingly or intentionally providing false information. Failure to submit the requested information or cooperate is punishable by a fine of up to

THB500 (US\$12.50). Provision of false information is punishable by imprisonment not exceeding three months or a fine not exceeding THB500 (US\$12.50). (Sections 22 and 23)

The present draft statistical law increases the penalty for failure to report requested information to a fine not exceeding Baht 5,000 (US\$125) and the penalty for providing false information is possible 6 month prison term or a fine not exceeding Baht 10,000. (US 250). The companies for which information is sought are trading in the millions, even billions of Baht. The modest penalty stipulated by both the present and draft law is a minor inconvenience if ever invoked. In the US, the current penalty for failure to report is US\$10,000 and/or imprisonment. Regardless of whether the penalty is ever invoked, the stiffness of the penalty reflects the seriousness that the government places upon obtaining the data. It would be worthwhile to revisit the amount of the penalty in the draft legislation.

#### **D. IMPLEMENTATION / BUDGETARY NEEDS**

Under the present Statistical Act, in order to conduct the survey, a budget request must be submitted to the NSO for prior consideration and approval and furthermore, the survey must be prescribed by Royal Decree. (Sections 14 and 15).

Under this framework, the MOC/DTN as the agency seeking data on international trade in services will have to coordinate with the NSO to submit a budget request and help to identify funding for the survey as well as to seek executive approval through the Royal Decree Mechanism.

### **PART II: OTHER HORIZONTAL ISSUES – CONSIDERATIONS FOR CHANGES TO THE NATIONAL STATISTICS SYSTEM**

#### **A. INTRODUCTION**

This project, to recommend improvements to Thailand's service sector statistics, has a limited scope with respect to broader issues of national statistics. However, as the available data were reviewed and discussed with the various agencies, it became apparent that there are problems that affect the entire data collection system, including data on the services sector, which are:

1. There is little or no data sharing among the Thai statistical and regulatory agencies.
2. Thai companies are reluctant to report their activities, especially financial information.
3. The statistical system in Thailand is decentralized, which requires effective coordination and budgetary control over the various statistical agencies in order to avoid duplication and promote cooperation within the system. The current statistical law, as implemented, does not foster coordination or cooperation among the statistical agencies.

Some of the problems can be traced back to the legal framework under which the statistical system operates. As technology evolves, governments have found it necessary to rework their statistical laws. The large-scale use of desktop computers has changed the way statistical agencies operate and has opened up possibilities that did not exist when the existing statistical law was instituted. This is especially true regarding confidentiality of respondent data and data sharing for statistical purposes.

The Thailand Statistical Law was enacted 40 ago and since then computer technology and statistical techniques have vastly improved. This requires corresponding changes in the legal framework to allow these improvements to work properly and synergistically in the Thai context.

The current law, or at least the way it is implemented, is a contributing reason for the deficiencies listed above. It leaves many issues open to interpretation and has no strong mechanisms for control and coordination of the various statistical agencies. This may work reasonably well in the context of a centralized statistical system, however, given the decentralized nature of the Thailand statistical system

more control, organization, and guidance would contribute to greater overall statistical effectiveness and efficiency.

## **B. STATISTICAL DATA SHARING**

In modern statistical systems around the world, statistical access to regulatory data, especially individual company tax records, is supremely important. This allows the creation of a unified, inclusive, and up-to-date Business Register, which is the foundation of modern economic censuses and surveys. It also reduces respondent burden, since businesses do not have to supply the same information repeatedly to different statistical agencies.

It is important to note that the United States and Thailand both have decentralized statistical systems and comparisons can be made that may be helpful. The United States Census Bureau operates under the legislative framework of Title 13, which provides the same basic regulations as the Thailand Statistical Law. B.E. 2508 (1965) but Title 13 is more detailed and precise. In fact, most statistical legislation around the world has similar characteristics, but there are also differences.

### 1. Thai Statistical Law and NSO Access to Regulatory Data

The first and only reference about gathering information from other agencies is the first sentence in Section 5, which states:

“**Section 5.** The National Statistical Office is authorized to perform the following statistical activities ... compile statistics from all statistical agencies ...”

Furthermore, the term “Statistics” is defined in Section 4 as follows:

“**Statistics**” means data indicating the **total number** collected from censuses, surveys, records, registration, reports, or other documents ...” (emphasis added)

So, the law is open to interpretation. Whereas it does not specifically authorize the NSO to access the individual records held in the Revenue Department files, it does state that NSO can “compile statistics” from the Revenue Department or any other agency. That implies access to the individual records but does not state it explicitly. It would be very helpful if the law stated directly to all agencies involved, exactly what their authorities and responsibilities are on this crucial matter.

### 2. U.S. Laws and United Nations Model Law on Access to Tax Data

The corresponding authority in the U.S. legislation regulating the Census Bureau is:

Title 13. Sec. 6. Information from other Federal departments and agencies; acquisition of reports from other governmental and private sources

(a) The Secretary [of Commerce], whenever he considers it advisable, may call upon any other department, agency, or establishment of the Federal Government, or of the government of the District of Columbia, for information pertinent to the work provided for in this title.

The U.S. code is clearly more explicit but still **does not compel** the requested agency to abide by its request. There is a complementary paragraph in Title 26 of the Internal Revenue Code<sup>4</sup> that allows the IRS to provide the data to the Census Bureau:

“Upon request in writing by the Secretary of Commerce, the Secretary [of the Treasury] shall furnish –

(A) such returns, or return information reflected thereon, to officers and employees of the ...  
*Census [Bureau], ...*

(B) for the purpose of, but only to the extent necessary in, the structuring of censuses and national economic accounts and conducting related statistical activities authorized by law.”

The two agencies have complementary legislation that explicitly allows the individual tax data to be shared with the Census Bureau. Although Title 26, the IRS legislation, does not give total access to any records that the Census Bureau might request, it grants access to data for the specified purpose, which makes it possible for the Census Bureau to construct and maintain their Business Register, which is absolutely crucial to the operation of their economic censuses and surveys.

The United Nations Model Law states:

“The right of access by the statistical agency to administrative holdings of information useful for statistical purposes should be explicitly recognized as an exception in the legislation that protects such holdings or in general, administrative registers. An ideal state of affairs is one of reciprocity, where the statistical legislation lays down the rights and conditions of access and the specific legislation that protects administrative holdings, wherever they may be within government, recognizes as an exception the right of access by the statistical agency for statistical purposes.”<sup>5</sup>

### 3. Case in Point: The United States Experience with the Use of Administrative Data

As indicated, Title 13 allows the Census Bureau to collect data from any agency in the Federal Government, while Title 26, Section 6103, allows the IRS to report the data to the Census Bureau upon written request. Prior to the advent of computer technology, use of administrative data was not particularly important. Although the history is not clear, it is known that the Census Bureau used administrative data for the 1954 Economic Censuses when they used Internal Revenue Service (IRS) lists to prepare the mailing list. In the 1958 Economic Census they received microfilm from IRS, which was transcribed onto punch cards and transferred to electronic tape for use with computers.

The language of Title 26, as quoted above, is very important to the operations of the Census Bureau, as it facilitated the creation of a Standard Statistical Establishment List, which was the first current and comprehensive business register that could be properly maintained using current data to record establishment births and deaths. It also allowed more realistic and reliable imputation (estimation) of missing and incomplete data, both from delinquent respondents and from incomplete/inconsistent returned questionnaires.

In December 2002, a further revision to the statistical laws<sup>6</sup> strengthened the confidentiality of respondents' data by ensuring that information supplied by individuals or organizations to an agency for statistical purposes, under a pledge of confidentiality, be used exclusively for statistical purposes. U.S.

---

<sup>4</sup> Confidentiality and Disclosure of Returns and Return Information, U.S. Code, Title 26, Subtitle F, Chapter 61, Subchapter B, § 6103

<sup>5</sup> UN Model Law, Appendix 5, Handbook, Rev.2

<sup>6</sup> Title V. Confidentiality Information Protection and Statistical Efficiency Act of 2002, 116 Stat. 29 62 Public Law 107-347—Dec. 17 2002

statistical agencies were being faced with declining trust of the public, even though information provided was protected under a pledge of confidentiality. The U.S. Congress realized that this adversely affected both the accuracy and completeness of statistical analyses. It is intended to assure respondents who supply statistical information, needed to develop or evaluate Federal policy that their responses will be held in confidence and will not be used against them in any government action. **The significant feature of this law is that it provides protection to all data provided to the government under a pledge of confidentiality.** It is not restricted to any one agency or any data collection effort. It puts all Federal Government statistical agencies under the same confidentiality provisions and makes all government employees liable to prosecution if the confidentiality provisions are breached. This brings the U.S. law more into conformity with the UN recommendations for a decentralized statistical system.

Subtitle B – Statistical Efficiency, of the 2002 law, is also intended to improve reporting by reducing the burden on respondents, thereby increasing their willingness to report. This section allowed the Census Bureau, Bureau of Economic Analysis, and the Bureau of Labor Statistics to share business data for exclusively statistical purposes. Sharing of data eliminates the need for additional surveys to collect data that may already be collected by other agencies.

“It will improve their ability to track the rapidly changing nature of business. In particular, the statistical agencies will be able to better ensure that businesses are consistently classified in appropriate industries, resolve data anomalies, produce statistical samples that are consistently adjusted for the entry and exit of new businesses in a timely manner, and correct faulty reporting errors quickly and efficiently.”

### **C. THE BUSINESS REGISTER – A RICH SOURCE OF BUSINESS INFORMATION**

#### **1. The U.S. Census Bureau’s Business Register**

The legal framework changes described above allowed the Census Bureau to construct the Standard Statistical Establishment List, currently called the Business Register. This is the Census Bureau’s ongoing directory of businesses in the U.S. Since 1989, this register has been maintained as a longitudinal link between businesses and locations, which permits observations of new business formations and failures of existing businesses. This has been made possible by combining administrative data from the Internal Revenue Service and the Social Security Administration, with the data collected by the Census Bureau itself.

It is the Census Bureau’s master business list and serves many purposes.<sup>7</sup>

- A universe mailing list for economic censuses, including in-scope businesses in all geographic locations
- A central source of list frames for business surveys
- A central data warehouse for administrative data
- Data collection and processing support for the economic census and related establishment surveys (Company Organization Survey, Annual Survey of Manufactures, etc.)
- For mail-out, check-in and follow-up, as well as data editing and imputation
- A source of data for statistical products (County Business Patterns, etc.)

The advantages of a Business Register are:

- Complete, accurate coverage of units in the survey target populations, with no gaps or duplicates
- Prompt recognition of entries and exits (births and deaths)
- Adherence to well-defined standards
  - Standard units

---

<sup>7</sup> Business Register Concepts, PowerPoint presentation, Ed Walker, Census Bureau.

- Standard classifications
- Standard, reliable methods
- Relevant, accurate data
- Timely, low-cost, low-burden data sources
- Effective support services for authorized survey programs

The legal authority for the Business Register is found in:

- A 1968 Office of Management and Budget directive to maintain a central business list
- Title 13, Chapter 5, which authorizes the economic census and related surveys and mandates use of administrative data, where feasible
- Title 26 of the Internal Revenue Code which authorizes use of tax information by the Census Bureau

The Business Register contains data on all multi-unit enterprises and the establishments they control, as well as all single unit businesses. The data contained on the Business Register are:

- Unique identifiers for each company and establishment; all establishments of a company have the same company number, which is permanent for the life of the enterprise. This also includes a serial number for each unit that does not change for the life of the unit; this allows data linking from year to year, even when ownership changes.
- Contact information
  - Business names
  - Primary name (usually legal name)
  - Secondary name (usually trade name)
  - Postal/mailling address
  - Company reporting official
    - Name
    - Telephone and fax numbers, e-mail address
  - North American Industry Classification (NAICS, similar function to TSIC)
  - Geographic—state, county, place, and metropolitan area codes; assignment based on address
  - Legal form of organization and Federal tax status
  - Entity type (e.g. multi-unit enterprise, multi-unit establishment, single unit enterprise/establishment)
- Company/establishment business data
  - Employment
  - Payroll
  - Annual output measure (value of shipments, sales, receipts, or revenue)
  - Total assets
  - Annual expenses
  - Inventory – beginning and end-of-year
  - Control and status indicators
  - Active status (identifies active units and active links)
  - Coverage change codes
  - Sampling information (e.g. sampling status, weight)
  - Mailing indicators (e.g. mail code, form number, reporting medium)
  - Check-in and correspondence codes
  - Status codes for processing and editing

## 2. The Present Business Register in Thailand

In a juridical sense, Thailand has a very complete Business Register. Thailand requires all new businesses with a fixed location (within a structure) to register with the MOC/DBD. It is the first step, in a set of steps, required before starting a new business. Registration is done at DBD offices in Bangkok, the provinces, or also through the internet. The information from registration forms submitted by juristic persons establishing a business, or changing the name, address, registered capital, shareholder changes

and on dissolution, are entered on-line immediately ensuring this database is always up-to-date. Enterprises have also to report their financial information, but the database of financial statements is not as up-to-date as the registration database. The financial statements are scanned for image retrieval by computer, which is basically a library function so the information cannot be used as a Business Register for statistical censuses and surveys, although some of it is useful to the NSO as indicated below.

In a statistical sense, therefore, the Business Register comprises not only the registration information on juristic persons, but also returns made by non-juristic persons, such as sole proprietorships, where registration may be required under the Commercial Registration Act and certain other laws. The NSO updates its sample frames for births with information from the MOC/DBD but the process is high cost and labor-intensive. Personnel from the NSO go to the national and provincial offices of MOC/DBD to collect newly registered cases, which are added to the sample frames. Information on business deaths, although required by law, is often not reported to MOC/DBD, so the NSO finds out about them only at the time of enumeration.

### 3. Future Development of a Statistical Business Register

A Business Register for statistical purposes has very particular characteristics. To be used as a universe list for censuses and surveys, it must be current and comprehensive. That requires constant maintenance using current administrative data, primarily tax information, to record establishment births and deaths and to update information for each enterprise. It also allows more realistic and reliable imputation (estimation) of missing and incomplete data both from delinquent respondents and from incomplete/inconsistent returned questionnaires.

As technology evolves, governments have found it necessary to rework their statistical laws and the way in which statistical agencies interact with one another. The large-scale use of desktop computers has changed the way statistical agencies operate and has opened up possibilities that did not exist when the current statistical law was formulated. This is especially true regarding confidentiality of respondent data and data sharing for statistical purposes. As noted above, the Census Bureau has made very effective use of administrative data in constructing their Business Register.

***In order to move to the next level of economic census/survey technique, it is absolutely crucial for the NSO to construct a modern Business Register.***

To do this requires access to administrative data, which may be possible within the current legal framework. However, if the institutional barriers are too great and agreement between agencies cannot be reached, the statistical law will have to be revised to allow data sharing.

### 4. Moving Away from Interviewer Enumeration

The construction of a Business Register is also the first step in moving away from an interviewer enumeration system to a mail-based self-enumeration system and, in the future, to one using electronic techniques such as the internet. All modern statistical systems have evolved in this direction for reasons of budget and efficiency; most of them started over 50 years ago.

While it may seem impossible to implement now, clearly it must be done in the future. While one cannot predict what technologies will dominate, it can confidently be predicted that live interviewers will not be the wave of the future, especially in the face of tighter public and private sector budgets. Somehow the NSO and other statistical and regulatory agencies have to begin to move away from old data collection technology to the modern electronic ones. The sooner this happens, the better. Generally, respondents also appreciate non-interviewer methods of enumeration, since they can complete the questionnaire at their convenience rather than when an interviewer shows up at their front door.

## D. STATISTICAL ORGANIZATION AND CONTROL

### 1. U.N. Model Law

As noted in the introduction to this chapter, the coordination and cooperation within Thailand's decentralized statistical system needs to be strengthened. As the UN Handbook<sup>8</sup> says,

“Clearly, the more decentralized a system, the more important coordination becomes. The most important tools to accomplish this are:

- The ability to control or at least to significantly influence the budgets of the statistical agencies;
- The ability to control whether or not an agency is allowed to carry out a data collection activity;

The ability to decide on statistical standards (classifications, etc) for the statistical system.”

The stronger the powers of coordination at the center of the system, the greater are the chances of integrating statistics effectively. Integrated statistics (definitions, concepts, and harmonized nomenclatures and classification devices) are immensely more powerful than statistics collected without harmonization. If the office in charge of coordination has sufficient staff and an appropriate budget, the legal power to apply the tools of coordination is correspondingly greater than that of an office lacking such assets.

### 2. The United States Experience

In the United States system, which is also highly decentralized with approximately 70 Federal agencies collecting statistics, these functions are invested in the Office of Management and Budget (OMB). OMB, part of the Executive Office of the President, controls all budgetary decisions, survey and forms clearance and approval, and maintains the major industry, product, and geographic classifications. It also chairs the Interagency Council on Statistical Policy, which meets regularly to advise on issues of statistical policy.

The “Paperwork Reduction Act of 1995” delineates OMB’s responsibilities with respect to the U.S. Federal Statistics System<sup>9</sup>. Under the Chief Statistician of the Federal Government who is resident in OMB, the OMB has the power to:

- Review and approve proposed agency collections of information.
  - Review of agency requests to determine the necessity for the data, including possible duplication with other surveys
  - Review of the information collection burden on respondents
  - Approval of questionnaires: questionnaires with more than nine respondents must be approved and carry an OMB clearance number on the front.
- Ensure that budget proposals of agencies are consistent with system-wide priorities for maintaining and improving the quality of Federal statistics.
- Develop and oversee the implementation of Government-wide policies, principles, standards, and guidelines concerning:
  - Statistical collection procedures and methods

---

<sup>8</sup> Handbook of Statistical Organization, Third Edition, The Operation and Organization of a Statistical Agency, United Nations, ST/ESA/STAT/SER.F/88

<sup>9</sup> Paperwork Reduction Act of 1995, FILE s244.enr --S.244-- S.244, One Hundred Fourth Congress of the United States of America

- Statistical data classification, including industrial, product, and geographic classifications
- Statistical information presentation and dissemination
- Timely release of statistical data
- Promotion of information sharing where collected for statistical purposes, consistent with privacy rights and confidentiality pledges
- Coordination of participation of the U.S. in international statistical activities, including the development of comparable statistics
- Establish and convene an Interagency Council on Statistical Policy, which consists of the heads of the major statistical agencies and representatives of other statistical agencies, under rotating membership.

As can be seen from the above, the U.S. statistical system, although decentralized, has a relatively high degree of control and coordination over the process, especially at the initiation of a survey. However, it is important to understand that once the surveys and questionnaires are approved, the individual statistical agencies have full authority and responsibility for the conduct of their surveys. In the case of continuing surveys, OMB does require statistical agencies to renew questionnaire approval for each new survey year.

### 3. Application in Thailand

The United States laws are much more specific and detailed than the Thailand law. The U.S. laws designate the agency to control and coordinate the system and lay out specific functions and authorities given to that agency.

Revision 2 of the UN Handbook states:<sup>10</sup>

“In the case of decentralized systems, there is a need for the statistical act to apply to all the members of the statistical system. For example, if there is a statistical agency or a research department within the Central Bank, is its legal authority to collect data from other banks determined by the general authority of the Central Bank or by a specific law or regulation authorizing the responsible department to collect supplementary information for statistical purposes? If there are discrete statistical agencies in the Ministries of Transportation, Agriculture, Public Works, Interior and so on, what are their legal rights and restrictions in terms of collection, access to micro-data, and form in which individual records are stored and accessed? How does the central statistical agency decide whether the particular cell is or should be a bona fide member of the statistical system? In an ideal state of affairs the following are minimum legal provisions:

- All members of a statistical system should have a legal basis for their collection operations;
- All members should have provisions defining their legitimacy, accountability, obligation to hold individual information in trust, and sanctions if those obligations are not heeded;
- All members should recognize the form in which individual information can move from one to the other to be shared for purposes of statistical integration and generally for effective analytical work;
- Provisions acknowledging the need for, and definition of, statistical coordination, as well as guidelines on how it is carried out.”

The Thailand law governing its decentralized statistical system has none of the detailed language and specific designations in the United States laws, nor does it have the detailed provisions and considerations recommended by the United Nations.

Perhaps it is time for a complete review and revision of the law to make it more modern in its outlook and with recognition of the many advances in computer technology and statistical techniques.

---

<sup>10</sup> UN Model Law, Appendix 5, Handbook, Rev.2

## E. IMPROVING RESPONDENT COOPERATION

### 1. The Legal Wording on Questionnaires

One of the most troubling aspects of economic statistics in Thailand is the poor response from larger firms in the major cities, in particular Bangkok. It is vitally important to begin to do some research on the reasons for this.

One possibility is to experiment with the wording of the extracts of the law as they appear on the questionnaires. NSO practice is to place the full wording of Sections 21-24 of the Thai Statistics Act on the second page of the economic questionnaires. It is a lot for the respondent to read and there are several phrases talking about penalties that may be somewhat unclear to the respondent. In addition, the phrase in Section 21 that states:

“No person, performing his duties under this Act, shall reveal any information to any other person who has no duty to perform according to this Act, except for the purpose of an inquiry or trial of an individual accused of committing an offence under this Act.” (emphasis added)

which can perhaps be misconstrued by the respondent to mean that his information can be used against him in *any* court proceeding. Clearly that is not the intention, but respondents may interpret it in that way.

It would be useful to experiment with the wording to determine if responses can be improved. In the next economic survey, for example, the wording on one-half of the questionnaires could be revised so as to:

- Remove the provisions of the Statistical Act on page 2
- Insert the following statement in a very prominent place on the front

THIS REPORT IS REQUIRED BY LAW. THE SAME LAW PROTECTS THE CONFIDENTIALITY OF YOUR REPORTED DATA, WHICH MAY BE USED ONLY FOR STATISTICAL PURPOSES. THE DATA CANNOT BE USED FOR PURPOSES OF TAXATION, REGULATION, OR INVESTIGATION. COPIES RETAINED IN YOUR FILES ARE ALSO IMMUNE FROM LEGAL PROCESS.<sup>11</sup>

The above statement is much more direct, conveys the full intent of the law, and assures the respondent that reported information is completely safe. It also puts the respondent on notice that the report is a legal requirement and saves a full page on the questionnaire.

### 2. Educate Respondents, Particularly Large Businesses, on the Use of Government Statistical Data

#### *(a) Contact with Professional, Business, and Trade Associations*

It is extremely important to have continuing contact with professional, business, and trade associations. Agency staff should participate actively to seek out the views of actual and potential respondents and clients about their statistical information needs and their comments regarding government statistics.

#### *(b) Awareness of Respondent Concerns/Respondent Burdens*

---

<sup>11</sup> The legal department at the NSO should be consulted to ensure that this paragraph reflects the full extent of the law in Thailand. This paragraph reflects the state of current US law.

It is also important to be aware of respondents' concerns regarding the surveys in which they participate. Ivan Fellegi, the Chief Statistician of Canada, notes that:<sup>12</sup>

“There is a genuine difference between the main concerns of larger and smaller businesses. Larger businesses want to be assured about confidentiality, as well as about the legal requirement to respond. Generally, however, we find that the overwhelming majority are willing to comply even with burdensome surveys so long as we convince them that important national interests are served and that we are thoughtful about respondent burden.

Smaller businesses are less often direct users of statistical information. They also have fewer resources to complete questionnaires so that their dominant issue is reporting burden. Statistics Canada deals with their concerns by:

- actively minimizing reporting burden, particularly on small business, through the exploitation of administrative records, sampling, and other means (e.g. abbreviated questionnaires);
- offering to small business optional reporting methods (mail, prearranged telephone interviews, FAX reminders, etc.);
- otherwise maintaining active liaison with small business organizations so that they are aware of the measures taken to minimize and control burden.

By using the above techniques, Statistics Canada has reduced the reporting burden imposed on business in every year since 1978, by a cumulative total of 66%.”

(c) *Data User Education and Outreach*

The U.S. Census Bureau has done a lot of work in developing data user conferences and other forms of data user outreach. They have prepared a number of presentations that are shown at various trade shows and association meetings. They also prepare data user seminars/presentations showing respondents how statistical information can be used to run their businesses more efficiently and profitably in the following areas.

- Identifying and locating target markets
- Site location and relocation
- Locating distributors and resellers
- Evaluating market share
- New business opportunities and expansion.

The U.S. Census Bureau's web page could be studied to obtain ideas on educating and involving respondents in the use of statistical data.

Respondents will be more likely to report if they feel that the data they supply can also be useful to them.

(d) *Focus Groups and Cognitive Interviews*

The use of focus groups and cognitive interviews can be used to explore respondents' attitudes towards reporting and uncovering the reasons why they are reluctant to report. The Census Bureau has used these techniques with success in the past.

---

<sup>12</sup> Characteristics of an Effective Statistical System, Ivan Fellegi, Washington Statistical Society, October 25, 1995

## E. RECOMMENDATIONS

### 1 Examine the 1965 Statistics Law with a view to possible revisions.

The United Nations Handbook of Statistical Organization, Third Edition, The Operation and Organization of a Statistical Agency, 2003 has guidance on the current thinking of legal frameworks and statistical organization. It's Annex I shows an "Annotated Model of a National Statistics Act".

The following provisions of the current Act should be given special attention.

#### (a) Data acquisition

Specific wording should be inserted to allow the NSO to obtain data for statistical purposes from all regulatory agencies, especially the Revenue Department and the Social Security agency.

#### (b) Data sharing among statistical agencies

The law should allow data collected by statistical agencies to be shared among them, reducing the burden on respondents to supply duplicate information requested by more than one statistical agency. This requires that the law provide many of the same regulations for all statistical agencies.<sup>13</sup>

- All members of a statistical system should have a legal basis for their collection operations;
- All members should have provisions defining their legitimacy, accountability, obligation to hold individual information in trust, and sanctions if those obligations are not heeded;
- All members should recognize the form in which individual information can move from one to the other to be shared for purposes of statistical integration and generally for effective analytical work.

#### (b) Respondent Confidentiality

Section 21 of the Thailand Statistical Law dealing with confidentiality of respondents' data should have an explicit statement inserted; "Except for the provisions of this Act, data provided by respondents cannot be used for purposes of taxation, regulation, or investigation."<sup>14</sup>

Although this is implicit in Section 21, it is useful to make the language clear and precise.

#### (c) Coordination, control, and cooperation within the Thai Statistical System

Clearly, the more decentralized a system the more important coordination, control, and cooperation becomes. Review the provisions of the current statistical law with respect to these items. The law should ensure that there is a central authority with:

- the ability to control, or at least to significantly influence, the budgets of the statistical agencies;
- the ability to control whether or not an agency is allowed to carry out a data collection activity;
- the ability to decide on statistical standards for the statistical system.

---

<sup>13</sup> UN Model Law, UN Appendix 05, United Nations Statistical Division

<sup>14</sup> The legal department at the NSO should be consulted to ensure that this paragraph reflects the full extent of the law in Thailand. This paragraph reflects the state of current US law.

## 2 Reducing Non-Response and Increasing Respondent Involvement

(a) Revise the Wording of the Statistical Act on the NSO Questionnaires.

- Remove the provisions of the Statistical Act on page 2 of questionnaires.
- Insert the following statement on the top front of questionnaires.

THIS REPORT IS REQUIRED BY LAW. THE SAME LAW PROTECTS THE CONFIDENTIALITY OF YOUR REPORTED DATA, WHICH MAY BE USED ONLY FOR STATISTICAL PURPOSES. THE DATA CANNOT BE USED FOR PURPOSES OF TAXATION, REGULATION, OR INVESTIGATION. COPIES RETAINED IN YOUR FILES ARE ALSO IMMUNE FROM LEGAL PROCESS.<sup>15</sup>

(b) Educate Respondents, Particularly Large Businesses, on the Use of Government Statistical Data

i) Prepare data user seminars and presentations showing respondents how statistical information can be profitably used to run their businesses more efficiently and profitably in the following areas.

- Identifying and locating target markets
- Site location and relocation
- Locating distributors and resellers
- Evaluating market share
- New business opportunities and expansion
- Protecting their business from illegal measures adopted by foreign governments that injure Thai businesses

The U.S. Census Bureau's web page could be studied to obtain ideas on educating and involving respondents in the use of statistical data.

ii) Organize focus groups and/or cognitive interviews to find out the reasons why large business respondents are so reluctant to report. The current Cognitive Interview results may supply indications and suggest future lines of research.

---

<sup>15</sup> The legal department at the NSO should be consulted to ensure that this paragraph reflects the full extent of the law in Thailand. This paragraph reflects the state of current US law.

## CHAPTER 4: THE EXTENDED BALANCE OF PAYMENTS SERVICES (EBOPS) CLASSIFICATION

### INTRODUCTION

This chapter covers the recommendations in the *Manual* on services balance of payments statistics, including the requirements of users and the compilation of EBOPS data.

### B. PROJECT OBJECTIVE, KEY GOALS AND GAPS TO FILL

#### 1. Objective of the Project and Key Goals

The objective of this project, as outlined in the Scope of Work, was to advise the Thai agencies in setting up an efficient statistics collection system for the services sector, that would integrate well with their already established statistics systems, would correctly reflect the relative importance of diverse services, and provide statistical support to the decision making by government and business. Given this overall objective, the key goals were determined to be:

- Use the *Manual* as the chief guide for addressing this objective, while promoting the implementation of the core elements of the *Manual*, starting with the *Extended Balance of Payments Services* classification (EBOPS).
- Focus on services that are internationally traded, as being of priority interest, rather than services produced mainly for domestic consumption.
- Make recommendations on the steps to be undertaken to refine and enhance the statistical capacity.
- Provide compilation guidance for data capture.

Chapter 5 addresses the issues of preparing Foreign Affiliates Trade in Services (FATS) statistics as a vital part of the requirements of *Manual* for developing trade in services statistics.

#### 2. The Main Gaps

Review of the services statistics and statistical agencies during Phases I and III of the project revealed four main gaps to fill:

- Level of detail now collected. A primary requirement of the *Manual* is the call for the recording of greater detail in all areas of services statistics. For trade in services, the present Thai system, based on the ITRS, is not capable of handling such detail.
- Insufficient coverage. The number and significance of service sectors and service products now existing in the Thai economy is substantial and expanding year by year. Gaps in information on several sectors need to be filled, e.g. education and health services, which are traded internationally, spas, ICT services and logistics.
- Collection weakness. The NSO is the agency charged with the primary responsibility for collecting data. Other agencies see their role more as users of data collected by others. This approach tends to minimize data collection. Low response rates experienced by the NSO intensify the problem.
- Supplementary surveys. Where the ITRS is the main source of data for exports and imports of services, and where residents are able to conduct transactions outside the domestic banking system, supplementary data must be collected, and some surveys must be used. This is not well-developed in Thailand.

Addressing these gaps forms the subject matter of the rest of this chapter.

## C. STATISTICAL REQUIREMENTS

### 1. Analytical Needs

In evaluating the existing statistical programs of the Thai government, an assessment is made in terms of their adequacy for revealing developments in the economy and particularly for meeting the needs of policy makers and trade negotiators, as well as of business enterprises engaged in international trade. The assessment looks at two aspects: first, the identification of the analytical purposes for which the data are needed and the statistical framework within which they can be expressed. Second, a review and evaluation of the statistical programs through which data are collected and compiled and recommendations on how they can be enhanced and expanded to meet user needs.

### 2. Statistical Needs of Users

The analytical framework for assessing the nature and characteristics of services in the economy is given in the *System of National Accounts (SNA 93)* and its various component accounts and it provides a useful basis for monitoring the structure and importance of services in the economy. In order to measure the role of services in the Thai economy and assess the impact of widening the market by liberalizing trade in services within the region and with the rest of the world, ideally it is necessary to compile and bring together the financial and production accounts of the system at current and constant prices. This includes accounts related to international trade and payments, as prescribed for by the Balance of Payments (BPM5), supplemented with data recommended for the Tourism Satellite Account (TSA). Important also are statistics related to capital, Foreign Direct Investment and Foreign Affiliates Trade in Services (FATS) statistics. Finally, labor market statistics relating to the labor force in terms of skills and occupation, gender, numbers employed, part-time and full-time employment and employee status are needed.

Although the above data sets are useful and necessary for providing a complete analytical framework, the assessment, in line with the Scope of Work for this project, concentrates mainly on production statistics and statistics on international trade in services, including the four modes of supply, tourism statistics and Foreign Affiliates Trade in Services statistics.

The interests of trade policy analysts, trade negotiators and business enterprises are especially relevant. They are engaged in fostering growth in the Thai economy, through promoting the development of services production, both for domestic consumption and for international trade. The particular interest in statistics of international trade in services stems from the fact that recent trade agreements cover services as well as goods. Consequently, the need has arisen for statistics both to inform the negotiators and to support and monitor the implementation of these agreements.

### 3. Production Statistics

Analysis of the role and importance of the production of services in the economy requires assembly of statistics about services produced in the economy and the industries that primarily produce them. Sectoral detail needs to reflect the service industries of analytical interest and importance, as well as new and emerging activities.

Production statistics of services needed by analysts can be presented, in the service sector dimension, within the production accounts of the *System of National Accounts (SNA 93)* framework, as total revenues from production and total associated costs of production by value of the goods and services purchased, and value added. Total revenues from production and total costs of production need to be broken down by type of *product*, good or service, for analytical purposes and for reconciling the production and expenditure sides of the accounts.

#### 4 Service Sectors and Service Products

The two major international classifications that are designed for the collection and compilation of business statistics are an *activity* and a *product* classification. Policy analysts are interested in information about the industries that produce and supply services, as well as in analyzing what proportion of domestic production is exported and what proportion of total demand is imported. Industry output of goods and services should ideally be broken down into product outputs, and domestic production, exports and imports should be compiled and compared in the product dimension.

To get the full picture of domestic production and international trade in a service product, it is necessary to gather information from all industries engaged in the production of that service, with particular focus on the industries primarily engaged in the production of the service. It is necessary to assemble data about the service products produced and exported on the output side and products purchased as inputs, whether domestically produced or imported.

Because it may be difficult to collect service product data across all industries, they are sometimes collected only from the principal producing industry. This can be adequate depending upon the product for which data are being collected, and the extent to which it is produced by that industry. Further, in the absence of product information and until it is possible to collect and produce product detail for comparing total output and exports, sector data will have to be treated as an adequate proxy for broad groups of service product data. In practice, therefore, total service sector activity output and exports are treated as proxies for product output and product exports respectively.

#### 5. Statistics of International Trade in Services

For analytical purposes, in addition to the production statistics, data on the value of exports and imports of services are also required. The output of a service product is sold either for domestic consumption, or is exported; and the total supply of a given good or service consists of domestic production plus imports. Statistics of international trade in services data are usually collected in the context of compiling the Balance of Payments. The statistical classification used for collecting this data is the Balance of Payments classification (BPM5). In most countries of the world, the level of detail at which data on international trade in services is collected for their Balance of Payments programs is still very much more aggregated than the level used in trade negotiations. The more recent international standard known as the Extended Balance of Payments Services Classification (EBOPS) is considerably more detailed than BPM5, but it is still not as detailed as the GATS Services Sectoral Classification List (GNS/W/120), which was created by the GATT for the legal purposes of scheduling legally binding specific commitments, under the General Agreement on Trade in Services (GATS) of the World Trade Organization, when they entered into force in 1995.

#### 6. Overview of Existing Data Collection System

In Thailand, the NSO is the main agency responsible for collecting basic economic and social statistics. It conducts censuses and surveys (for example, the Manufacturing Industry Survey; the Survey of Business Trade and Services; the Construction Industry Survey; and the Hotels and Guest Houses Survey). The services sectors for which the NSO collects data on domestic production of covered services include transport, storage and communications, hotels and restaurants, private hospitals, construction, financial intermediation, wholesale and retail trade and repairs. The basic data are transferred to the NESDB, the agency which compiles the National Accounts and Gross Domestic Product statistics.

These surveys do not capture all the service sectors of the economy, and to that extent do not fully reflect the growing complexity and significance of services in the Thai economy. For example, although a “Social Issues Survey” is conducted, which covers levels of education, the economic statistics of the *education sector* are not revealed. Although it is known that increasing numbers of foreign students purchase educational services in Thailand’s schools, universities and technical colleges, the statistics

collected do not reflect the financial benefit to Thailand of this activity. The situation is similar for *health* services, also sold internationally, and for financial and business services, which are rapidly expanding both in terms of domestic consumption and international trade.

Other governmental agencies – the BOT, NESDB, the MOC, MOE, MOH, MOL, and the TAT – while not being responsible for official data collection, do gather information from various sources for their own purposes. These sources include the occasional survey, but essentially are considered as requests for the voluntary reporting of information to the agency, since there might be no legal authority to gather the data requested. In this decentralized system, with several agencies and regions collecting information, the data are used for various administrative purposes, but are not as meaningful for analytical purposes as they could be, had they been gathered within the framework of a unified statistical system.

#### **D. THE *MANUAL* – AN OVERVIEW**

The *Manual* establishes the international standard and sets out a newly defined framework for measuring trade in services. It covers and recommends concepts and methodologies for the compilation and reporting of statistics on trade in services, foreign direct investment, and Foreign Affiliates Trade in Services (FATS) statistics.

The *Manual* notably recommends extending the principles of the *Balance of Payments Manual* BPM5, but not replacing it: The level of detail recommended in paragraph 2.32 of the *Manual* is greater than that of BPM5. In current practice, the imports and exports of service products, i.e. trade in services, is measured within the balance of payments statistics; and compilation of the balance of payments data has been guided by BPM5. The *Manual* is consistent with the BPM5 in its concepts and classification, but goes further and provides a more detailed classification of trade in services statistics in the form of the *Extended Balance of Payments Services Classification* (EBOPS).

In the wide range of concepts and methodologies described in the *Manual*, five core elements are recommended for implementation by national statistical agencies in phases, according to the needs and priorities of their own countries or region. They are reproduced in their entirety in Chapter 2 but it is worth recalling that the implementation of the first five core elements would provide the basis for internationally comparable data sets for comparison at a more detailed level. Five other recommended elements are seen as a long-term goal.

#### **E. ISSUES AND RECOMMENDATIONS**

##### 1. The Current Position in Thailand

For users, the statistics required to analyze the impact and implications of trade liberalization are details of exports and imports of services, cross-classified by country or region of destination of exports and country or region of origin of imports. In the ongoing trade negotiations in the WTO and ASEAN, as well as the US-Thailand FTA negotiations and future trade negotiations, what is required is information on the country of destination of exports and the country of origin of imports of services, for whatever the level of detail that it is possible to collect. The absence of this information for the services trade of Thailand is a most important data gap.

The Bank of Thailand is the agency responsible for the compilation of the balance of payments. The main source of data is an International Transactions Reporting System (ITRS), supplemented by information from a few other sources, such as the Thai Airways International, the Tourism Authority of Thailand, government agencies, specialized financial institutions, and information from oil companies and telecommunications companies.

Data from the ITRS are compiled for the current account of the balance of payments. The current account is subdivided into four basic components: goods, services, income and transfers. Of particular interest in this report is the measurement of receipts and payments for services traded internationally, and income from investment and employment. The use of surveys is not currently a source of data for the balance of payments compilation, with the notable exception of the Survey on the International Investment Position.

Under the ITRS compilation system, commercial banks are legally required to report to the BOT, on a daily basis, individual international transactions between residents and non-residents, allocated by purpose of transaction. Transactions of US\$50,000 and over are reported by transaction in full detail; those below that threshold are not reported by transaction and are aggregated under the purpose of transaction, business sector, country and currency. Thus although the names of these transactions cannot be identified, other details necessary for the compilation of BOP statistics are the same as for those above the threshold. The BOT specifies and describes 20 categories of transactions according to the purpose of the foreign exchange purchase or sale. From the purpose specified by the client on the “Foreign Exchange Transaction Form” (Item 4), the commercial bank official allocates the transaction to a numerical code, which can be broadly allocated in accordance with the BPM5 standard classification.

## 2. Assessment

The data are compiled under the Balance of Payments system for which the primary concern are transactions – payments into and out of the country for goods and services, which contribute to a measure of the “current account balance”. The ultimate interest of the central bank in compiling this data, is not the detail of economic statistics, but overall changes in the foreign exchange reserves of the country. Where the agency compiling the balance of payments statistics is the central bank, the institutional concern with payments and balances means that the level of product detail at which compilers work need not be as detailed as the level of interest to trade negotiators and other policy analysts. Since for all practical purposes, the compilations for the balance of payments provide the only data on exports and imports of services in Thailand, it is necessary to examine the classifications used by the Bank, and to examine whether the current system might be refined to produce the level of detail required for other purposes.

The BOT states that of the individual transactions captured in the ITRS records, which are transactions at or above the US\$50,000 threshold, represent 97% of the resident-non-resident transactions taking place through the domestic banking system. While this is good for capturing gross payments and receipts and for overall balance of payments balances, it is not presently adequate for fulfilling the core recommended elements of the *Manual*. Notably, what is required, is an increase in the number of purposes of transaction reported to meet the EBOPS classification. However, it is most probable that such increased reporting for statistical purposes would not voluntarily be accepted by the commercial banks.

When using the data collected by the BOT’s ITRS as the main source of data, there are three principal problems, specifically, classification levels, coverage and release of data that render the information an incomplete data set for trade negotiating purposes and these are highlighted below.

(a) Classification levels: The 20 categories of transactions collected by the ITRS correspond broadly to the services components of the BPM5, but with some omissions, notably in transportation services. These categories are more aggregated than the detail required for EBOPS, but it is not clear that the current needs of the prime users in Thailand call for this greater level of detail as a priority. It is recommended, and the BOT states, that its next priority is to disaggregate transportation services by mode of transport into sea, air and land components as proposed in EBOPS. Likewise, data on ICT services are of much interest to policy analysts. Some receipts and payments for these services are now captured by the ITRS in the category “Computer and Information Services.” The data are aggregated in “Other services,” but presumably arrangements could be made for these to be revealed separately.

(b) Coverage: The 97% coverage of individual transactions, at the US\$50,000 threshold, taking place through the domestic banking system is certainly excellent. Detailed information is recorded by purpose of transaction, sector of transaction, and source and destination of funds. These are very desirable features according to the requirements of the *Manual*. However, since residents are also able to conduct transactions with non-residents outside the domestic banking system – notably through bank accounts held abroad by Thai residents, the figures collected, therefore, represent a minimum of actual flows, and are under-reported to the degree to which companies net out their gross sums. This business practice appears to be common enough to be of consequence for the statistics. The result is that the coverage of the ITRS is not complete and supplementary data need to be collected.

(c) Release of data: (1) The BOT now collects data in 20 categories of the BPM5 classification, but statistics on receipts and payments for services in international transactions are published in only 10 categories, as shown in the second column of the box below. (2) Statistics on receipts and payments for the other 10 items collected would be of interest to trade analysts, but are hidden in the category “Other Services,” and are listed in italics in the first column of the box below.

<b>20 Categories of Services Collected in the ITRS</b>	<b>10 Categories of Services Published</b>
Transportation Freight Passenger Other Travel Government services n.i.e. Other services Communications services Construction services Insurance services Royalties and license fees Other services <i>Financial services</i> <i>Computer and information services</i> <i>Fees and other commissions</i> <i>Operational leasing services</i> <i>Legal, accounting, management consulting, and public relations</i> <i>Advertising, market research, and public opinion polling</i> <i>Representative office expenditure</i> <i>Recreational services</i>	Transportation Freight Passenger Other Travel Government services n.i.e. Other services Communications services Construction services Insurance services Royalties and license fees Others

### 3. Recommendations on Implementation

It is recommended that the following consecutive steps be carried out in the context of the overall project implementation of Phases I and II, as discussed further in Chapter 9, Conclusions.

Step 1. Short term: Improve the data on international trade in services currently collected in the statistics on international trade in services by (a) deepening the level of disaggregation, and (b) reporting the direction of trade.

Step 2. Medium term: supplement the ITRS, the main source of data, with other sources, including from surveys.

#### ***Step 1. Short Term Recommendations***

##### (a) Deepening the level of detail disseminated

To the extent that the BOT now collects more detailed data than is published, an effort should be made, as a first step, to extract the detail and make it available to trade negotiators and analysts in other government departments, subject to confidentiality constraints. Specifically, dissemination of the details of the service categories now collected and combined into an aggregate of “other services” would be a valuable addition to the body of information on services. Services of particular interest are Computer and Information services, Financial services (except insurance), and Legal, Accounting and Management consulting.

As discussed in Chapter 3, this type of “administrative information” is a prime candidate for Information Sharing across government agencies.

##### (b) Reporting the Direction of Trade

The information now collected on source and destination of receipts and payments for services should also be released, in a similar manner as is now done for commodity trade (Table 44 of the BOT’s “Foreign Trade and Balance of Payments”). This information is not only useful but necessary for trade negotiations, for which a minimum distinction should be made between service exports and imports with its primary trading partners such as the United States, the EU, and regional countries.

Where necessary, resources should be provided to do this, for example to develop systems to be able to extract the detail, and more importantly, through training of personnel with the skills to assemble it analytically and assess what should be suppressed on grounds of confidentiality.

#### ***Step 2. Medium Term Recommendations***

- The first recommendation is that processes be developed that will allow both survey data and administrative data to be used more easily by various agencies, including from the ITRS. Agencies should actively work together, through the medium of a task force, to see how best to do this. It is realized that this is “easier said than done” in an atmosphere of downsizing and uncertainty.
- Recommendations for enhancement of the services statistics are discussed below, with a focus on elements # 1, 2, 5 and 10 of the *Manual*. Note that Manual Recommendation #'s 3 and 4 are discussed in Chapter 5.

(a) *Manual Recommendation #1: Implementation of BPM5 Recommendations on Service Transactions Between Residents and Non-residents.*

The implementation is now in place, with the reservations discussed in the previous section.

(b) *Manual Recommendation #2: Compilation of Balance of Payments Data According to EBOPS.*

This involves the collection of data on exports and imports for a much greater number of services, that is, disaggregating the BPM5 standard components for services into EBOPS subcomponents. The proposed detailed components of EBOPS are shown in table A. 1.1 in Annex A. It was pointed out in the previous section that it is not practical to envisage the provision of greater services detail through extending the transactions purposes codes of the ITRS, because of the burden of reporting would create resistance from the commercial banks. This means that additional data must be obtained from the survey route. Two options are possible:

(i) Make use of the existing BOT “Survey on International Investment Position” and add a section on “International Transactions in Services and Income,” as is being done in some countries. Here, the company would be asked to indicate income received and payments made for approximately 16 listed services of the EBOPS classification. This approach would target only the major players in international transactions, and it would provide supplementary information while maintaining the ITRS. It is noted that the Bank of Japan, which uses an ITRS system for the balance of payments statistics, is currently exploring the possibility of introducing a survey system which focuses more on data from major players than on individual international cash transactions of the ITRS.

(ii) Introduction of a survey of more general application, based on the model proposed in the “pre-test survey” conducted in Phase IV of this project. Such a survey would target priority sectors such as the Information and Computer Technology, communications, medical services, spas, education services and so on.

It is pointed out in the *Manual* that implementation of EBOPS should be to the extent relevant to the compiling economy, and that “compilers should commence with the disaggregation of services of major economic importance to their own economies.” In the case of Thailand, this would mean the sectors identified as priority. They are of interest to decision makers for a variety of reasons, including high export potential, current significance in terms of export earnings, employment generating capacity, importance in inter-regional trade, and as targets for liberalization in on-going trade negotiations. While the *Manual* does not provide guidance on what criteria to determine the sectors of economic importance to the economies, the project team carried out an informal survey of the agencies. The results were interesting as the different agencies attributed different degrees of importance to the sectors. In the informal survey of the MOC/DTN the results were as follows:

1. Personal, cultural and recreational  
(includes Education and Health services)
2. Communications
3. Other Business services  
(includes Professional and technical services)
4. Computer and information services
5. Insurance services
6. Transportation
7. Construction
8. Travel
9. Financial services
10. Royalties and license fees
11. Government services n.i.e.

It is recommended that since the MOC/DTN will need this data for negotiation purposes that the MOC/DTN determine the sectors of priority in accordance with its own negotiation strategies.

(Please note that a more thorough discussion of the specific service sectors is found in Annex A, Compilation Notes.)

Thailand's Specific commitments on sectors were made at the 5-digit CPC level, but beyond that level, Thailand's own classification was used. The EBOPS categories of the *Manual* are thus too highly aggregated to correspond with the detail directly, but are useful for policy and evaluation work.

(c) *Manual Recommendation #5: Compilation of Statistics on Trade in Services by Partner Country, for each of the Main Types of Services in BPM5.*

The basic information on source and destination of receipts and payments for services is already collected for individual transactions in the ITRS records. What is required is compilation of the individual transactions in a particular service by country destination, or at least by major trading partners. A minimum distinction should be made between service exports and imports with the United States, the EU and with regional countries. Such analytical presentation is not done in the regular course of compiling the BOP statistics, but resources should be provided, for example, to develop systems to extract the detail. If a survey system is used, the pre-test survey (of Phase IV) also allows this information to be readily captured. The information should then be released in a similar manner as is now done for commodity trade.

(d) *Manual Recommendation #10: The Allocation of BOP/EBOPS Data to the Four GATS Modes of Supply*

Measurement of trade in services is much more difficult than measurement of trade in goods. First, services are harder to define; and second, the nature of services is such that they can be delivered across international borders in a variety of ways. Therefore for the General Agreement on Trade in Services, a further dimension has been introduced with respect to the measurement of international trade in services, namely that of the four modes of supply. This concept is used to explain the ways in which services can be traded internationally. The concept and the data which result from its application provide an additional tool for the trade negotiator and as a general/guide in monitoring and negotiating specific legal commitments.

The allocation of transactions between residents and non-residents over the four modes of supply is the last of the ten recommended elements in the *Manual*. While the *Manual* encourages compilers to make the allocation of transactions over modes of supply, it also sounds a cautionary note: "However, recognizing the difficulty of allocating balance of payments transactions to modes of supply, the *Manual* recommends that a full allocation of services by modes of supply be accorded a low priority." [3.49]

International trade in services can take place through four modes of supply:

- Mode 1, *cross-border supply*, only the service crosses the border. The delivery of the service can take place, for example, through telecommunications (e.g. telephone, fax, television and internet), or the sending documents, disks, tapes, etc by post;
- Mode 2, *consumption abroad*, occurs when consumers travel outside their country and consume services abroad. Visits to museums in a foreign country, medical treatment of non-resident persons and language and computer courses taken abroad are typical examples;
- Mode 3, the service supplier establishes a *commercial presence* in another country through, for example, a company, branch or subsidiary. In many countries examples of commercial presence

include foreign banks and insurance companies. However, since legislation in Thailand caps foreign ownership, foreign majority owned services companies are not very common.

- Mode 4, *presence of natural persons*, occurs when an individual has moved temporarily into the territory of the consumer to provide a service, whether self-employed or as an employee. Examples are computer consultancy services and accountants sent by an accounting firm to work in another country on a temporary basis.

To monitor the four modes, data are needed on the value of exports and imports of services by country of destination for exports and by country of origin for imports.

To be part of mode 1, these services must be directly exported from the territory of one country to the territory of the other.

When the owner or the employee of the service firm travels across the border to deliver the service, either on his/her own account or as an employee of a firm, the transaction falls into mode 4, presence of natural persons.

To monitor mode 2 (consumption abroad): what is needed is a record of tourist expenditure on services that occurs when visitors/tourists cross the border to consume services in an economy, other than the one in which they normally reside.

To monitor mode 3 (commercial presence): foreign affiliate trade in services statistics are required, covering a wide range of production data, including number of employees, pertaining to foreign owned establishments or subsidiaries, within the domestic economy (inward FATS). Likewise, data about the subsidiaries abroad of domestically owned corporations (outward FATS) are needed.

When a foreign subsidiary is set up in an economy, (to which GATS commitments on Mode 3 directly relate [para 4.51]), it may supply its output to the residents of that economy, or it may export some or all of its output to its home country or to third countries. The activities of subsidiaries producing services for the economy in which they are located are described as delivery of a service through “commercial presence”. The benefit to the receiving country will relate to the income that is spent in the country on domestically produced intermediate goods and services, on wages and salaries, re-invested, or paid in taxes. The proportion of the intermediate expenditure made on imports, constitutes a leakage that it is important to measure.

To monitor mode 4 (presence of natural persons): two sets of data are needed. (a) the value of services delivered by persons temporarily abroad, and (b) their compensation and country of origin.

The services negotiators in MOC/DTN require data on which of the four GATS modes the national exports and imports of services are supplied. The *Manual* suggests a simplified approach (described below) to the statistical treatment of the modes of supply. It is based on the determination of the location of the supplier of the service at the time of the service transaction. It suggests that Balance of Payments service transactions correspond to modes 1, 2, and 4 and that FATS statistics be allocated to Mode 3. This simplified approach is proposed for initial use pending the collection of more detailed data through surveys of businesses. For a fuller, and more precise explanation of the principles to be used in making statistical allocation to the modes of supply, reference should be made to the *Manual* [paragraphs 2.14-2.20, 2.72-2.97, and 3.41-3.49].

Potentially many firms in all sectors could be importing services which calls for a complete survey of all firms, or large stratified samples taking into account geographical area, service sector and the size of firms, to give a reliable picture of the pattern for the economy as a whole. Far fewer firms may be exporting their services cross-border in Modes 1 and 4 though again many firms in most sectors could be earning from the expenditure of tourists i.e. Mode 2.

The income earned by local firms from the expenditure of foreign affiliates in the economy also falls into Mode 2, however, under EBOPS these supplies are not part of cross-border trade, and would have to be identified by FATS and other surveys. Data on Mode 3 from FATS surveys will give a picture from the relatively smaller number of foreign affiliates established in the market. Their exports and imports of services form part of the overall EBOPS position and should be shown separately from those of the nationally-owned firms, with their trade with affiliated parties (their owners or subsidiaries abroad) in turn split out.

In the present project, it was agreed that MOC/DTN make use of the data collected by the pre-test EBOPS survey to carry out a trial exercise on the allocation to the four modes of supply. The pre-test data related to five of the eleven main sectors, though from a very small and unrepresentative list of firms. Some firms could not separate out their exports and imports of services from overall sales and expenditure. In cases where the firms owned subsidiaries abroad, or were themselves foreign affiliates, not all of them were able to split their sales between affiliated and unaffiliated firms. No other FATS variables were collected because the survey called for EBOPS figures only. Nevertheless, the exercise was completed by MOC/DTN on the data that could be used.

The simplified method for allocation of data between modes as recommended by the Manual (see paragraphs 2.94 to 2.99 and Table 1 on page 24) is:

**Mode 1:** transportation (except a minor part in Mode 2), communication, insurance and financial services, and royalties and license fees.

The following may be allocated partly to Modes 1 and 4:  
computer and information services, other business services, and personal, cultural and recreational services.

**Mode 2:** the travel component of EBOPS, excluding travelers' expenditure on goods; repairs to carriers in foreign ports; part of transportation – i.e. supporting and auxiliary services to carriers in foreign ports.

- All services recorded under item *travel* (i.e. excluding goods) should be allocated to Mode 2 (consumption abroad).

**Mode 3:** the FATS statistics, plus EBOPS data; construction services may be allocated entirely here, or partly here and partly to Mode 4

**Mode 4:** some of the data in the balance of payments labor-related flows and other sources can be extracted, though at first the picture may not be very complete or rigorous. It has to be ensured there is no duplication with employees in foreign affiliates (who are in Mode 3, commercial presence)

It is worth noting that the *Manual* further suggests that:

- If the major part of a given service category corresponds to services supplied under one mode, the whole service should be fully allocated to that mode.
- Where a service transaction involves several modes of supply, in principle, an allocation should be made among them for each transaction. However for many transactions it is difficult to make such an allocation, e.g. in the case of an architect who designs a construction project, makes visits to the country of the purchaser and delivers the final documents through a telecommunication link, it is recommended that if estimates of subdivision of resources cannot be made, the transaction be allocated to the most important mode, in terms of time and resources associated with it. Such a decision will have to be made for *computer and information services*,

and *other business services* and knowledge of the location of the supplier at the time of delivering the service is therefore important.

The MOC/DTN compilation showed that the pre-test survey did not pick up tourism and the relevant transportation services because these had been omitted from the sectors on the Schedules A and B forms. This is in line with usual practice for international trade in services surveys of this kind. International trade in transport services is best collected from a variety of sources covering maritime, air, road, and inland waterways transport providers. The EBOPS category of travel accounts for the international aspects of expenditure by tourists, usually collected from visitor and accommodation surveys.

As for the overall picture, the survey picked up data only under Mode 1 and this could be shown separately for Telecommunications, Computer and information, Financial and Other business services. Construction firms and those offering services to oil drilling offshore sites and for train signaling systems also featured in the sample.

It was not possible to attempt an allocation between Modes 1 and 4 in those sectors identified in the Manual (as shown above under Mode 1), nor were there any data for Mode 2 in the EBOPS results. There were no data from the construction firm to allocate to Mode 3, nor separate data for any sector to allocate to Mode 4. The services to the offshore drilling rigs and on train signaling systems comprised 'Other business services' and were allocated to Mode 1, with no data to enable some of the turnover to be allocated to Mode 4. The Manual advises in such cases, anyhow, to allocate the data to the dominant mode.

In the future, it is likely that for the Mode 2, data on tourism MOC/DTN will have to rely on passenger surveys conducted by TAT and their analysis of immigration department entry forms, together with hotel and lodging surveys.

Mode 4 will present the greatest challenge, being the most difficult mode to estimate. There could be some sub-sectors where this mode might form a significant proportion, and the values allocated accordingly to exports and imports. The relevant paragraphs of the Manual for use as a reference are: 2.83, 2.88 and 3.45-3.47.

No data were reported from Schedule B (of the pre-test EBOPS survey) on imported services, to allocate to the four modes of supply.

Note that the pre-test is also discussed in Chapter 6.

## CHAPTER 5: THE COLLECTION AND COMPILATION OF FOREIGN DIRECT INVESTMENT (FDI) DATA AND FOREIGN AFFILIATES TRADE IN SERVICES (FATS) STATISTICS

### A. INTRODUCTION

The OECD has stated that: “the share of production (or turnover) stemming from outside a country’s borders is one of the most relevant indicators for measuring the scale of globalization - not only at global and sectoral levels, but also at the level of the individual firm. In some sectors, the said output is often twice as high as the value of the exports, which shows that, in order to penetrate a market, direct investment may be a more important instrument than exports.”<sup>16</sup>

In general, enterprises established abroad export more than the average for domestic firms, and they also import more. There are probably common phases that direct investments pass through in order to supply foreign domestic markets. It may take a long time for the initial investment to become profitable, and then some further time for reinvested earnings to build up sufficient capital, before regular transfers of profits can be made back to the parent enterprise. This underlines the central need for compiling statistics on foreign affiliates so as to track trends.

For a complete picture to be obtained, data on balance of payments, foreign direct investment, income from portfolio investments, and the activities of foreign affiliates must be correlated. Where data is aggregated for a sufficient number of firms, interesting conclusions can be drawn on the way in which groups undertake investment to expand their market reach, depending on the state of development. Typically, certain countries will form the bridgehead for regional operations, and this type of investment can create losses in the initial years, to be followed by profits at a later stage. Trade flows between those two countries and third countries also change, reflecting the extent of dependence on intra-firm transactions, and success in exporting by the foreign affiliates. It will be necessary to link together into a unified statistical picture the cross-border trade flows, including intra-firm transactions, and the investment and funding flows - including the build up of re-invested earnings in the asset stock position.

The *Manual* indicates (in §4.14) that its “recommendations for FATS statistics centre on the answers to four questions.

- (1) What is the universe of firms to be covered?
- (2) How are the data to be grouped: by country, by industrial activity, or by product?
- (3) What variables should be covered?
- (4) How might the statistics be developed?”

The recommendations that answer the first three questions (in §4.15) are:

(1) “As to firms covered, the *Manual* recommends that FATS statistics cover all firms that are majority owned by a foreign direct investor.”

(2) “Data on such firms *in* the compiling economy should be grouped geographically, primarily on the basis of the country of ultimate beneficial owner but, if possible, with some data also being provided on the basis of the country of the immediate investor (first foreign parent). Data on foreign affiliates *of* the compiling economy should be grouped according to the country of location of the firm whose operations are being described. Concerning grouping by industry or product, the first priority is for a grouping by industry, into categories—termed *ISIC* Categories for Foreign Affiliates (ICFA)—drawn from the *ISIC* (Revision 3). Not all FATS variables lend themselves to a product breakdown, but for those that do, the breakdown for services should be on a basis compatible with EBOPS.”

---

<sup>16</sup> “Chapter I: Introduction to the Concept of Economic Globalization and its Measurement”, DSTI/EAS/IND/SWP(2002)2, of 21 March 2002, OECD, Paris: §36.

(3) “Several specific variables are suggested for collection, to include at least the following basic measures of foreign affiliate activity:

- (1) sales (turnover) and/or output,
- (2) employment,
- (3) value added,
- (4) exports and imports of goods and services, and
- (5) number of enterprises.”

Further variables to be compiled are “on additional aspects of the operations of foreign affiliates, such as assets, net worth, operating surplus, gross fixed capital formation, taxes on income, research and development expenditures, and compensation of employees.” (§1.24)

When WTO Members make specific commitments under the GATS these affect the entry and operation of foreign affiliates in their own jurisdiction, and as a quid pro quo they expect their trading partners to make legal commitments (bindings) “with a view to enhancing the ability of their firms to supply services in those countries.” (§4.5) Thus, there are two categories of FATS enterprises:

**Inward FATS** enterprises are Foreign Affiliates (subsidiaries and branches resident in the *compiling* economy) that are controlled by direct investors in *another* economy.

**Outward FATS** enterprises are Foreign Affiliates (subsidiaries and branches resident in *another* economy) that are controlled by direct investors in the *compiling* economy.

The *Manual* envisages that “data on inward FATS are often easier to collect than data on outward FATS. The entities covered are located in the compiling country, and data for them would ordinarily already be included in the country’s domestic enterprise statistics. Thus, compiling data for them may involve only identifying the foreign-owned subset of domestically located firms and tabulating existing data for them. For outward FATS, in contrast, the entities covered are located outside the compiling economy and generally would not be covered by existing data. Furthermore, there may be legal or practical obstacles to surveying them directly; generally, the data would have to be collected from resident direct investors rather than from the foreign affiliates themselves. ... Nonetheless ... some countries have successfully compiled data for outward FATS as well.” (§4.6)

## **B. THE CURRENT POSITION**

Thailand compiles the standard IMF data on FDI, but has not yet started work on the compilation of FATS statistics.

The BOT survey on the International Investment Position (Form 40) currently collects information on the number of firms with foreign investor participation and with investments in firms abroad, and their assets, net worth, operating surplus, gross fixed capital formation and taxes on income.

In order to carry out the IIP survey, the BOT maintains a database of registered FDI enterprises. This lists Thai companies with foreign participation of over 10%. It is based on the information sent by enterprises to MOC, supplemented by input from various sources, including the ITRS.

If transactions are greater than US\$50,000, settled through the Thai banking system, and not subject to “netting out”, data on their exports and imports of goods and services are collected under the ITRS reporting system.

The NSO “Survey of Business Trade and Services” also collects information from a sample of all enterprises on sales and expenses, employment, fixed assets and whether the proportion of any foreign investment is under or over 10%.

There is, as yet, no collaboration on an ongoing basis between the NSO business survey compilers and the BOP and IIP compilers at the BOT, to produce an overall composite picture of these elements of FATS statistics, which together form a majority of those recommended in the *Manual* to be compiled.

### C. RECOMMENDED ACTION

The new standard for FATS statistics featured in the *Manual*, and as adopted by the UN, is soundly based on international statistical concepts and standards. The Thai government would do well to decide on its implementation as rapidly as is feasible, despite the added burdens it may impose on both the compiling agencies and private sector respondents.

Without comparable figures covering the major trade flows and the activities of foreign affiliates, the GATS negotiators at the WTO in Geneva will have no hard data on which to base their priorities. Nor will the government be properly aware of the extent of the services contribution to the nation's overall economic well-being.

#### 1. Identifying FDI and FATS Enterprises

Creating a comprehensive central register of establishments would be an essential first step. From this register, the list of FDI and FATS enterprises, or any other subset of establishments, can be generated. The register of establishments should generate an exhaustive list for FDI enterprises, if it is updated on an ongoing basis and is well maintained.

The register of FATS enterprises consists of a subset of the register of FDI enterprises, listing all FDI enterprises with over 50% foreign ownership, and therefore consists of subsidiaries and branches. Thus the FATS establishments register can be generated from the FDI establishments register. Note that it is accepted practice when dealing with FATS statistics to refer to "majority-owned affiliates" as 'affiliates' – see the *Manual* footnote 59.

Close cooperation between BOT, MOC and NSO might be needed to identify ways to ensure that the BOT list of FDI enterprises is kept fully comprehensive.

The following is a recommended template for the register of establishments for FDI enterprises.

<u>Enterprise Name</u>	<u>% of Foreign Ownership</u>	<u>Country of Ultimate Beneficial Owner</u>	<u>Industry activity Codes (TICFA)</u>	<u>Goods and Services product Codes (CPC 1.0)</u>
Company A				
Partnership B				
Joint Venture C				

The relationship of FATS statistics to foreign direct investment statistics is introduced in the *Manual* as follows:

“Foreign direct investment (FDI) financial transactions and related investment position (stock) and income measures are not, strictly speaking, FATS variables because they do not pertain to the overall operations of foreign affiliates, but relate only to transactions between and positions with direct investors and their foreign affiliates. In addition, FDI measures are ordinarily compiled with respect to transactions and positions with all foreign affiliates, whereas FATS variables are ... to be compiled only with respect to affiliates in which the direct investor holds a majority interest.” (§4.8)

“Notwithstanding these differences, FDI statistics should be considered an important adjunct to FATS statistics. Countries that cannot implement compilation of FATS statistics immediately may find that FDI statistics can provide an alternative interim indicator of commercial presence. In addition, FDI statistics can be used in conjunction with FATS statistics to indicate the extent to which the operations of affiliates were financed with funds from direct investors, as well as the extent to which the income generated by affiliates accrues to direct investors.” (§4.9) However, it should be noted that FDI statistics do not strictly reflect the FATS variable of gross fixed capital formation because the initial investment is not isolated.

## 2. Compilation of Inward FATS

FATS statistics are to be presented by ISIC Categories for Foreign Affiliates (i.e. TICFA) categories, and the recommended presentation format is illustrated in the *Manual*, Table 4, p.67.

Since BOP figures record the sales transactions between residents and non-residents, the first variable chosen for the FATS collection is also sales, so as to have a comparable measure for comparisons between the ‘cross-border’ and ‘commercial presence’ modes of supply. (§4.3)

Additional variables comprise those “required for an adequate assessment of the economic effects of affiliate operations and of measures to liberalize the delivery of services through the commercial presence mode of supply.” (§4.4)

The BOT IIP Survey (Form 40) could in theory be extended to collect information on those recommended variables not presently requested. This may be advisable initially. The recommended procedures for frequency and content of the FATS survey forms are outlined below.

However, eventually the surveys may be undertaken by NSO, and plans should allow for this.

## 3. Compilation of Outward FATS

The recommended approach for compiling statistics on outward FATS variables would be to obtain the information from the Thai firms that own subsidiaries and/or branches abroad. Such data are otherwise difficult to source.

The BOT IIP Survey (Form 40) could in theory be extended also to collect information on outward FATS for those recommended variables not presently requested.

## 4. Compilation Procedures

The procedures for carrying out the FATS surveys, together with a listing of the data to be collected, are set out in Annex B, together with a draft of the FATS survey form. Chapter 6 on Survey and Sampling Techniques further discusses the identification of FATS establishments.

## 5. Level of staffing

The level of staffing required for the implementation of these survey recommendations will depend on which agency is made responsible for the surveys, the degree of cooperation between them, and the number of FDI enterprises identified. Staffing will also be related to the number of variables collected in the survey forms, and the survey frequencies. For example, at first the thresholds for compliance could be set relatively high, and surveys carried out every other year instead of annually. In this case appropriate follow up action could be taken to ensure higher response rates.

## CHAPTER 6: SURVEY AND SAMPLING TECHNIQUES

### A. THE INTERNATIONAL TRANSACTIONS REPORTING SYSTEM (ITRS) LIST AS A SAMPLE FRAME

The movement of goods in international trade has long been measure as part of the collection of customs duties. There is no analogy in services because they are invisible when crossing borders. In Phase III, the review of the various resources available to obtain EBOPS data on the value of cross-border trade in services, revealed several potential sources that could be used to collect international trade in services data.

The ITRS is run by the BOT to collect data for the BOP. It was thought that the commercial banks could perhaps expand their BPM5 codes to EBOPS and that would give a pretty good estimate of the value of trade in services. However, BOT was not interested in pursuing this approach, as they did not think the commercial banks would be willing and able to code to this level. Other problems include:

- Netting out – transactions for which only net payments are made, where firms operate clearing or netting schemes.
- Transactions settled outside the domestic banking system (e.g. via accounts held abroad by residents)
- Transactions of less than US\$50,000 have to be reported separately.

The ITRS could be used as a sample frame of firms reporting exports and imports of services. This would be similar to the Netherlands where, "...a remnant of ITRS based on a simplified bank reporting was maintained to permit the identification of enterprises carrying out international transactions."<sup>17</sup>

Enterprise surveys could be used to directly collect imports and exports of services between residents and non-residents. For this type of survey the ITRS could be used to select representative samples of international transactions.

"The quality of statistics obtained from surveys depends on the appropriateness of the techniques used to design samples, to prepare questionnaires and to process the results, and also depends on the quality of the business register. The latter should be kept up to date and be sufficiently documented to enable an appropriate identification of each survey's target population."<sup>18</sup>

It was not possible to comment on the quality of the ITRS with respect to its value as a sample frame for a future survey without a direct review of its detail records. However, since it is a complete record of all bank transactions and has complete identifying information (except for the missing names for transactions less than US\$50,000, which may be more significant in the service sector), it should be extremely useful for that purpose.

There are no alternatives to using the ITRS because no current and comprehensive list of businesses exists. This is relevant for the very particular universe of trade in commercial services. Perhaps the ITRS list could be supplemented with trade association data or other sources relating directly to services trade.

### B. PRETEST OF THE INTERNATIONAL TRANSACTIONS IN COMMERCIAL SERVICES QUESTIONNAIRE

The questionnaires used by the U.S. Bureau of Economic Analysis (BEA) and Statistics Canada were reviewed. BEA uses multiple, multi-page questionnaires while Canada uses just a single four page form.

---

<sup>17</sup> Measuring Trade in Services, World Trade Organization, Nov 2003

<sup>18</sup> Measuring Trade in Services, World Trade Organization, Nov 2003

BEA's questionnaires are much more detailed and specific, with a great deal more instructional material as part of the questionnaires. BEA also has a separate series of questionnaires for transactions with affiliated and unaffiliated parties, while Canada uses the same questionnaire for both types of transactions.

The major difference is that the BEA questionnaires provide space down the columns for 31 separate country lines (23 of which are preprinted) while the Canadian style has room for only four separate countries across the rows. Respondents who trade a limited number of services with many different countries will prefer a BEA-style questionnaire while those who trade a large variety of services with only a few countries will appreciate the Canadian-style questionnaire. Data processors probably prefer the Canadian-style questionnaire since it is much simpler to set up and automate.

It was decided to try out the simpler looking, more inclusive, Canadian approach as in the questionnaire reproduced in the Annex B. It was hoped that the pretest would give some indication of respondent questionnaire preferences.

### **C. COGNITIVE INTERVIEW**

A cognitive interview attempts to better understand how the questions might function in the actual survey. Do respondents understand the questions being asked? How well they responding and what are they thinking? Respondents are generally instructed to think aloud during their responses. To the extent possible, respondents are asked to talk through how they interpreted the questions, used their understanding to retrieve information, judged the relevance of the question, and choose what and how they would report their answers.

The excerpt below explains what was to be achieved by the cognitive process and how the respondents should interviewed.

*The Cognitive Interview will tell us a lot about respondents' willingness and ability to report and their attitudes about the survey and government statistics in general. So, if you encounter resistance about completing the questionnaire, just try to get them to agree to the Cognitive Interview.*

*Remember, on the Cognitive Interview we are trying to get them to talk as much and as honestly as possible - don't try to cut their answers short or complete their thoughts, as we want to know and understand their thought process as much as we can. Complete the Cognitive Interview with as much detail as possible, i.e., if the respondent gives you a detailed answer that can be summarized with a "Yes" or "No", don't summarize - write down the whole reply.*

The Cognitive Interview also attempted to understand respondents' attitudes to NSO and other governmental surveys, and hopefully was only a first step in this learning process.

The reasons for the low response rate in Bangkok and other large metropolitan areas need to be explored. Clearly, businesses are protective of their financial data, especially on income and expenses, but such a low response rate puts the value of the surveys in jeopardy.

### **D. BRIEF OVERVIEW OF RESPONSES TO THE COGNITIVE SURVEY PRE-TEST RESPONSES**

MOC/DTN provided a table summarizing the responses from 20 firms (out of the total of about 50 forms sent out). These included firms supplying the following services: software (7), telecoms support (3), construction (2), oil drilling (1) and train signaling (1). Five of the software firms, one of the telecoms and the train signaling firm were exporting their services.

Only six firms reported importing services, and for five, this accounted to 15% or less of total purchases, though for the oil drilling firm the proportion was over 80%. The imports of four firms consisted of consultancy services.

The EBOPS service classification definitions were considered to be clear and helpful. There were few responses on whether the sales and purchases information came from the financial or management accounts, five saying it was easy and one found it difficult, whereas one found it impossible because the records were held abroad. None declared whether the figures reported were accurate or just a guess.

Half the persons responsible for completing the form received it in the first place, but only six had read the covering letter. The form was not applicable to six firms, and two persons did not understand it. Eight found the instructions were clear, but five did not. Nine would complete the form given time, but two would not. Two could do it in one day, one in a week, but five would need several weeks.

Most firms thought the survey quite standard or normal, and in general there was a positive attitude to the need of the government to undertake such enquiries. Only six had received an NSO survey before, but sixteen had received other governmental enquiries and the majority were willing to complete such forms. Only five had nominated staff who would fill out the forms, and an EBOPS survey form should be sent to the accounts department in ten cases and to the PR department in six.

Seven firms expressed concerns that the information would not be kept confidential, while six did not have such qualms, but most wanted the government to make their systems more secure.

#### **E. SELECTED ISSUES ON THE “SURVEY OF BUSINESS TRADE AND SERVICES”**

Current survey information on the services sector in Thailand comes from the NSO “Survey of Business Trade and Services.” Additional data on services is reported in the Gross Domestic Product compiled by NESDB, and the Balance of Payments compiled by the BOT.

According to the latest data reported by the NSO covering the year 2003, there are 1,179,313 establishments, employing 3,986,604 persons, with total receipts of THB 210,540,474,000 in the industries covered in this survey. Surveys have been conducted since 1968; the 2004 survey (covering the calendar year 2003) is the 21<sup>st</sup> in the series.

##### 1. Industry Coding and Service Sector Detail

Industry coverage includes the service sector activities below:

<u>ISIC Division</u>	<u>Description</u>
50	Sale, maintenance, and repair of motor vehicles and motorcycles, including retail sale of automotive fuel
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles
52	Retail trade, (excluding motor vehicles and motorcycles), including repair of personal and household goods
55	Hotels and restaurants
70	Real Estate activities
71	Renting of machinery and equipment without operator and of personal and household goods
72	Computer and related activities
73	Research and development
74	Other business activities
92	Recreational, cultural, and sporting activities
93	Other service activities

Five digit TSIC codes are applied based on the description of the activity supplied by the respondent in Item 3 of the questionnaire. There is no service product detail requested on the questionnaire, so verification of the activity description is not possible. Item 3 is reproduced below. Note that this is a translation and may not accurately reflect the original meaning.

*3. Please specify the kinds of goods and/or services by ordering from the highest value of sales or receipts to the lowest.*

---

*(e.g., Wholesale and retail of construction materials, retail sale of clothes and textiles, retail sale and repairing of electric appliances, retail of cars and maintenance, hotel/guest house dormitories, restaurant/bar, labor recruitment and business management consultancy activities, etc.)*

*If you operate more than one type of business, please specify type of business with the highest receipts.*

---

The lack of service product detail on the questionnaire is a major problem because it makes the coding subject to inaccuracies where a description frequently masks the different types of activity that an establishment actually engages in. To their credit, the NSO does attempt to obtain qualitative information on the major activity among other secondary activities; however, coding based on reported service product detail would more accurately reflect what the establishment is actually doing. NSO staff state that the problem lies with respondents who are unwilling to report more detailed breakdowns of their services. In a previous survey, the NSO tried to get simple breakdowns for wholesale trade, retail trade, and services but was unsuccessful due to respondent refusal.

The lack of service product detail is also a major information deficiency due to its importance in the analysis of the data. Analysis depends on service information, whether for markets, potential customers, questions of location and relocation, identifying and locating target markets, locating distributors and resellers, evaluating market share, seeking new business opportunities and expansion. Commodity detail is also necessary for more accurate Tourism Satellite Accounts and not least, GATS specific commitments are inscribed on a product basis.

In the context of the *Manual*, the lack of service product detail in the survey prevents any comparisons with EBOPS data, and with future surveys of international trade in services based on product classifications.

## 2. Foreign Affiliates

The identification of FATS establishments was discussed with NSO. In the Survey of Business Trade and Services, the expansion of “Question No. 5 – Foreign Investment or Share Holding,” as shown below, could identify the FATS establishments in the survey.

*No. 5 Foreign investment or share holding? (Circle only one choice)*

*No..... 1                      Yes..... 2*

*If yes, please fill in the proportion of foreign investment or share holding (circle only one choice)*

*Ten percent or lower ..... 1*

*Ten to fifty percent ..... 2*

*More than 50 percent ..... 3*

*Identify the country of major ownership: \_\_\_\_\_*

However, the following problems would still exist:

- The universe of FATS establishments would not be completely identified, since in a sample survey it is unlikely that all FATS establishments would have been selected for enumeration.
- It may be difficult for very large companies listed on a stock exchange to determine the country of major ownership which could change from survey to survey.

Where a census is designed to reach all service establishments, the questionnaire format would not be convenient to obtain detailed information on ownership from a single establishment. On the present form, basic details are reported on an already full single line, so adding a question on FATS would crowd some other information off the form. On balance it might not be worth adding the FATS questions to obtain data for a very small part of the universe of service establishments.

**3. Sampling Issues**

One of the most persistent, complex, yet crucial problems in collecting data for economic analysis, policy formulation and execution, is the selection of unbiased and representative samples. Sampling for economic surveys is generally much more complicated than sampling for demographic surveys, since the size and contribution of economic units can vary greatly. For most developing countries, even those with trained sampling personnel, the sampling process is difficult. Frequently, expert consultants are called in to provide the sampling plan, estimation procedure, and variance computation formulas.

To its credit, the NSO has designed and selected the sampling plan without any assistance. An NSO information sheet for the survey sampling plan is reproduced below.

**Business Trade and Services Survey 2004**  
**Sample Design**

---

The survey covered the 53 types of business trade and services activity (4 digits code) and the establishments with one or more persons at work. A Stratified Systematic Sampling was adopted. Bangkok Metropolis and regions were constituted strata, while type of activity was constituted as sub-stratum. The sampling units were establishments.

**Stratification**

Bangkok Metropolis and regions were constituted as for strata. Establishments in each stratum were divided into 53 types of activity (4 digits code) and 12 groups according to the number of workers as follows:

Group	1	2	3	4	5	6	7	8	9	10	11	12
number of workers	1-5	6-10	11-15	16-20	21-25	26-30	31-50	51-100	101-200	201-500	501-1,000	>1,000

## Selection of Sampling Unit

The sample selection of establishments was performed separately and independently for each type of activity (4 digits code) and group of establishment. They were selected by using systematic sampling, with a total sample of 25,751 from 1,179,324 establishments.

The total number of sample establishments selected for enumeration by region and group was as follows:

Region	Group												
	Total	1	2	3	4	5	6	7	8	9	10	11	12
Bangkok Metropolis	10,33	3,148	913	424	1,364	908	675	1,295	842	416	238	74	34
Central	3,310	1,154	356	221	375	245	204	370	206	106	58	9	6
North	2,539	945	317	176	237	175	161	257	157	74	30	5	5
Northeast	2,665	1,017	302	183	273	170	143	287	175	69	44	2	-
South	3,048	1,178	345	193	332	184	175	309	181	81	62	7	1
Vicinity of Bangkok Metropolis	3,858	1,607	467	242	377	251	189	346	201	103	67	3	5
Total	25,75	9,049	2,700	1,439	2,958	1,933	1,547	2,864	1,762	849	499	100	51

This sampling plan should result in a representative sample. However, the NSO added a non-response factor to increase the sample size in areas with high non-response, including Bangkok and other large metropolitan areas. This results in more establishment reports to compensate for the low response rate and could result in an unknown bias depending on how these additional establishments were handled.

If sample weights were adjusted based on the response cases, bias may be introduced. It is possible that the response cases have somewhat different characteristics than the non-response cases, so their increased weights would bias the sample towards their characteristics.

If data for delinquent establishments were imputed, there should be no bias, since the sample weights were decided at the time of selection.

Although the sample design allows for the calculation of standard errors, this type of design makes the calculation very complicated. The NSO decided, therefore, not to calculate the standard errors, which makes it impossible to judge the precision and accuracy of the results, because there is no mechanism to minimize the sample size for a given precision. In general, a sample size that is larger than necessary has to be used to achieve predetermined variances and standard errors.

For these reasons, it is recommended that the NSO should look into using a system such as the CHROMY-GEN sampling program. It was developed by the U.S. Census Bureau to help survey designers find minimum cost stratified samples that satisfy multiple variance constraints. A multivariate allocation satisfies target precisions for more than one survey item. It was then adapted for use in

economic surveys that use Poisson<sup>19</sup> sampling (in particular, the U.S. Census Bureau's Annual Survey of Manufacturers) where each sampling unit (establishment in this case) is treated as a separate stratum.

The CHROMY\_GEN program was so named because it implements the multivariate-allocation algorithm described by Chromy (1987)<sup>20</sup>, and it is a general-purpose program. **It is important to note that no coding changes are needed to apply it to different surveys; one simply prepares different input data files.** This makes it much easier to design and select samples; once the methods of constructing files are well known and practiced, each sample design becomes easier than the last.

Additionally, use of a Poisson sampling system allows very easy calculation of variances for all publication or tabulation levels. The variances are calculated for each establishment and, since variances are additive, is carried along in the record just like any other data item. The actual standard errors are then calculated on the variance total for each tabulated cell. This allows the publication of the maximum reliable data possible. Every tabulation cell that meets the coefficient of variation (CV) publication criteria can be published. This is true for any level of industry or geographic area combination.

A drawback to a Poisson system is that the overall sample size cannot be predetermined. There will always be minor differences since the probability of each establishment is compared to a random number and either selected or not. A modified Poisson system, where the probabilities are determined using a Poisson variance calculation and the cases are selected using a systematic sample, does result in a fixed size sample but the resulting variances may be slightly incorrect, especially in cells with small number of selected cases. Some experts object to that. A systematic sample, is one where only the first establishment's probability is compared to a random number and then a "take-every"<sup>21</sup> value determines the remaining selected cases.

A sampling technique has been developed using *order sampling* techniques, specifically *Pareto* sampling, which will result in fixed-size samples and correct variance calculation. More research would have to be done before this alternative could be recommended.

The U.S. Census Bureau has used CHROMY-GEN in several small and large-scale surveys. Some of these are:

- Annual Survey of Manufactures
- Monthly Wholesale Trade Survey
- Monthly Retail Trade Survey
- Monthly Services Survey
- Investment Plans Survey
- Current Employment Statistics Survey
- Origin-Destination Information (sample selected for the U.S. Post Office)
- Rates, pieces, and weights (sample selected for the U.S. Post Office)

CHROMY-GEN is a big improvement over previous sampling processes. No programming specifications need to be written and no coding changes are needed to apply it to different surveys. It is only necessary to prepare different input data files to develop different samples. This makes it possible for survey personnel to take this process into their own hands and (after a little practice) design and select samples with relative ease. CHROMY-GEN, originally written in the SAS programming language, has been re-written into FoxPro, which is much cheaper and more widely available. Moreover, many more persons are able to work in FoxPro.

---

<sup>19</sup> Poisson sampling is a system where each ultimate sampling unit is treated as a separate stratum and is sampled with probability proportional to size. It is uniquely suited to surveys of economic activity where there is great variation in unit size.

<sup>20</sup> Chromy, J. (1987), "Design Optimization with Multiple Objectives," *Proceedings of the Survey Research Methods Section*, American Statistical Association, pp. 194-199.

<sup>21</sup> In a systematic sample only the first case is selected with a random number. The remaining cases are selected by applying an interval number derived by dividing the total universe by the required total sample size.

Although knowledge of programming is not necessary, the user must be computer literate, have a working knowledge of FoxPro and be able to construct and manipulate FoxPro files – and must also:

- be knowledgeable about the data files that serve as the sample frame,
- understand the objectives and constraints of the proposed survey, and
- have some understanding of the sampling precision that is required.

The user does not have to understand the sampling techniques employed, although it may be helpful to be somewhat familiar with elements of sampling technique.

In addition to selecting final samples, CHROMY-GEN can be used in the planning process to determine budgets and prepare alternative survey plans by helping to determine appropriate and realistic sample sizes. Once the basic files are prepared describing the universe, only one file must be revised to determine a new sample size with different variance factors. Therefore, turnaround time is relatively short, sometimes a matter of minutes, leading to increased flexibility in planning, presentation, and revision of survey proposals.

CHROMY-GEN can also have a function to “prove” the sample, by tabulating the results using the weighted sample data and comparing that to the universe sample frame data. The tables can provide simulated sample frame data (including sampling error calculations) showing the level of publication detail the sample can support. In this way, communication between samplers, survey designers, managers and the eventual data users, can be greatly facilitated.

## **F. RECOMMENDATIONS**

### 1. Arising from the Cognitive Survey Pre-test

The officials conducting the Cognitive Survey said it was a useful exercise, and suggested that the following issues be taken into account for the future EBOPS and FATS surveys:

Any list of targeted respondents should be cross-checked with the DBD company register of financial statements and memoranda of agreements.

The respondents should be given adequate notice of the arrival of a survey form, which in most cases should be faxed or mailed to the head of the accounts or finance department.

The wording of surveys should be simple and avoid the use of technical terms.

Generally firms should be given ample time to answer where financial details are called for, especially for those firms whose accounts are compiled in a regional office abroad.

Account should be taken that:

- Firms are easily able to provide total sales figures, but not so easily to isolate sales to non-residents – because managers tend to use aggregate data, and not drill down to individual clients
- Many would prefer just to check boxes, as for multiple-choice forms, rather than write anything
- There is a strong likelihood that respondents will refuse to grant face-to-face interviews
- Voluntary surveys, when no sensitive information is requested, are more likely to be returned.

Where responses are mandatory, it is important that the IIP practice be followed, and personal relations with the largest services firms be developed over time, because it is a deep part of Thai culture not to complete such surveys and the contacts have to be carefully persuaded to give good cooperation.

As firms believe that the information they provide would not be kept confidential, this aspect has to be treated more positively, and the undertaking to maintain confidentiality be clearly stated on the front of survey forms.

## 2. Recommendations Arising from Survey and Sampling Techniques

It is important for NSO to begin moving towards the collection of product information on its survey questionnaires for the reasons mentioned above. This will require the development of separate tailored questionnaires for related service groups. Examples of tailored questionnaires for the services sector were provided to study tour participants and are also available on the Census Bureau and Statistics Canada websites.

In question 5 of the Survey of Business Trade and Services consider including the additional information needed to identify the foreign affiliates as shown above.

Begin to explore more effective sampling designs for economic surveys. The use of CHROMY-GEN as shown above minimizes sample size for a given precision, which would result in cost benefits and increased accuracy. Another benefit would be easy calculation of sampling errors and standardization of the sampling process greatly reducing the time required to design and select a sample.

## CHAPTER 7: CLASSIFICATIONS FOR TRADE IN SERVICES

### A. CURRENT POSITION: USE OF INTERNATIONAL GUIDELINES

In Thailand, various data on services are collected in accordance with international classification guidelines when possible. The NSO for example, has used the International Standard Industrial Classification of Economic Activities (ISIC) as the basis for the Thailand Standard Industrial Classification (TSIC). Its annual survey report on “Business Trade and Services” provides the widest coverage of the service sector in Thailand. The NSO has also made use of the UN Central Product Classification (CPC). Broader statistics of this kind cover both output that is exported, and the activity of foreign controlled firms, which is of interest for trade negotiations.

The Bank of Thailand compiles Balance of Payment data and uses the breakout of the IMF’s Balance of Payments Manual (BPM5) to portray services trade. The data are mainly compiled from the ITRS as specified by the IMF. This comprises foreign exchange records of the commercial banks, where purpose coding reflects BPM5 categories. The Bank complements ITRS information on services by other data from the Ministries of Finance, Defense and Telecommunications, as well as the national airlines and the Tourism Authority of Thailand.

At the MOC/DTN monitors and participates in international agreements both regionally and within the WTO. Thailand’s schedule of specific commitments under the GATS of 1995 and its subsequent amendments drew on the most detailed level of the CPC, when undertaking specific legal commitments on sectors, or used definitions of even greater detail.

Internationally, the broad scope of the GATS has increased both the number of classifications for services and their intersection with the domestic economy. Their importance will be seen below.

### B. ASSESSMENT OF THE CURRENT SITUATION

The assessment leads to a few observations:

1. Although certain use of international norms is made, interviews with Thai officials at the outset of the Project indicated limited awareness of the international guidelines specifically designed for services statistics; and the *Manual*, which embodies the guidelines, was not currently in use.
2. Thailand has a decentralized system for the production and collection of data, and within that system, there is a dependence on several sources of data to compile key flows of services trade. This makes it especially important to have a common classification, or set of classifications, for services trade, so as to achieve internal consistency and enable better international comparisons to be made.
3. At the same time, the number of international classifications, which could potentially relate to trade requires some focus – not every norm can be implemented, nor all selected ones implemented to their fullest extent, over a realistic time horizon.
4. Indeed, existing classifications have extensive detail, suggesting that consolidation of detail would add to manageability and serviceability of the data. This would *not* restrict the implementation of any greater detail as resources and priorities allow.
5. A frequent limitation for users, amongst various published standards, is the lack of linkage between them. Some alignment between a small number of classifications will require certain additional detail beyond categories of the EBOPS classification.

6. Echoing the third point, even a basic set of norms, compatible with the recommendation of *Manual*, would need a flexible time horizon. Nor need there be a rush to cover all memorandum items of EBOPS, if other non-standard aggregations are important priorities for the national compiling authorities.

These observations are largely taken up by the recommendations in Section C below. First, however, the key classifications comprising a framework for Thailand are discussed together with the general approach taken.

### 1. Existing Classifications

Three key classifications bear on the measurement needs for international trade in services.

- The first relates to trade between residents and non-residents of Thailand, or cross-border exports and imports of services products. These flows have long been categorized by the BPM5 and more recently by the *Manual* in an expanded form, known as the EBOPS classification. Services statistics in Thailand have been compiled according to the basic BPM5 breakout, which lists about 20 components. However, the detail of EBOPS, comprising some 60 unique categories, remains to be implemented.
- Thailand is an original member of the WTO, formally entering into its General Agreement on Trade in Services in 1995. For its schedule of specific commitments, Thailand (and other WTO members) drew from a generic and much more detailed list of trade categories, referred to as the GNS/W/120 (the GATS list). These product categories are ordered differently than the later EBOPS groupings, and are more detailed. This detail is often described by codes of the UN's Provisional Central Product Classification (or CPC). There is little current experience in Thailand in using the CPC for compilation and presentation of data according to a GATS format.
- The GATS agreement brought an extra dimension beyond the standard coverage of trade statistics used in National Accounts or BOP statements. The additional dimension is known as Foreign Affiliates Trade in Services (FATS) statistics, and refers to sales generated from the establishment of a commercial presence in the host economy. Since these sales and related variables are usually measured according to industries rather than by products, the *Manual* has developed a listing of industries to portray FATS data. It is based on the ISIC classification, much more familiar to statisticians in Thailand. These ISIC groupings, with a cross-linkage to EBOPS, are known in the *Manual* as ICFA, or ISIC Categories for Foreign Affiliates, and is the third key classification for services trade. Statistics on FATS remain to be developed by Thailand and are the subject of recommendations in Chapter 4.

### 2. General Approach

An overall classification framework, which helps define and organize data in ever more detail, needs to be grounded in the international standards, so as to permit regional and international comparability. These norms, such as EBOPS, the CPC and ISIC, contribute to the capacity to show trade in its traditional format and further, to indicate the scope of today's international firms, whose activity abroad is often a key part of operations.

Secondly, an overall classification framework should avoid having its main constituents operating in isolation. A perennial shortcoming for users has been the limited ability that classifications often have to relate or 'talk' to one another. This is not surprising, as they do not have the same conceptual foundation or structure. For example, exports are product-based (as in EBOPS and GATS), while output/sales/revenues of producers are organized by industry activity (ISIC). Individual companies in an industry often have secondary products that would fall in a different category if they were the main output. Or again, some trade is the domestic production of a host country (known as Mode 3 or FATS) when the WTO classification is used.

An overall classification framework can be termed as a set of linkable classifications.

## **C. RECOMMENDATIONS FOR CLASSIFICATIONS**

The recommendations are discussed in two parts. The first deals with the main schedules being proposed, the treatment of memorandum items and general phase-in over time. The second part provides statistical notes and recommended breakouts on a sector-by-sector basis.

### **1. Main Schedules**

#### **(a) Proposed Set of Classification Schedules**

The specific aim has been to build three reference classifications from the above three international standards, most central to services trade, namely EBOPS, GATS and ICFA/ISIC.

The task has been to identify enough sub-EBOPS items, using the CPC, to enable linkage amongst the three at a medium level of disaggregation. The linkage is designed to be serviceable and not an exercise in perfection. They will provide results in the "detailed towards aggregate" direction, but not necessarily in the other direction i.e. "aggregate to detailed" or "detailed towards more detailed," yet they offer some interoperability between them. This does not detract from any aims of eventually implementing full versions of the international norms, or parts of them. A more attractive or tractable target over time, however, would seem to be to start from a coherent and flexible framework focused on services trade.

It should be noted that the choice of aggregation and detail in the framework proposed here has also been informed by international proposals for the next generation of classifications to be issued from 2007. Some of the anticipated changes are substantial, but appear broadly to be in the direction of greater interoperability between, for example, the CPC and ISIC Manuals – the approach taken here.

The proposed set of classifications is now outlined. The full schedules in table form are given in Annex C, prefaced by a Reader's Guide on how each is to be read.

Note that some sectors retain special codes in this Chapter. Please refer to appropriate list in Annex C for the corresponding explanation.

#### **(i) TEBOPS (Linkage format for EBOPS)**

EBOPS is the key classification for services trade flows between residents and non-residents. Still, some EBOPS categories are limited in their capacity to link directly with the GATS and ICFA schedules, even when the latter are aggregated to a medium level. They require certain expansion, in other words, via CPC coding, in order to link with categories of the other classifications in a compatible way. (CPC Version 1.0 specifications are used here, as the UN has not yet correlated Version 1.1 with EBOPS).

These supplementary CPC codes are variously referred to in the statistical notes and sectoral recommendations at (d) below with respect to TEBOPS; they are identified more explicitly in the TEBOPS and TGATS tables.

#### **(ii) TICFA (Linkage format for ICFA/ISIC)**

This is the only industry- or activity-based schedule of the three reference classifications, the other two being product-based. Its role is to classify FATS, but as FATS will usually take longer to develop, the *Manual* recommends initially using foreign direct investment (FDI) figures as a proxy (in addition to their use as a measure of investment as such). It is recommended here that TICFA be considered to classify both FATS and related FDI information, if greater operational convenience and/or improved presentation is required.

The ICFA table appearing in the *Manual* is essentially a summarized selection from the extensive ISIC Rev.3.0 listing of industries, which the *Manual* has particularly adapted to show industries which produce services. Some goods-producing activities are also shown since nearly all industry sectors, including goods, can produce or buy services. The TICFA has been updated to show the ISIC components in ISIC Version 3.1. Version 3.1 varies little overall from its precursor, 3.0.

The anticipated changes in ISIC 4 could noticeably increase the match between some TICFA categories and EBOPS. The convergence of ICT, with the differentiation of content from the means of its delivery (or 'connectivity') is a central change. In services related to goods production, services supporting agriculture and forestry (but not fishing) will be separately identified; so will the mode of transport, for a range of auxiliary transport services. However, manufacturing on a fee or contract basis continues to be undifferentiated from production with owned materials. The basic industrial processes are the same regardless of trade patterns.

**(iii) TGATS** (Abbreviated version of the GATS negotiators' list, GNS/W/120)

The GNS/W/120 list has been extensively used for guidance by trade negotiators in both the WTO Uruguay, and now Doha Rounds of negotiations on services.

TGATS is a less-detailed aggregation of GNS/W/120, arranged, as indicated above, to link with the statistical breakouts of EBOPS and ICFA of the *Manual*. Its format and coding follow the GATS presentation. Once measured, a recompilation of EBOPS and related details offers a numerical overview of all GATS categories, whether commitments in those categories are scheduled or not. The levels shown here have two functions: along with other broader aggregates, they have a clear role in WTO monitoring and policy reviews. Secondly, the TGATS format acts as a framework within which specific legal commitments (often made in more detail) can be shown, and if desired, shown along with items that still remain to be scheduled.

**(iv) TGATS - SC** (Thailand's Specific Commitments in relation to all GATS sectors)

With a general TGATS framework in place, the opportunity was taken to overlay it with the particular choices appearing in Thailand's own Schedule of Specific Commitments as appended to its GATS agreement. The resulting version of TGATS is titled TGATS-SC.

An examination of TGATS-SC and the Schedule itself, shows detail beyond even the 5-digit CPC's that Thailand used in its Schedule, and is thus beyond the scope of generalized statistics - except as to the nearest parent group. This is common for many WTO members. With the scheduled commitments **highlighted in black**, the scheduled elements can be placed into visual context with other trade flows, which may remain to be negotiated.

Thus, the TGATS-SC framework provides trade officials with a full set of sub-sector elements incorporating the latest specifications (including those for IT-related sectors), as the basis for an eventual complete quantification of trade flows at any level, as selected by policy makers, business analysts and academic or other researchers.

Two other schedules are annexed:

**(v) Abridged ISIC 3.1**

This is reproduced for reference in Annex C and may be of value for national compilers as a framework to review the contents of, or go beyond TICFA, for particular reporting purposes. As with ICFA, less detail appears for the goods-producing sector of the economy.

## **(vi) Relationship to Operating Definitions of Selected Services, TEBOPS**

A set of operating definitions was developed for the Project's Phase IV EBOPS Survey, other than Travel and Transportation, and feature as Schedule C of the Survey document in Annex B. These operating descriptions generally are a condensation of EBOPS definitions, since the full definitions of the *Manual* are often longer or seem more technical to users. It may occasionally be beneficial to add a different description that applies in a practical way for, say, the compilation of imports as compared to exports.

Transportation and travel often have separate sources, or survey approaches, to generate trade statistics of those sectors. They were not surveyed in Phase IV. However, a supplementary listing suggests some operating definitions for the Transportation sector as such, but excludes travel definitions. The Statistical notes section at (d) below discusses an alternative presentation of travel. It operationally combines both the suppliers and consumers of travel services as they can most readily be measured (see Box at Travel).

### (b) Treatment of Memorandum Items

It should be noted that the TEBOPS classification identifies a certain number of Memorandum items. These are shown in the TEBOPS schedule with the nearest related sector.

In practice (if not strictly in principle), a memorandum could appear in place of a standard item in a given national format or, as in the *Manual*, a memo item may appear as an addition to a standard listing. Memorandum items typically serve different analytical purposes; and so have different coverage, concepts or valuations than the main listing - which must, incidentally, add up to the total of all Services in the Current Account of the Balance of Payments. Some service groupings or sub-items relevant to the Thai statistics could thus be considered for presentation as national Memorandum items independent of those in the *Manual*.

The *Manual* recommends the implementation of several Memorandum items as an adjunct to its main list. The list of EBOPS memorandum items in the *Manual* is largely suggested as a later priority. For Thailand, national Memorandum items may well be appropriate for transactions in respect of travel, ICT and logistics, as now explained.

The standard BPM5 presentation divides total travel into travel for Business and for Personal purposes. But for many analyses it would be more useful to see total travel split a different way; that is, to break out how much is spent for the services of accommodation, food and beverages, or local transport within the country visited. Other useful spending breakouts would show recreation of various kinds and even how much is spent on goods bought by visitors. (The latter are buried in with services; and so need to be estimated and taken out for any GATS presentation, because they fall outside the Agreement's scope). It is therefore suggested that this alternative presentation should appear as a Memo item for any national presentation purposes.

Another important reason for introducing national memorandum items is to have a location for services which cross, and/or go outside of, EBOPS boundaries. Information and communication technology (ICT), for instance, includes packaged software (usually classified as goods) and embraces minor parts of other EBOPS categories than the central categories for Telecommunications and Computer services. Logistics also can safely appear as a memorandum item. While it is harder to specify, it can be given expression in terms of some core components of the transportation sector.

More on the definition and coding of ICT and logistics is attached. (See boxes in the Statistical notes and sectoral recommendations section in Annex C. For logistics, see items with superscript 1 in Transport services of the TEBOPS schedule.)

### (c) Phasing and Implementation

In practical terms, a breakout at the level of EBOPS is suggested as an initial priority within TEBOPS. Indeed it is close to the detailed table used in the IMF's database and appearing in its Compilation Guide for the BPM5.<sup>22</sup>

As previously noted, TEBOPS includes the various sub-items needed to link over to a GATS presentation. The number and timing of the implementation of these sub-EBOPS items will necessarily reflect priorities of national authorities. They need not, for example, all appear on a given survey instrument and could well be targeted and tailored to individual sectors.

A last consideration to note is the distinction between classification formats that are used to *portray* statistical output and the categories and definitions that are used internally to *collect* the statistical input. Many countries have evolved their own practices to define categories, or otherwise assign, reported information on internal worksheets. Any number of these line items may then be transferred into output categories.

Output categories, of course, can be organized differently for different presentations. Formats may be for official releases or for use in one-off reports. The point is that the underlying requirement is to have a consistent definition for building up those presentations. Moreover, the flexibility to re-order building blocks to fit other analytical needs, or special-purpose aggregations, may well be seen as valuable in its own right.

While the benefits of a uniform set of definitions at all stages of a statistical process are clearly attractive in principle, it may be more feasible at the outset to gain experience with commonly-defined outputs. This would not, nor should not, preclude use of standard categories in certain surveys on the input side. That would contribute positively, in fact, by enhancing consistency of definitions in the statistical process. Having flexibility on the input side, however, would recognize the practical reliance on non-survey sources, which are common in statistical offices.

### (d) Statistical Notes and Sectoral Recommendations

The specification of TEBOPS categories is given in the following notes. Each category is described in order, with its EBOPS title and reference code from the *Manual*, along with additional recommended breakouts (CPC coding) or alternative groupings, notably for travel. Where a given TEBOPS category is sufficient to correspond with a counterpart category of TGATS or TICFA, then no further breakout of the category is suggested.

#### **Transportation (EBOPS 205)**

The main subdivisions are suggested to be Sea, Air and Other. This is the primary breakout presented in the BPM5. Remaining parts of 214, that is Other transport, excepting sea and air, are listed according to the extended classification of the *Manual*. These are presented in TEBOPS and TGATS with a view to future compilation and reporting requirements.

Specifically, totals of freight, passenger and other for 214 derive ideally from the components that make up rail (219), road (223), or internal waterway (227) modes. Also identified are categories for pipeline transport (231) and supporting and auxiliary services (232).

Further detail is appropriate to align with GATS, or to supply components for a memo item on core Logistics. Transportation components of Logistics include 208, 209, 211, 212, 216, 217 and part of 232.

---

<sup>22</sup> International Monetary Fund, "Balance of Payments Compilation Guide", Washington, 1995, Chapter X, Table 10.1

Rentals of vessels and aircraft with crew are suggested to be shown separately and are defined by CPC coding. Other such rentals would be assigned to 217 under Other transportation services of 214 (or to 232) as they develop in future. The breakouts of pushing and towing services further serve to align with the GATS format.

Maintenance and repair of transport equipment in port - vessels and aircraft - is presently included with Transportation services, but the coverage for GATS seems wider. An option, under consideration for the next revision of BPM5, is to shift many repairs from goods, and consolidate them with a few that now reside in services. For present purposes, it is suggested that at least running repairs for transport equipment be included by mode of transport where known, and where not, allocated to group 232.

Effectively, group 232 will proxy the Other component (217) of Other transport (excluding sea and air) (214).

## LOGISTICS

A partial estimate for Logistics can be made most simply if top-down breakouts of data are available as follows:

- 205 1.1 Sea transport, less 207, passenger services
- 210 1.2 Air transport, less 211, passenger services
- 214 1.3 Other transport, less 215, passenger services and some of 232, (i.e. auxiliary support to all modes of transport not connected to cargo handling, warehousing, and storage, customs brokers and freight forwarders)

Otherwise, if building from the detail, two initial estimates are needed:

(A) the freight components for Rail (221), Road (225, above) and Inland waterways (229) need to be estimated - at least in total - and added to freight by Sea (208) and Air (212). The sum of these components is alternatively represented by 216, the freight category of the summary group 214 listed just above.

### plus

(B) the Other components for Rail (222), Road (226, above) and Inland waterways (230) need to be estimated - at least in total - and added to those by Sea (209) and Air (213). The sum of these components is alternatively represented by 217, the Other transport category of the same group 214.

In addition to the basic freight and other services, a Memo item on core logistics would also cover: (i) support services identifiable with other modes (excluding sea and air), and not relating to passengers, and (ii) support services for more than one mode of transport (per paragraph 3.71 of the *Manual*) and not relating to passengers or tourism. These are the specific CPC items 671, 672 and 679, covering key elements of cargo handling, warehousing and notably, storage, customs brokers and freight forwarders.

Additional logistics items in other categories are not yet identifiable with specific CPC codes. Logistics and supply chain management would appear to be buried in: Postal and courier services (246); IT consulting services (263); general logistics consulting of Business and management consultancy (277), or in Other business services (284). In the latter category are found various security services, which seem to have little reference in some profiles of the logistics sector.

Further discussion appears in Annex C.

### **Travel (236)**

The BPM5 breakout is recommended to continue unchanged as travel spending for Business purposes and for Personal purposes. Within the Personal category, Health (241) and Education (242) are relevant details from the demand side, which complement the categories on the supply side of Health (896) and Education services (895) below.

The most comprehensive data on travel is compiled from the demand side. But increasingly data arising from the supply of services are important, including for use in tourism satellite accounts (TSA).

An alternative breakout of Travel is suggested in the box below.

#### **ALTERNATIVE FORMAT FOR TRAVEL**

An alternative grouping for Travel recommended by the *Manual* (para 3.85) has categories for: expenditure by travelers on goods (which is presently a Memorandum item and needs to be removed from GATS comparisons), for Accommodation and Food and beverage serving services, and 'All other' expenditure. The suggestion is to extend this, beginning with a split to show accommodation separately from food and beverages. A classification proposed for future BOP use goes in this direction, and also splits from 'All other' expenditure the outlays on Transportation, made up of 'local' spending by travelers in the economy visited, (i.e. not the spending to get there and back).

So as to reflect national importance and potential developments, and to better match with GATS and assist with TSA accounts, four further breakouts are suggested of the 'All other travel expenditures' category (EBOPS 871) once local transport is removed:

- 1) Breakouts of Travel agency, tour operators and guide services and of tourist information and reservation services (sought from the suppliers of the services). These are presently placed with another EBOPS category, Other business services (284).
- 2) Outlays on entertainment services.
- 3) Outlays on sporting and recreational services.
- 4) Outlays on personal well-being, such as at spas.

The last three breakouts are demand side items which, like local transport, have no EBOPS or CPC coding.

The spending on Entertainment and on Sporting and recreational services, further serve to complement the international transactions of service providers shown later in TEBOPS (see 10.2.3). It should be noted that recreational services include gambling and casino operations, not separately identified in GATS or ISIC.

### **Communications (245)**

It is recommended to split this standard BPM5 grouping into Postal and courier services (246) and Telecommunications services (247), neither of which would have sub-items for basic reporting. Telecommunications is progressively being taken into the orbit of ICT services (see computer services below). The GATS schedule includes the audiovisual services of 288.

### **Construction (249)**

The coverage of Construction services is given at paragraph 3.98 of the *Manual*, and should include local purchases. It may well be impractical to separate these for inclusion in ‘Other business services’ as originally assigned in BPM5. This said, the complete presentation of the *Manual* itself gives rise to complexities in implementation, so no further breakout is suggested here.

Recording practices vary internationally on whether construction projects longer than a year are treated as quasi foreign direct investments, or as services. Once treated as an FDI project, the work becomes that of the host economy and is no longer a cross-border service. The center of economic interest has shifted, in other words, to the host economy. If that same project happens to be over 50% owned by non-residents, it becomes a FATS transaction (where 50-50 joint ventures and minority ownerships, incidentally, fall underneath the FATS radar). The *Manual*, moreover, considers that Mode 3 of GATS applies if a commercial presence for construction is set up abroad, if only for a short period of time, even though the center of economic interest actually remains with the providing economy. BOP adjustments to merchandise trade can also be required if transactions covered in construction services are already part of exported or imported goods.

### **Insurance (253)**

The international definition with netted premiums and claims appears to have limitations. While the international definition should be compiled to meet reporting obligations, the caveat of paragraph 256 of the BPM5 appears difficult to ignore (“For some purposes – e.g. for use in trade negotiations, total premiums and claims are relevant...”<sup>23</sup>).

A supplemental breakout of insurance is suggested here in the form of a TEBOPS memorandum item to cover, on a gross basis, life insurance, freight insurance, other property and casualty insurance, reinsurance, and auxiliary services including outsourced administrative functions. Such gross recording rules for current account compilation would permit analytical comparison with other service sectors, whether or not in the context of trade negotiations. Instead of reflecting the (increasingly -outsourced) administration of insurance policies, values would reflect risk that is legally and actually assumed by the carrier, rather than the client. For a fuller discussion of the issues and details of presentation is given in Annex C under “Insurance Services and their Classification”.

### **Financial services, except insurance (260) + (887 for FISIM as available)**

Since many view insurance as a component of financial services, the term ‘Financial services, except insurance’ is suggested here in place of “Financial services” in the *Manual*. The term ‘Other financial services’, while slightly simpler, may be unclear when referred to on its own rather than listed just after Insurance.

It is recommended to add Financial Intermediation Services Indirectly Measured (FISIM) into ‘Financial services, except insurance’, where FISIM are defined but not yet quantified. This step would mean greater consistency between the level of services, as now measured in the BOP and by the National Accounts, where FISIM is progressively being included by many economies.

An estimate of FISIM in Thailand remains to be developed, because effort is constrained by the limited detail available in the ITRS system, mainly relied upon for the compilation of services trade. Inclusion as the *Manual* Memo item 887, may be preferred initially.

A further breakout of ‘Financial services, except insurance’ should be explored for future compilation and reporting. Money transfer services are one of many supporting services covered (if not readily separable) under the existing definition of this category. Another area of possible coverage is that of

---

<sup>23</sup> See IMF “Balance of Payments *Manual*,” 5<sup>th</sup> Ed., 1993, para. 257

correspondent banking, where a wide range of banking services are not explicitly charged. This would seem a candidate for a future benchmark study. It would in the process clarify for users and compilers, the relationship between correspondent banking and (a) explicit banking charges already measured, and (b) estimates of FISIM.

### **Computer and Information Services (262)**

A separation of computer and information services is recommended as helpful for GATS, largely because of the News agency services component, which GATS shows separately.

The core computer services are also key components of ICT services. They are undergoing major reorganization in classification systems, as the scope of communication and information coverage - particularly in ISIC - is expanded and then redistributed to reflect internet and related technology.

For the next edition of the IMF BOP Manual, a classification of these products is proposed which would combine EBOPS Communications, possibly including courier and postal services, with Computer and information services, into a new Information technology services group. That new total would be broken out in four ways described as Telecommunications, Computer services, Internet provision services and Other information provision services.

Information provision, however, is not part of the OECD definition of ICT, which is concerned only with the *means* of transmission and not the *content*, and which also includes packaged software usually classified as goods. A detailed discussion of ICT is given in Annex C, both in terms of products and of industries, taking account of the most recently available drafts of the CPC and ISIC, and used in the coding shown in the box below to reflect a more current description of products and activities.

## INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

<b>ICT Products comprise</b>	<u>TEBOPS link</u>	<u>(ISIC 4, 2005)</u>
Telecommunications	247	
Computer / IT services +	263+	
<ul style="list-style-type: none"> <li>• Packaged software, covering systems software and application software (goods)</li> <li>• Computer programming and consultancy services, which generate systems and application software and support it</li> <li>• Computer systems management</li> <li>• Data processing services which host, support and manage business processes.</li> <li>• Maintenance and repair service of computer and peripheral equipment</li> <li>• Web search portals</li> <li>• Licensing of rights to use computer software</li> <li>• Leasing or rental services of office machinery</li> </ul>	(n.a.)	
Wholesaling of computers, peripheral equipment and software		46* (4651)
Wholesaling of electronic and telecommunication parts and equipment		46* (4652)
Telecommunications	247	61
Rental of office machinery and equipment, including computers	272	77 (7330*)
Computer and related activities, which comprise:	263+	
<ul style="list-style-type: none"> <li>• Software publishing of packaged software for systems, applications, games, etc.</li> <li>• Information technology services, such as computer programming, IT consultancy, facilities management support and processing</li> <li>• Web search portals</li> <li>• Repair of computers and peripheral equipment</li> </ul>	(n.a.)	(582) (goods) 62  6312 9511

Note: As distribution largely takes place after the border, aside from packaged software, a product classification for ICT becomes relevant mainly when a commercial presence is established, for a wholesaling function, which is more germane to FATS.

Only wholesaling appears in the industry definition of ICT, based here on OECD reference definitions. Retailing has been excluded so far, as the number of retailers thought to be exclusively selling ICT products was relatively small and not well distinguished by a separate coding.

### **Royalties and license fees (266)**

A total covering patents, trademarks, copyrights and franchises is suggested to be shown. Because the WTO has a separate trade agreement on such intellectual property, royalties are largely out of scope for a GATS-based listing of services, with the exception of franchises.

Coding for intellectual property has moved ahead rather gradually in the field of international classifications. Franchises have an EBOPS coding (891), while the nearest CPC is part of 7334 in Version 1.1. Also out of scope would be software licensing (CPC 7331 of Version 1.1).

### **Distribution services (271)**

Any commissions not already valued in goods would be allocated to Other trade-related services, 271. Few transactions between residents and non-residents would be expected on the wholesaling and retailing of commodities, since such distribution would usually take place beyond the border. For the measurement of commercial presence, GATS Mode 3, however, these services may well be significant.

It is recommended that Merchandizing (or the buying and selling of goods outside the merchant's economy) be given a low priority. A future option being considered internationally may be to include it within goods, avoiding a negative entry in services when proceeds from sales of merchandise fall below the costs of acquisition.

### **Operational leasing services (272)**

This category would be shown on its own without further breakout.

### **Legal services (275)**

This category would be shown on its own, without further breakout.

See also Accounting services, below

### **Accounting and related services (276)**

This category would be shown on its own, without further breakout.

It should be noted, however, that national accounting firms (and law firms), which are expected to apply an international company's accepted professional standards for accounting, usually operate autonomously under the name of an international company and would not be considered majority-owned firms for purposes of FATS statistics, because they have little or no outside equity, and their decisions and transactions are locally controlled. Hence there should be no recording of these in TICFA.

Such firms need to be identified for exclusion from the FATS register, though they would still have service flows classified as trade between residents and non-residents - such as for the right to use the international name, to receive corporate internet service or to access various central expertise.

### **Business and management consulting (277, 285)**

The EBOPS category 277 could be expanded through the addition of Services between related enterprises not elsewhere included (285). Business and management consulting covers both advisory and operational assistance services, while 285 is defined as contributions to general management and overhead expenses which "cannot be specifically classified to any other component of EBOPS" (the *Manual* 3.135). Alternatives are separate compilation, or combination with Other business services of 284. If any of the outlays in 285 happened to be for personal, cultural or recreational services, and could not be identified,

they would be carried into the Other business services of 284. The same potential for overstatement applies with the suggestion here of adding 277 and 285.

A concern amongst those revising the classifications, is that the services of affiliated firms (285) are a catch-all and ought really to be distributed. The potential too for the inclusion of management fees, which might better be treated as dividends, is of course a question of individual respondent reporting, rather than of classification. Category 285 currently exists in any case. Using it for overhead services, which within reason, defy a better breakout, may be superior to leaving a gap.

#### **Advertising services (278)**

This category would be shown on its own without further breakout.

#### **Research and development (279)**

This category would be shown on its own, without further breakouts

#### **Architectural, engineering, and other technical services (280)**

A small modification could readily fill out the coverage of Environmental services, by transferring CPC code 83131 on environmental consulting to 282 below.

A further code is identified for addition to this group, that is, CPC 83139 Other scientific and technical services. It is currently part of EBOPS 284. In the GATS listing, CPC 83139 is assigned to engineering-related services (as shown at Annex table A.III.2 of the *Manual*).

#### **Agricultural, mining and processing services (281)**

This category might also be termed “primary and processing services.” While not so described in the *Manual*, it covers core environmental services, supporting services to primary production, and certain processing of manufactured and other outputs on a fee or contract basis.

282 Environmental services largely consist of waste treatment and de-pollution, and a code for environmental consulting (CPC 83131 is undefined, but is suggested to cover biological and ecological consulting, environmental audits, and impact and site assessments, but excluding engineering projects which happen to be environmental in their purpose).

283\* Supporting services to primary production. Here, specific CPC codes of EBOPS 283 are identified to cover services that are “incidental to” i.e. which facilitate production in agriculture, forestry, fishing and mining.

283\*+ Production contracted abroad, or ‘processing’, covers the production of manufactured goods abroad, and which stay abroad, on a fee or contract basis. The originating party owns the product and is billed for the processing. If the processing facility is in Thailand, the processing charge billed to the foreign originator is included in Schedule A. The charge is shown in Schedule B if payment is made by a Thai originator to a processor abroad.

These transactions are represented by other specific CPC codes of EBOPS 283. To this are added a few CPC codes of 284, also covering fee or contract work. These include, if applicable, services to distribute electricity locally, along with contract printing, publishing and reproduction services.

The significance of fee/contract production of basic crops, or other primary production, remains to be gauged and in any case appears not to be covered in CPC classifications issued to date; no recommendation is made here.

### **Other business services (284\*)**

This comprises a wide variety of services to business, and represents the bulk of CPC coding to that category. The option is available to expand this category by adding 285, Services between related enterprises, n.i.e. (not included elsewhere). See discussion under 277 above.

Within 284, potential may well exist for the separate identification of both real estate and security services.

Real estate is a separate component in the GATS listing and in TICFA. Its CPC coding excludes immovable assets under TEBOPS, but these have to be included for GATS/TICFA comparisons where a commercial presence could also undertake transactions in land and buildings.

Investigation and security services, if not substantial for cross-border trade, may be an activity engaging the services of local staff under FATS. Separate coding (CPC 852) is available for inclusion in TEBOPS and TGATS, and a counterpart is also available to be shown separately within TICFA.

To align with GATS engineering services, CPC 83139, other scientific and technical services, is also identified separately. Lastly, greater GATS precision and future classification changes would be facilitated by the separate identification of veterinary services. These are fairly widely scattered in different classifications (e.g. see supporting services to Agriculture, above or Health, below.) Perhaps of limited weight, this item would be considered for later action.

### **Personal, cultural and recreational services (287)**

This is a higher-level aggregation in EBOPS and is useful for linkage to TICFA. It comprises audiovisual services, education and health services, not already covered by Travel, and a large residual from which other components may be separately compiled, as relevant for services statistics in future. Memo items within this broad area remain to be determined.

### **Audiovisual services (288)**

A breakout of audio-visual services is recommended so as to align with GATS, which places these services with its Communications category.

To assess a wider coverage of royalties beyond TEBOPS 266, it would be useful to isolate the distributive rights for audiovisual products for a limited period or area, such as film screening. The *Manual*, incidentally, has a Memorandum item on audiovisual services which includes related royalties and some other elements that reside beyond the scope of Services (as assets, or goods such as tapes, videos and disks - but without an estimate of the fees-for-use classified to them).

### **Educational services (895)**

This category would be shown as a whole, but components scheduled in GATS for example, may make further breakout relevant for compilation or reporting in future. Tuition and living expenses of students at educational institutions outside their economy of residence are covered within the Travel account (at 242). They cover a wide variety of services consumed by travelers.

Services covered include correspondence courses, internet or televised services, and services provided directly by teachers in host economies, whether as employees or on own account. Services to the education market, such as testing and course development, are included.

### **Health Services (896)**

Two sub-groupings of CPC 896 are suggested for compilation and reporting as relevant. The first breakout to be used for GATS would be for professional services - of doctors, nurses and paramedical personnel - typically provided outside institutions. Secondly, GATS has a breakout for institutionally-provided services. These various human health services may be provided by employees or on own account. They may be provided remotely or on-site.

TICFA covers all Health services, while TEBOPS and GATS cover human health services, leaving veterinary services as the main difference; its CPC codes are identified, should a more precise match with GATS be required. Otherwise veterinary services are allocated to Other business services 284, above.

The significant spending, which can occur, by medical patients in a host economy are covered within the Travel account (at 241). This is analogous to the expenditure of students allocated to the Travel account (at 242).

### **Other personal, cultural, recreational services (897)**

This category comprises a wide variety of services, which are associated with the performing arts, cultural institutions (as libraries/archives, museum and preservation services), sporting and recreational services, gambling and betting (as casinos). Also included are social services, services of personal well-being (as salons or spas offering treatment other than by medical or paramedical personnel of 896), and other personal, cultural and recreational services.

In the case of social and well-being services, it is important to consider that employees or own-account specialists, for example, when they go abroad to deliver their services, may not generate significant export earnings. Most of the transactions would arise from spending by travelers to Thailand, as an attractive destination for these services. Like non-resident students and medical patients, such visitor spending is covered - if not isolated - in the Travel account. If desired, the sources of the travel data could be modified and coordinated to isolate these outlays as an extension of Travel flows. Outward travel for the same purpose would be a useful complement, if measures of spending measures proved to be reasonably obtainable.

### **Government services (291)**

It is noted that services in this category are mostly for the provision of public administration. The fact that a government, at any level, may pay for (or sell) engineering services, for example, will necessitate reclassifying those transactions to engineering, rather than to government services.

Government services, which are largely an exclusion from GATS, are nonetheless an important standard category. Breakouts would follow those set out in the *Manual*; that is, 292, 293 and 294 of EBOPS. No recommendation is made, beyond that of the *Manual*, to use these three categories when breaking out Government services flows.

## **CHAPTER 8: INFORMATION TECHNOLOGY SYSTEMS**

### **A. INTRODUCTION**

Information Technology (IT) is posited as a critical tool in the compilation of the trade in services statistics in Thailand. The key agencies responsible for the generation of trade statistics rely, in varying degrees, on IT for specific tasks ranging from data input or capture to generation of official published statistics.

This chapter presents the key findings and recommendations for the use of IT in the compilation of trade in services statistics in Thailand. The information presented is based on data and information obtained during a one week country visit to Thailand.

One of the primary objectives of the country visit was to obtain first hand, details on the current IT systems and to analyze the data obtained, to determine the extent to which these organizations possessed the capacity either to compile the required statistics, or alternatively, to supply timely and verifiable data to compiling agencies responsible for generating trade in services statistics.

### **B. ASSESSMENT OF IT ENVIRONMENT OF SELECTED AGENCIES**

The following agencies were interviewed by the IT consultant:

- The National Statistical Office (NSO);
- The Bank of Thailand (BOT);
- The Ministry of Commerce/Department of Business Development (DBD); and
- Revenue Department, Customs Department and Excise Department, Ministry of Finance.

These are the key agencies involved in the compilation process. While several other agencies were identified as producing data, these four agencies are the primary statistical producers and are the focus of this chapter.

Summary information on each of the agencies interviewed is presented below. It focuses specifically on areas that impact directly on the agency's ability to process or to supply data on trade in services.

#### 1. The National Statistical Office

The NSO is the core body responsible for Thailand's statistical activities including:

- the collection, compilation and dissemination of basic statistical data;
- providing recommendations relating to statistics;
- organizing training courses on statistical methods and computer data processing; and
- serving as the statistical data bank of the country.

An interview was conducted with personnel from the Information and Communication Technology Center (ICT Center), to obtain information on the current ICT infrastructure, data processing procedures and overall capacity. The following were identified as the key functions and responsibilities of the ICT Centre:

- Planning, supporting and promoting the use of information;
- Developing computer systems for the processing of data and information systems; for managing the data warehouse and office database;
- Managing the computer system;
- Preparing and processing data for censuses and surveys;
- Controlling and maintaining the computer network system; and
- Coordinating network services and the exchange of statistical data with other government agencies, government enterprises and international organizations.

The ICT Centre comprised eight functional groups and one General Administrative Branch. The key responsibility of each functional group and the current level of staffing are presented below.

<b>Group</b>	<b>Personnel</b>	<b>Key Responsibilities</b>
Research and Development Group	5	<ul style="list-style-type: none"> <li>▪ Support the NSO, in developing ICT master plan.</li> <li>▪ Look at new IT Technology.</li> </ul>
Computer and Network System Development Group	12	<ul style="list-style-type: none"> <li>▪ Network and hardware infrastructure administration and support.</li> </ul>
Data Processing System Development Group	10	<ul style="list-style-type: none"> <li>▪ Develop data processing system for processing of data, including edit checks and tabulation plans.</li> </ul>
Information System Development Group	9	<ul style="list-style-type: none"> <li>▪ Responsible for dissemination of information.</li> <li>▪ Manage website.</li> </ul>
Electronic Data Development Group	10	<ul style="list-style-type: none"> <li>▪ Analyze census and survey data.</li> <li>▪ Develop data warehouse.</li> </ul>
Provincial Information and Communication Technology Support Group	8	<ul style="list-style-type: none"> <li>▪ Manage data collection operations in field at provincial level.</li> <li>▪ Support provincial offices with data capture</li> </ul>
Data Preparation Group	51 80 Temporary	<ul style="list-style-type: none"> <li>▪ Edit coding and data entry via keying or electronic data capture</li> </ul>
Computer Operation Group		<ul style="list-style-type: none"> <li>▪ Responsible for production of statistical output</li> </ul>
General Administration Branch		
Data Dissemination Division		<ul style="list-style-type: none"> <li>▪ Publications</li> </ul>

The NSO's network infrastructure is a well-structured environment as illustrated in Figure 1 below. It provides connectivity to the remote Provincial offices via a 2Mbps (mega bits per second) leased line.

From a security and redundancy standpoint, the network comprises a Checkpoint firewall solution, Virtual Private Network (VPN) facility for secure remote access, a DMZ<sup>24</sup>, a Radius Server<sup>25</sup> and anti virus software. Appropriate redundancy systems are also installed. The hardware environment comprises IBM mainframe computers, personal computers and other dedicated servers. Intel based desktop computers are used with Microsoft Windows client operating systems.

The NSO Software Environment comprises a number of specialized applications. DB2 is used for the primary Enterprise Database Management System (EDMS) on an IBM mainframe computer. Also, the NSO has developed a data warehousing solution that currently incorporates data from the 2003 agricultural census, for which a DB2 database engine is used. Data marts are available also for several other surveys, including the Health and Welfare Survey 2003, the Manufacturing Industry Survey 2004 and the Child and Youth Survey 2002.

SAS and SPSS are used for statistical data processing while for application development, a combination of tools including Visual Basic and Visual Basic-.NET, Visual FoxPro, Power Builder, ASP and Visual Age for JAVA were identified.

Given that one of the primary functions of the NSO is the collection of primary data via sample surveys and censuses, the issue of data capture is extremely important in the current operating environment. Three data entry systems are used within the NSO:

- Manual keying of data;
- Data input via a Personal Digital Assistant (PDA) system; and
- Automated data capture comprising Intelligent Character Recognition (ICR), Optical Mark Recognition (OMR) and Optical Character Recognition (OCR) technologies.

Using the traditional manual data entry system, the operators read completed forms and manually enter the data into the system via key stations. This is done at the provincial level and electronic files are transferred to the main office for validation and processing.

The PDA system was introduced in 2003 in an effort to develop a paperless data capture system that facilitated quick and efficient access to data.

---

<sup>24</sup> A DMZ or De-Militarized Zone is an area that exists between 'Trusted' and 'Untrusted' networks to provide additional levels of security whilst enabling external access to information.

<sup>25</sup> Remote Authentication Dial-In User Service (RADIUS) - a multi-user client-server security protocol used in computer networks to provide remote user authentication and accounting.



*Figure 1: NSO Network Infrastructure Diagram*

Questionnaires and databases are developed using Microsoft Visual Basic.NET programming and published to the NSO website. These files are downloaded at the Provincial Statistical Offices onto handheld devices that are used in the field, instead of printed forms. Interviews are completed on portable computer devices (pocket PCs), following which each device is synchronized with a PC to download the completed forms into a database that is e-mailed to the main office in Bangkok.

While this method of data collection provides a good alternative to manual data entry, it presents its own set of challenges, particularly with respect to the type of questionnaires that are to be administered, as well as an aversion on the part of some enumerators to technology. As a result, this system is currently restricted to Opinion Surveys that have predominantly pre-coded responses.

Automated data capture was introduced for the last Population and Housing Census. Using Verity Teleform, a data capture and forms processing solution, and production scanners, completed census questionnaires were scanned and data verified and exported. This procedure yielded data in a notably shorter timeframe compared to the traditional approach to keyed data entry.

The NSO has yet to apply this technology across the board in the conduct of other social and business surveys.

The availability of adequate personnel currently poses a challenge to the NSO, because those who retire are not being replaced. As a result, those remaining are required to perform all the tasks, which poses the risk of potential setbacks in the key operational activities.

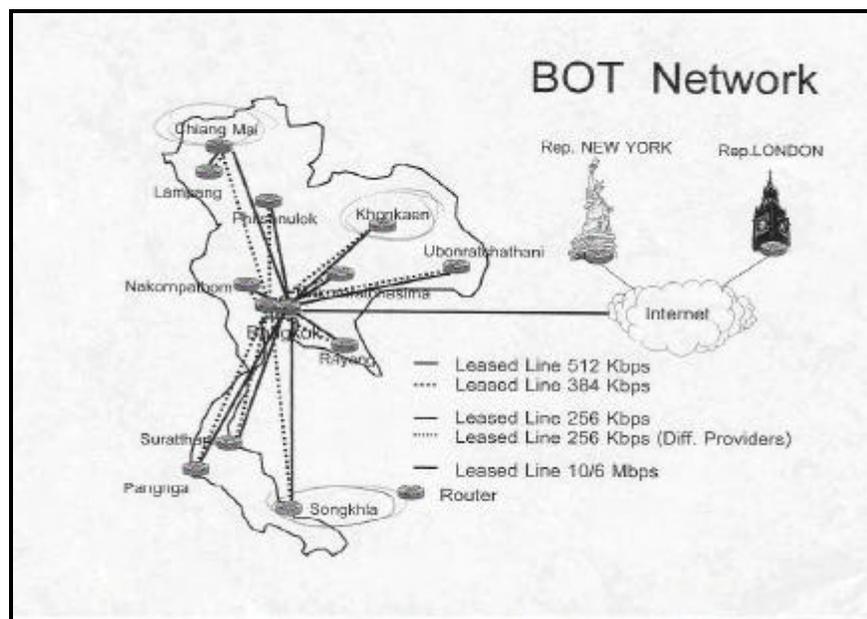
Overall, a good IT infrastructure networking environment exists with proper security systems and data redundancy. It demonstrates that the NSO has the capacity to assist in the collection, processing and supplying of relevant data, in the appropriate format(s) to the relevant compiling agency. An overdependence on too few personnel may however, impact the pace at which these data can be made available.

## 2. The Bank of Thailand

The ICT environment of the BOT is managed by the Information Technology Department, which comprises four Offices – Business Integration, Business Solution Delivery - Office 1, Business Solution Delivery - Office 2 and Technical Management and Operations.

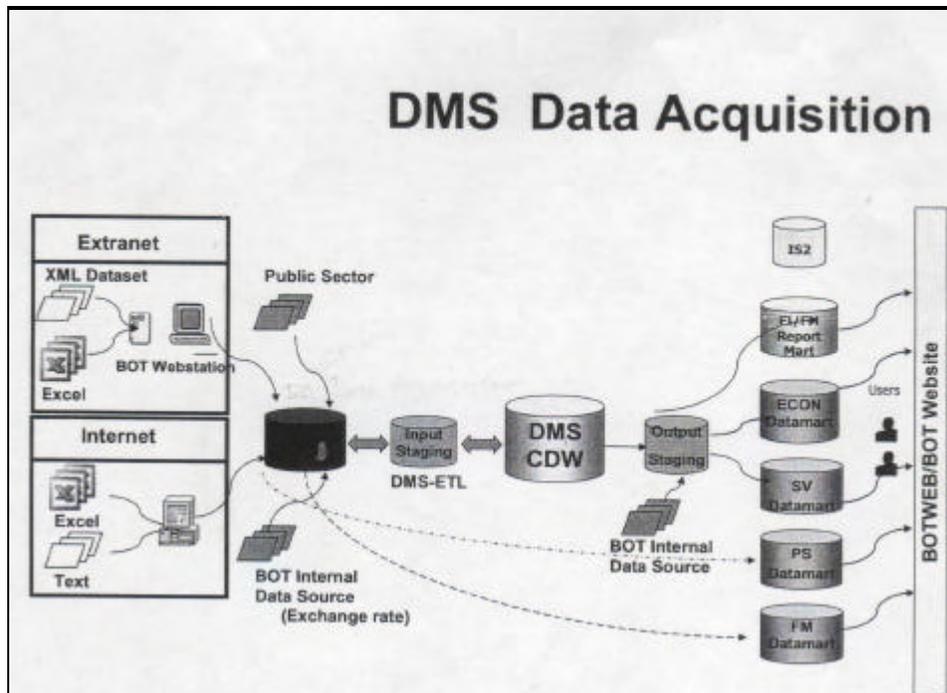
The main office in Bangkok is interconnected with several remote sites throughout Thailand via leased lines as well as with London and New York via an internet connection. A backup site forms part of the BOT network infrastructure (see Figure 2).

The operating system environment is a mixed one and comprises a combination of UNIX, Microsoft Windows and Novell Netware servers. The majority of servers (175) are Microsoft Windows based servers, 20 are UNIX based comprising SUN Solaris and IBM AIX, while the others (38) are Novell Netware servers.



**Figure 2: BOT Network**

The BOT is the agency with responsibility for compiling the balance of payments for Thailand. Data storage and processing activities are managed via the Bank's Data Management System (DMS) a comprehensive data warehousing solution (See Figure 3).



**Figure 3: BOT Data Management System**

The DMS facilitates submission of data via the internet, as Microsoft Excel or text files, as well as via a secure extranet facility, through which data can be submitted in XML or Excel format. These data are combined with other internal data and stored to an internal staging area where they are subject to Extract, Transform and Load (ETL) procedures. ETL is a data integration function that involves extracting data from external sources, transforming it to fit business needs, and ultimately loading it into the Central Data Warehouse (CDW) and/or function specific data marts<sup>26</sup>. Data from the ECOM data mart are used in the compilation of BOP statistics.

The BOT uses Oracle as its primary database application, as well as Microsoft SQL Server.

This IT environment is well organized and among the best identified during the country visit. The DMS provides an excellent fulcrum around which much of the data processing and data management requirement of the BOT are met. The IT personnel have a good understanding of their roles and responsibilities and show a commitment to adapting to new requirements once proper guidelines are provided.

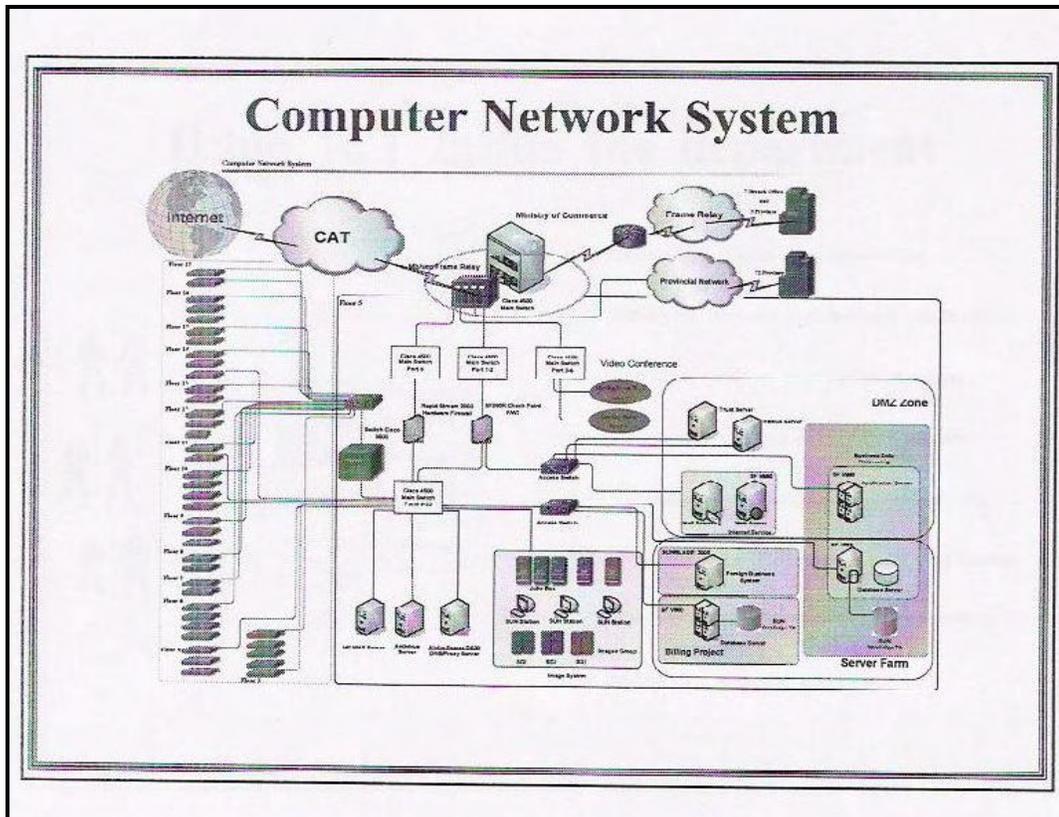
In instances where specific skills may not be resident, or in instances where appropriate personnel may not be readily available, the BOT is supported in its IT initiatives through outsourcing arrangements.

### 3. The Ministry of Commerce/Department of Business Development

The MOC/DBD is responsible for the registration of all businesses operating in Thailand. Its IT functions are the responsibility of The Information Technology Center that is responsible for controlling and managing the computer systems, including the network infrastructure, hardware and software.

<sup>26</sup> A data mart is a subset of a data warehouse, that is typically designed for use by a single department or function. Whereas a data warehouse combines databases across an entire enterprise, data marts are usually smaller and focus on a particular subject or department. Some data marts, called dependent data marts, are subsets of larger data warehouses.

The current network system is part of the Ministry's infrastructure (see Figure 4). Frame relay connections provide linkage to provincial offices. The network comprises web, mail and application servers, and an imaging system. The Intranet site is installed on a Sun Server.



**Figure 4: DBD Network Infrastructure**

In addition to the imaging solution, that is used to digitize and store financial records and other relevant paper documents submitted by registrants, the IT Center manages the database of all business registrants. This is achieved via an Oracle data warehouse that stores registration details for each registered company. Data from this system are passed to the Revenue Department for its revenue collection functions.

Summary financial information is published for each company on the DBD website.

Plans are currently being considered by the DBD to provide linkages to other agencies such as the Revenue Department of the Ministry of Finance and to develop a data exchange system based on open standards, such as XML.

The IT functions are the responsibility of only a few individuals, and as a result, the need was expressed for assistance in IT-related initiatives.

The DBD current environment allows them to maintain the critical data and information required for their operation. Like most of the other agencies, there is proper connectivity with remote sites, though the speed of these connections may sometimes be slow and cause some degree of concern.

To the extent that the DBD may be required to contribute data to the services trade statistics project, their current database system will allow for the export of these data in the appropriate formats. From a standpoint of providing other critical human inputs however, the DBD may not be in a position to extend itself beyond its current IT obligations, given its limited human resource base.

#### 4. Ministry of Finance/Revenue Department, Customs Department and Excise Department

##### *(a) Revenue Department*

The Revenue Department provides a key revenue collection platform for the government of Thailand. It is the highest tax collection agency under the Ministry of Finance and is responsible for collecting a range of individual and corporate taxes.

Given that the Revenue Department was identified as one of the agencies that could potentially supply data to the compiling agency, an assessment of their existing IT systems was undertaken.

The IT environment comprises two mainframe computers and as many as 772 dedicated servers, providing a range of functions. The entire network environment hosts approximately 25,000 personal computers and notebook users and is a mixed operating system environment comprising Unix and Linux, Windows 2000 and 2003 Advanced Server, AIX, a UNIX platform developed by IBM and OS/390, the operating system most commonly installed on its S/390 line of mainframe servers.

The DBMS systems used by the Revenue Department include DB2, which houses the Department's main data warehouse, Oracle 9, Microsoft SQL Server 2000 and MYSQL<sup>27</sup>.

The Department's core tax application, **e-Revenue Web Services**, is a web-based solution, developed in Microsoft.NET, that is accessible via the internet and corporate Intranet site. Some of the main tax applications include:

- TIN - Checking for validation and existence of Tax Identification Numbers (TIN) and Personal Identification Numbers (PIN).
- TCL - Providing information on the total tax collection of the Revenue Department from all tax types and tax return forms.
- CIT - Providing basic information on businesses, which is grouped by industry sector.
- VAT- Providing comprehensive information on Value-Added Tax registrants.

The Revenue Department exudes a progressive IT culture and has shown a high degree of commitment to providing easy access to data, services and information via its website. The database systems and applications used are consistent with emerging IT trends and places the agency in a good position to support the services statistics project if required.

##### *(b) Customs Department*

The Customs Department is one of the government agencies under the Ministry of Finance. Its main functions and responsibilities include:

- Collection of Customs taxes and duties;
- Collection on behalf of other government agencies, of value added tax (VAT), excise tax, and municipal tax;
- Supervision of imports and exports, to ensure compliance with relevant laws and regulations;
- Prevention and suppression of smuggling, tax and duty evasion, including other Customs offences;
- Promotion of manufacturing and exports through tax measures; and
- Facilitation of international trade.

---

<sup>27</sup> MYSQL is one of the world's most popular open source databases.

The Customs Department is organized into three functional groups. The Information and Communication Technology Bureau falls under Group 2, which is responsible for the development of information technology.

The network environment of the Department is well structured, with a high-speed gigabit network comprising a call centre, Sun servers, firewall solutions and an E-Pay system. A LAN/WAN environment provides connectivity between the main offices and all the satellite districts, with the appropriate security infrastructure.

The Department data are stored in an Oracle 9 database, which will allow it to supply data to, or integrate with, other database systems in the medium to long term.

*(c) Excise Department*

The Excise Department is the agency responsible for the collection of excise tax on commodities and services in Thailand, under approximately 20 categories, guided by the Excise Tax Act and Excise Tax Tariff rates.

The database comprises approximately 35,000 businesses. Businesses registered with the Ministry of Commerce are required by law to register also with the Excise Division.

Services sector companies are required to declare their total sales figure on a monthly basis. Figures submitted by companies are verified by officials who are responsible for monitoring businesses. Official checks are made to production sites, while in other instances, reference is made to the company's financial statements. Generally, however, it is harder to verify the data supplied for companies in the services sector.

There are approximately 72 persons in the Department. These include programmers, database management personnel and data entry operators.

The Department's WAN comprises 210 interconnected offices spread across the various provinces. The network comprises Sun servers as well as Windows based hardware. Internet connection is provided via a 128K leased line. At present, the Excise Department does not have a VPN.

There are system redundancy backup servers both for the database system and also for application servers.

The Excise Department uses Microsoft Windows as part of its client server environment and Sun servers and an Oracle DBMS for its core applications, which were developed in house. The Department is proposing to introduce several web-based applications in the not too distant future.

The Oracle DBMS is used to house the main data compiled by the Department and uses two systems to populate the database. A manual data entry system is used for businesses making payments at offices. An online tax system through which data are entered into the Oracle database, is used by some 20 larger businesses in the Bangkok metropolitan area.

Data are compiled on a monthly basis and comprise the following details:

- Name of business;
- Company profile;
- Type of tax(es) associated with the company;
- Address of business;
- Quantity of items produced for sale; and
- Value of commodities

The current system is insufficient to meet the growing needs of the Department and as a result, a project is underway to expand the IT hardware systems capacity and is expected to be completed in 2005.

The Department adheres to strict confidentiality on information sharing practices and does not share company specific data with other agencies, for which only aggregated data are made available. There is some degree of collaboration with Customs and Revenue Departments.

The Department, subject to the proper institutional arrangements, would be able to provide the data required in the appropriate electronic format.

## **C. OVERALL ASSESSMENT OF IT CAPACITY OF AGENCIES INTERVIEWED**

### 1. Hardware Infrastructure

Overall, the current level of hardware infrastructure is good. Physical networks are well organized and documented with appropriate levels of security and redundancy incorporated into the design. The agencies interviewed have well structured LAN/WAN infrastructures, with the appropriate hardware redundancy systems.

They have access to high speed internet connections. The NSO and DBD in particular, highlighted some limitations to available bandwidth for internet access and data exchange across their wide area networks. For example, the DBD obtains its internet access from the Ministry of Commerce, and as a result does not have autonomy over bandwidth management.

To the extent that the services trade statistics project identifies the need for interconnectivity and centralized database systems, there is a need to assess the needs of each agency with respect to bandwidth available, to ensure there exists the capacity to operate on a fully integrated database environment.

It should be noted that while each agency has a relatively good LAN/WAN infrastructure, at present there is no interconnectivity among the various agencies. While interconnection via a ministerial backbone would provide for the development of an integrated database system and would minimize repetition of data across agencies, it is not a prerequisite for the compilation of the required statistics on trade in services in the short term.

A good example of how an interconnect system may facilitate several organizations, relates to the establishment of a centralized Business Register that can be referenced by the relevant agencies. For example, the DBD is the agency responsible for the registration of new businesses in Thailand, and the database is shared with the Revenue Department which assumes responsibility for maintaining it. However, no mechanism exists at present that allows the DBD to access the updated database from the Revenue Department.

The NSO Register of Establishments is a separate database, which may afford easy data reconciliation because of the different identification schema and classification codes used for the same establishment.

Several agencies request that companies submit audited financial statements to corroborate reported data. Clearly, it would be better if these statements could be submitted once to a single agency which would have the authority to grant electronic access to the digitized record by other properly-authorized agencies.

### 2. Database Systems

A primary concern, when examining the EDMS used by the various agencies, was the extent to which data could be transferred to the compiling agency, from its existing storage system, in a format that was in the first instance compatible with the processing system used and could be easily imported and manipulated for use.

The agencies interviewed utilize database systems that are based on **Open DataBase Connectivity** standards. ODBC is a standard database access method, developed by the SQL Access group in 1992, with the goal of making it possible to access any data from any application, regardless of which database management system (DBMS) is handling the data.

ODBC manages this by inserting a middle layer, called a database driver, between an application and the DBMS. The purpose of this layer is to translate the application's data queries into commands that the DBMS understands. For this to work, both the application and the DBMS must be ODBC-compliant -- that is, the application must be capable of issuing ODBC commands and the DBMS must be capable of responding to them.

Oracle 9 appears to be the de facto DBMS application used within the Thai IT environment and provides a shared platform for future database integration initiatives. IBM DB2 is also common, as is Microsoft SQL Server 2000. The latter however, is never used exclusively by any agency.

Within the context of the services trade statistics project, the database systems available are capable of delivering good performance, scalability, and reliability for developing and supporting enterprise-class business applications, given the ability to, among other things:

- use powerful extraction, transformation, and loading (ETL) tools;
- automate routines that extract, transform, and load data from heterogeneous sources;
- implement replication with heterogeneous systems;
- perform rapid, sophisticated analysis on large and complex data sets, using multi-dimensional storage;
- use multiple dimension types for flexible business analysis;
- conduct rich data analysis and use data mining capabilities;
- ensure applications are secure in any networked environment, with role-based security and file and network encryption; and
- connect to OLAP<sup>28</sup> cubes, using the Web with no additional programming

The data warehousing capabilities of almost all the agencies interviewed demonstrate an understanding and capacity to properly organize and manage large volumes of structured data. The NSO has employed data warehousing technologies in its operations, while the BOT's DMS provides an excellent interface for the capture, processing and storage of information.

### 3. Personnel

The implementation and maintenance of an efficient IT system will depend to a large extent on the quality and availability of appropriate personnel. Based on the systems currently available, it is reasonable to conclude that each of the organizations interviewed has access to the requisite skills (Systems Analysts, Database Administrators, Application Developers and Programmers) required for implementing and managing their various database systems and IT environments.

The NSO and the DBD, reported that they experienced challenges on the availability of personnel. At the NSO, the government's policy of not replacing persons who retire from service, means that there is increasing dependence on fewer persons to do all the tasks, and in some instances, more. The DBD indicated too that the current size and competencies of their IT personnel were inadequate to meet the varied requirements of the department.

A direct solution to solving the issue of staffing has been the practice of outsourcing networking infrastructure and application development services to private service providers. This system seems to work well and is used by all agencies. There is the need, nonetheless, to ensure that critical functions

---

<sup>28</sup> On-line analytical processing (OLAP) is a term used to generically refer to software and applications that provide users with the ability to store and access data in multi-dimensional cubes.

remain resident within the various agencies and to ensure that appropriate levels of recruitment and training are provided for these functions. This is extremely critical, given that the compiling and processing of trade in services data will require additional levels of effort that extend beyond the typical workload of some agencies.

## **D. RECOMMENDATIONS**

### 1. Surveys

One of the primary considerations guiding the recommendations for an IT system for the processing of trade in services statistics, hinges around the method used to collect the required input data. The compilation is not currently based on data generated from a formal business survey, but relies instead on administrative data from disparate data sources, prime among them being the ITRS.

Certain developing economies, such as the Organization of Eastern Caribbean States (OECS), for example, rely on a structured business survey for compiling balance of payments statistics and have successfully developed customized applications that facilitate the input processing and publishing of data generated from surveys. Given the present method of compilation in Thailand, this is not an available option.

### 2. Data Management Systems

One of the primary objectives of the IT component of the services trade statistics project is to provide guidelines for the implementation of an efficient system *that integrates well with already established statistics systems*. Therefore, it is recommended that the BOT DMS be used to generate the required trade statistics, which is the most feasible option for the following reasons:

- The DMS is currently being used to produce balance of payment statistics;
- The system is designed to accommodate data from a variety of disparate data sources and data formats;
- From the standpoint of the BOT, the minimum requirement has been identified as the ability to supply the data required in electronic format.
- The present extranet facility negates the need for external suppliers of data to be part of an integrated network environment;
- BOT IT personnel have the capacity in house to develop any special loader programs or data submission templates required to accommodate new data; and
- The development required using this approach would be achieved in a substantially shorter timeframe and at a significantly lower cost than would be required to develop a new system.

As a prerequisite to ensuring that the proposed recommendation succeeds, the following should be accomplished:

- All new data items required for the compilation of the required statistics must be clearly identified;
- The providers of each data item must be identified;
- The BOT must coordinate with each of the respective data providers to determine the route, method of delivery and format in which the data are to be provided;
- The appropriate business rules regarding the treatment of each data item in the compilation of the required statistics as well as the new classification systems must be documented;
- The BOT must make the appropriated adjustments and enhancements to its current system to facilitate the generation of the required statistical output.

Details provided in the Compilation Notes in Annex A would prove useful for these purposes.

### 3. Speeding Compilation by Automation of Questionnaires

One of the key characteristics of good compilation practice relates to the timeliness with which the data are made available to end-users. In many organizations, the pace at which data can be disseminated via publications is determined by the extent to which these data can be entered into a processing system in the shortest timeframe. In the event that some of the data required for the compilation of statistics must be collected via survey questionnaires, consideration should be given to utilizing electronic form submission, automated data capture, or form processing technologies where applicable. The NSO currently has at its disposal Verity Teleform, which was used to process the last census conducted. This technology has not been introduced in the processing of some of the standard establishment surveys, and it is recommended that due consideration should be given to this possibility.

To the extent that the BOT conducts the *Survey on International Investment Position* and is being encouraged to consider adding a section on *International Transactions in Services and Income* to this exercise, the BOT should consider the acquisition of Verity Teleform which could be used to efficiently capture, validate and export data directly into the appropriate database system in a significantly shorter timeframe when compared to manual data entry procedures.

Alternatively, if a specific survey activity is used as an alternative to modifying the *Survey on International Investment Position*, data capture technology can assume a similar role in this process.

### **E. CONCLUSION**

The main issues discussed in this chapter are summarized for ease of reference:

- Agencies generally have good networking environments, despite the absence of an inter-agency network backbone;
- All agencies utilize DBMS applications that will facilitate data transfer and the exchange of data based on ODBC standards;
- There is a healthy culture with respect to the implementation of data warehousing systems;
- Consideration should be given to establishing a centralized Register of Businesses that can be used by all agencies;
- Given that Thailand relies primarily on administrative data to compile BOP statistics and given too that only limited categories of EBOPS statistics may be produced in the short term, the most feasible option available with respect to the adoption of information technology, would be for the BOT DMS to generate the additional statistics required;
- There is the need to clearly identify all data required and to verify whether these data are indeed available and from whom;
- Once the source of these data are identified, guidelines for the submission of these data must be agreed upon by the BOT and each submitting agency;
- Where possible, data capture technologies and the submission of data via electronic forms, should be exploited by the NSO and BOT in particular, to fast track the compilation of statistics.

## CHAPTER 9: CONCLUSIONS

### A. INTRODUCTION

The objective of this project is to establish an efficient statistics collection system for the services sector that integrates well with already established statistics systems. Taking this request into consideration, this report provides guidance on how to implement the recommendations established in the *Manual* in Thailand. The Chapter begins with a discussion of horizontal issues that are important in creating an environment that is conducive to establishing an efficient system that would be applicable to all statistical collection in Thailand. Sections B and C summarize the most salient points discussed in the report and discuss recommendations for implementation over two phases, Phase I: Inter-Agency Cooperation and Phase II: The Survey Phase.

Implementation work on the recommendations of this final project report must be seen in the context of MOC giving support to exports, the need of MOC to be able to analyze the likely impact of opening up the Thai services market to foreign firms, and its mandate to maintain the company registration procedures, which is important in relation to producing a national business register.

### B. HORIZONTAL ISSUES

#### 1. Establish a National Business Register

As discussed in Chapter 3, the national business register is the complete directory of all business in all of Thailand. In order to move to the next level of economic census/survey technique, it is essential that the NSO construct a modern business registry. This list is best assembled and maintained by regularly collecting information from the MOC/DBD, the Department of Revenue and the Social Security Administration. This list should fall under the responsibility of the NSO, either under the new Statistics Act or under the Master Plan. Once this list is complete, it must be maintained regularly by the NSO. Once the Master Plan is implemented, the conduct of surveys will be even more decentralized, therefore, this should remain a core function of the NSO from which other Ministries may draw upon to create the necessary universe lists and sample frames. With a view to collecting services statistics, once the national business register is established, the universe list should be cross referenced with the BOT's ITRS and the IIP and with the MOC/DBD.

#### 2. Clarify Laws

##### *(a) Data Sharing Between Agencies*

With a view to maximizing value to government and reducing the burden on respondents who currently are required to supply duplicate information to various agencies, the law should explicitly provide for data sharing amongst government agencies for statistical and analytical purposes. It should clearly state the nature of the information that may be shared (i.e. personal, corporate, "one way" tax data), conditions under which identification may be provided or should be suppressed, the nature of exclusions, if applicable, the direction which the information may be shared, and the treatment of information once shared, such as whether the data is protected from legal process for tax, investigative, or regulatory purposes. The method in which individual information can move from one government agency to the other to be shared for purposes of statistical integration and effective analytical work should also be specified in the regulations. All affected survey forms should include language summarizing the above and could include language such as the following:

THIS REPORT IS REQUIRED BY LAW. THE SAME LAW PROTECTS THE CONFIDENTIALITY OF YOUR REPORTED DATA, WHICH MAY BE USED ONLY FOR STATISTICAL PURPOSES. THE DATA CANNOT BE USED FOR

PURPOSES OF TAXATION, REGULATION, OR INVESTIGATION. COPIES  
RETAINED IN YOUR FILES ARE ALSO IMMUNE FROM LEGAL PROCESS.<sup>29</sup>

The forthcoming Statistical Act and Master Plan, the Official Information Act, in combination with the regulations, must provide the basis for a sufficient interchange of information between these official agencies.

*(b) Duty of Confidentiality, Enforcement and Penalties*

The Statistical Act, the Master Plan, the Official Information Act and the regulations should also clearly establish a uniform duty of confidentiality for all agencies that will have access to the confidential data and this duty must be accompanied by sanctions if those obligations are not heeded. The penalties must be sufficiently stiff so as to have a deterrent effect. To protect the integrity of the system, provision must be made for enforcement.

The cognitive survey demonstrated that the public perceives a weakness in the treatment of data collected by the government and expressed a desire that this information be kept more secure. This is an opportunity to strengthen the obligations and inform the public of the precautions taken to protect the data collected.

3. Establish a Central Authority for Coordination Purposes

The law should ensure that there is a central authority with the ability to control, or at least to significantly influence, the budgets of the statistical agencies, to approve whether or not an agency is allowed to carry out a data collection activity, and to decide on statistical standards for the statistical system.

4. Educate the Public

Large business and other respondents should be educated on the commercial use to which government statistics can be put, such as for market research, by means of seminars and presentations, and be persuaded to overcome the resistance to completing survey forms. This could be done by the conduct of focus groups, better design of survey questionnaire forms, and cognitive surveys.

5. Modernize Survey Methods

Longer term, it should be planned to move away from enumerator interview-based collection methods to surveys by mail and electronically. Lessons learned from the pre-test of the EBOPS survey form should be taken into account. As soon as possible, ways to automate questionnaires, in order to speed up compilation processing and dissemination, should be studied and implemented.

The trial cognitive survey, conducted with the pre-test EBOPS survey, exposed various issues to be taken into account for the conduct of surveys, including the notice period for distributing forms, the time given for completion, the preferred use of multiple choice boxes, and the need for developing personal relations with the largest firms, the data from which can predominate in certain sectors.

A public relations and advertising campaign might be carried out by government in order to improve the response rates of surveys. The NSO should make use of cognitive surveys and geographic mapping methods to also improve the response rates.

*(a) Sampling Techniques*

---

<sup>29</sup> The legal department at the NSO should be consulted to ensure that this paragraph reflects the full extent of the law in Thailand. This paragraph reflects the state of current US law.

More effective sampling designs should be explored for NSO surveys, with the use of the Chromy-Gen program to minimize sample sizes for given precisions, to increase accuracy through easier calculation of sampling errors, decrease costs and greatly reduce the time required to design and select samples.

The NSO should improve its Survey of Business Trade and Services through the use of more rigorous statistical sampling techniques and possibly the use of the Chromy-Gen program.

*(b) Classifications*

Thailand has a decentralized system for the production and collection of data, and within that system, there is a dependence on several sources of data to compile key flows of services trade. This makes it especially important to have a common classification, or set of classifications, for services trade, so as to achieve internal consistency and enable better international comparisons to be made.

*(c) Use of Information Technology*

Automated data capture and form processing technologies should be used to speed up the compilation of statistics. To the extent possible, data should be maintained in a central data management warehouse.

## **C. IMPLEMENTATION: PHASE I – INTER-AGENCY COOPERATION**

### 1. Services Trade Data Task Force

Within the decentralized state system of Thailand, the MOC/DTN will need to chair a task force on an as necessary basis, so as to actively utilize the wide range of data collected by various agencies. Participation of at least the BOT, NSO, NESDB, MOC (DBD, DOI) and as occasion demands, invite other agencies such as MFA, Revenue, TAT, SIPA and certain line ministries (i.e. Labor, Education, Health and so on) to participate. The TAT should be involved in order to improve the compilation of data for the Tourism Satellite Account tables, as recommended by UN World Tourism Organization, and the TAT analysis of linkages between tourism and selected priority sectors for development. This task force should continue into Phase II of implementation and will be important to cover the areas not addressed by the EBOPS and FATS survey questionnaires.

### 2. Agreements to Share Data Between Agencies

In accordance with the Official Information Act, state agencies may disclose personal information for planning and statistical purposes with other government agencies where there is an obligation to protect the information. The MOC/DTN and the BOT should sign a Memorandum of Understanding establishing 1) sharing of limited data and 2) procedures for safeguarding the data. This type of agreement may also be used with other government agencies that collect services data. The BOT was the focus of much of the discussion in this report because it collects in a single location, a wealth of information related to services trade, but services information is also collected by other agencies, such as the agencies listed above and mechanisms to share this information should also be developed.

### 3. The Manual's Recommendations

Information concerning Steps 1-5 of the *Manual*, principally, EBOPS and FATS data should be collected and shared through existing mechanisms such as the BOT's ITRS and the IIP. The BOT presently collects more detailed data than is published, specifically, details of service sector categories combined into "other services" that should be extracted and shared with the MOC/DTN. The direction of trade (i.e. the country of destination for exports and of origin for imports) should also be made available for Thailand's principal trading partners such as the U.S., E.U., Asian neighbors and any other country of strategic interest. To the extent possible, the BOT and the NSO could widen the data collected from the

ITRS and the IIP. This could include adding a section to the IIP on “international transactions in services and income” that only targets the major players. The IIP could also collect the FATS information, if extended suitably and the data classified by ISIC Categories for Foreign Affiliates, at first for inward FATS, and then for outward FATS.

NSO surveys should move towards the collection of product information on its survey questionnaires, which would involve developing separate tailored forms for related service groups, and also to adapt the Survey on Business Trade and Services to identify foreign affiliates.

The MOC/DTN should then make the allocation of these data to the GATS four modes of supply, at first using the simplified approach.

#### **D. IMPLEMENTATION: PHASE II – FULL IMPLEMENTATION OF SURVEY MECHANISMS**

##### 1. DTN Chair Services Trade Data Task Force

During Phase II of implementation, the MOC/DTN should continue to chair the task force described in Phase I and continue to use administrative data for some sectors that are not covered by the EBOPS and FATS survey forms.

During this Phase, it is envisioned that the MOC/DTN will implement the EBOPS and subsequently FATS survey forms. Under the present legal framework the NSO would actually carry out the survey, until such time as the forthcoming Statistical Act and the Master Plan come into effect, at which time it is expected that the MOC will need to assume this function. Until the new legal framework is operative, and the final allocation of responsibilities has been approved and allocated, including the human and funding resources, closer inter-agency cooperation with joint responsibilities for data collection and compilation may be required. This may further include the responsibility for analysis of trends, the evaluation of specific aspects, and early warning, even if dissemination is solely undertaken by the NSO.

##### 2. Budget

Under the present Statistical Act, a budget request must be submitted to the NSO and the survey must be prescribed by Royal Decree. During Phase IV, the NSO stated that it has severe budgetary limitations and the MOC agreed to investigate whether it could obtain its own budget funds to be provided to the NSO for work to be carried out on certain aspects of the *Manual* implementation. MOC would also consider whether international funding agencies, such as UNDP and the ADB, could be asked for capacity building aid for Thailand’s statistical development.

A new International Trade Strategy Agency has been established in MOC headed by a director with experience in the service sector. This agency has a wider responsibility than the MOC/DTN and will probably be able to obtain government funds for sector research, and for which the MOC/DTN could not outsource work to private specialists. Perhaps there could also be some assistance from the MOC Department of Export Promotion.

Should a number of government agencies have to be involved in implementing the recommendations of the *Manual*, then the objectives would have to be clear and a coordinated plan presented jointly for the appropriation of funds. MOC agreed to speak to the NSO and NESDB about including proposals for funding to be inserted into the national budget plan. MOC considers that the NSO should give it a high priority, and might be responsive if so requested. MOC also agreed to send letters submitting proposals to other agencies for specific export and import-related aspects, and defend that angle of any central government project, if necessary.

### 3. Implementation of EBOPS and FATS Surveys

#### *(a) Universe List*

As discussed above, a National Business Registry is of critical importance. Once this registry is operational, a universe list will need to be extracted for purposes of mailing and communicating with the targeted respondents. Until such time as the National Business Registry is functioning the MOC/DTN, the BOT, the NSO and the MOC/DBD will have to develop and update the universe list similar to the one prepared for the pre-test. MOC/DBD has already started on improving its records and ability to keep them up to date and to extract information from the records.

The universe list would include FDI enterprises, of which the FATS enterprises would be a sub-set, listing those where foreign ownership is over 50%, and where Thai firms own over 50% of entities abroad. The first output could possibly be a mailing list of potential services exporters and importers. This would be easy for those firms with foreign participation, as they have to submit annual returns to MOC/DBD confirming they are still actively operational. This would facilitate creating a list from which the inward FATS entities could be identified. In addition, for those professions whose members have to be registered as qualified to practice, lists would be in existence and could be obtained by MOC.

The NSO and BOT might explore initially how to use the BOT Data Management System for the initial data submission, storage and processing. Data would be transferred to this DMS based on formats, standards and guidelines agreed with each agency. Eventually these functions could be transferred to the NSO, using specifically structured surveys of businesses to facilitate input processing and publishing.

#### *(b) Target Priority Sectors*

The Manual recommends a staged approach beginning with those sectors of priority to the Thai economy. Some national priority sectors for both internal economic development and national exports include: cars, fashion, software and ICT, tourism and food products. For services, the policy is to identify export potential, including for those services assisting manufacturing exports. Thailand must develop niche markets, building on their excellence for precision and detail, such as in building and design work. MOC/DTN will need to determine its priority sectors in accordance with its trade negotiating priorities. These sectors should be targeted first for data collection.

#### *(c) Collection Methods*

Since the target recipients of the EBOPS and FATS questionnaires are firms, this audience could be the subject of a pilot project to test the use of modern collection methods such as conducting the surveys by mail, fax and electronically, while moving away from enumerator interview-based collection methods. Given that the universe of targeted respondents is not overwhelmingly large, follow up work will need to be undertaken over the phone and by mail to increase response rates. Since enumerators will not be used this will be a more cost effective approach; however, some staff will be needed for follow up calls.

#### *(d) The Surveys*

This Final Report provides survey forms in Annex B for EBOPS and FATS data capture as well as for the cognitive survey. Additionally, suggested compilation notes for each sector are provided in Annex A. A pre-test of the inward FATS survey form and cognitive survey should be carried out, with a view to planning to carry out regular surveys of inward FATS data, and eventually of outward FATS data as well. Comments received from the cognitive survey may be taken into consideration in the development of the final version of the questionnaire forms.

(e) *Treatment of Sectors Not Reached by Survey Methods*

The survey questionnaire method will only be effective for certain sectors. The survey questionnaires omit certain sectors such as tourism and transportation services. Transport services is best collected from a variety of sources covering maritime, air, rail, road and inland waterways transport providers. The EBOPS category of travel accounts for the international aspects of expenditure by tourists is usually collected from visitor and accommodation surveys. For professional and business services, such as lawyers, accountants, architects and engineers it is recommended that research be undertaken by private sector research organizations, the trade associations or academia, although the legal authority should be broad enough to permit the eventual collection of data by the government from these enterprises. When MOC holds its ad hoc Public Hearing meetings, perhaps those trade associations represented could be asked to complete a questionnaire about their members.

It is also important to recognize that a significant proportion of the informal workforce and low productivity employment may account for a portion of the service sector that is unaccounted for.

(f) *Classifications*

The classifications recommended for use by Thailand are based on those in the *Manual* and under the GATS. Tables for each, specially tailored to the situation in Thailand, are provided in the Annex C of this report. They are linked through the use of the product and activity international classifications of the CPC and ISIC respectively. While the *Manual* has yet to specify an integrated set of classifications that is closer to present limits of statistical compilation, the TGATS and TGATS-SC tables provided in this report, can be used by MOC/DTN as a descriptive framework for negotiating purposes until more actual detail can be developed.

The initial priority should be the production of BOP data according to the EBOPS classification. Collection and compilation categories should be sufficiently detailed so as to be building blocks to provide flexibility for various analytical needs and special purpose aggregations.

4. The *Manual's* Recommendations

Once the EBOPS and FATS surveys are implemented, MOC/DTN will have significantly more detailed information. In the long term, MOC/DTN may begin to implement Steps 6-10 of the *Manual*. It should continue to use administrative data where the survey questionnaires are not practical.

Eventually, Thailand should collect and publish a greater degree of disaggregation of statistics on their international trade in services account, as specified by EBOPS. It could at first be based on the ITRS and other administrative data, and subsequently complemented through the use of surveys.

Full implementation of the *Manual* ensures that there will be no data gaps and overlaps and it provides both the vision for this part of the overall Master Plan framework and statistical data map, and the strategic map for statistics production, storage, analysis and dissemination.

## **ANNEXES**

## ANNEX A: COMPILATION NOTES

### A. 1. SELECTION OF SERVICES FROM THE BOP CURRENT ACCOUNT FOR EBOPS

The provision of statistical detail is a key element in analyzing and monitoring developments in the economy, and the recording of data based on the EBOPS classification is a basic first step required in the *Manual*. The classification of services currently used by the Bank of Thailand is the BPM5 classification, and the extension from this to the EBOPS classification essentially requires three steps:

- (1) widening the coverage of service industries
- (2) expansion of product detail collected, and
- (3) in some cases, realignment of the allocation of data collected, to specific service components.

#### a) Internationally Accepted EBOPS Codes

In the discussion of the core sectors which follows, these sectors are cross-referenced to the definitions of the components of EBOPS as presented in detail in the *Manual*. Annex II of the *Manual* shows the EBOPS classification with the internationally accepted codes, which is reproduced as Annex A.1.1 for ease of reference. Compilers are encouraged to make full use of the *Manual* and its coded descriptions of the contents of an item [Table A.III.1, EBOPS-CPC, Version 1.0 - GNS/W/120 correspondence]. The table shows the internationally accepted EBOPS code for each service item, and the contents of an item are shown with their corresponding Central Product Classification (CPC) code.<sup>30</sup>

In addition, compilers should note that the discussion of coverage of the definitions has proved very helpful in determining how to classify and code an item reported in any of the BOP survey forms. This narrative is found in the *Manual* Chapter III, Section H, paragraphs 3.52 to 3.143. In reading the sections which follow, it would be beneficial to review these outlines of services along with reference to the entire classification of EBOPS services provided in Annex II of the *Manual*. References to paragraphs of the *Manual* and EBOPS codes are shown here in square brackets.

#### b) Thai Service Sectors of Priority Interest

The *Manual* recommends that balance of payments data be collected according to EBOPS, “which involves disaggregating the BPM5 standard components for services into EBOPS subcomponents. Where the compilation of the main EBOPS classification is developed and carried out in stages, compilers should commence with the desegregation of services of major economic importance to their own economies.” [1.19] In other words, work should commence on the sectoral priorities for the Thai economy. The *Manual* provides flexibility by not specifying a definition for “economic importance to their own economies.” This is open to interpretation by each implementing country; the Manual does not provide guidance on what criteria should be considered when prioritizing services sectors.

---

<sup>30</sup> *Measuring Trade in Services* is a helpful companion document to the *Manual*. It is a training module on statistics of international trade in services produced by the World Trade Organization, and it provides an overview as well as elaborates on the concepts in the *Manual*. It is available at the website [http://www.wto.org/english/res\\_e/statis\\_e/services\\_training\\_module\\_e.pdf](http://www.wto.org/english/res_e/statis_e/services_training_module_e.pdf) or at the UN website <http://unstats.un.org/unsd/tradeserv/>.

### c) Compilation Guide

Since the international community has not yet developed a compilation guide to prepare trade in services data, this section of the report attempts to provide some orientation. The following section provides the definition found in the *Manual* for each sector, a description of the current position in Thailand and measurement considerations. The 11 EBOPS sectors are discussed in the order of appearance found in the *Manual* and are shown below. Note that due to the extraordinary time constraints faced by the project team and the level of investigation required to assemble a compilation guide, only the definitions and a brief summary are provided for Construction, Royalties and License Fees and Government Services, n.i.e., with no further discussion.

1. Transportation
2. Travel
3. Communications Services<sup>31</sup>
4. Construction Services
5. Insurance Services
6. Financial Services
7. Computer and Information Services
8. Royalties and License Fees
9. Other Business Services
10. Personal, Cultural, and Recreational Services  
(including Education and Health Services)
11. Government Services, n.i.e.

#### **1. Transportation [205]**<sup>32</sup>

##### Definition

Transportation services include three kinds of services provided by residents of one economy to those of another specifically: passenger, freight and other transportation services. EBOPS distinguishes eight modes of transportation providing these three services, of which the original three modes covered in BPM5: sea, air and other transport services [206, 210, 214] and are now discussed. EBOPS further subdivides ‘Other transport services’ into six categories of transportation service, only one of which – Other supporting and auxiliary transport services [232] – is likely to be of any significance in Thailand. Sea transport, Air transport and Other transport services are then each broken down into three components, namely passenger, freight and other services. In this way exports and imports of transportation services can be stated either by the mode of service or by the type of service.

##### Current Position and Measurement Considerations

- **Passenger Transportation Services.** Care should be taken in the treatment of transportation services provided by a domestic company to visitors and tourists within the country. This is to be treated not as transportation but as travel. The *Manual* notes that transportation services exclude “passenger services provided to non-residents by resident carriers within the resident economies (included in *travel services*), cruise fares (included in *travel services*), ... and time charters without crew (included in *operational leasing services*). [para. 3.66] In current practice, taxi services are correctly allocated to travel.

---

<sup>31</sup> Note that for purposes of this report, Communication Services and Computer and Information Services are discussed together. The International Community is working to merge the two EBOPS classifications.

<sup>32</sup> The number in [ ] refers to the EBOPS classification.

The services of domestic airline companies providing services to tourists within the country are sometimes overlooked.

- **Freight Transportation Services.** These services are provided by non-resident operators on Thailand's imports (debits). [para. 3.67] There are several methods for estimating freight services, mostly requiring the collection of survey data. One method – the current practice in many countries including Thailand – is to estimate this debit entry as a percentage of the c.i.f. value of imports – 10% in many cases. (The c.i.f. value of total imports is correspondingly reduced to bring merchandise imports to the f.o.b. valuation required by convention.) The 10% ratio estimate appears to be based on data collected in a sample survey, conducted sufficiently long ago as to be out of date. It is prudent to re-examine this figure and update it or examine the possibility of changing the method of estimating freight services, as the BOT is doing in the Survey on International Freight and Insurance on Imports.
- **Other Supporting and Auxiliary Transport Services [232].** This sub-group of transportation services in the EBOPS classification is of particular interest since the component includes *cargo handling and container handling services*. The *Manual* recommends that all cargo handling services be included in [232]. The definitions of Sea transport services [209] and Air transport services [213] specifically exclude cargo handling. The *Manual* notes that services relating to more than one mode of transport and that cannot be allocated to individual modes of transport are recorded under this heading [232]. It includes “cargo handling (such as loading and unloading of containers), storage and warehousing, packing and repackaging ...” [para.3.71] The separate identification of this activity in the *Manual* reflects its increasing size and importance as a service that can be traded worldwide. In countries where container handling services are provided by a public sector Port Authority, it is probably a subject of discussions on privatization and liberalization in trade negotiations. For statistical purposes, it is recommended that container handling should continue to be reported where it now sits, i.e. aggregated with other items in *Other transport services* [217].

## **2. Travel and Tourism**

Travel and Tourism accounts for over 50% of Thailand's services receipts from international trade. The statistics for this dominant service sector are now discussed.

The most comprehensive data on travel is compiled from the demand side. But increasingly, and including for use in tourism satellite accounts (TSA), data arising from the supply of services are important.

### Definition

*Travel*<sup>33</sup> differs from most other international services in that, as a functional category, it is the consumer that gives it its distinctive characterization, whereas most other services are classified by product. The traveler<sup>34</sup> moves to another economy to obtain goods and services. Travel expenditure is characterized by the purchaser and is not a single product, and for this reason it is not identified with any corresponding category of the *CPC*. In fact, expenditure on a wide range of services and goods is classified under *travel*.

*Travel* covers primarily the goods and services acquired in an economy by travelers during visits of less than one year to that economy. The goods and services are purchased by, or on behalf of, the traveler or provided, without a quid pro quo (that is, as a gift), for the traveler to use or give away. Excluded is the international carriage of travelers, which is covered in *passenger services* under *transportation*. Also excluded are goods purchased by a traveler for resale in the traveler's own economy or in any other economy.

A traveler is an individual staying for less than one year in an economy, of which he or she is not a resident, for any purpose other than (i) being stationed on a military base or being an employee (including diplomats and other embassy and consulate personnel) of an agency of his or her government, or (ii) being an accompanying dependent of an individual mentioned under (i). Expenditures made by individuals covered in (i) and (ii) are recorded under *government services, n.i.e.* Expenditures made in the economy of the employing enterprise by seasonal and border workers are included under *travel*. The one-year guideline does not apply to students or to patients receiving health care abroad, who remain residents of their economies of origin, even if the length of stay in another economy is one year or more.

Although *BPM5* recommends a breakdown of *travel* into *business* and *personal* travel in its standard components, the *Manual* recommends a further breakdown of each of these types of travel.

***Business travel*** covers travelers going abroad for all types of business activities, such as carrier crews stopping off or laying over, government employees on official travel, employees of international organizations on official business, and employees working for enterprises that are resident in an economy different from that of the employee. They may visit an economy for sales campaigns, market exploration, commercial negotiations, missions, meetings, production or installation work, or other business purposes on behalf of an enterprise resident in another economy. Also included as business travelers are *seasonal and border workers*—those residents

---

<sup>33</sup> The term *travel*, as used in the *Manual*, is synonymous with the term *travel* used in *BPM5* and consistent with the term *tourism* used in the *1993 SNA*. It is also related to the term *tourism* used by the World Tourism Organization. The differences between the *Manual* and *BPM5* on the one hand and the World Tourism Organization on the other hand, relate to expenditure by students and medical patients if they stay in the host economy for one year or more and expenditure by certain types of employees.

<sup>34</sup> The term *traveler* used here differs from the *TSA* definition of *visitor* primarily in the areas of students residing in other countries for education purposes, patients receiving long-term health care abroad, and some aspects of employment abroad.

of one economy who are employed by enterprises resident in a different economy. Such employees are travelers in the economy of their employing enterprise.

*Business travel* comprises the goods and services acquired by the traveler for his or her own use (including those for which the business travelers are reimbursed by employers), but not the sales or purchases that they may conclude on behalf of the enterprises they represent. Personal expenditure on goods and services by seasonal, border and other non-resident workers in economies in which they are employed, are also recorded under business travel.

The *Manual* recommends a breakdown of *business travel* into two sub-components—***expenditure by seasonal and border workers*** and ***other***.

***Personal travel*** covers travelers going abroad for purposes other than business, such as holidays, participation in recreational and cultural activities, visits with friends and relations, pilgrimage, and education- and health-related purposes. The *Manual* recommends a breakdown of personal travel into three sub-components—***health-related expenditure*** (total expenditure by those traveling for medical reasons), ***education-related expenditure*** (that is, total expenditure by students), and all ***other*** travel. This breakdown is the same as the supplementary information recommended in *BPM5*. In addition, separate data collected on, or estimated for, expenditure on health and education services, are useful for analytical purposes, and if these are available, they should be provided separately.

The *Manual* recommends an alternative disaggregation for *travel* services, to distinguish ***expenditure on goods, expenditure on accommodation and restaurant services***, and ***all other travel expenditure***. This alternative disaggregation, included in the memorandum items to the EBOPS classification, will allow the allocation of expenditure on services to Mode 2 supply of services. The separate identification of expenditure on accommodation and food services will facilitate more general analysis of travel expenditure.

All goods and services (except international passenger fares) acquired by travelers from the economies in which they are traveling for their own use are recorded under *travel*. These goods and services may be paid for by the traveler, paid for on his or her behalf, or provided to him or her without a quid pro quo. The most common goods and services entered under *travel* are lodging, food, beverages, entertainment and transportation within the economy visited (all of which are consumed in the supplying economy), and gifts, souvenirs and other articles purchased for travelers' own uses and which may be taken away from the economies visited.

#### Recommendation

The BPM5 breakout is recommended to continue, that is, travel spending for Business purposes, and for Personal purposes. Within the Personal category, Education and Health are relevant details from the demand side, complementing the core categories of Education and Health services.

An alternative grouping for Travel, one proposed for future BOP use, has categories for: expenditure by travelers on goods (which is presently a Memorandum item of the *Manual* and needs to be removed from GATS comparisons); for Transport services ('local' spending by travelers i.e. in the economy visited); for Accommodation and for Food and beverage services - currently a single Memo item - as is All other expenditure.

So as to reflect national importance, to better match with GATS and to assist with TSA accounts, three further breakouts are suggested of the 'All other travel expenditures' category (EBOPS 871):

- 1) from the suppliers of the services, breakouts of Travel agency, tour operators and guide services and of tourist info/reservation services. These are presently with another EBOPS category, Other business services [284].
- 2) Outlays on entertainment services, and
- 3) Outlays on sporting and recreational services.
- 4) Outlays on personal well-being, such as spas.

The last two breakouts are again demand side items, which like local transport, have no EBOPS or CPC coding. The spending on Entertainment and on Sporting and recreational services further serve to complement the international transactions of service providers shown later in TEBOPS. It should be noted that recreational services include gambling and casino operations, a topic not heretofore raised for separate identification (and not separately identified in either GATS or ISIC).

## **2.1 The Tourism Satellite Account**

### Measurement Considerations

Tourism is not an “industry” in the usual statistical definition; rather it is the partial output of a group of ISIC industries. The construction of a Tourism Satellite Account (TSA) provides analysts with a means of separating and examining both tourism supply and tourism demand within the general framework of the System of National Accounts. The use of a framework such as National Accounts makes international comparability easier, as well as comparability with other domestic activities. A large variety of information can be obtained from the TSA, concerning:<sup>35</sup>

- tourism’s contribution to the economy of a given country and its ranking relative to other sectors and in comparison with other countries. By evaluating and using this information, both public bodies and tourism enterprises will increase their capacity to influence decision-making at all levels of the Administration.
- industries that benefit from tourism, and to what extent, particularly for industries that are not traditionally associated with tourism. Certain enterprises may be able to determine how tourism influences their business performance and subsequently use this information to enhance their business strategies and thus increase their competitive edge.
- the amount of tax generated as a result of tourism activity, which is an important factor in terms of convincing municipal, provincial, regional and national authorities to design incentives for boosting tourism investments.
- data relative to visitor demand and the extent to which it is matched by domestic supply.
- improvement of knowledge concerning jobs generated by tourism and their characteristics, without which the creation of really useful employee training programs in more characteristic tourism activities (e.g. hotels, travel agencies, car rental firms, tourism information services, etc.) can prove to be a haphazard exercise.

The main focus of tourism statistics, including the TSA, is individuals and their trips. Trips are classified by:

- Purpose (business, personal)
- Duration
- Origin and destination

---

<sup>35</sup> General Guidelines for National Tourism Administrations Relative to the Development of the Tourism Satellite Account, World Tourism Organization, 2002.

- Means of transport used
- Type of accommodation used

The TSA goes beyond traditional tourism data to include concepts such as:

- Internal tourism consumption - the amount of visitor consumption within an economic territory
- Value added of tourism industries - a supply side indicator that measures total supply from tourism activities, and does not depend on tourism demand
- Tourism value added and gross domestic product which measure the net value of goods and services produced, estimated through the difference in the value of outputs and inputs.
- Others: Tourism employment - Tourism gross fixed capital formation - Tourism collective consumption - Total tourism demand.

International recommendations call for more of an SNA/Input-output type of approach, using industry and commodity data, in addition to tourism specific data. TSA's are generally dependent on commodity information being available. For example, the five major tables for the 2002 United States TSA accounts<sup>36</sup> are titled:

- Table 1. Production of Commodities by Industry, 2002
- Table 2. Supply and Consumption of Commodities, 2002
- Table 3. Demand for Commodities by Type of Visitor, 2002
- Table 4. Output and Value Added by Industry, 2002
- Table 5. Employment and Compensation of Employees by Industry, 2002

The TSA for Thailand

Due to the lack of commodity survey data, Thailand's TSA accounts are much more heavily dependent on tourism data. According to a TAT presentation<sup>37</sup>, these tables cover the following areas:

- Demand Side
- Tourist Consumption Expenditures (Tables 1- 4)
- Government Consumption Expenditure by Tourism Purpose (Table 9)
- Tourism Gross Fixed Capital Formation (Table 8)
- Supply Side
- Supply Table (Tables 5 – 6)
- Use Table (Tables 5 – 6)
- Employment (Table 7)
- Demand and Supply
- Input – Output table
- Impact Table

In the same presentation, the current challenges and recommendations for the future were included:

- Current challenges
- Lack of a central agency to accumulate data on service sector.

<sup>36</sup> U.S. Travel and Tourism Satellite Accounts for 1998-2003, Survey of Current Business, September 2004

<sup>37</sup> Development of Tourism Satellite Account in Thailand, PowerPoint presentation, Ms. Walailak Noypayak, Tourism Authority of Thailand, 2005

- Data is not current and there is a lack of data linkage.
- Private sector needs to better understand the uses of TSA, leading to more cooperation in providing data.
- Domestic tourism revenue is underestimated, because “before and after” expenditures are not included.
- Future recommendations
- Adjust TSA table baselines every five years in line with NESDB Input – Output table.
- Transfer TSA to a relevant organization
- Analyze the economic impact from each foreign tourist market.

### 3. Communications Services [245], including Computer and Information Services [262]<sup>38</sup>

#### Definition

These sectors are two of the 11 main groups of services identified in BPM5 and EBOPS. They are discussed together here for convenience. Information and Communication Technologies services, (or ICT services, the commonly used term), is not a specific EBOPS category, but the services listed below are key components of ICT services. These classifications are in the process of being reviewed as the scope of communications and information coverage is being expanded to reflect internet and related technology.

For these two sectors, EBOPS requires further disaggregation of the BPM5 single component as follows:

#### Communications services

- Postal and courier services [246]
- Telecommunications services [247] include Internet Service Providers, electronic mail (e-mail), on-line information and data retrieval, fax services, cell phone services, and radio and television transmission services. (For the full range of services and their CPC classification, see the *Manual* Table A.III.1.)

#### Computer and information services

- Computer services, [263] comprising consultancy services, data processing services, and maintenance and repair of equipment; web page hosting; provision of advice and assistance; other education and training services. (For a full range of services included, see the *Manual* paragraph 3.117)
- Information services, [264] which are further broken down into:
  - News agency services [889]
  - Other information provision services, such as database provision services to business. [890]

#### Compilation and Data Sources

These services are relatively new and a data collection system has not been fully established in all countries. The main requirement now is to capture the whole universe of the providers of these services. This involves the updated register of businesses, particularly where the business unit is likely to be small, owner-operated and with up to 5 employees.

The NSO survey of "Business, Trade and Services" collects principal statistics (domestic output, expenditures, wages, employment) and detailed information of establishments engaged in business trade and some sectors of services, classified by ISIC Rev.3. The services sectors include ISIC Division 72 Computer and related activities. "Sensitive" questions involving financial data are asked, but frequently not reported. The result is that a large volume of structural data is collected, but financial data for economic analysis are less strong. Specifically, for purposes of international trade in services, questions would need to be incorporated in the survey to gather information about the value and destination of exports of computer services and imports, as well as the source and destination of the transaction flows. Accordingly, these questions were included in the pre-test EBOPS Survey as part of Phase IV.

---

<sup>38</sup> Note that Communication Services and Computer and Information Services are now discussed together. The International Community is working to merge the two EBOPS categories.

#### **4. Construction Services [249]**

##### Definition

*Construction services* covers work performed on construction projects and installation by employees of an enterprise in locations outside the territory of an enterprise. The *Manual* recommends that *construction services* be disaggregated into *construction abroad* and *construction in the reporting economy*. This disaggregation allows for the recording of both the construction services provided and the goods and services purchased in the host economy by non-resident enterprises that are providing the services, on a gross basis. Thus *construction abroad* comprises the construction services provided to non-residents by enterprises resident in the compiling economy (credit) and the goods and services purchased in the host economy by these enterprises (debit). *Construction in the reporting economy* comprises construction services provided to residents of the compiling economy by non-resident construction enterprises (debit) and the goods and services purchased in the compiling economy by these non-resident enterprises (credit).

This recommendation is a deviation from *BPM5*, which recommends that expenditures for goods and services purchased in the host economy be included in *other business services, other*. It is acknowledged that, for strong practical reasons, a country may prefer to continue to follow the treatment recommended in *BPM5*; in such cases, the treatment should be described in the explanatory methodological notes that accompany the publication of the data on construction services.

Both sub-components of *construction services* cover the work performed on construction projects and installations by employees of an enterprise in locations outside the economic territory of the enterprise. (The work is generally performed for a short time period; the one-year rule for residency of such enterprises is to be applied flexibly.) *Construction services* are valued on a gross basis—that is, they are valued inclusive of all goods and services used as inputs to the process of providing construction services, and also inclusive of all of the other costs of production and the operating surplus that accrues to the owners of the construction enterprise. This valuation principle is the same as that which applies in the valuation of all production (of both goods and services) as described in the *1993 SNA*.

*Expenditure on goods and services in the host economy* includes expenditure by the construction enterprise on locally supplied items, as well as expenditure in the host economy by the construction enterprise on goods and services that have been imported to the host economy, where the goods and services are for use on the construction site. In the particular case where the construction enterprise purchases goods and services in its home economy, these still constitute part of the value of construction services. However, because they have not been purchased in the host economy, they are excluded from *goods and services purchased in the host economy*.<sup>39</sup> Depending on the method of data collection used, it may not be possible to identify separately the goods purchased in the home economy and the host economy; for practical purposes, the compiler may need to estimate a breakdown or otherwise attribute all goods purchased to either the host or the home economy of the construction enterprise.

---

<sup>39</sup> Balance of payments compilers should note that in merchandise trade statistics, the value of goods imported into the host economy for use on the construction site will be included in merchandise imports under the general and special trade systems. Where goods are purchased by the construction enterprise in its home economy and shipped to the construction site, an adjustment must be made to the merchandise trade statistics to exclude the value of any such goods from the balance of payments goods component. If the goods are purchased in the host economy, no such adjustment is necessary.

It may not be possible to identify the purchase of goods and services separately from labor costs; in this case the compiler will need to estimate a breakdown, or alternatively allocate all costs either as goods and services or as labor costs.

#### Recommendation

In the light of complexities in implementation, no further breakout is suggested. For example, practice in different countries may in fact vary as to whether construction projects longer than one year are treated as quasi-foreign direct investment, or as services. The *Manual* moreover, as just explained, considers that Mode 3 of GATS applies if a commercial presence is set up abroad even for a short period of time, rather than the center of economic interest remaining with the home country. BOP adjustments to merchandise trade can also be required if transactions covered in construction services are already part of exported or imported goods.

No single operating practice for Thailand is suggested for recording construction abroad and construction in the compiling economy.

## **5. Insurance services [253]**

### Definition

Insurance services cover the provision of various types of insurance by resident Thai companies to non-residents, and vice versa. For the BPM5 these services are reported as a single item, but for the EBOPS classification it is recommended that they should be further broken down into five categories of insurance service:

- life insurance and pension funding;
- freight insurance;
- other direct insurance;
- reinsurance;
- auxiliary services to insurance.

In practice, it may be more feasible to include term life insurance with Life insurance and pension funding, rather than with other direct insurance, as recommended by the *Manual* paragraph 3.101. If organizational and marketing similarities of the two forms of life insurance, or availability of data suggest for example, that such a consolidation is warranted, the allocation should be footnoted accordingly.

### Current position

*Production:* The insurance sector is a relatively minor contributor to the Gross Domestic Product of Thailand, as shown in the box inset below. Life insurance forms the major part of the sector, and in the latest figures for the second quarter of 2005, growth in both life insurance and non-life insurance continued to increase, non-life more so than life insurance.

*International trade:* The balance of payments accounts indicate that receipts and payments for insurance services are relatively small, with payments to non-residents exceeding receipts in 2003 and 2004. The source of the data is the ITRS and the entries include insurance on goods. Further investigation may indicate that this is the largest component of the “insurance services” item.

<b>GDP Originating from Select Services Sectors at current market prices</b>				
(Millions of Baht)				
	2000	2001	2002	2003p
Air transport	69,706	79,074	89,679	89,250
Activities of travel agencies	39,144	40,977	43,500	45,036
Hotels and restaurants	275,214	289,175	309,626	300,414
Post and telecommunications	72,881	85,514	89,307	95,038
Financial intermediation	103,144	103,582	119,231	143,859
Insurance and pension funding	40,208	44,880	46,912	53,266
Source: <i>National Income of Thailand, 2003.</i> NESDB				

<b>Performance of Insurance sector, 2003</b>		
	Life Insurance	Non-life Insurance
Direct premiums (Baht millions)	133,355	71,160
Increase over 2002 (%)	15.4	13.6
Assets end of 2002 Baht millions	450,098	112,825
Increase over 2002 (%)	28.1	15.9
Net profit (Baht millions)	9,605	4,085
Increase over 2002 (%)	89.9	58.3
Source: <i>Annual Insurance Report of Thailand, 2003</i> . Dept. of Insurance, Ministry of Commerce		

### Measurement

The insurance sector presents a particularly complex and difficult area of measurement of services. The *Manual* recommends a measurement of insurance that nets claims against premiums and designates a portion of the premium as services.<sup>40</sup> At the same time, a measure valued on a gross basis (and thus more comparable to other services) can be compiled showing debits and credits as follows:

*Credits* comprise premiums earned (or written in the case of life insurance) by resident insurers from their clients abroad, plus claims by residents incurred on policies issued by non-resident insurers. This applies to insurance and reinsurance.

*Debits* comprise claims by non-residents incurred on policies issued by resident insurers, plus premiums earned/written by non-resident insurers from resident clients. This applies to insurance and reinsurance.

This reflects the procedure identified in BPM5 [257]: “For some purposes – e.g., for use in trade negotiations – total premiums and claims are relevant and are shown as memorandum items under *insurance services*.”

While gross premiums and gross claims are listed as Memo items in the *Manual*, they may differ from the compilation of credits and debits above.<sup>41</sup> If one adds gross premiums alone, one part comes from credits and another from debits. Gross claims also have piece from debits and a piece from credits. This is a different result than adding up all the credits and adding up all the debits. The prime interest would appear to be in the sum of the credits and sum of the debits.

The insurance sector is undergoing change and so is the measurement of insurance services. Work on revision of the Fifth Edition of the IMF’s Balance of Payments Manual (BPM5) will

<sup>40</sup> Measures on a net basis differ from the general recording principle for transactions in the current account of the Balance of Payments, according to which transactions are recorded on a gross basis (BPM5 paragraphs 192-193). In practice, this netting process means that the credit entry for *freight insurance*, for example, represents the difference between premiums earned and claims payable on goods lost or destroyed in transit.

<sup>41</sup> Credits, as indicated, can be a combination of both premiums and claims according to what the resident insurer receives as premiums, and what the resident client receives from claim on its insurer abroad. Similarly, debits can comprise premiums going from resident clients to a foreign insurer, and claims incurred by resident insurers to settle with its clientele abroad.

produce changes in BOP methodology affecting insurance. These changes will involve a move from measurement based on premiums less claims, as outlined above, to premiums less ‘adjusted’ claims, i.e. adjustments to smooth the effects of major disasters on claims. In the new IMF Manual the proposal for the treatment of non-life insurance services will indicate calculation of the value of insurance services, including reinsurance, by using the following formula:

	premiums earned
<i>plus</i>	adjusted premium supplements
<i>less</i>	adjusted claims.

#### Current Position and Measurement Considerations

Currently, the main source of data for trade in insurance services is the ITRS. It is clear that this source is not appropriate for delivering the breakdown into the five components recommended. Such information would have to be gathered by the survey process. Here too, the general form proposed for capturing international receipts and payments for all services may not be appropriate for insurance services. A special survey form and supplementary sources may be required.

One such source is the report *Annual Insurance Report* of the Department of Insurance. It gives detailed information, by 66 reporting companies, subdivided into life insurance activities and non-life activities. Information includes premiums, claims including for cargo, profit and loss statements and assets. There is a breakout for reinsurance activities, and there appears to be the capacity to distinguish the five sub-components, as far as level of activity is concerned. However, this large body of information does not cover trade in these services. This would require a new and specific focus.

For greater detail on measurement and compiling insurance services for the balance of payments, see Box 3.2 of the *Manual* and the IMF *Balance of Payments Compilation Guide* (paragraphs 551-561), available at <http://www.imf.org/external/pubs/ft/bopcg/1995/bopcg.pdf>

#### Recommendation

The insurance sector in Thailand is not well developed, and is a low priority sector, both in terms of level of output and of interest for international trade. This reality is recognized by the international norms, and the compilation guides just noted allow certain smaller flows to be ignored.

Because of the changing nature of the industry itself and the on-going review of definitions and methodology in measurement of the service, no specific changes are recommended to the basis for international reporting. Nevertheless, the following guidelines can be taken into consideration for future improvement of the data:

Credits and debits for insurance services should first be recorded and monitored on a gross basis. If the data indicate that the level of receipts and payments for insurance services have increased in importance, or needs emerge for trade or other policy purposes, it may be useful to distinguish the five sub-components and to gather data on their international flows.

Whether or not increases in industry size occur, or policy needs develop, a priority should be to record the origin of receipts and destination of payments by major trading partner, even if only at the aggregated level of insurance services [253].

## **6. Financial Services, except Insurance [260]**

### **Definition**

Financial intermediation and auxiliary services are generally provided by banks, stock exchanges, factoring enterprises, credit card issuers and other enterprises – in connection with transactions in financial instruments, or as advisory and other services.

Examples of financial services are: explicit and implicit commissions and fees associated with financial transactions, such as deposit taking and lending, including mortgage and other loan services for business and personal purposes; letters of credit, bankers' acceptances, lines of credit and similar; financial leasing; factoring; financial derivative transactions; underwriting, placement of issues, brokerage; payment clearance, financial advisory services; custody of financial assets or bullion; financial asset management; merger and acquisition; corporate finance and venture capital; credit cards; foreign exchange transactions; and credit rating.

FISIM is the acronym for Financial Intermediation Services Indirectly Measured.

Not all fees are invoiced separately, but are included indistinguishably with the financial services to which they relate: examples include the price of securities and charges for international transfers of foreign currency. This also occurs when financial derivatives are transacted through an intermediary. These implicit fees have to be estimated, in line with the supplement to the IMF BPM5 published in 2000.

FISIM measures the value of services not invoiced separately. In principle the estimate is based on the difference between the interest receivable by financial intermediaries on their loan and deposit assets and the interest payable on deposit and loan liabilities. FISIM is measured separately for lenders and borrowers, using a 'reference' rate of interest such as an inter-bank lending rate or the central bank lending rate. Property (investment) income receivable by financial intermediaries from the investment of their own funds should be excluded from the estimation of FISIM.

### **Industry and Product Classification**

Version 3.1 of the International Standard Industrial Classification of All Economic Activities classifies establishments dealing in financial services, except insurance, in Division 65 as shown below.

#### ***65 Financial intermediation, except insurance and pension funding***

- 651 Monetary intermediation*
- 6511 Central banking*
- 6519 Other monetary intermediation*
- 659 Other financial intermediation*
- 6591 Financial leasing*
- 6592 Other credit granting*
- 6599 Other financial intermediation n.e.c.*

*Auxiliary activities are included in Division 67 as shown below.*

#### ***67 Activities auxiliary to financial intermediation***

- 671 Activities auxiliary to financial intermediation, except insurance and pension funding*
- 6711 Administration of financial markets*
- 6712 Security dealing activities*
- 6719 Activities auxiliary to financial intermediation n.e.c.*

## Product Classification

The *Manual* recommends that trade flows between residents and non-residents be classified using EBOPS. A Thai format for EBOPS (TEBOPS) has been proposed elsewhere in this report. TEBOPS has only a single classification, 260 – Financial services, except insurance, which is defined as follows:

### **260 Financial services, except insurance**

*Covers banking and related services including intermediation, fees on credit and debit cards, investment banking, fees relating to mergers and acquisitions, venture capital services, securities and commodity brokerage, processing and clearance of securities transactions, portfolio management, trust and custody services, provision and transfer of financial information, advisory services, etc. Excludes legal, accounting and tax planning services.*

## Current Position

Although “Financial Services” is coded separately on the “Foreign Exchange Transaction Form”, the data are only published as part of a larger aggregate - “Other Services”. Unpublished data show that Financial Services is a relatively small part of overall service transactions, and as recorded in the 1<sup>st</sup> quarter 2005 ITRS system, accounts for only 0.4 percent of the total value of ITRS receipts for services trade and 1.2 percent of payments.

## Measurement Considerations

Although the export of financial services is not a major source of foreign currency, it is recommended that the situation be monitored more closely.

1. Publish the detailed data on receipts and payments for ‘Financial Services, except insurance’, in the BOT’s Balance of Payments report.
2. Add Financial Intermediation Services Indirectly Measured (FISIM) into ‘Financial services, except insurance’, where they are defined but not yet quantified (as recommended in Chapter 6). This step would mean greater consistency between the level of services as now measured in the BOP and by the National Accounts, where FISIM is progressively being included by many economies.
3. A further disaggregation of ‘Financial services, except insurance’, should be explored for future compilation and reporting. Money transfer services are one of many supporting services covered under the existing definition of this category, as is correspondent banking, where a wide range of banking services are not explicitly charged. This would seem an ideal candidate for a benchmark study. It would in the process clarify for users and compilers the relationship between correspondent banking and (a) explicit banking charges already measured, and (b) estimates of FISIM.

**7. Computer and Information Services [262]: see Communications Services [245], above**

**8. Royalties and License Fees [266]**

Definition

The *Manual* recommends a disaggregation of the *BPM5* component into *franchises and similar rights* and *other royalties and license fees*.

*Franchises and similar rights* comprise international payments and receipts of franchising fees and the royalties paid for the use of registered trademarks.

*Other royalties and license fees* includes international payments and receipts for the authorized use of intangible, non-produced, non-financial assets and proprietary rights (such as patents, copyrights, and industrial processes and designs) and with the use, through licensing agreements, of produced originals or prototypes (such as manuscripts, computer programs, and cinematographic works and sound recordings). Payments and receipts for the outright purchase or sale of these assets and rights are excluded (following *BPM5*, these are recorded as capital account transactions, not as services). Excluded also are distributive rights for audiovisual products for a limited period or a limited area; these are included in *audiovisual and related services*.

Recommendation

These services are out of scope for GATS, except for franchises, which should be identified separately. Franchises have an EBOPS coding [891] while the nearest CPC is part of 7334 in Version 1.1; also out of scope would be software licensing (CPC 7331 of Version 1.1). The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights covers intellectual property such as patents, royalties and so on, but with the exception of franchises.

## **9. Other Business Services [268]**

### **9.3. Miscellaneous business, professional and technical services [273]**

Legal [275], Accounting [276], Business and management consulting [277], Advertising and market research [278], Research and development [279], Architectural, engineering and other technical services [280], Agricultural, mining and on-site processing services [281], Other business services [284], Services between related enterprises, n.i.e. [285]

#### Definition

In BPM5 this category was one of three that comprised the residual *Other Business Services* category. In EBOPS it has been extended to seven sub-categories to provide much greater detail. This is the largest extension in service components from BPM5 to EBOPS. For many countries, this is new territory and a difficult area for compilers of national accounts and the balance of payments.

The first of the seven groups, Legal, Accounting, Business and management consulting services is of particular interest, as Thailand appears to be a net importer of these services.

#### Current Position and Measurement Considerations

As in the case of ICT services, the main requirement is to identify and capture the universe of the providers and purchasers of these services. This involves the updated register of businesses, particularly where the business unit is likely to be in the range of 0-5 employees. Experience elsewhere has shown that surveys of the professional services yield poor results, as response rates are notoriously low. In particular, legal, accounting, management and engineering services are provided by a number of small enterprises with poor reporting records, and a few large enterprises. Therefore general industry surveys bring little return.

The collection of data on Business, professional and technical services has therefore to be approached through special pilot studies and occasional surveys, in order to build benchmarks of receipts and payments on which annual estimates can be based.

The experience of another jurisdiction is instructive: a recent survey sent to large firms providing these services produced favorable response rates on legal and accounting transactions. Since a few large firms tend to account for the greater part of the international market, focusing on such firms is likely to be a more productive method of collecting the data. The BOT experience with large firms in the IIP survey, also suggests that this might be the most efficient approach to adopt for the business and professional services.

While the ITRS does record a single line item for “Legal, accounting, management consulting, and other public relations”, the receipts and payments figures reported cannot be broken down into its component parts, as would be required for meaningful analysis.

When using administrative data sources, including tax records, where these are available to compilers, the expectation of some is that once the appropriate administrative data sources have been accessed, then the information needed would be forthcoming. But here too the experience has been that this is not necessarily so, and although gross incomes may be reported, specific information regarding international receipts may not be available. Hence the recommendation that resources be devoted to gaining information from a few large firms, and that pilot studies be used to build up the body of knowledge of these services.

A *Business Register* is a primary resource necessary for building information on the supply side. The benefit of the register is that it establishes a population, which can be used to extrapolate

estimates for a total population from incomplete data sets. Incomplete data sets are likely to be the main source of information on these services for some time to come.

Two types of pilot studies should be undertaken to establish: (1) the most effective approach for obtaining information from these sectors and estimating their income; (2) by a follow-up pilot study to obtain benchmark estimates on which to build. The latter study should provide some concrete information on the value of services performed, and ask the respondent to estimate the proportion of revenues derived from domestic and foreign sources. This would not be a survey conducted by the statistical office, but an exploratory research study, using willing pilot respondents, contacted through service associations and other sources of the researcher.

The work involved in producing the estimates of the business, professional and technical services requires a mixture of ingenuity, statistical estimation and public relations to bring service associations on board in educating their members as to the value of their participation in statistical surveys. It is recommended that as an immediate step, a start should be made to adding a question on the business register to identify which companies are trading now. The question could seek a simple Yes or No response such as: "Do you export or import services?" This information would provide the groundwork on which to base subsequent questions.

## **10. Personal, cultural, and recreational services [287]**

### Definition

This group of activities is listed in the *Manual* with the corresponding CPC codes. It ranges from catering services, hairdressing and barbers, sporting activities including gambling and betting services, to performing arts and live entertainment services, and spas.

Measurement of this last category of spas is identified as of interest to policy analysts because of the potential for increased trade from growing travel and tourism.

Within this large category of activities, education and health services are of material interest for Thailand.

### Data sources

The supply side is uncharted territory and the process of developing statistics is one of estimation, rather than compilation of reported data. This will entail a gradual process, requiring considerable ingenuity, of piecing together bits of information gathered from a variety of sources.

This group is characterized by a large number of small enterprises and self-employed business units, and the first task is to register their very existence, to establish the universe. Here the methods used for a Business Register come into play, e.g. the population Census, household income and expenditure surveys, VAT records. However, the cut-off point used for the register of establishments could exclude these enterprises.

### Recommendation

Measurement of these service activities – both for domestic production and the balance of payments – is therefore a three-step process: (a) the recording of the existence of the enterprise producing the service; (b) benchmark studies commissioned to produce some basic data about the nature of the activity and transactions; and (c) compilers use the first two steps to extrapolate and build annual estimates.

It is recommended that compilers:

- adopt the definitions of the *Manual*.
- maintain a comprehensive Business Register.
- build estimates in two ways:
  1. survey large firms, with direct interviews and intense follow-up
  2. commission pilot studies to build benchmarks from which estimates of the universe can be made.

Developing the statistics of trade in services is not an overnight process. Where it has not already begun, a start can be made immediately with the registering of participants in this field, as part of updating the Business Register. Ideally, administrative and financial arrangements for the commissioning of pilot or benchmark studies should also be activated now. These studies are of a research nature and could more readily fit into the portfolio of the research department of the BOT. It is not realistic to see them as part of the regular work of the National Statistical Office or the NESDB, unless there is a large infusion of funds to create such capabilities. Statistical offices the world over are notoriously under-funded, and in an atmosphere of downsizing, such funding is unlikely to be forthcoming.

It is important to develop processes that will allow the statistical system to more easily use both survey data and administrative data, specifically both the ITRS and survey data. Agencies should

cooperate in a task force, to see how best to do this. This is easier said than done in a context of downsizing and uncertainty. Nevertheless, the sharing of information and collaboration between BOT, MSO and MOC is possible.

### **Education services [895]**

#### **Definition**

In the BPM5 and EBOPS classifications, Education services are part of the larger group of Personal, cultural, and recreational services [287 and 289]. EBOPS further extends the subcomponent [289] to distinguish the three sub-groups:

- Education services [895]
- Health services [896]
- Other [897]

The *Manual* recommends separating Education and Health services, since they are important for trade negotiating purposes of GATS. In the Thai economy the three sub-groups of services are highlighted for measurement, as they are identified among the core sectors of interest, both for trade purposes as well as for their present and potential capacity to generate income and employment domestically.

By definition Education services include primary, secondary, university, and technical and vocational services, which include Computer schools, a large number of which are in operation in Thailand. They comprise services supplied between residents and non-residents relating to education, such as

- correspondence courses
- education via the internet
- teachers and schools which supply services directly to non-residents who come to Thailand.

#### **Sources of Data for EBOPS Travel**

The basic objective is to capture the export earnings for the economy from the presence of non-resident students in Thailand; similarly to capture Thai payments for the education of Thai students abroad. Such data are not now collected, and the National Statistical Office does not obtain this basic information from the Ministry of Education.

In the absence of specific surveys of the education sector, the next option is the building of estimates by using the existing administrative records of the MOE, enhanced by a few more statistics. The MOE collects data on educational institutions and foreign students in Thailand. Although the information is of a structural nature and also contained in financial statements provided under the law, the Ministry could request additional data that would allow the measurement of export earnings from education services.

What is required to build the estimates of earnings from education services is:

#### ***A. Receipts from Foreign Students***

1. Number of foreign students attending each of the institutions:
  - 124 universities
  - 120 international schools
  - 3,000 private schools, including computer schools

The Ministry of Education collects this information.

2. Fees paid by foreign students at each of these institutions.

This information is not now collected, but the MOE is in a position to request such data along with the filing of financial reports.

Nationality of foreign students is not now recorded, and would be needed to determine the “destination of exports” of the education services. The MOE should request institutions to provide at least a percentage distribution by country of their foreign students.

***B. Payments by Thai Students Abroad***

Data can be obtained from the office of the Prime Minister, which has records of Thai students studying abroad on scholarships. Payments by students studying abroad privately and not on scholarships can be deemed to have been picked up in the records of the ITRS under the *travel* category.

**Health services [896]**

The headline of an Associated Press article in *The Nation*, Bombay, India of September 7, 2005 read: “More Americans, Europeans are jetting off to India for cheap, high-quality medical care”. The article reports that India attracted 250,000 foreign patients last year, Singapore got 200,000 and “Thailand – the favorite destination – 600,000.” The source is unknown, but the figures give an indication of the significance of “medical tourism” in Thailand, as an internationally traded service, and of the health services to be measured.

**Definition**

Health services include hospital services, general medical and dental services, laboratory services, and services of nurses, midwives and paramedical personnel provided by resident personnel to non-resident clients. Some of these services can be delivered ‘cross-border’ and others by visiting specialists, for example, medical and dental laboratory services. Where the user typically has to travel to another country in order to receive delivery of the service, this is the GATS Mode 2 supply.

For both Education and Health services, the distinction has to be made on whether the demand for the service should be allocated to:

- Group 2.2 Travel: Personal travel [240]
  - 2.2.1 Travel: Health-related expenditure [241]
  - 2.2.2 Travel: Education-related expenditure [242]                    or
  
- Group 10 Personal, cultural, and recreational services [289]
  - Education services [895]
  - Health services [896]
  - Other [897]

The distinction is not always clear at first sight, because both education and health services can be divided into two parts, each with several component services:

- (a) the dominant part of the service: where the non-resident client travels to the compiling country in order for the transaction to take place. Under the application of the GATS concept of *modes of supply*, this would be allocated to Mode 2 – consumption

abroad. [3.43]. Hence, the *Manual's* definition for 895 and 896 notes: "Excluded is all expenditure by travelers on education and health (included in *Travel*)." [3.138].

(b) the subsidiary components of the service: which can be delivered by cross-border supply (Mode 1), for example, through telecommunications (telephone, fax, internet, etc.), or by sending documents, disks and tapes by post. This would be the case of correspondence courses taken, or laboratory work and medical opinions or treatment, for example, given over the internet. Or they could be supplied under Mode 4, by visiting specialists, whether as employees or on own account.

It is suggested that the item compiled as *Education services* [895] should consist of those services which can be delivered by cross-border supply such as correspondence courses, education via the Internet and Mode 4 services delivered by non-resident specialists. *Health services* [896], should comprise medical and dental laboratory services for which no movement of resident clients is involved. Those health services involving the movement of a non-resident client should be compiled as a component of *Travel* [236, 241].

#### Data sources

The Ministry of Health now collects data from medical institutions as part of the registration system. The Tourism Authority of Thailand, with the help of the World Tourism Organization, is implementing the Tourism Satellite Account and compiling the tables recommended. The TAT is therefore the agency best placed to produce data on receipts and expenditures on health services as part of the estimate of *travel and tourism* – tourist expenditure on health-related services.

## **11. Government Services n.i.e. [291]**

### **Definition**

*Government services, n.i.e.*, is a residual category covering government transactions (including those of international organizations) not contained in the other components of the EBOPS classification above. Included are all transactions (in both goods and services) by embassies, consulates, military units, and defense agencies with residents of economies in which the embassies, consulates, military units, and defense agencies are located and all transactions with other economies. Excluded are transactions with residents of the home economies represented by the embassies, consulates, military units, and defense agencies and transactions in the commissaries, post exchanges, and these embassies and consulates.

A breakdown of this item into services transacted by *embassies and consulates*, services transacted by *military units and agencies*, and all *other* transactions is recommended in the *Manual*.<sup>42</sup>

Transactions classified to this component comprise those for goods and services (such as office supplies, furnishings, utilities, official vehicles and operation and maintenance, and official entertainment) and personal expenditures incurred by diplomats and consular staff and military personnel as well as their dependents in the economies in which they are located. Also included in this component are transactions, subject to the same considerations as those in the preceding item, by other official entities (such as aid missions and government tourist, information, and promotion offices) located in economies abroad. Included as well are transactions associated with general administrative expenditures and so forth that are not classified elsewhere. In addition, this component includes transactions associated with aid services that are provided by non-military agencies, that do not give rise to any payments, and that have offsets in transfers. Last, transactions associated with the provision of joint military arrangements and peacekeeping forces, such as those of the United Nations, are included in *government services, n.i.e.*

Most transactions included in this EBOPS component are not covered by the GATS. In particular the GATS excludes:

- (i) goods supplied to or by embassies, consulates, military units, and so on because the GATS applies only to services transactions;
- (ii) services supplied by embassies, consulates, military units, and so on because these services are supplied in the exercise of government authority; and
- (iii) supplies of services to embassies, consulates, military units, and so on by government entities from other countries (including, in particular, from the country of location).

The GATS covers only the supply of services by non-government entities to government entities, foreign diplomats, and consular staff and their dependents, which are allocated to Mode 2. These services are included in *government services n.i.e* when they cannot be classified in other components. However, identification of these transactions would require the compilation of data on goods supply separately from the supply of services, as well as a further breakdown by type of supplier of the service. This is not recommended in the *Manual*.

---

<sup>42</sup> This breakdown is not required for GATS purposes.

d) General, cross-sectoral, issues

1. Benchmark Studies

The gathering of information on the flows involved for services activities would have to be approached first as a research exercise, under a specific commissioned study, and out-sourced if necessary, which would marshal data about the nature of the businesses, in order to construct benchmarks of components of receipts and payments. Such benchmark studies should be undertaken in one region or town, as it would be unnecessarily expensive to conduct the same research in each region. This should be a collaborative exercise, with information gathered in one area shared with others, for use as a reference on which to build.

2. Training

The BOT, NSO and MOC have the software and well-trained IT people to operate their data management systems and to produce various combinations and presentations of given data. However, for the compilation of services statistics, both of the production statistics and balance of payments accounts, there appears to be need for training of staff because of the difficult nature of the data needed. The extension of the coverage of statistics in international trade in services and the building of the capability to produce those statistics requires personnel with the confidence to undertake the new tasks and challenges. Data management and the software to do this is not the problem; rather the current staff training is inadequate to meet the new challenges. It is therefore strongly recommended that resources be devoted to better training.

## A. 1.1 EBOPS TABLE

<b>Extended Balance of Payments Services Classification</b>					
<b>Component</b>	<i>BPM5</i> standard components	<i>BPM5</i> supplementary items	<i>BPM5</i> memorandu m items	Joint Classification components	Internationally accepted codes
1 Transportation	X			X	205
1.1 Sea transport	X			X	206
1.1.1 Passenger	X			X	207
1.1.2 Freight	X			X	208
1.1.3 Other	X			X	209
1.2 Air transport	X			X	210
1.2.1 Passenger	X			X	211
1.2.2 Freight	X			X	212
1.2.3 Other	X			X	213
1.3 Other transport	X				214
1.3.1 Passenger	X				215
1.3.2 Freight	X				216
1.3.3 Other	X				217
Extended classification of other transport					
1.4 Space transport				X	218
1.5 Rail transport				X	219
1.5.1 Passenger				X	220
1.5.2 Freight				X	221
1.5.3 Other				X	222
1.6 Road transport				X	223
1.6.1 Passenger				X	224
1.6.2 Freight				X	225
1.6.3 Other				X	226
1.7 Inland waterway transport				X	227
1.7.1 Passenger				X	228
1.7.2 Freight				X	229
1.7.3 Other				X	230
1.8 Pipeline transport and electricity transmission				X	231
1.9 Other supporting and auxiliary transport services				X	232
2 Travel	X			X	236
2.1 Business travel	X			X	237
2.1.1 Expenditure by seasonal and border workers				X	238
2.1.2 Other				X	239
2.2 Personal travel	X			X	240
2.2.1 Health-related expenditure		X		X	241
2.2.2 Education-related expenditure		X		X	242
2.2.3 Other		X		X	243
3 Communications services	X			X	245
3.1 Postal and courier services				X	246
3.2 Telecommunications services				X	247
4 Construction services	X				249
4.1 Construction abroad				X	250
4.2 Construction in the reporting economy				X	251

	<i>BPM5</i> standard component	<i>BPM5</i> supplementary items	<i>BPM5</i> memorandu m items	Joint Classificatio n	Internationally accepted codes
5 Insurance services	X			X	253
5.1 Life insurance and pension funding				X	254
5.2 Freight insurance				X	255
5.3 Other direct insurance				X	256
5.4 Reinsurance				X	257
5.5 Auxiliary services				X	258
6 Financial services	X			X	260
7 Computer and information services	X			X	262
7.1 Computer services				X	263
7.2 Information services				X	264
7.2.1 News agency services					889
7.2.2 Other information provision services					890
8 Royalties and license fees	X			X	266
8.1 Franchises and similar rights					891
8.2 Other royalties and license fees					892
9 Other business services	X			X	268
9.1 Merchanting and other trade-related services	X			X	269
9.1.1 Merchanting				X	270
9.1.2 Other trade-related services				X	271
9.2 Operational leasing services	X			X	272
9.3 Miscellaneous business, professional, and technical services	X			X	273
9.3.1 Legal, accounting, management consulting, and public relations		X		X	274
9.3.1.1 Legal services				X	275
9.3.1.2 Accounting, auditing, bookkeeping, and tax consultancy services				X	276
9.3.1.3 Business and management consultancy and public relations services				X	277
9.3.2 Advertising, market research, and public opinion polling		X		X	278
9.3.3 Research and development		X		X	279
9.3.4 Architectural, engineering, and other technical services		X		X	280
9.3.5 Agriculture, mining, and on-site processing services		X		X	281
9.3.5.1 Waste treatment and depollution				X	282
9.3.5.2 Agriculture, mining, and other on-site processing				X	283
9.3.6 Other business services		X		X	284
9.3.7 Services between related enterprises, n.i.e.				X	285
10 Personal, cultural, and recreational services	X			X	287
10.1 Audiovisual and related services	X			X	288
10.2 Other personal, cultural, and recreational services	X			X	289
10.2.1 Education services					895
10.2.2 Health services					896
10.2.3 Other personal, cultural, and recreational services					897
11 Government services, n.i.e.	X			X	291
11.1 Embassies and consulates				X	292
11.2 Military units and agencies				X	293
11.3 Other				X	294

Memorandum items					
	<i>BPM5</i> standard component s	<i>BPM5</i> supplementary items	<i>BPM5</i> memorandu m items	Joint Classificatio n components	Internationally accepted codes
1	Freight transportation on merchandise, valued on a transaction basis			X	853
1.1	Sea freight			X	856
1.2	Air freight			X	857
1.3	Other freight			X	858
1.4	Space freight				862
1.5	Rail freight				863
1.6	Road freight			X	864
1.7	Inland waterways freight				865
1.8	Pipeline freight				868
2	Travel				
2.1	Expenditure on goods				
2.2	Expenditure on accommodation and restaurant services			X	
2.3	All other travel expenditure				
3	Gross insurance premiums		X	X	874
3.1	Gross premiums—life insurance				875
3.2	Gross premiums—freight insurance				876
3.3	Gross premiums—other direct insurance				877
4	Gross insurance claims		X	X	879
4.1	Gross claims—life insurance				880
4.2	Gross claims—freight insurance				881
4.3	Gross claims—other direct insurance				882
5	Financial intermediation services indirectly measured (FISIM)				887
6	Financial services including FISIM				888
7	Merchanting gross flows			X	893
8 <sup>43</sup>	Audiovisual transactions				894

<sup>43</sup> This item consists of a range of services and other transactions relating to audiovisual activities. Included are services that may be included in either *audiovisual services* or *royalties and license fees*, and also the acquisition and disposal of non-produced, non-financial assets relating to audiovisual activities, such as patents, copyrights, trademarks, and franchises.

## A. 2. INVESTMENT AND ENTERPRISE DEFINITIONS

### A. DEFINITIONS

*Direct investment* is the category of international investment that reflects the objective by a resident entity in one economy (that is the direct investor), to obtain a lasting interest in an enterprise (that is the direct investment enterprise) resident in another economy. The phrase 'lasting interest' implies the existence of a long-term relationship between the direct investor and the enterprise, and a significant degree of influence on the management of the enterprise.

Importantly, direct investment comprises not only the initial investment transaction between the investor and the enterprise, but also all subsequent transactions between them and among affiliated enterprises.

A *direct investment enterprise* is an associate, subsidiary or branch operating in a country other than the direct investor's country of residence.

For statistical purposes, a direct investment enterprise, however, is defined as an incorporated or unincorporated enterprise in which a direct investor, who is resident in another economy, owns 10% or more of the ordinary shares or voting power of an incorporated enterprise, or the equivalent in an unincorporated enterprise. Above this 10% foreign ownership threshold direct investment enterprises comprise, **associates** where there is 10% to 50% foreign ownership, **subsidiaries** with more than 50% foreign ownership, and **branches** where there is 100% foreign ownership of unincorporated enterprises (whether wholly or jointly owned).<sup>44</sup>

A *foreign direct investor* is an individual, an incorporated or unincorporated public or private enterprise, a government, a group of related individuals, or a group of related incorporated and/or unincorporated enterprises that have invested in a direct investment enterprise.

*Foreign Affiliate Trade in Services (FATS)* Enterprises are those with more than 50% foreign ownership that is subsidiaries and branches, which are primarily engaged in the production of services outside the investor's economy.

### B. COMPILING FATS STATISTICS

*For ease of reference, the rest of this section consists of relevant verbatim extracts from the Manual.*

Recommendations on compiling FATS Statistics: the Set of Elements for Phased Implementation.

Foreign Direct Investment (FDI) statistics

1.20 Collect complete statistics on foreign direct investment (i.e., the flows, income, and period-end positions) classified by *ISIC* activities to be complementary to the FATS statistics. For those countries that must delay the implementation of FATS statistics, FDI statistics provide an alternative interim indicator of commercial presence.

FATS: Basic Variables

1.21 Record certain basic FATS statistics, such as sales (turnover) and/or output, employment, value added, exports and imports of goods and services, and number of enterprises. For achieving comparability when reporting to international organizations, these are classified by

---

<sup>44</sup> See Box 7 on page 55 of the *Manual*.

specified activity categories based on *ISIC* (i.e., the *ISIC* Categories for Foreign Affiliates [ICFA]).

#### Trade in Services by Partner Country

1.22 Compile statistics on trade in services by partner country. ... In the case of FATS and FDI, it would be to report partner country detail both in the aggregate and for the major industry categories within ICFA. ... It is recommended that countries give a higher priority to providing data with respect to their most important trading partners. To the extent possible, countries should use a common geographical basis for all three sets of statistics.

#### FATS: Further Details

1.24 Augment the basic FATS statistics by compiling data on additional aspects of the operations of foreign affiliates, such as assets, net worth, operating surplus, gross fixed capital formation, taxes on income, research and development expenditures, and compensation of employees.

1.25 Detail of sales by product is desirable, not least because of the potential comparability between FATS data and trade between residents and non-residents. While compilation on this basis may well have to remain a long-term goal for most countries, as a first step toward a product basis, countries may wish to disaggregate sales in each industry as between services and goods. In addition, countries that are building their statistical systems for FATS on existing data systems that already include product detail may wish to use this detail from the outset because it could help them in monitoring commitments under the GATS that are specified in terms of services products. Similarly, countries that are building their FATS data systems from the ground up should consider the feasibility of providing for a product dimension.

#### Trade between related<sup>45</sup> and unrelated parties

1.27 Within the statistics on trade in services between residents and non-residents, separate out the trade with related parties from that with unrelated parties.

#### GATS modes of supply

1.28 Allocate the transactions between residents and non-residents over the GATS modes of supply. The simplified procedure set out in section III.F may be used as a starting point in compiling a first approximation of this allocation.

#### Extract from Box 1.2 International Trade in Services

International trade agreements concerning services, in particular those embodied in the GATS, make provision for agreement on suppliers moving to the country of the consumer.

To reflect this type of trade, the *Manual* extends the definition of *international trade in services* to include the value of services provided through foreign affiliates established abroad, described here as *Foreign Affiliates Trade in Services* (FATS). Such trade is described in Chapter 5.

Services are also supplied by individuals located abroad, either as service suppliers themselves, or employed by service suppliers, including those in the host country. A large part of this type of trade in services is covered by the *BPM5* and FATS frameworks.

---

<sup>45</sup> Trade with related enterprises is defined to include trade with all enterprises with which there is a direct investment relationship.

N.B. Although this *Manual* extends the scope of the term international trade in services, it is not suggesting that these extensions be regarded as imports or exports.

#### Economic Variables for FATS

4.46 A wide range of economic data or variables—operational and financial—in regard to FATS may be pertinent for analytical and policy purposes. The selection of the variables to be collected should be based primarily on their usefulness in implementing the GATS and in analyzing globalization phenomena. The practicalities of data availability also must be considered. With such considerations in mind, this *Manual* recommends that the FATS variables to be collected include at least the following basic measures of foreign affiliate activity: (i) sales (turnover) and/or output, (ii) employment, (iii) value added, (iv) exports and imports of goods and services, and (v) number of enterprises. Although these variables constitute a basic set that can provide answers to a variety of questions, additional measures of foreign affiliate activities may prove useful in addressing specific issues. The *Manual* suggests several measures that might be considered for collection by countries that are able to compile such additional information. Most of both the “basic” and the “additional” variables were drawn from the *1993 SNA*, as were their definitions.

#### Other Variables

4.67 Although not included as priority items, there are other FATS variables of significance, perhaps for certain countries of equal or greater importance than some of those previously discussed. As is the case for the priority items, comparisons with the total economy and with specific sectors can be made and used for assessing the impact of foreign-controlled enterprises on home and host economies.

4.68 Among such variables, which are listed and defined below, are those already collected by some countries. (The definitions are drawn from the *1993 SNA*, which may be consulted for additional details.)

*Assets* Entities over which ownership rights are enforced and from which economic benefits may be derived by their owners by holding or using them. These include both financial assets and non-financial assets, whether produced or non-produced.

*Compensation of employees* The total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the employee during the accounting period.

*Net worth* The difference between the value of all assets - produced, non-produced, and financial - and all liabilities.

*Net operating surplus* Measured as value added (gross), less compensation of employees, consumption of fixed capital, and taxes on production, plus subsidies receivable.

*Gross fixed capital formation* Measured by the total value of a producer’s acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non-produced assets realized by productive activity. (Fixed assets are defined as produced assets that are themselves used repeatedly, or continuously, in processes of production for more than one year.)

*Taxes on income* These consist of corporate income taxes, corporate profit taxes, corporate surtaxes, and so forth, and taxes that accrue to owners of unincorporated enterprises as a result of the income of those enterprises. Taxes on income include only taxes in the host country of the affiliate and not any taxes paid by the parent in the home country as a result of income earned or

distributed by the affiliate. Taxes on income are usually assessed on the total income of corporations from all sources and not simply profits generated by production.

*Research and development expenditures.* Expenditures for activities undertaken for the purpose of discovering or developing new products (goods and services), including improved versions or qualities of existing products, or discovering or developing new or more efficient processes of production.

## ANNEX B: SURVEY FORMS

### B.1: THE EBOPS SURVEY FORM

National Statistical Office  
International Transactions in Selected Commercial Services, 2004

This report is Confidential.

Respondent name and address block.  
Include any codes or other identifying information required.

#### Purpose of Collection

Thank you for agreeing to participate in this survey pretest. As we mentioned in our previous telephone communication, the Government of Thailand would like to facilitate and increase the export of services from Thai companies to the rest of the world. Currently, there is not enough information on this important service sector for government to make informed policy decisions to achieve this aim and to develop and monitor international trade agreements. Therefore, the National Statistical Office is beginning a research project to see if reliable data are available and can be reported by Thai exporting and importing companies. That is the purpose of this questionnaire and subsequent interview.

Please complete the survey to the best of your ability. If your accounting records are not fully compatible with the information requested, please estimate as closely as possible. In about one week, a representative from the NSO will telephone you to set up a time for an interview which will take approximately one-half hour. **This phase is extremely important and we urge you to have the completed form available during the interview and to cooperate fully with the NSO representative .**

We want to incorporate feedback and requirements from potential respondents and users and want any recommendations you have for improving the flow and function of the questionnaire. So please do not hesitate to make any comments or recommendations, whether or not they seem critical or impolite. We want to hear your truthful comments about the survey, the questionnaire, and your opinions about this data collection effort.

#### ARE YOU A SERVICES EXPORTER OR IMPORTER?

Generally speaking, if you bill a client abroad for any service that you provide, you are a service **exporter**, and if you buy any service from abroad, you are a service **importer**. **You can be both an exporter and an importer of services.** A variety of services are listed on this form with more details shown at the end.

The enclosed report form requests information on international transactions in services between your company and other companies or individuals located in foreign countries. It covers a variety of commercial services and international service transactions as described in Schedule C.

It is **not intended for imports and exports of goods, and interest payments or receipts. Report only transactions in international services.**

#### About reporting:

**Confidentiality:** Your individual company information will remain **strictly confidential**. These data will not be published. They will be used only for internal review to determine if this survey is feasible.

Contact Us for  
any assistance:      **Tel:**  
                                 **Fax:**  
                                 **E-mail:**

**Instructions on filling out the survey**

**Period Covered:** Please report for the calendar year 2004 or your nearest fiscal year.  
(Enter fiscal year date: \_\_\_\_\_)

**Estimates:** If a particular category of service by foreign country is not readily available, please estimate to the best of your ability.

**Coverage:** Please report all external service transactions with individuals or companies outside of Thailand. **Note: Amounts you report in Schedules A and B should include services (but not goods) transacted over the internet.**

**Related parties:** In this survey you are asked to show payments for services supplied from individuals and companies located in foreign countries and receipts from services supplied by your company to individuals or companies in foreign countries. Please show transactions with affiliated organizations separately. An affiliated organization is one in which you own more than 50% of its capital or an organization that owns more than 50% of your capital.

**Definitions:** Please see definitions of services on Schedule C.

**Countries:** Please see country codes on Schedule D. If your company trades with more than four (4) countries for any particular service, please make additional copies of Schedules A and B.

**Please make a copy for your records.**

**Thank you for your cooperation.**

Signed

**National Statistical Office**

**This report is CONFIDENTIAL**

**Schedule A - Exports of selected commercial services, 2004**

**For your operations in Thailand, please report the value of services sold to customers abroad (revenues earned) during 2004 (or your nearest fiscal year)**

Please round to Millions of Thai Baht (Example: Baht 236,233,599 = 236, Baht 236,599,453 = 237)

<b>I.I.I.I Services</b> (See definitions in Schedule C.) Include internet transactions.		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								Total revenues from exported services	
		Importing Country		Importing Country		Importing Country		Importing Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Postal and courier services	246										
Telecommunications services	247										
Construction services	249										
Insurance: receipts from claims on non-resident insurers	253										
Financial services other than insurance	260										
Computer services	263										
Information services	264										
Royalties & license fees	266										
Merchanting and other trade-related services	269										

<b>1.1.1.1 Services</b> <b>(See definitions in Schedule C.)</b> <b>Include internet transactions.</b>		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								<b>Total revenues</b> <b>from exported services</b>	
		Importing Country		Importing Country		Importing Country		Importing Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Operational leasing services	272										
Legal services	275										
Accounting services	276										
Business management consulting services	277										
Advertising and related services	278										
Research and development	279										
Architectural and engineering Services	280										
Agricultural, mining, and processing services	281										
Other business services	284										
Audiovisual and related services	288										
Education services	895										

<b>1.1.1.1 Services</b> (See definitions in Schedule C.) Include internet transactions.		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								<b>Total revenues</b> <b>from exported services</b>	
		Importing Country		Importing Country		Importing Country		Importing Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Health services	896										
Other personal, cultural, and recreational services	897										
	999										
<i>1.1.1.1.1 Total revenues</i>											

Note: If your company trades with more than four (4) countries for any particular service, please make additional copies of Schedules A and B.

**Comments** or qualifications about the data reported above:

**This report is CONFIDENTIAL**

**- Schedule B – Imports of selected commercial services, 2004**

**For your operations in Thailand, please report the value of services purchased from suppliers abroad (expenditures) during 2004 (or your nearest fiscal year)**

Please round to Millions of Thai Baht (Examples: Baht 236,233,599 = 236, Baht 236,599,453 = 237)

I.1.1.2 Services (See definitions in Schedule C) Include internet transactions.		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								Total expenditures for imported services	
		Exporting Country		Exporting Country		Exporting Country		Exporting Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Postal and courier services	246										
Telecommunications services	247										
Construction services	249										
Insurance: receipts from claims on non-resident insurers	253										
Financial services other than insurance	260										
Computer services	263										
Information services	264										
Royalties & license fees	266										
Merchanting and other trade-related services	269										

<b>1.1.1.2 Services</b> (See definitions in Schedule C) Include internet transactions.		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								<b>Total expenditures            for imported services</b>	
		Exporting Country		Exporting Country		Exporting Country		Exporting Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
		_____		_____		_____		_____			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Operational leasing services	272										
Legal services	275										
Accounting services	276										
Business management consulting services	277										
Advertising and related services	278										
Research and development	279										
Architectural and engineering Services	280										
Agricultural, mining, and processing services	281										
Other business services	284										
Audiovisual and related services	288										
Education services	895										

<b>1.1.1.2 Services</b> (See definitions in Schedule C) Include internet transactions.		Please enter country code from Schedule D (example: JP for Japan, MY for Malaysia, etc.)								<b>Total expenditures            for imported services</b>	
		Exporting Country		Exporting Country		Exporting Country		Exporting Country			
		Enter Country Code:		Enter Country Code:		Enter Country Code:		Enter Country Code:			
		_____		_____		_____		_____			
Description	Code	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties	Transactions with foreign affiliated parties	Transactions with other foreign parties
Health services	896										
Other personal, cultural, and recreational services	897										
	999										
<b>1.1.1.2.1.1 Total purchases</b>											

**Comments** or qualifications about the data reported above:

Note: If your company trades with more than four (4) countries for any particular service, please make additional copies of Schedules A and B.

## **Schedule C: Description of Selected Services in TEBOPS for the Phase IV survey**

**246 Postal and courier services:** includes express delivery services.

### **247 Telecommunications**

Covers wired, wireless and satellite telecoms for voice, telex, fax, data, email, voice mail, teleconferencing, paging, VOIP, EDI, and radio and television transmission. Data transmission and basic internet as well as internet access are included; also the rental of telecommunications lines or other capacity. Excludes: the value of subject matter transported by telecoms services.

### **249 Construction services**

Covers residential and commercial buildings, civil engineering projects, finishing, installation and assembly, repairs, refurbishment, special trades, demolition and site clearance, excavation, piling, etc, and the rental of construction equipment with operator. Please estimate the construction portion of turnkey projects.

### **253 Insurance**

Please record separately claims received from non-resident insurers (for Schedule A ) and premiums paid to non-resident insurers (for Schedule B).

- (a) Insurance services comprise the components below.
- (b) Life insurance and pension funding (life insurance, individual and group pensions, portfolio management services)
- (c) Freight insurance (on cargoes only)
- (d) Other direct insurance (accident, health, motor, marine, aviation and other transport coverage; property, liability, credit and surety, and travel insurance)
- (e) Auxiliary insurance services (brokerage, agency, claims adjustment, actuarial, outsourced back office services, etc.)

### **260 Financial services, except insurance**

Covers banking and related services including intermediation, fees on credit and debit cards, investment banking, fees relating to mergers and acquisitions, venture capital services, securities and commodity brokerage, processing and clearance of securities transactions, portfolio management, trust and custody services, provision and transfer of financial information, advisory services, etc. Excludes: legal, accounting and tax planning services.

### **263 Computer services**

Covers hardware, software (including operating and internet software) and other consultancy services, computer facilities management, systems maintenance, web hosting and other data processing, hardware repair and maintenance. Excludes: the value of any hardware and pre-packaged software, whether imported or exported.

### **264 Information services**

Covers on-line information retrieval and storage services, provision of database and internet content, web search portals and other support services. Also covers news agency services (and syndicated reporting services to the media), and non-bulk subscriptions to newspapers and periodicals. Database charges not separable from related telecommunications charges should be included here, unless they predominate, in which case please report under 247.

### **266 Royalties and license fees**

Covers fees for the use of:

- (a) Patents, industrial designs, industrial know-how or manufacturing rights, and payments for the use of unpatented industrial processes.

(b) Trademarks (such as words, symbols, designs or combinations thereof) which distinguish the holder's products or services from those of another provider.

(c) Franchises, where contractual privileges granted by an individual or firm to another, permit the sale of a produce or service in a specified area and/or manner.

(d) Copyrights include rights to use computer software, excepting off-the shelf products (classified with goods). The value of multiple-use licenses and license extensions for software copies already provided to clients should be included. Copyrights also cover royalty or license fees for the use of artistic, literary dramatic or musical originals. Excludes: distributive rights for audiovisual products for a limited period or area (reported in 288).

### **271 Trade-related services**

Covers commissions on goods and service transactions between (i) resident merchants, commodity brokers, dealers, manufacturers' sales branches and commission agents and (ii) non-residents. Includes auction commissions. Excludes: commissions already recorded in the price of goods imported and exported through Customs, and financial service commissions (whether involving insurance, credit, stock or bond issues).

### **272 Operational leasing services**

Covers resident/non-resident leasing or rentals of transportation equipment without crew, and of related equipment such as rail cars and containers or drilling rigs. Leasing or rentals of industrial machinery and equipment without operator are covered, together with rentals and leasing of office and commercial equipment and of household and personal goods. Excludes: financial ('capital') leases, rentals of vehicles to foreign visitors, and telecommunications equipment (included in 247).

### **275 Legal services**

Covers services that provide legal advice and representations in any legal, judicial and statutory procedures, and the drawing up of legal documentation. Certification consultancy, arbitration/conciliation services, escrow and estate settlement services are covered as well.

### **276 Accounting services**

Covers accounting, auditing of financial statements, bookkeeping services, corporate and individual tax planning and preparation, and receivership services.

### **277 Business management consulting services**

Covers advisory and operational assistance services in such areas as general management; financial, human resource and marketing management; production (including supply chain) management; and public relations services.

### **278 Advertising and related services**

Covers the planning, creating and placement of advertising, together with the purchase and sale of advertising space, including on the internet. Also covers market research; telemarketing, trade fairs, exhibition and other product promotion services; public opinion polling.

### **279 Research and development**

Covers basic and applied research in the physical and social sciences and the humanities. Includes experimental development of new products and processes, and interdisciplinary R&D. Commercial research in areas such as electronics, pharmaceuticals and biotechnology is included. Excludes: technical studies and consultancy work.

### **280 Architectural, engineering and other technical services**

Covers architectural design and contract administration, urban planning and landscape architecture. Engineering covers project consulting, design, integrated engineering services and project management, all carried out in various stages and in different fields (as civil, industrial).

Excludes: mining engineering (included in 281). Technical services include surveying (except geological, which are included in 281), mapping, weather services, product certification and technical inspection.

#### **281 Agricultural, mining and processing services**

Covers core environmental services of waste treatment and depollution.

Covered too are supporting services to agriculture, forestry, fishing, and mining including mining engineering and geological surveying.

Processing covers services of production on own or others' inputs on a fee/contract basis; the production occurs abroad and the product stays abroad. The originating party owns the product and is billed for the processing. If the processing facility is in Thailand, the processing charge billed to the foreign originator is included in Schedule A. The charge is shown in Schedule B if payment is made by a Thai originator to a processor abroad.

#### **284 Other business services**

Covers services such as personnel placement, investigation and security, real estate services including hotel management, building cleaning, translation and interpretation, call centers, photographic services and other services to business that cannot be assigned under 247 to 281 above.

Also included are services between related enterprises (285). This covers payments between such enterprises which also cannot be specifically allocated to an appropriate services category. These payments represent contributions to the general management costs and overhead expenses.

#### **288 Audiovisual and related services**

Covers resident/non resident transactions for the production of films, videos, TV and radio programs. Includes sound recording, technical and post-production services, distribution, projection services and video rentals. Distributive rights for audiovisual products for a limited period or area are included here, as are the services of directors, broadcasters, performing artists, guests, authors, composers and writers. Excludes: sale of ownership rights (treated as assets, not services).

#### **895 Education services**

Covers provision of correspondence courses and services to the educational market such as testing, examination, and development of course materials. Instruction may be over the internet or by travel to a host economy; includes the remuneration of own-account instructors. Excludes: fees and living expenses of students at educational institutions outside their economy of residence.

#### **896 Health services**

Covers services of doctors, nurses and paramedical personnel, whether or not as own-account providers. Also covers laboratory and similar services. These human health services may be provided remotely or on site. Excludes: all medical and related expenses of patients at medical centers outside their economy of residence.

#### **897 Other personal, cultural, and recreational services**

Covers services associated with performing arts, cultural institutions (as library/archive, museum and preservation services), sporting and recreational services, gambling and betting (as casinos). Also included are well-being services (such as salons or spas offering treatment other than by medical or paramedical providers included in 896), and social, other personal, cultural and recreational services, not included elsewhere.

## B. 1.2 THE COGNITIVE QUESTIONNAIRE

### Cognitive Interview

Company name: \_\_\_\_\_

Telephone request date: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Person visited: Name \_\_\_\_\_ Title: \_\_\_\_\_

Interviewer: \_\_\_\_\_ Interview date: \_\_\_\_\_

Interviewer's organization: \_\_\_\_\_

---

#### **Introduce yourself and read the following statement to the respondent:**

*The Government of Thailand would like to facilitate and increase the export of services from Thai companies to the rest of the world. Currently, there is not enough information on this important service sector for government to make informed policy decisions to achieve this aim and to develop and monitor international trade agreements. Therefore, the National Statistics Office is beginning to do research with Thai companies that import and export services to determine the best way to collect data on international transactions. That is the purpose of this questionnaire and interview.*

**We want to incorporate feedback and requirements from data providers and want any recommendations you have for improving the questionnaire and the survey. We want to hear your truthful comments about the survey, the questionnaire, and your opinions about this data collection effort. So please do not hesitate to make any comments or recommendations, whether or not they seem critical or impolite.**

1. First, can you please tell me a little about you and your position with the company.

- A. How long have you been with this company?
- B. What is your title/role?
- C. What are your major responsibilities?
- D. Are you responsible for completing other government surveys? If so, can you remember their names?

2. Ask the following questions about the company's exported and imported services:

#### **Exported Services**

- A. Does your company sell services internationally (to companies or persons in foreign countries)?
- B. Approximately, what proportion of the company's total income is accounted for by international sales of services?
- C. What types of services do you sell:
  - i) Within Thailand?

ii) *Outside of Thailand?*

**Imported Services**

- D. *Does your company purchase services internationally (from companies or persons in foreign countries)?*
- E. *Approximately, what proportion of your total expenditure for services is accounted for by international purchases of services?*
- F. *What types of services do you purchase:*
- i) *Within Thailand?*
  - ii) *Outside of Thailand?*

**For the next series of questions, refer to the form sent earlier to the respondent.**

**3. If there are entries on the form, ask a series of probing questions to determine if the respondent understood the question and reported correctly. Go to the first entry and ask:**

- A. *Is the description of the service category in column 1 clear to you? What specific services did you include under this category?*
- B. *In deciding what to include, did you look at Schedule C: Definitions of Selected Services, in the back of the form? If so, was it helpful?*
- C. *Was the term “transactions with foreign affiliated parties” explained clearly on the questionnaire? What does it mean to you?*
- D. *Did this information come from your financial and/or management accounts?*
- i) *If yes, how difficult was it to extract?*
  - ii) *If no, were you able to estimate with some accuracy or was it more of a guess?*

**Continue for each completed entry. Use the continuation sheet for additional entries.**

**4. If the form is completely blank, ask a series of probing questions to determine why the respondent didn't complete the form.**

- A. *Were you the person previously contacted on the telephone?*
- B. *Did you read the cover letter sent with the original mailing?*
- C. *Did you attempt to complete the form?*
- i) *If yes, can you tell us why you didn't complete the questionnaire?*
  - ii) *If no, can you tell me why you didn't try to complete it?*
  - iii) *Did you look at the instructions? If yes, were the instructions clear?*
- D. *We realize that the time for completion was very short.*
- i) *If you had more time would you be willing to complete the form?*

ii) *Is this information available in your accounting records? How long do you think it would take to compile the required data?*

iii) *Can I assist you now to complete the form using your best estimates?*

#### **5. Other Survey Comments**

A. *Do you have any other comments about the form or the survey?*

B. *Do you think it is important for government to make policy to assist Thai exporters of services? Please explain.*

C. *Do you think that the results of this survey can assist the government to make better import/export trade policy? Please explain.*

#### **6. Attitudes toward the NSO and Government Statistics**

A. *Have you completed other questionnaires from the NSO?*

B. *If the company receives NSO questionnaires are they normally completed and returned to the NSO? If not, why not?*

C. *What are your general perceptions about NSO questionnaires and other government statistical inquiries?*

D. *Is it company policy to complete mandatory government statistical forms? What about voluntary surveys?*

E. *Does your company have a particular person or staff to answer government statistical questionnaires?*

F. *What would be more likely to get your attention:*

i) *Questionnaires sent by mail to the Accounting Department or questionnaires delivered to the reception area? Please explain.*

G. *Questionnaires from the NSO state that the completed reports are CONFIDENTIAL.*

i) *Do you have any doubts about that statement? Please explain your answer.*

ii) *If you have doubts, what could change your mind?*

#### **7. General Comments:**

*Do you have any other comments about this interview, survey questionnaire, or anything else about statistical projects in general?*

**B.2. THE FATS SURVEY FORM**

**National Statistical Office**  
**Annual Survey of Foreign Affiliates in Thailand Trade in Services**

	Respondent name and address block. Include any codes or other identifying information required.
--	--

---



---

THIS REPORT IS REQUIRED BY LAW. THE SAME LAW PROTECTS THE CONFIDENTIALITY OF YOUR REPORTED DATA. YOUR REPORTED DATA MAY BE USED ONLY FOR STATISTICAL PURPOSES. IT CANNOT BE USED FOR PURPOSES OF TAXATION, REGULATION, OR INVESTIGATION. COPIES RETAINED IN YOUR FILES ARE ALSO IMMUNE FROM LEGAL PROCESS.

**What is a Foreign Affiliated Company?** -- A business enterprise located in Thailand in which a foreign person/company owns more than a fifty (50) percent voting interest (or the equivalent).  
**Who should report?** -- Foreign affiliated companies in Thailand which are supplying services (see attachment for list of covered services).  
**Purpose of collection:** -- To provide estimates of the total service activity of foreign affiliates in Thailand.  
**Reporting period:** -- Calendar year 2005 or nearest fiscal year. (Enter fiscal year period: \_\_\_\_\_)  
**Estimates:** -- Make reasonable efforts to obtain the information required. However, if actual figures are not available, please provide estimates and label them as such.  
**Please complete and return this form by (DATE, etc.) to (Organization Name and Address)**

<b>Part I.</b>	<b>Identification of First Foreign Parent and Ultimate Beneficial Owner (UBO)</b>
<b>1. Enter the name, country, and TICFA code (see supplemental list) of the first foreign parent</b>	
<i>Name:</i>	
<i>Country:</i>	<i>TICFA code:</i>
<b>2. Enter name, country, and TICFA code of Ultimate Beneficial Owner (see instructions)</b>	
<i>Name:</i>	
<i>Country:</i>	<i>TICFA code:</i>

<b>Part II.</b>		<b>Selected Financial and Operating Data of Foreign Affiliate in Thailand</b>		
<b>1.</b>	<b>Major activity of this foreign affiliate</b> ( <i>Briefly describe activity</i> )			
<b>2.</b>	<b>Industry of this foreign affiliate</b> ( <i>Enter the 4-digit TICFA code for the major activity of this affiliate. See supplement sheet.</i> )	<i>TICFA Code:</i>		
<b>3.A.</b>	<b>Total number of employees at the end of 2005</b> ( <i>Include part-time employees, but exclude temporary and contract employees not on your payroll</i> )			
<b>3.B.</b>	<b>Total employee compensation</b> ( <i>include a. wages and salaries — employees' gross earnings before payroll deductions, and direct and in-kind payments by the employer to employees; and b. expenditures for all employee benefit plans.</i> )	<b>Amount (Baht)</b>		
		Billions	Millions	Thousands
		<b>Amount (Baht)</b>		
		Billions	Millions	Thousands
<b>4.</b>	<b>Total sales or gross operating revenues</b> ( <i>Gross sales minus returns, discounts, and allowances; exclude sales or turnover taxes</i> )			
	<b>a.</b>	<b>To resident persons/companies in Thailand</b>		
	<b>b.</b>	<b>To foreign affiliated persons/companies</b> ( <i>resident outside Thailand</i> )		
	<b>c.</b>	<b>To other foreign persons/ companies</b>		
<b>5.</b>	<b>Net income (or loss) - after provision for income taxes</b>			
<b>6.</b>	<b>Total assets</b> ( <i>close of 2005</i> )			
<b>7.</b>	<b>Total liabilities</b> ( <i>close of 2005</i> )			
<b>8.</b>	<b>Total exports of goods and services, including capital goods</b> ( <i>supplied by foreign affiliate in Thailand to foreign persons/companies.</i> )			
	<b>a.</b>	<b>Exports of goods, including capital goods</b> ( <i>valued f.a.s. Thailand port</i> )		
	<b>b.</b>	<b>Exports of services</b>		
<b>9.</b>	<b>Total imports of goods and services, including capital goods</b> ( <i>supplied to foreign affiliate in Thailand by foreign persons/companies</i> )			
	<b>a.</b>	<b>Imports of goods, including capital goods</b> ( <i>valued FAS foreign port</i> )		
	<b>b.</b>	<b>Imports of services</b>		
<b>Notes and comments:</b>				

## B.2.1. SURVEY PROCEDURES FOR FATS SURVEYS

### a) Conducting FATS Surveys

Chapter 4 of the *Manual* sets out recommendations for the collection of statistics on Foreign Affiliates Trade in Services (or FATS statistics). These comprise data from both direct investment enterprises - foreign owned affiliates in the compiling economy (inward FATS), and affiliates established by enterprises of the compiling economy in the countries of foreign customers (outward FATS).

Services could potentially be supplied by any producer and thus **benchmark universe surveys** cover, at intervals, all producers to identify the services producers. **Annual surveys** would concentrate on affiliates in which the direct investor holds a majority of the ordinary shares or voting power. The first priority for inward FATS is the geographical attribution of the ultimate beneficial owner (and of first foreign parent as a link with FDI statistics), and for outward FATS the attribution is based on the country of location of the affiliate whose operations are surveyed. For reporting to international organizations, FATS variables should be disaggregated according to ISIC Categories for Foreign Affiliates (i.e. TICFA), and any product detail should follow an EBOPS compatible basis.

In an interim situation before FATS statistics are developed, FDI statistics provide an alternative interim indicator of GATS commercial presence, or Mode 3. In accordance with international practice, these FDI statistics should be compiled as specified by BPM5 and the OECD Benchmark Definition of Foreign Direct Investment (BD3).<sup>46</sup> This involves enterprises where a direct investor, who is resident in another economy, owns 10% or more of the ordinary shares or voting power (for an incorporated enterprise) or the equivalent (for an unincorporated enterprise). Where this proportion lies between 10% and 50% these are termed associates – whilst branches are unincorporated enterprises wholly or jointly owned, either directly or indirectly, by the direct investor. FATS statistics include both incorporated enterprises, and registered partnerships with the proportion of foreign voting power over 50% and branches.

The Manual recommends that the FATS variables be collected in two stages, as already indicated, the first being for the basic data on sales, employment, value added, exports and imports and number of enterprises. Further statistics would include data on assets, net worth, operating surplus, gross fixed capital formation, taxes on income, compensation of employees, and even research and development expenditure. Disaggregation of sales between goods and services in each TICFA sector should be an important early aim, and later on the services sales could include product detail for comparability with the EBOPS data and for monitoring commitments under the GATS. It is open to any country to concentrate on those aspects seen as of national interest.

### b) The FATS Surveys: Frequency and Content of Forms

The following guideline for recommended action is based on U.S. practice:

#### i) Survey frequency

**Benchmark universe surveys** are carried out every five years to identify enterprises with 10% foreign ownership, indicating those with over 50% (for inward FATS), and enterprises whether nationally owned or foreign affiliates, which own 10% or more of enterprises established abroad, indicating where this ownership is over 50% (for outward FATS). These occasional surveys would include a form for exemption to be claimed where there is no such foreign ownership of investment abroad. Enterprises in Thailand would be classified by TICFA. Enterprises where the

---

<sup>46</sup> Benchmark Definition of Foreign Direct Investment, 3<sup>rd</sup> edition, 1996, OECD, Paris

owner is the only worker, and the self-employed, even sole, unincorporated economically active persons are to be covered by these surveys.

**Annual surveys** would be for a sample taken from the benchmark universe survey, on the basis of a threshold set so that a high proportion of the total sales and other key variables are covered, but so that the number of returns is greatly reduced. The threshold is set on the basis of assets, sales or gross operating revenues and net income (or loss) each of which falls below a set amount.

#### ii) Content of the FATS Survey Forms

The survey forms should include a declaration on the mandatory nature of the survey, and the fines and imprisonment sanctions for non-compliance.

They should also include a confidentiality statement, indicating that reports may only be used for analytical or statistical purposes, where the firm cannot be individually identified, and that the forms will not be used for the purposes of taxation, investigation or regulation. Copies retained on file by enterprises are immune from legal process.

Filing could be submitted electronically (using a secure automated system), by mail or by delivery to a designated address. Email correspondence could be used for dealing with any subsequent questions arising, subject to the enterprise being made aware that email is not necessarily secure against interception by a third party.

Where financial or management accounts do not easily allow for the extraction of any item required, estimates are permissible.

The country of residence is the criterion for ownership, not the country of citizenship.

#### iii) Variables to be collected by FATS surveys

The surveys for both inward and outward FATS entities could include, maximally, a demand for the following information:

(the bank, insurance, wholesale and retail sectors would be required to complete designated sections with reduced detail, if they are the subject of separate additional surveys)

- Sales in each TICFA category for the top ten such categories
- Number of employees, with their occupation classification (in two broad Categories: “Managerial, professional and technical”, and “All others”), and their compensation (wages and salaries gross, employee benefit plans, for these two broad categories of occupation)
- Sales or gross operating revenues (excluding sales or turnover taxes)
- Net income (or loss)
- Total assets and total liabilities
- Total income from:
  - Equity investments (at home or abroad)
  - Certain realized or unrealized gains or losses
  - Other income
- Total costs and expenses from:
  - Costs and expenses
  - Home country income taxes
  - Other costs and expenses
- Net income or loss
- Sales to: Resident persons Foreign affiliates; Other foreign persons (See note below).

- Interest, royalties to government entities, taxes, fees, other royalties
- Receipts / payments from / to foreign persons for intangibles
- Research and development expenditure
- Goods and services imports and exports: with notes on the allocation between goods and services of software and the distribution of gas, water and electricity (See note below).
- A list of foreign affiliates where the holding is under a set threshold, showing sales or gross operating revenue and net income or loss, country, industry code (TICFA), total assets, total liabilities, net assets, number of employees, and debt owed to affiliates or owned in them.

Note: the total of each of these items should be equal.

Furthermore “Detail of sales by product is desirable, not least because of the potential comparability between FATS data and trade between residents and non-residents. While compilation on this basis may well have to remain a long-term goal for most countries, as a first step toward a product basis, countries may wish to disaggregate sales in each industry as between services and goods.” (the *Manual* §1.25)

Note: enterprises are not asked initially to allocate their exports and imports to the four GATS Modes of Supply, and this would be done by the compiling agency, or the Ministry of Commerce, Department of Trade Negotiations, at an aggregate level in accordance with the *Manual* recommendations (§§ 2.98 and 3.41-3.49).

Information obtained from partner countries is useful when data are not available within a country and also to validate and improve statistics of the compiling country. As discrepancies are identified and explained, compilers can improve the quality of their BOP and FATS statistics.

Various options can be combined for the compilation of inward and outward FATS statistics. As an example, the United States and most EU countries that compile outward FATS data collect both inward and outward FATS statistics on the basis of FDI surveys. Belgium uses FDI surveys for outward FATS but compiles inward FATS data on the basis of statistics collected on domestic enterprises. Sweden produces both inward and outward FATS statistics on the basis of a specific separate survey.

## **C Compilation of Statistics on FDI Flows: Methodology**

### **i) Data Collection**

The statistics to be compiled on FDI comprise the following:

- Direct Investment Income Flows

This category captures income on equity and debt in the compiling economy and abroad, and is reported on a net basis, and comprises:

- \* Distributed Income: dividends and distributed profits
  - \* Reinvested earnings and undistributed profits
  - \* Interest received (on debt)
- Direct Investment Financial Transaction Flows, comprising:
    - \* Equity capital (claims, liabilities)
    - \* Reinvested Earnings (net)
    - \* Other Capital, which captures inter-company debt transactions, other loan financing, etc.
  - Direct Investment Stock:

The value of the stock of direct investment (claims, liabilities) at the end of the reference period in the compiling economy and abroad (covering equity capital and reinvested earnings).

Secondary sources, which can be used as references for data on FDI flows for member countries include the *Balance of Payments Statistical Yearbook*, and *International Financial Statistics* both published by the IMF.

#### ii) Foreign Direct Investment (FDI)

The OECD Benchmark Definition of Foreign Direct Investment provides operational guidance - within the conceptual framework of the IMF BPM5, and as an elaboration of it - on how foreign direct investment data should be compiled to meet internationally agreed standards.

#### iii) Units, and Ownership

The IMF points out that “The concept of direct investment is fundamentally different from the concept of foreign-controlled resident enterprises. While all foreign-controlled enterprises will be direct investment enterprises, those that are not considered foreign-controlled enterprises may also be in direct investment relationships with non-resident direct investors” [“Balance of Payments Compilation Guide”, paragraph 691, IMF, 1995].

While FATS data are dealing solely with subsidiaries in IMF parlance, it is nevertheless important that where such subsidiaries in turn own subsidiaries within the compiling economy - or abroad - that these are included in the data, because there can be a major difference between doing so or not.

The treatment of holding companies with extended chains of control can be very complex and easily give rise to inter-country variances, including double counting. The first ‘layer’ of the subsidiaries of a holding company may be considered, but the analysis not carried down or accounted for pro-rata, in respect of shares held, in turn, by those subsidiaries in any ‘sub-subsidiaries’. OECD has issued recommendations (in BD3) on how to treat Special Purpose Entities (SPEs) of multi-national enterprises, which often involve intricate situations, and the *Manual* recommends they be followed. SPEs engage primarily in international transactions with few or no local operations where they are registered, and are variously called financing subsidiaries, holding companies, base companies or regional headquarters.

#### iv) Employees

The basic unit to record the number of employees will have to be normalized, whether it be for persons employed full time over the period of a whole year, the head count on a certain date, or part-timers aggregated up into full time equivalents.

#### v) Disaggregating Goods and Services

Many manufacturers supply services, and these can account for a significant proportion of services production. It is important to separate out the goods and services activities of all foreign affiliates and, eventually, the services products resulting from such productive activities.

There are problems arising from the incorporation of goods in certain figures classified as services only. Examples arise in the travel category; computer software, consultancy, and implementation; construction; and government services. Intra-firm transactions, especially for large-scale manufacturing, can incorporate many services. The residual category ‘Services between related enterprises n.i.e’ (n.i.e. = not included elsewhere; EBOPS 285) is for items that cannot be specifically classified elsewhere, and covers payments from branches, subsidiaries and

associates to their parent enterprise or other related enterprises, as contributions, for example, to general management overheads and reimbursement of expenses.

vi) Misleading Comparisons

Comparison of the performance between foreign affiliates in a country, with the performance of the entire 'local' sector, can give a misleading impression. Often the foreign affiliates are part of regionally or globally active multinational enterprises and should more properly be compared with locally owned multinationals, rather than the whole set of firms, which includes predominantly small enterprises weighted heavily to one and two person entities. The significance of this becomes clearer when the high concentration of firms is taken into consideration.

vii) Confidentiality

Governments undertake not to publish information, which can reveal the position of individual groups or enterprises. The reality is that for smaller trade flows and smaller economies, where a variety of factors are being displayed in statistical tables, data in an increasing number of 'cells' have to be suppressed.

## ANNEX C: CLASSIFICATION LINKAGES

### C. 1. READERS' GUIDE TO CLASSIFICATIONS FOR THAI SERVICES TRADE

#### KEY

**“T” in the acronyms TEBOPS, TGATS and TICFA signifies “Thailand”**

**The *Manual* = “Manual on Statistics of International Trade in Services”, UN, 2002**

**EBOPS = “Extended Balance of Payments Services” classification of the *Manual***

**CPC = “Central Product Classification” (Version 1.0), United Nations**

**GATS = “General Agreement on Trade in Services”, World Trade Organization**

**GNS/W/120 = reference list of services categories used in GATS negotiations**

**ISIC = “International Standard Industrial Classification of All Economic Activities”  
(Rev 3.1), United Nations**

**ICFA = “ISIC Categories for Foreign Affiliates” classification of the *Manual*\***

\*These flows arise through the establishment of a commercial presence in the home or host economy (‘Mode 3’ of GATS). Activities so classified are also known as ‘FATS’ (Foreign Affiliates Trade in Services) statistics.

#### (a) Classification Schedules

##### (i) TEBOPS

###### About the table

TEBOPS represents a Thai classification for trade in services between residents and non-residents. The breakouts are by EBOPS category as recommended for compilation in the *Manual* (at Annex II, pp 82-84). The table uses the EBOPS order and most category titles as well.

What distinguishes TEBOPS from just using Annex II of the *Manual* are two features:

1. TEBOPS includes certain additional detail, which is expressed in terms of CPC coding. That coding is needed to link up with the other key classifications for services trade, TGATS and TICFA. (Several EBOPS categories directly correspond with GATS and foreign affiliate classifications once those are aggregated up to a medium level. Other EBOPS categories though, do not match. But, with some modification and supplementary detail, a serviceable linkage is made which generally respects the titling and ordering of TGATS and TICFA).
2. TEBOPS identifies a number of national memorandum items not found in the *Manual*.

###### Reading the TEBOPS table

On the left are the TEBOPS descriptions; to the right are the corresponding EBOPS numbers, titles, and any CPC coding relevant for linkage.

Example: first page

- Transportation is the TEBOPS description; 205 the EBOPS number and title, Transport.
- The *Manual* recommends breakouts by mode (sea air, etc) and where possible by type (passenger, freight, other), so the hierarchy is described accordingly.

- The superscript denotes a category used in the transportation group to compile a suggested national memo item on logistics. Memo items appear in red.
- CPC descriptions, as under Other air transport, appear at the left, with their code numbers to the right. These components and further memo items are identified for compiling both logistics and TGATS items.

## (ii) TICFA

### About the table

TICFA represents a Thai format for classifying the activities of foreign affiliates, or FATS. It is recommended as a summary format also to classify statistics on Foreign Direct Investment, where this may initially be a proxy for FATS statistics.

TICFA, like TGATS, is an abbreviated version of a fuller correspondence table, in this case found at Annex IV of the *Manual*, pp 150-159. TICFA groupings (as Transportation, Construction) each occupy a horizontal block. At a summary or lower level the TICFA, or ICFA categories, have counterparts in other classifications.

Since the generation of outward FATS statistics presents some particular challenges, classification at higher TICFA levels is perhaps a more useful starting point.

### Reading the TGATS table

The TICFA/ICFA/ISIC descriptions appear on the left, with ICFA, ISIC (3.1) and EBOPS codes located in the center columns. Related EBOPS descriptions appear on the right.

Example: first page

- The chief category, Transportation, (ICFA 8.1), corresponds with the transportation categories of TGATS and TEBOPS, though in a different ordering. Some internal differences apply in coverage. TICFA does sub-divide water transportation at 8.1.2 into sea and inland water components, but not supporting services of that mode. This is anticipated, however, with ISIC Rev.4, together with other changes in the direction of increased comparability.

## (iii) TGATS

### About the table

TGATS represents a Thai classification for services trade organized on a GATS basis. It is an abbreviated version of the GNS/W/120 list used for services negotiations. As it cannot be compiled by simple re-assembly of EBOPS categories, additional CPC detail from the TEBOPS categories is used to align with the GATS definitions. (The full GNS/W/120 list, incidentally, is cross-referenced to CPC codes up to the 5-digit level and sometimes beyond. It is reproduced at Annex VI of the *Manual*, pp 161-166. Its order and coverage differ from EBOPS, but by no means bar a correspondence. GNS/W/120 coding is also cross-referenced with EBOPS at Annex IV of the *Manual*.)

### Reading the TGATS table

The TGATS categories are identified at the left by red coding just after the description. The description is that used by GNS/W/120 in most cases, or reflective of it where some different ordering is needed (as at engineering services).

To the right of each red-coded category are the corresponding EBOPS numbers, titles, and CPC coding relevant for linkage.

Example: first page

- The first TGATS category is Legal services, identified by its red code 1A a. 1A a is the GNS/W/120 coding for Legal services; that is, item 'a' of sub-sector A, Professional Services, which in turn is part of 1, the Business services sector.
- Opposite 1A a, is the EBOPS description, 275 Legal services. All of 1A a, happens to have a single corresponding EBOPS category.

Further examples:

- The second TGATS category is Accounting, auditing, bookkeeping and taxation services, identified by its red code 1A b, c. Here, two GNS items (1A b Accounting auditing and book keeping services, and 1A c Taxation services) are combined to link with an EBOPS category, which covers them both. That is, 1A b, c corresponds with 276 Accounting, auditing, bookkeeping, and tax consulting services of EBOPS.
- The third TGATS category is Engineering and related services, is identified by its red code 1A d, e, f, g; e, m. This is a modified category without direct linkage to EBOPS, and has a title of its own.
- The nearest EBOPS category, 280 on Architectural, engineering and other technical services, is the group of services most likely to be measured statistically and so guided the selection of GNS coding that would reasonably match.
- The associated GNS categories are Architectural, engineering, integrated engineering and urban planning and landscape architecture, or 1A d, e, f, g, under Professional services. Technical testing and analysis and Related scientific and technical consulting are parts 'e' and 'm' listed farther along under 1 F, Other business services.
- The CPC code 835 is shown for the component 1 A e, m, should this smaller group of services wish to be analyzed separately.
- Lastly, the description, on the right, lists:
  - (i) the addition to EBOPS 280 of CPC 83139, Other scientific and technical consulting services. This is currently part of EBOPS 284 (Other business services), but the *Manual* allocates it here to the GNS code 1A e (Annex III, p 125).
  - (ii) the deduction of CPC 83131, Environmental consulting services of 280. It is recommended here as a suitable component of Environmental services of TGATS 6.

### **(iv) TGATS-SC**

#### About the table

TGATS-SC illustrates the Specific Commitments made for sectors by Thailand in its GATS agreement of 1995. The scheduled items are superimposed on the basic TGATS table. The table is unique in that it also lists and codes items, which have *not* been scheduled.

### Reading the TGATS table

Scheduled items (many specified at the 5 digit level of the CPC) are highlighted in yellow at the left. TGATS categories (or parts of them), which are *not* scheduled in the Agreement, remain un-highlighted. Un-highlighted CPC codes are added at the right, thus adding a statistical dimension to unscheduled items, which may remain to be negotiated.

The scheduled items on the other hand are not assigned CPC coding. Typically, they would be already covered by broader measurements of their TGATS group (gray-shaded). Countries rarely compile trade at a CPC level as the codes are so numerous. Detailed CPC coding for each item in GNS/W/120 is in any case listed at Annex III of the *Manual* (pp 124-149).

Example: first page

- A simple illustration is with TGATS category 1A b, c, Accounting, auditing, book keeping and taxation services. The wording highlighted in yellow denotes scheduling, whether full or partial.
- In fact, Thailand scheduled only 1A b, its Accounting, auditing and book keeping services. Its Taxation services (1A c) were not scheduled; they are identified in a separate line just below and are left un-highlighted.
- Opposite Taxation services, appears its CPC code (823). It too is un-highlighted. That would make it visually distinct from any gray-shaded linkage codes in the EBOPS descriptions for a TGATS category (e.g. at Engineering services).

**C.2.: TEBOPS – LINKAGE FORMAT FOR EBOPS**

**TEBOPS (Linkage format for EBOPS)**

**Thailand classification for resident/non-resident trade in services**

\* indicates part of a category or code

TEBOPS descriptions	EBOPS descriptions and specific CPC 1.0 coding
<p>1. Transportation</p> <p>Sea transport</p> <p>    Passenger, sea</p> <p>    Freight, sea<sup>1</sup></p> <p>    Other sea transport<sup>1</sup></p> <p>        Supporting services</p> <p>        Vessel rentals with crew</p> <p>        Pushing, towing services</p> <p>        &lt;&lt;Memo&gt;&gt;: Other marine repairs, maintenance</p> <p>Air transport</p> <p>    Passenger, air</p> <p>    Freight, air<sup>1</sup></p> <p>    Other air transport<sup>1</sup></p> <p>        Supporting services</p> <p>        Aircraft rentals with crew</p> <p>        &lt;&lt;Memo&gt;&gt;: Repair/maintenance, air transport</p> <p>Other transportation services [See sub-totals below]</p> <p>    Passenger, other</p> <p>    Freight, other<sup>1</sup></p> <p>Other transport services<sup>1</sup></p> <p>    Inland waterway transport</p> <p>        Supporting services</p> <p>        Vessel rentals with crew, inland</p> <p>        Pushing and towing, inland</p> <p>    Rail transport</p> <p>        Supporting services</p> <p>        Pushing and towing, rail</p> <p>    Road transport</p> <p>        Supporting services</p> <p>        Vehicle rentals with operator</p> <p><u>Sub totals for Other transportation services:</u></p> <p>    Space transport services</p> <p>    Pipeline transportation and power transmission</p>	<p>205 Transport</p> <p>206 Sea transport</p> <p>207 Passenger</p> <p>208 Freight</p> <p>209 Other</p> <p>        CPC 673*, 676*</p> <p>        CPC 6513</p> <p>        CPC 6514</p> <p>        &lt;&lt;Memo&gt;&gt;: CPC 87149*</p> <p>210 Air transport</p> <p>211 Passenger</p> <p>212 Freight</p> <p>213 Other</p> <p>        CPC 677</p> <p>        CPC 664</p> <p>        &lt;&lt;Memo&gt;&gt;: CPC 87149*; CPC 6771*</p> <p>214 Other transport</p> <p>215 Passenger</p> <p>228 Inland waterway transport</p> <p>220 Rail transport</p> <p>224 Road transport</p> <p>216 Freight</p> <p>229 Inland waterway transport</p> <p>221 Rail transport</p> <p>225 Road transport</p> <p>217 Other</p> <p>230 Inland waterway transport</p> <p>        CPC 677</p> <p>        CPC 6523</p> <p>        CPC 6524</p> <p>222 Rail transport</p> <p>        CPC 674</p> <p>        CPC 6413</p> <p>226 Road transport</p> <p>        CPC 675</p> <p>        CPC 6422,23 &amp; 6425</p> <p>218 Space transport</p> <p>231 Pipeline transport and electricity transmission (part of CPC 6911)</p>

<p>Inland waterway transport services  Rail transport  Road transport  Supporting services to all Transportation:  category is nearly all comprised of:  Cargo handling &amp; related items, including  logistics<sup>1</sup>  Repair/maintenance, modes unspecified  .....  <sup>1</sup> components for a &lt;&lt;Memo item on core logistics&gt;&gt;</p>	<p>227 Inland waterway transport  219 Rail transport  223 Road transport  232 Other supporting and auxiliary transport  services  Of which: CPC 671, 672, 679  CPC 87149*; CPC 87141&amp; 43</p>
<p>2. Travel and tourism  Business travel  Personal travel  Health  Education  Other personal spending</p> <p><u>Alternative format for Travel,(236) &lt;&lt;Memo item&gt;&gt;</u></p> <p>Traveler spending on goods  Accommodations, food and beverage services  which comprise:  Accommodations  Food and beverage services  Other travel outlays  Travel agency, tour operator and guide services  Travel agency and tour operator services  Travel agency services  Tour operator services  Tour guides  Other, including tourist information/reservations  Transportation spending in country visited  Potential breakouts:  Outlays on entertainment services  Outlays on sporting and recreational services  Outlays on well-being, as spas  All other travel outlays</p>	<p>236 Travel  237 Business travel  240 Personal travel  241 Health-related expenditure  242 Education-related expenditure  243 Other</p> <p>869 Expenditure on goods (EBOPS Memo item)  870 Expenditure on accommodation, food and  beverage serving services (EBOPS Memo item)  CPC 631  CPC 632 &amp; 633  871 All other travel expenditure  284* CPC 678  CPC 67811  CPC 67812  CPC 67820  CPC 67813  (No EBOPS or CPC coding)  (No EBOPS or CPC coding; but see 10.2.3 coverage)  (No EBOPS or CPC coding; but see 10.2.3 coverage)  (No EBOPS or CPC coding; but see 10.2.3 coverage)  (No EBOPS or CPC coding)</p>
<p>3. Communications  Postal and courier services  Telecommunication services  for info, comprise  Wired services  Wireless services  Satellite services  On-line access services</p>	<p>245 Communications services  246 Postal and courier services  247 Telecommunications services  CPC 8411  CPC 8412  CPC 8413  CPC 8420 *</p>

<p>4. Construction Of which: rentals with operator</p> <hr/>	<p>249 Construction services CPC 548</p> <hr/>
<p>5. Insurance &lt;&lt;Breakouts as Memo items (gross)&gt;&gt; Life insurance (participating and term) and pension funding Freight insurance Other property and casualty insurance Reinsurance Auxiliary insurance services</p> <hr/>	<p>253 Insurance services 254 Life insurance and pension funding, and 256* Term life portion of Other direct insurance 255 Freight insurance 256* Remainder of Other direct insurance 257 Reinsurance 258 Auxiliary services</p> <hr/>
<p>6. Financial services except insurance</p> <hr/>	<p>260 Financial services, and 887 FISIM (&lt;&lt;EBOPS memo item&gt;&gt;)</p> <hr/>
<p>7. Computer and information services Computer services excludes on-line information provision (is 890) includes computer training (see also at 895) Information services News agency services Other information services</p> <hr/>	<p>262 Computer and information services 263 Computer services excludes CPC 843 (see Info services) includes CPC 929* (see also core Educ.) 264 Information services 889 News agency services (see Pers,cult,rec) 890 Other information provision services (consists of CPC 843 above)</p> <hr/>
<p>8. Royalties and license fees Franchises  Other royalties and license fees</p> <hr/>	<p>266 Royalties and license fees 891 Franchises and similar rights (nearest code is CPC 1.1's 7334*) 892 Other royalties and license fees</p> <hr/>
<p>9.1 Distribution services<sup>2</sup>  <sup>2</sup>Consists essentially of commissions (including of merchants, brokers and commission agents). Transactions are mainly at the wholesale level and are not already valued in goods trade.</p> <hr/>	<p>— — 271 Other trade-related services</p> <hr/>
<p>9.2 Operational leasing services</p> <hr/>	<p>272 Operational leasing services</p> <hr/>

<p>9.3.1.1 Legal services</p> <hr/>	<p>275 Legal services</p> <hr/>
<p>9.3.1.2 Accounting and related services</p> <hr/>	<p>276 Accounting, auditing, bookkeeping, and tax consulting services</p> <hr/>
<p>9.3.1.3 Business and management services, including 9.3.7 Services between related enterprises</p> <hr/>	<p>277 Business and management consulting and public relations services, and 285 Services between related enterprises</p> <hr/>
<p>9.3.2 Advertising and marketing services</p> <hr/>	<p>278 Advertising, market research and public opinion polling</p> <hr/>
<p>9.3.3 Research and development</p> <hr/>	<p>279 Research and development</p> <hr/>
<p>9.3.4 Engineering and related services  except: environmental consulting add: other scientific and technical services</p> <hr/>	<p>280 Architectural, engineering and other technical services except: CPC 83131 (to 282) add: CPC 83139 (from 284)</p> <hr/>
<p>9.3.5+ Primary and processing services<sup>3</sup></p> <p><u>Environmental services</u> &lt;&lt;Memo&gt;&gt;</p> <p><u>Supporting services to primary production</u> &lt;&lt;Memo&gt;&gt;</p> <p>Excluding veterinary services for livestock ( to 9.3.6 below)</p> <p>.....</p>	<p>281 Agricultural, mining, and on-site processing services and 284* portions relating to energy and publication</p> <p>282 Waste treatment and de-pollution, and environmental consulting<sup>4</sup> CPC 83131 of 280</p> <p>283* portions covering Services incidental to: Agriculture, hunting CPC 86111 to 86130; and excluding vets of CPC 9322 &amp; 9329 Forestry CPC 86140 Fishing CPC 86150 Mining CPC 8621</p> <p>.....</p>
<p><sup>3</sup> Covers a range of supporting services to primary production, services of waste processing, and the upgrading of own or others' inputs (including services)</p>	<p><sup>4</sup>Covers biological and ecological consulting, environmental audits, impact and site assessments, but excludes engineering projects which happen to</p>

<p>on a fee or contract basis. The term 'services incidental' has applied to both the supporting services and the products themselves which are being contracted abroad.</p> <p style="text-align: center;"><u>Production contracted abroad</u>    &lt;&lt;Memo&gt;&gt;</p>	<p>be environmental in their purpose.</p> <p>283* portions covering Manufacturing on own or others' inputs on a fee/contract basis and output stays abroad CPC 863, 864</p> <p>284* minor portions, covering: Services for any local distribution of electricity, gas, water on a fee/contract basis CPC 8622 and printing, publishing and reproduction services on a fee/contract basis CPC 8692</p>
<p>9.3.6 Other business services Of which: Real estate services Other scientific, technical services Investigation and security services Also included are veterinary services</p>	<p>284* remaining portions (comprise most of 284) of which: CPC 7211 &amp; 7221 CPC 83139 (to 280) CPC 852</p> <p>283* portion covering services to livestock, CPC 9322 &amp; 9329, and</p> <p>897* portion covering pet service</p>
<p>10.1 Audiovisual and related services Of which: Video rentals Performer, author services</p>	<p>288 Audiovisual and related services Of which: CPC 7322 CPC 9631* &amp; 9632*</p>
<p>10.2.1 Education services comprise, for info Primary education Secondary education Higher education Adult and other education</p>	<p>895 Education services</p> <p>CPC 921 CPC 922 CPC 923 CPC 924, 929</p>
<p>10.2.2 Health services Of which: Professional services comprise, for info Medical, dental services Services of nurses, midwives,</p>	<p>896 Health services</p> <p>CPC 9312 CPC 93191</p>

<p style="text-align: center;">and paramedical personnel Of which: Institutional and other human health comprise, for info Hospital services Ambulance services Residential health facilities Other human health</p> <hr/> <p>10.2.3 Other personal, cultural and recreational services Social services and other health Entertainment services, for info, comprise Live entertainment and other performances Performing arts, promotion, presentation, and operation of performing arts facilities Services of performing artists Services of other artists Amusement parks and similar attractions Libraries and archive services Museums and preservation services Sporting and other recreational services, for info, comprise Sports and supporting services, including recreational sports (as golf, diving) Services of athletes (own account) and related support Gambling, betting services (as casinos) Coin-operated amusement machines, and Other recreational and amusement services Other and domestic services, for info, comprise Washing ,cleaning and dying services Beauty and physical well-being services (as spas, salons etc., not offering the medical or paramedical services of CPC 9312, 93191) Funeral, cremation and undertaking services Other miscellaneous services Domestic services (where traded)</p> <hr/> <p>11 Government services Embassies and consulates Military units and agencies Other government services</p>	<p style="text-align: center;">CPC 9311 CPC 93192 CPC 93193 CPC 93119</p> <p style="text-align: center;">897</p> <p style="text-align: center;">CPC 933</p> <p style="text-align: center;">CPC 9629 CPC 9621,9622,&amp; 9623 (Less time/ geographical royalties not yet expressed in CPC terms) CPC 9631 CPC 9632 CPC 9691 CPC 845 CPC 964 CPC 965, 966, 9692, 9693 &amp; 9699 CPC 971, 972,973,979 &amp; 980</p> <p style="text-align: center;">CPC 965</p> <p style="text-align: center;">CPC 966 CPC 9692 CPC 9693 CPC 9699</p> <p style="text-align: center;">CPC 971 CPC 972</p> <p style="text-align: center;">CPC 973 CPC 979 CPC 980</p> <hr/> <p>291 Government services n.i.e. 292 Embassies and consulates 293 Military units and agencies 294 Other government services</p>
---	---

### **C 2.1 (a) Supplementary Listing for Transportation Services (for future reference)**

Note: the references here to Schedules A and B are to the Exports and Imports schedules respectively of the EBOPS Survey Form.

#### **207 Sea transport, passenger**

Covers passenger fares received by resident sea carriers from non-residents (A), and payments of passenger fares by residents to non-resident carriers (B). Includes on-board expenditures and the rental of vessels with crew.

#### **208 Sea transport, freight**

Covers revenues of resident sea carriers from non-residents, in order to move Thai exports beyond its customs border; to bring imports to Thailand's customs border, and to move foreign-owned goods, such as between foreign ports (A).

Payments cover freight expenses incurred with non-resident sea carriers, so as to bring Thai imports to its customs border, to move Thai exports beyond its border, and to move its own goods between foreign ports (B).

Covers transoceanic and coastal (but not internal) voyages and includes rental of vessels with crew.

#### **209 Sea transport, other**

Covers supporting services, including towing, pushing, port operations, salvage and the maintenance and repair of vessels (excluding major repairs/refits/conversions).

#### **211 Air transport, passenger**

Covers fares purchased by non-residents from resident air carriers (Sched A), and fare payments by residents to non-resident air carriers (Sched B). Covers scheduled and non-scheduled services and the rental of aircraft with crew.

#### **212 Air transport, freight**

Covers freight receipts by resident air carriers from non-residents (Sched A), and freight payments to non-resident air carriers by resident clients (Sched B). Covers scheduled and non-scheduled flights and the rental of aircraft with crew.

#### **213 Air transport, other**

Covers supporting services, including airport operations (except cargo handling – see 232), air traffic control and the maintenance and repair of aircraft (excluding major repairs/refits/conversions).

#### **214 Other transport**

Covers transport of passengers and freight by road, rail, inland waterways; pipeline, multi-modal and other transport, which cannot be assigned as sea or air, together with supporting and auxiliary services.

Of specific interest are certain components of 214:

#### **224 Road transport, passenger**

Covers transport by bus, taxi, non-motorized vehicles and vehicle rentals with operator. Scheduled and unscheduled services are included.

**225 Road transport, freight**

Covers transport by trucks of different sizes and purposes, freight by human- or animal-drawn vehicles, moving services; rental services of trucks. Scheduled and unscheduled services are included.

**226 Road transport, other**

Covers bus station, highway/bridge and parking operations, and the maintenance and repair of motorized road vehicles.

**231 Pipeline transport and electricity transmission**

Covers pipeline transport of petroleum and natural gas, and of other products if applicable; electricity transmission charges, such as for crossing the national territory.

**232 Other supporting and auxiliary services (approximates to the higher-level category, 217 Other transport, Other)**

Covers services that relate to more than one mode of transport and are not allocated to an individual mode. Includes container and other cargo handling, specialized and general storage and packing, navigational aids, freight-forwarding and customs brokerage, salvage operations. Services of 232 cover multi-modal components of logistics services, and relate also to supply chain management consulting and IT services in 277 and 263.

**C 2.1 (b) Logistics: Suggested Components for a TEBOPS Memorandum Item**

**(a) Background**

Early Project notes on logistics read as follows:

“To capture ‘logistics’ a simple form of ‘satellite account’ may be necessary to bring together into one ‘cluster’ those activities most characteristic of this service: namely certain means of transport, express carriers, forwarding agents, customs brokers, storage and warehousing, packing and unpacking of containers, item tracking and so on. These ‘products’ are spread over a range of the TEBOPS codes.”

Definitions here for ‘logistics’ are considered from three sources:

**(i) Freight and logistics**

From “Report on Taiwan”, U.S. Department of Commerce, International Trade Administration, U.S. Commercial Service, 2004

- Transportation logistics consist of very complex and fragmented components, requiring a wide range of players, including air and ocean carriers, ground transport operators, freight forwarders, customs brokers, third-party logistics providers, warehouses, and other intermediaries.

**(ii) Service Industries Overview Series: Logistics**

Industry profile, Industry Canada, March 2004

Logistics is the process of planning, implementing and controlling the flow and storage of goods and services and related information, from the point of origin to the point of consumption.

Often considered with this is:

- Supply chain management – which provides supervision and direction for the various parts of the distribution system, including production scheduling and

inventory control, transportation, warehousing, wholesaling, retailing and brokerage

**(iii) Hong Kong, China submission of 28 March 2001 to the WTO**

GATS Council – Special Session, quoted in “WTO, E-commerce and Information Technologies, “A report of the UN ICT Task Force”, S. Wunsch-Vincent; J. McIntosh, ed., NY, 2005

Logistics, in general, is understood as the procedure to optimize all activities to ensure the delivery of products through a transportation chain from one end to the other.

**(b) Suggested components of a TEBOPS Memo item on Logistics**

The core items in the transport field should be fairly tractable and recognizable in GATS or ISIC classifications. The passenger services segment should be separated out, however, cargo handling and baggage handling at air or rail terminals is not separated from non-container cargo handling. Some services (like vehicle rentals) are not listed below as these have to be looked after by a carrier to provide the basic service being measured; some of course may see rentals and other inputs as part of the broad chain. Regulatory and public safety services of government are not specified at this time, though they too are engaged and in some respects tradable.

EBOPS coding and selected CPC detail

- 205** 1.1 Sea transport, less **207**, passenger services
- 210** 1.2 Air transport, less **211**, passenger services
- 214** 1.3 Other transport, less **215**, passenger services

This will cover:

1. Freight charges other than by sea or air.
2. Support services identifiable with other than sea or air modes and not relating to passengers. This includes support services for more than one mode of transport per paragraph 3.71 of the *Manual* and not relating to passengers or tourism. This in turn comprises a part of 232 (i.e. auxiliary support to all modes of transport not connected to cargo handling, warehousing, and storage, customs brokers and freight forwarders).
3. The key portions of 232 from which logistical and supply chain management often emanate: Cargo handling (CPC 671), storage (CPC 672) and notably, customs brokers and freight forwarders (CPC 679).

**246** 3.1 Postal and courier services. Letter traffic (CPC 6811) could be relevant given the small dimensions of commercial disks and documents that often go by large or specialty courier services.

Financial services While banks are described as part of logistical consortia, no reference is apparent to freight and marine insurance services.

IT services are becoming more relevant, but there is difficulty as to how to disengage the end purpose from all the other flows making up CPC's (as 8314 on software development and advisory; or 8423 on-line access and information). This may need sub-specification in a survey source, or specialized research.

**277** Distribution services

These services for EBOPS largely comprise commissions of merchants, broker and commission agents who in this context form part of the supply/delivery chain. Transactions are mainly at the

wholesale level and not already valued in goods. Further significant distribution, which occurs within the territory is relevant to FATS.

Specific to logistics are the growing number of outsourcing companies that specialize in providing logistics packages as a whole. These may be an area for sub-specification as well. International services by these “3PL” (third party logistics) companies may be classified here or to Other business services.

**277\*** Logistics consulting services are part of CPC 83119, Other management consulting services.

**284\*** Security services (CPC 852) were not noted in the short profiles above. Security consultation services, for example, could be envisaged as part of an exported logistics package, or may be part of a Port Authority’s overhead and be sourced abroad.

**Compilation note:**

A partial estimate for Logistics can be made most simply if top-down breakouts of data are available as follows:

- 205 1.1 Sea transport, less 207, passenger services
- 210 1.2 Air transport, less 211, passenger services
- 214 1.3 Other transport, less 215, passenger services and some of 232, ( i.e. auxiliary support to all modes of transport not connected to cargo handling, warehousing, and storage, customs brokers and freight forwarders)

Otherwise, if building from the detail, two initial estimates are needed:

(A) the freight components for Rail (221), Road (225, above) and Inland waterways (229) need to be estimated -at least in total - and added to freight by Sea (208) and Air (212). The sum of these components is alternatively represented by 216, the freight category of the summary group 214 listed just above.

plus

(B) the Other components for Rail (222), Road (226, above) and Inland waterways (230) need to be estimated at least in total - and added to those by Sea (209) and Air (213). The sum of these components is alternatively represented by 217, the Other transport category of the same group 214.

In addition to the basic freight and other services, a Memo item on core logistics would also cover:

- (i) support services identifiable with other than sea or air modes, and not relating to passengers, and
- (ii) support services for more than one mode of transport per paragraph 3.71 of the *Manual* and not relating to passengers or tourism. These are the specific CPC items 671, 672 and 679, covering key elements of cargo handling, warehousing, and notably storage, customs brokers and freight forwarders.

Additional logistics items in other categories are not yet identifiable with specific CPC codes. Logistics and supply chain management would appear to be buried in: Postal and courier services (246); IT consulting services (263); general logistics consulting of Business and management consultancy (277), or in Other business services (284).

In the latter category are found various security services which seem to have little reference in some profiles of the logistics sector.

**C 2.1 (c) ICT: suggested components for a TEBOPS Memorandum Item**

(a) ICT Products comprise

Telecommunications

Computer and IT services

- Packaged software, whose contents cover:
  - (i) systems software (including operating systems, network and database management software, development and programming language tools); and
  - (ii) application software (including spreadsheets, graphics, games, accounting and GIS software, web design, publication software for

specific industries, or utilities software such as anti-virus or search engines).

- Computer programming and consultancy services, which cover:
  - (i) IT technical consulting and support, including data recovery;
  - (ii) IT design/development for applications, networks and systems; software originals, and network management services.
- Computer systems management
- Data processing services which host, support and manage business processes.  
This covers: web hosting; applications services; business process management (as for specific industries, help & call centers, financial transactions processing, human resource tasks, supply chain management/logistics consulting), and other client processes, for example data storage & management, video/audio streaming or other data hosting.
- Maintenance and repair service of computer and peripheral equipment
- Web search portals
- Licensing of rights to use computer software
- Leasing or rental services of office machinery which cover:  
leasing or renting of office machinery, except computers, and leasing or rental of computers.

(b) ICT Industries comprise

- \* Wholesaling of computers, peripheral equipment and software
- \* Wholesaling of electronic and telecommunication parts and equipment
- \* Telecommunications
- \* Rental of office machinery and equipment, including computers
- \* Computer and related activities, which comprise:
  - Software publishing of packaged software for:  
Operating systems, business and other applications, and computer games for all platforms. Includes *licensing the production, reproduction or distribution of copyrighted software*
  - Information technology services, which cover:  
Computer programming; IT consultancy and facilities management including processing and support activities; and other IT services such as disaster recovery or software installation.
  - Data processing, hosting and related activities
  - Web search portals
  - Repair of computers and peripheral equipment

### C. 2.1. (d) Insurance Services and their Classification

Conceptually, current measures of insurance services trade appear to be calculated as if the client assumes the risk, leaving the service measure to cover sales and administration of policies. In the simplest case, this measure of service is based on a netting of claims against premiums of resident insurers (cr). The ratio of that net to total premiums of resident insurers is applied to the total premiums charged by non-resident insurers (dr). During good times, this measure of service can be a positive number and reflect the overall generation of a surplus to cover operations and cover for liabilities. When losses persist for several years (excluding earnings on mandated reserves), the suggested ratios for certain measures stay negative, and so are of doubtful relevance.

Alternatively, the insurer, not the client, is the party that assumes the risk and expects to provide a settlement under the terms of policies written,<sup>47</sup> and the calculation uses gross measures of premiums and claims. With gross measures, differing levels of premiums for different risks can be reflected in a way no net measure can accomplish. Risk valuation would seem particularly appropriate for Reinsurance in that its very purpose is to spread risk.

The net approach has given rise to undesirable levels of volatility and has sometimes awkward explanations in extreme situations. When there is a huge claim the gross calculations clearly reveal the situation.

A more fundamental limitation of the approach, which views the service in terms solely of administrative operations, arises from the changing nature of the insurance industry itself. Outsourcing by the insurers is diminishing this administrative base and reducing its relevance accordingly. Ernst and Young reported in 2002 that progressively more insurers in North America, Europe and Asia, were outsourcing their back office operations to third companies specializing in such services.<sup>48</sup> In November 2004, the insurance arm of Canada's largest bank sold the business services division it owned in the US (and to which it had already outsourced back office work), to a different business services firm, IBM.<sup>49</sup>

On matters of application, it is noted that net measures depart from the basic rule of gross recording for BOP Current account transactions. With other service sectors stated in gross terms, insurance cannot be compared directly with them. It is also possible that this exception to gross recording might be understating not simply insurance, but the overall value of current Service exports and imports by billions of dollars globally.

A breakout of insurance services can be suggested which avoids many of these concerns. Rather than a 'double' netting (once for Cr and implicitly for Dr), credits and debits are first defined on a gross basis as follows and then broken down by category. Income on reserves is treated here as Income, not services.

*Credits* comprise premiums earned (or written in the case of life insurance) by resident insurers from their clients abroad, plus claims by residents incurred on policies issued by non-resident insurers. This applies to insurance and reinsurance.

---

<sup>47</sup> Bathgate, Deanna, US Department of Labor, "Price Indexes for Property and Casualty Insurance", 19<sup>th</sup> Voorburg Group Meeting, Ottawa, Canada 27 September- 1 October, 2004; and forerunner paper by Sherwood, Mark "Output of the Property and Casualty Industry" Center for the Study of Living Standards, Conference on Service Sector Productivity and the Productivity Paradox, Ottawa, Canada April 11-12, 1997.

<sup>48</sup> McPhie, Doug, Ernst and Young LLP, "Thumbs up on Outsourcing" in Cross Currents, Summer 2002 ([www.ey.com](http://www.ey.com))

<sup>49</sup> RBC Financial Group, News Releases , November 23, 2004 "IBM to acquire Liberty Insurance Services" ([www.rbc.com/newsroom](http://www.rbc.com/newsroom)).

*Debits* comprise claims by non-residents incurred on policies issued by resident insurers, plus premiums earned/written by non-resident insurers from resident clients. This applies to insurance and reinsurance.

### **Life insurance (254, 256\*)**

This is suggested to cover all life insurance, “with or without a substantial savings element”, which, is the phrase used in defining Life insurance, Class 6601 of ISIC3.1 (also ISIC 3.0, and retained in the draft of ISIC, Revision 4).

This contrasts with the *Manual* definition where paragraph 3.101 reads:

“Term life insurance... is a form of direct insurance, and is excluded here (that is, excluded from EBOPS 254) and included in *other insurance*” (that is, in 256 – Other direct insurance).

One would thus expect that CPC 71311 *Life insurance and individual pension services*, where “policies may provide pure protection or may also contain a savings component” would be asterisked to both the life category (254) and to Other (256), where term life resides. In fact it is all allocated to life (254) in the *Manual's* Annex for EBOPS and GATS. With an anomaly between the text and the Annex table, the compiler is not totally without grounds to put all life together, if that is what the data are already limited to in practice.

The rationale in the *Manual* for placing term insurance with other direct insurance has to do with death being the only condition for payout (para 3.101). It becomes life insurance if there are other ‘bells and whistles’, which are secondary criteria used for making a primary classification. Perhaps production functions, which are analyzed for making classification decisions, would indicate that term and other life activity had more in common with each other, than term has with various property and casualty, where it resides.

The joining of term life with other life would seem at least not inconsistent with some international discussions on the classification of bundled products.<sup>50</sup> It is not hard to imagine a given policy sold by the same sales force, expressed in the same contract document and acted upon by the issuer. Investment provisions and capacity to draw annuities are aspects of the protection service the issuer may offer. The pure coverage component, or a simple term-only policy, serves to provide financial protection as well, but the funds flow to the chosen beneficiary rather than the purchaser.

The practical capacity to collect data by product line and so distinguish term from savings-type policies, may prove to be the limiting factor in trying to go beyond showing all life insurance transactions lumped together.

### **Freight insurance (255)**

### **Other direct insurance (256\*)**

This is the category for property and casualty insurance. Term life is included with Life, above.

### **Reinsurance (257)**

Reinsurance in ICFA/ISIC is included in Life and Non-life insurance categories, though it is proposed to be shown separately in ISIC Revision 4.

---

<sup>50</sup> United Nations Statistics Division, ‘Treatment of Bundled Products’ in *2004 Questionnaire for the revision of the Central Product Classification*, New York, July 2004.

**Auxiliary services (258)**

This would include back office work outsourced by insurance companies, as well as the usual agent and brokerage commissions and other specialized services closely related to insurance and pension fund operations. Auxiliary services also include claims adjustment, actuarial services, salvage administration and consulting on insurance and pension funding.

### C. 3: TICFA – THAILAND CLASSIFICATION FOR FATS AND FDI

#### TICFA (Linkage format for ICFA/ISIC)

#### Thailand classification for FATS and FDI

\* indicates part of a category or code

TICFA/ ICFA / ISIC DESCRIPTION	ICFA codes	ISIC codes	EBOPS codes	EBOPS Description
Production and fee/contract services (Environmental services, supporting services to primary production and of production contracted abroad)				
~ Sanitation and similar activities	17	90	282+	Waste treatment and de-pollution
~ Agricultural, forestry, fishing and related services	1.1-1.3	01,2,5	283*	Agricultural,
~ Mining, of which: services incidental to oil/gas extraction	2	10-14		mining, and
~ Manufacturing	3	112		other on-site processing services
~ Electricity, gas water supply	4	15-37 40,41	283*,284* 284*	Misc. business, professional and technical services (minor part)
Construction	5	45	249	Construction services
Trade and repair (Distribution services)	6	50,51,52	271	Other trade related services (EBOPS,GATS exclude repair at 271)
Travel and tourism (partial coverage)				
~ Hotels and restaurants	7	55	870	Travelers' expenditures on accommodation, food & beverages
~ Travel agency, tour operator & tourist assistance services	8.1.4.2	6304	236* 284*	Travel Misc. business, professional and technical services (minor element)
Transportation (Transport and Storage)	8.1	60,61,62 63ex6304	205	Transportation
~ Land transport (incl pipelines)	8.1.1	60		
Transport via railways	8.1.1.1	601	220,221	Rail transport, passenger and freight
Other land transport	8.1.1.2	602	224,225	Road transport, passenger and freight
Transport via pipelines	8.1.1.3	603	231*	Pipeline transport (excl power)
~ Water Transport	8.1.2	61		
Sea and coastal water transport	8.1.2.1	611	207,208	Sea transport, passenger and freight
Inland water transport	8.1.2.2	612	228,229	Inland waterway transport, passenger and freight
~ Air transport (including Space)	8.1.3	62	211,212; 218	Air transport, passenger and freight; Space transport (all)
~ Supporting and auxiliary transport (cargo handling and related services)	8.1.4*	63ex6304	232; 222,26, 209,13,30	Other supporting and auxil. transport Other, by mode (rail,road,,sea,,inland waterways and by air)

Post and telecommunications	8.2	64	245	Communications services
~ Post and courier activities	8.2.1	641	246	Postal and courier services
~ Telecommunications	8.2.2	642	247	Telecommunications services
Financial intermediation				
~ Financial intermediation excluding Insurance and pension funding, but incl supporting services other than insurance ( Banking & related services)	9.1 9.3.1	65 + 671	260 887	Financial services except insurance, incl supporting services of ISIC 671, and implicitly inclusive of FISIM
~ Insurance and pension funding (ex compulsory social security) but incl supporting services to insurance	9.2	66 +672	253	Insurance services, including supporting services to insurance of ISIC 672
Real estate activities (see also # 17 below) ( incl immoveable assets)	10	70	284*	Misc. business, professional and technical services
Renting of machinery and equipment (without operator) and of personal and household goods	11	71	272	Operational leasing services
Computer and related services; news agencies (other information services not identified)	12 19.2	72 922	263 889	Computer services, and News agency services
Research and development	13	73	279	Research and development
Legal activities	14.1.1	7411	275	Legal services
Accounting, bookkeeping, auditing and tax consultancy	14.1.2	7412	276	Accounting, auditing, bookkeeping and tax consulting services
Advertising, and Market research and public opinion polling	14.3 +14.1.3	743 7413	278	Advertising, market research and public opinion polling
Business and management consulting	14.1.4	7414	277,285	Business and management consulting and public relations; and n.i.e. Services between related enterprises
Engineering and other technical services	14.2	742	280-	Architectural, engineering and other technical services
Other business services (than real estate)	14.4	749	284*	Misc. business, professional and technical services (major part)

Personal, cultural and recreational activities	15,16, 18,19,20	80,85, 91,92,93	287	Personal ,cultural and recreational services
~ Education	15	80	895	Education services
~ Health and social work, of which : veterinary services ( ISIC 852) Social work ( ISIC 853 )	16	85	896 283*,897* 897*	Health services (human health only) Service supporting agriculture, and Other personal, cultural and recreational services
~ Activities of membership organizations	18	91	897*	Other personal, cultural and recreational services
~ Motion picture and video production, distribution and projection, and Radio/TV programming	19.1.1	9211 9212	288	Audiovisual and related services
~ Entertainment and arts activities	19.1.2 19.1.3	9213 9214	289*	Other personal, cultural and recreational services
~ Libraries, archives, museums, cultural activities, of which: libraries, archives ISIC 9231	19.3	9219 923	289*	Other personal, cultural and recreational services
~ Sporting and other recreational activities	19.4	924	289*	Other personal, cultural and recreational services
~ Other service activities	20	93	289*	Other personal, cultural and recreational services

## Abridged ISIC 3.1

### (INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES)

For use with reference to services statistics

#### **A Agriculture, hunting and forestry**

##### **01 Agriculture, hunting and related service activities**

- 011 Growing of crops; market gardening; horticulture
  - 012 Farming of animals
  - 013 Growing of crops combined with farming of animals (mixed farming)
  - 014 Agricultural and animal husbandry service activities, except veterinary activities**
  - 015 Hunting, trapping and game propagation **including related service activities**

##### **02 Forestry, logging and related service activities**

- 020 Forestry, logging **and related service activities**

#### **B Fishing**

##### **05 Fishing, aquaculture and service activities incidental to fishing**

#### **C Mining and quarrying**

- 10 Mining of coal and lignite; extraction of peat
- 11 Extraction of crude petroleum and natural gas; **service activities incidental to oil and gas extraction excluding surveying**
  - 112 Service activities incidental to oil and gas extraction excluding surveying
  - 1120 Service activities incidental to oil and gas extraction excluding surveying
- 12 Mining of uranium and thorium ores
- 13 Mining of metal ores
- 14 Other mining and quarrying

#### **D Manufacturing**

- 15 Manufacture of food products and beverages
- 16 Manufacture of tobacco products
- 17 Manufacture of textiles
- 18 Manufacture of wearing apparel; dressing and dyeing of fur
- 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
- 20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- 21 Manufacture of paper and paper products
- 22 Publishing, printing and reproduction of recorded media
- 23 Manufacture of coke, refined petroleum products and nuclear fuel
- 24 Manufacture of chemicals and chemical products
- 25 Manufacture of rubber and plastics products
- 26 Manufacture of other non-metallic mineral products
- 27 Manufacture of basic metals
- 28 Manufacture of fabricated metal products, except machinery and equipment

- 29 Manufacture of machinery and equipment n.e.c.
- 30 Manufacture of office, accounting and computing machinery
- 31 Manufacture of electrical machinery and apparatus n.e.c.
- 32 Manufacture of radio, television and communication equipment and apparatus
- 33 Manufacture of medical, precision and optical instruments, watches and clocks
- 34 Manufacture of motor vehicles, trailers and semi-trailers
- 35 Manufacture of other transport equipment
- 36 Manufacture of furniture; manufacturing n.e.c.
- 37 Recycling

**E Electricity, gas and water supply**

- 40 Electricity, gas, steam and hot water supply
- 41 Collection, purification and distribution of water

**F Construction**

**45 Construction**

- 451 Site preparation
  - 4510 Site preparation
- 452 Building of complete constructions or parts thereof; civil engineering
  - 4520 Building of complete constructions or parts thereof; civil engineering
- 453 Building installation
  - 4530 Building installation
- 454 Building completion
  - 4540 Building completion
- 455 Renting of construction or demolition equipment with operator
  - 4550 Renting of construction or demolition equipment with operator

**G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods**

**50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel**

- 501 Sale of motor vehicles
  - 5010 Sale of motor vehicles
- 502 Maintenance and repair of motor vehicles
  - 5020 Maintenance and repair of motor vehicles
- 503 Sale of motor vehicle parts and accessories
  - 5030 Sale of motor vehicle parts and accessories
- 504 Sale, maintenance and repair of motorcycles and related parts and accessories
  - 5040 Sale, maintenance and repair of motorcycles and related parts and accessories
- 505 Retail sale of automotive fuel
  - 5050 Retail sale of automotive fuel

**51 Wholesale trade and commission trade, except of motor vehicles and motorcycles**

- 511 Wholesale on a fee or contract basis
  - 5110 Wholesale on a fee or contract basis
- 512 Wholesale of agricultural raw materials, live animals, food, beverages and tobacco
  - 5121 Wholesale of agricultural raw materials and live animals
  - 5122 Wholesale of food, beverages and tobacco
- 513 Wholesale of household goods
  - 5131 Wholesale of textiles, clothing and footwear
  - 5139 Wholesale of other household goods
- 514 Wholesale of non-agricultural intermediate products, waste and scrap
  - 5141 Wholesale of solid, liquid and gaseous fuels and related products
  - 5142 Wholesale of metals and metal ores

- 5143 Wholesale of construction materials, hardware, plumbing and heating equipment and supplies
- 5149 Wholesale of other intermediate products, waste and scrap
- 515 Wholesale of machinery, equipment and supplies
- 5150 Wholesale of machinery, equipment and supplies
- 519 Other wholesale
- 5190 Other wholesale

**52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods**

- 521 Non-specialized retail trade in stores
  - 5211 Retail sale in non-specialized stores with food, beverages or tobacco predominating
  - 5219 Other retail sale in non-specialized stores
- 522 Retail sale of food, beverages and tobacco in specialized stores
  - 5220 Retail sale of food, beverages and tobacco in specialized stores
- 523 Other retail trade of new goods in specialized stores
  - 5231 Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles
  - 5232 Retail sale of textiles, clothing, footwear and leather goods
  - 5233 Retail sale of household appliances, articles and equipment
  - 5234 Retail sale of hardware, paint and glass
  - 5239 Other retail sale in specialized stores
- 524 Retail sale of second-hand goods in stores
  - 5240 Retail sale of second-hand goods in stores
- 525 Retail trade not in stores
  - 5251 Retail sale via mail order houses
  - 5252 Retail sale via stalls and markets
  - 5259 Other non-store retail sale
- 526 Repair of personal and household goods
  - 5260 Repair of personal and household goods

**H Hotels and restaurants**

**55 Hotels and restaurants**

- 551 Hotels; camping sites and other provision of short-stay accommodation
  - 5510 Hotels; camping sites and other provision of short-stay accommodation
- 552 Restaurants, bars and canteens
  - 5520 Restaurants, bars and canteens

**I Transport, storage and communications**

**60 Land transport; transport via pipelines**

- 601 Transport via railways
  - 6010 Transport via railways
- 602 Other land transport
  - 6021 Other scheduled passenger land transport
  - 6022 Other non-scheduled passenger land transport
  - 6023 Freight transport by road
- 603 Transport via pipelines
  - 6030 Transport via pipelines

**61 Water transport**

- 611 Sea and coastal water transport
  - 6110 Sea and coastal water transport
- 612 Inland water transport
  - 6120 Inland water transport

**62 Air transport**

- 621 Scheduled air transport
- 6210 Scheduled air transport
- 622 Non-scheduled air transport
- 6220 Non-scheduled air transport

**63 Supporting and auxiliary transport activities; activities of travel agencies**

- 630 Supporting and auxiliary transport activities; activities of travel agencies
- 6301 Cargo handling
- 6302 Storage and warehousing
- 6303 Other supporting transport activities
- 6304 Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
- 6309 Activities of other transport agencies

**64 Post and telecommunications**

- 641 Post and courier activities
- 6411 National post activities
- 6412 Courier activities other than national post activities
- 642 Telecommunications
- 6420 Telecommunications

**J Financial intermediation**

**65 Financial intermediation, except insurance and pension funding**

- 651 Monetary intermediation
- 6511 Central banking
- 6519 Other monetary intermediation
- 659 Other financial intermediation
- 6591 Financial leasing
- 6592 Other credit granting
- 6599 Other financial intermediation n.e.c.

**66 Insurance and pension funding, except compulsory social security**

- 660 Insurance and pension funding, except compulsory social security
- 6601 Life insurance
- 6602 Pension funding
- 6603 Non-life insurance

**67 Activities auxiliary to financial intermediation**

- 671 Activities auxiliary to financial intermediation, except insurance and pension funding
- 6711 Administration of financial markets
- 6712 Security dealing activities
- 6719 Activities auxiliary to financial intermediation n.e.c.
- 672 Activities auxiliary to insurance and pension funding
- 6720 Activities auxiliary to insurance and pension funding

**K Real estate, renting and business activities**

**70 Real estate activities**

- 701 Real estate activities with own or leased property
- 7010 Real estate activities with own or leased property
- 702 Real estate activities on a fee or contract basis
- 7020 Real estate activities on a fee or contract basis

**71 Renting of machinery and equipment without operator and of personal and household goods**

- 711 Renting of transport equipment
- 7111 Renting of land transport equipment
- 7112 Renting of water transport equipment
- 7113 Renting of air transport equipment

- 712 Renting of other machinery and equipment
  - 7121 Renting of agricultural machinery and equipment
  - 7122 Renting of construction and civil engineering machinery and equipment
  - 7123 Renting of office machinery and equipment (including computers)
  - 7129 Renting of other machinery and equipment n.e.c.
- 713 Renting of personal and household goods n.e.c.
  - 7130 Renting of personal and household goods n.e.c.
- 72 Computer and related activities**
  - 721 Hardware consultancy
    - 7210 Hardware consultancy
  - 722 Software consultancy and supply
    - 7221 Software publishing
    - 7229 Other software consultancy and supply
  - 723 Data processing
    - 7230 Data processing
  - 724 Data base activities and online distribution of electronic content
    - 7240 Data base activities and online distribution of electronic content
  - 725 Maintenance and repair of office, accounting and computing machinery
    - 7250 Maintenance and repair of office, accounting and computing machinery
  - 729 Other computer related activities
    - 7290 Other computer related activities
- 73 Research and development**
  - 731 Research and experimental development on natural sciences and engineering (NSE)
    - 7310 Research and experimental development on natural sciences and engineering (NSE)
  - 732 Research and experimental development on social sciences and humanities (SSH)
    - 7320 Research and experimental development on social sciences and humanities (SSH)
- 74 Other business activities**
  - 741 Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy
    - 7411 Legal activities
    - 7412 Accounting, book-keeping and auditing activities; tax consultancy
    - 7413 Market research and public opinion polling
    - 7414 Business and management consultancy activities
  - 742 Architectural, engineering and other technical activities
    - 7421 Architectural and engineering activities and related technical consultancy
    - 7422 Technical testing and analysis
  - 743 Advertising
    - 7430 Advertising
  - 749 Business activities n.e.c.
    - 7491 Labor recruitment and provision of personnel
    - 7492 Investigation and security activities
    - 7493 Building-cleaning and industrial-cleaning activities
    - 7494 Photographic activities
    - 7495 Packaging activities
    - 7499 Other business activities n.e.c.
- L Public administration and defense; compulsory social security**
  - 75 Public administration and defense; compulsory social security**
    - 751 Administration of the State and the economic and social policy of the community
      - 7511 General (over-all) public service activities
      - 7512 Regulation of the activities of agencies that provide health care, education, cultural services and other social services excluding social security
      - 7513 Regulation of and contribution to more efficient operation of business

- 7514 Supporting service activities for the government as a whole
- 752 Provision of services to the community as a whole
- 7521 Foreign affairs
- 7522 Defense activities
- 7523 Public order and safety activities
- 753 Compulsory social security activities
- 7530 Compulsory social security activities

## **M Education**

### **80 Education**

- 801 Primary education
  - 8010 Primary education
- 802 Secondary education
  - 8021 General secondary education
  - 8022 Technical and vocational secondary education
- 803 Higher education
  - 8030 Higher education
- 809 Other education
  - 8090 Other education

## **N Health and social work**

### **85 Health and social work**

- 851 Human health activities
  - 8511 Hospital activities
  - 8512 Medical and dental practice activities
  - 8519 Other human health activities
- 852 Veterinary activities
  - 8520 Veterinary activities
- 853 Social work activities
  - 8531 Social work with accommodation
  - 8532 Social work without accommodation

## **O Other community, social and personal service activities**

### **90 Sewage and refuse disposal, sanitation and similar activities**

- 900 Sewage and refuse disposal, sanitation and similar activities
  - 9000 Sewage and refuse disposal, sanitation and similar activities

### **91 Activities of membership organizations n.e.c.**

- 911 Activities of business, employers and professional organizations
  - 9111 Activities of business and employers organizations
  - 9112 Activities of professional organizations
- 912 Activities of trade unions
  - 9120 Activities of trade unions
- 919 Activities of other membership organizations
  - 9191 Activities of religious organizations
  - 9192 Activities of political organizations
  - 9199 Activities of other membership organizations n.e.c.

### **92 Recreational, cultural and sporting activities**

- 921 Motion picture, radio, television and other entertainment activities
  - 9211 Motion picture and video production and distribution
  - 9212 Motion picture projection
  - 9213 Radio and television activities

- 9214 Dramatic arts, music and other arts activities
- 9219 Other entertainment activities n.e.c.
- 922 News agency activities
  - 9220 News agency activities
- 923 Library, archives, museums and other cultural activities
  - 9231 Library and archives activities
  - 9232 Museums activities and preservation of historical sites and buildings
  - 9233 Botanical and zoological gardens and nature reserves activities
- 924 Sporting and other recreational activities
  - 9241 Sporting activities
  - 9249 Other recreational activities

**93 Other service activities**

- 930 Other service activities
  - 9301 Washing, and (dry-) cleaning of textile and fur products
  - 9302 Hairdressing and other beauty treatment
  - 9303 Funeral and related activities
  - 9309 Other service activities n.e.c.

**P Activities of private households as employers and undifferentiated production activities of private households**

**95 Activities of private households as employers of domestic staff**

- 950 Activities of private households as employers of domestic staff
  - 9500 Activities of private households as employers of domestic staff

**Q Extraterritorial organizations and bodies**

**99 Extraterritorial organizations and bodies**

- 990 Extra-territorial organizations and bodies
  - 9900 Extra-territorial organizations and bodies

#### C.4. TGATS – THAI CLASSIFICATION FOR GATS STATISTICS

##### TGATS (Abbreviated version of negotiators' list, GNS/W/120)

##### Thai classification for GATS statistics

- **Coding in <<...>>** indicates basic TGATS categories, with associated EBOPS descriptions opposite.
- \* indicates part of a category or code.

TGATS categories	Associated EBOPS descriptions and specific CPC 1.0 coding ( <i>italicized</i> )
1. Business services	
A. Professional services a Legal services <<1A a>>	275 Legal services
b,c Accounting, auditing, book keeping and taxation services <<1 A b,c>>	276 Accounting, auditing, bookkeeping and tax consulting services
Engineering and related services <<1 A d,e,f,g; e,m>>  d,e Architectural, engineering f integrated engineering g urban planning and landscape architecture	280 Architectural, engineering and other technical services comprise 1A d,e,f,g, <b>and</b> 1F e,m, Other scientific & technical services ( <i>CPC 835</i> ) below. Add: <i>CPC 83139</i> from EBOPS 284 Deduct: <i>CPC 83131</i> for TGATS 6 below.
h Medical and dental services j Services of midwives, nurses, physiotherapists and paramedical personnel	<i>CPC 9312</i> ( Shown with EBOPS 896 below)  <i>CPC 93191</i> ( Shown with EBOPS 896 below)
B. Computer and related services <<1 B>>  Comprises: a Consultancy re hardware installation b Software implementation services, c Data processing services d Data base services e Other, includes maintenance, repair of computer & peripheral equipment training for clients, and other professional computer training	263 Computer services and 890* Other info services ( <i>CPC 843</i> , data base services – most of 1 B c)  <i>CPC 8713</i>  <i>CPC 9290*</i>
C. Research and development <<1 C>>	279 Research and development
D. Real estate services ( with 1F n, below)	Part of EBOPS 284 Other business services, below

<p>E. Rental/leasing services without operator &lt;&lt;1 E&gt;&gt;</p> <p>Comprises services relating to: a. Ships, b. Aircraft, c. Other transport equipment , d. other machinery and equipment, and e. Other ,including household goods and video tapes</p>	<p>272 Operational leasing services (Includes video rentals <i>CPC 7322</i> of EBOPS 288 below)</p>
<p>F. Other business services</p> <p>a,b Advertising; market research and public opinion polling &lt;&lt;1 F a,b&gt;&gt;</p>	<p>278 Advertising, market research, and public opinion polling</p>
<p>c Management consulting service &lt;&lt;1 F c,d&gt;&gt;</p> <p>e Technical testing and analysis</p> <p>m Related scientific and technical consulting</p>	<p>277 Business and management consulting and public relations services</p> <p>285 Services between related enterprises n.i.e.</p> <p>Technical services <i>CPC 83561;69</i>, are covered at EBOPS 280 above.</p> <p>Also covered at EBOPS 280 above</p> <p>All of e+m opposite are covered by <i>CPC 835</i> at 280)</p>
<p>Primary and fee/contract services &lt;&lt;1 F f,g,h,i,j,r&gt;&gt;</p> <p>f,g,h, Services incidental to primary production</p> <p>Note: various (sub-CPC) consulting and technical items are scheduled in f (agriculture+ forestry), and in g( fishing).</p> <p>h Services incidental to mining</p> <p>i Services incidental to manufacturing</p> <p>r Printing and publishing</p> <p>j Services incidental to energy distribution</p>	<p>Primary and fee/contract services 283, 284*</p> <p>283* Agricultural, mining....</p> <p>Most may be covered in EBOPS 280 above</p> <p>283* ...and on-site processing. of <i>CPC 861,8621</i></p> <p>These processing services largely refer to contract production abroad which stays abroad and uses own or others' inputs. Can be extended to cover some further contract production in EBOPS</p> <p>284* for example, in printing &amp; publishing, <i>CPC 8692</i>.</p> <p><i>CPC 8622</i> covers various energy-related fee/contract flows for electricity transmission or local gas/water distribution if applicable.</p>
<p>Miscellaneous business services &lt;&lt;1 F k, l,n.o,p q,s,t; 1 A I; and 1 D&gt;&gt;</p> <p>n Maintenance, repair of equipment , except computer and transportation equipment (found at 1Be and at 11Ad, 11Bd, 11Cd, 11Ed, 11Fd</p> <p>l Investigation and security services</p> <p>q Packaging services</p> <p>o,p,s, t Other</p>	<p>284 * (most) Other business services cover many remaining business services. Also listed here are Real estate of 1D above and certain veterinary services of <i>CPC 932</i> to facilitate linkage to EBOPS. Excludes <i>CPC 8313</i> (at EBOPS 280 and 282).</p>

<p>..... 1Ai, veterinary services (not distributed elsewhere)</p> <p>1 D Real estate services</p>	<p>..... <i>CPC 932</i> , if distributed, comprises 9321 for pet animals ( to EBOPS 897) 9322 for livestock ( to EBOPS 283, above ) 9329 for other animals; related labs and hospital services (also to EBOPS 283)</p> <p>Note: <i>CPC 7211, 7221</i> apply for cross-border trade; while all of <i>CPC 721, 722</i> apply for FATS, as these codes include immoveable assets. Services of hotel management are scheduled at 9D with <i>CPC72112;72212</i></p>
<p>2. Communications services (Includes internet access and audio-visual services)</p> <p>A.,B. Postal and courier services &lt;&lt;2 A,B&gt;&gt;</p>	<p>246 Postal and courier services</p>
<p>C. Telecommunications &lt;&lt;2 C&gt;&gt;</p> <p>a Voice telephone service, b,c Switched communications services, d Telex services, e Telegraph services, f Facsimile services, g Private leased circuit services</p> <p>h, i Electronic mail; voice mail, j On-line information and data-base retrieval(database access portion)</p> <p>k EDI (electronic data interchange), l Enhanced/value-added facsimile services... m Code and protocol conversion, n On-line information/data processing</p> <p>o items forming part of 'Related telecoms services' of the Provisional CPC)</p>	<p>247* Telecommunication services covered by <i>CPC 8411</i> (wired services), <i>CPC 8412</i> (wireless services), <i>CPC 8413</i> (satellite services), <i>CPC8420*</i> (on-line access, see also 1Bd). For info, these are distributed among:</p> <p>“Basic” services</p> <p>“Value-added” services</p> <p>“Other” services Widely dispersed in <i>CPC 1.0</i>; not distinguished here.</p>
<p>D. Audiovisual services &lt;&lt;2 D&gt;&gt; Excludes fees for distribution rights which are time- and geographically- limited (out of GATS scope).</p> <p>of which: d Radio, TV transmission services</p>	<p>288 Audiovisual and related services Includes <i>CPC 7322</i> (video rentals) of 1Ee, and performance/author services of 10E below (parts of <i>CPC 96310 &amp; 20</i>, not in D opposite).</p> <p>included in EBOPS 247 above</p>
<p>3. Construction and related engineering services &lt;&lt;3&gt;&gt;</p>	<p>249 Construction services Includes rentals of construction equipment with operator (<i>CPC 548</i> - not classified to 1E of TGATS)</p>

<p>4. Distribution services &lt;&lt;4 A,B,C; D&gt;&gt;  A. Commission agents' services</p> <p>B.,C. Wholesaling and retailing  (largely applies for FATS)  D. Franchising</p>	<p>271* Trade related services (except merchandising)  Essentially represented by CPC 612, except referred to as 'Wholesale trade on a fee or contract basis', and excluding fees (as does A. opposite) for sales of motor vehicles; but including telecoms equipment sales and service part of CPC 7542, at 2 C o, above)</p> <p>Note: No CPC 1.0 coding for Merchandising or for Franchising (CPC 7334* in CPC 1.1).</p>
<p>5. Education services &lt;&lt;5&gt;&gt;</p>	<p>895 Education services  Note: many services of 5. opposite would be covered at EBOPS 242, Education-related expenditures by travelers (on tuition, board etc.) EBOPS 895 largely covers distance education, services provided by instructors abroad, etc.</p>
<p>6. Environmental services &lt;&lt;6&gt;&gt;</p>	<p>282 Waste treatment and depollution services</p> <p>Note: EBOPS presentation would extend 282 by shifting CPC 83131 on Environmental consulting from EBOPS 284 to form a basic "environmental services" grouping.</p>
<p>7. Financial services  A. Insurance services including reinsurance &lt;&lt;7 A&gt;&gt;</p>	<p>253 Insurance services</p>
<p>B. Banking and other financial services &lt;&lt;7 B&gt;&gt;</p>	<p>260 Financial services except insurance and FISIM</p>
<p>8. Health related and social services &lt;&lt;8&gt;&gt;</p> <p>A. Hospital services  B. Other human health services  C. Social services</p> <p>9. Tourism and travel related services &lt;&lt;9. A, B, C, D or individually, &gt;&gt;  A. Hotels and restaurants &lt;&lt;9A&gt;&gt;</p> <p>B. Travel agencies and tour operators &lt;&lt;9 B&gt;&gt;</p> <p>C. Tourist guide services &lt;&lt;9C&gt;&gt;</p>	<p>896 Health services (human)  Includes professional services of 1 A h j (CPC 9312; 93191)  Excludes social services (see 897*below)  Note: many services of 8. opposite, would be covered at EBOPS 241, Health-related expenditures by travelers (on medical charges, etc.). EBOPS 896 largely covers remote care delivery, services provided by practitioners working abroad, etc.</p> <p>897* Social services (CPC 933)</p> <p>236 Travel, except goods of EBOPS 869 (out of scope)</p> <p>870 Accommodation, food and beverage serving services, CPC 631 (accommodation) and CPC 632, 633 (food &amp; beverages)</p> <p>CPC 67811 (agencies) and CPC 67812 (operators)</p> <p>CPC 6782</p>

<p>D. Other &lt;&lt;9D&gt;&gt;</p>	<p><i>CPC 67813</i> (information &amp; reservations services) and All other tourist expenditure: 9D (excepting goods) less (A,B,C and <i>CPC 67813</i>)</p>
<p>10. Recreational, cultural and sporting services &lt;&lt;10., 12*&gt;&gt;</p> <p>Detail comprises</p> <p>A. Entertainment services (as theater, concerts,etc)</p> <p>B. New agency services</p> <p>C. Libraries, archives, museums ,other cultural services</p> <p>D. Sporting and other recreational services</p> <p>E. Other Other personal, cultural and recreational services, and Domestic services, where tradable,</p>	<p>897*(most) Other personal, cultural and recreational services than Education and Health. Excludes Social services ( <i>CPC 933</i>) to 8 C above.</p> <p>889 News agency services</p> <p>Includes gambling, betting services Note: Two <i>CPC</i> categories of 12. opposite, i.e., <i>CPC 97 and CPC 98</i> are added here to facilitate linkage to EBOPS coverage. (<i>CPC 95 and 99</i> are excluded) Note: <i>CPC 9723</i> ,Physical well-being services, covers services of spas.</p>
<p>11. Transport services</p> <p>Four &lt;&lt;TGATS components&gt;&gt; below:</p> <p>&lt;&lt;Maritime transport 11 A Air transport 11 C (including any D, Space) Other modes of transport 11 B, E, F, G Other, supporting services 11 H, I&gt;&gt;</p>	<p>205 Transportation</p> <p>Four basic components :</p> <p>Sea Air ( including any Space transactions of 218) Other modes, and Supporting services</p>
<p>A. Maritime transport services Comprises:</p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Rentals of vessels with crew</p> <p>d Maintenance and repair of vessels</p> <p>e Pushing and towing services</p> <p>f (other) Supporting services for maritime transport</p>	<p>206 Sea transport</p> <p>207 Sea transport, passenger</p> <p>208 Sea transport, freight <i>CPC 6513</i>, if not included indistinguishably with 207and 208 above</p> <p>209 Sea transport, other <i>CPC 87149*</i>( sea portion) or with 232 below if mode cannot be determined.</p> <p><i>CPC 673*</i>, <i>676*</i> or with 232 below if mode cannot be determined.</p>
<p>B. Internal waterways transport Comprises:</p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Rentals of vessels with crew</p>	<p>227 Inland waterways transport</p> <p>228 Inland waterways transport, passenger</p> <p>229 Inland waterways transport, freight <i>CPC 6523</i>, if not included indistinguishably with 228and 229 above.</p>

<p>C. Air transport services Comprises:</p> <ul style="list-style-type: none"> <li>a Passenger transportation</li> <li>b Freight transportation</li> <li>c Rentals of aircraft with crew</li>   <li>d Maintenance and repair of aircraft</li>   <li>e (other) Supporting services for air transport; also space transport of 11D.</li> </ul>	<p>210 Air transport</p> <ul style="list-style-type: none"> <li>211 Air transport, passenger</li> <li>212 Air transport, freight <i>CPC 6640</i>, if not included indistinguishably with 211 and 212 above.</li> <li>213 Air transport, other <i>CPC 87149*</i> (air portion), or with 232 below if mode cannot be determined. <i>CPC 677</i>, or with 232 below if mode cannot be determined.</li> </ul>
<p>E. Rail transport services Comprises:</p> <ul style="list-style-type: none"> <li>a Passenger transportation</li> <li>b Freight transportation</li>   <li>c Pushing and towing services</li> <li>d Maintenance and repair of rail transport equipment (includes rail car cleaning services)</li> <li>e (other) Support services for rail transport</li> </ul>	<p>219 Rail transport</p> <ul style="list-style-type: none"> <li>220 Rail transport, passenger</li> <li>221 Rail transport, freight</li> <li>223 Rail transport, other <i>CPC 6413</i> <i>CPC 87149*</i> (rail portion), or with 232 below if mode cannot be determined. <i>CPC 674</i>, or with 232 below if mode cannot be determined.</li> </ul>
<p>F. Road transport services Comprises:</p> <ul style="list-style-type: none"> <li>a Passenger transportation</li> <li>b Freight transportation</li> <li>c Rentals of commercial vehicles with operator</li>   <li>d Maintenance and repair of road transport equipment</li>   <li>e (other) Supporting services for road transport</li> </ul>	<p>223 Road transport</p> <ul style="list-style-type: none"> <li>224 Road transport, passenger</li> <li>225 Road transport, freight <i>CPC 6422,23, &amp; 6425</i> if not included indistinguishably with 224 and 225 above</li> <li>226 Road transport, other <i>CPC 87141,42,43</i>, or with 232 below if mode cannot be determined <i>CPC 675</i>, or with 232 below if mode cannot be determined.</li> </ul>
<p>G. Pipeline transport</p>	<p>231 Pipeline transport and electricity transmission EBOPS covers electricity transmission not on a fee/contract basis (<i>CPC 6911</i>); to be deducted here</p>
<p>H. Services auxiliary to all modes of transport</p> <ul style="list-style-type: none"> <li>a Cargo handling</li> <li>b Storage and warehousing</li> <li>  Navigational aids</li>   <li>c,d, + I Other supporting services not associated with a particular mode of transport   Freight forwarding   Other multi-modal support services</li> </ul>	<p>232 Other supporting and auxiliary transport services Cargo handling (<i>CPC 671</i>) Storage and warehousing (<i>CPC 672</i>) Navigational aids (<i>CPC 673</i>), with EBOPS 232: ideally deducted here and shown with 11A,B Other supporting services not associated with a particular mode (<i>CPC 679</i>) <i>CPC 6791*</i> <i>CPC 679</i> less <i>CPC 6791*</i></p>

## C.5. TGATS-SC – THAILAND’S SPECIFIC COMMITMENTS

### TGATS-SC

(Thailand’s Specific Commitments in relation to all GATS sectors)

- **Highlighted categories** contain Thailand’s scheduled sectoral commitments in GATS; underscoring indicates minor occurrence of scheduling.
- Un-highlighted CPC codes indicate coverage for trade not scheduled at the time Thailand’s Agreement first took effect (1995) and as subsequently amended.
- **Red text in << ...>>** indicates basic TGATS categories, while **Grey** indicates their linkage to EBOPS.
- \* indicates part of a category or code.

TGATS categories	Associated EBOPS descriptions and specific CPC 1.0 coding ( <i>italicized</i> )
1. Business services	
A. Professional	
a <b>Legal services</b> <<1A a>>	275 <b>Legal services</b>
b,c <b>Accounting, auditing, bookkeeping and taxation services</b> <<1 A b,c>> except Taxation services	276 <b>Accounting, auditing, bookkeeping and tax consulting services</b> <i>CPC 823</i>
<b>Engineering and related services</b> <<1 A d,e,f,g; e,m>>	280 <b>Architectural, engineering and other technical services</b> comprise 1A d,e,f,g, <b>and</b> 1F e,m, Other scientific & technical services ( <i>CPC 835</i> ) below. Add: <i>CPC 83139</i> from EBOPS 284 Deduct: <i>CPC 83131</i> for TGATS 6 below.
d,e <b>Architectural, engineering</b>	
f <b>integrated</b>	<i>CPC 8331,32;8651</i>
g <b>urban planning and landscape architecture</b>	
h <b>Medical and dental services</b>	<i>CPC 9312</i> ( Shown with EBOPS 896 below)
j <b>Services of midwives, nurses, physiotherapists and paramedical personnel</b>	<i>CPC 93191</i> ( Shown with EBOPS 896 below)
B. <b>Computer and related services</b> <<1 B>>	263 <b>Computer services and</b> 890* <b>Other info services</b> ( <i>CPC 843</i> , data base services – most of 1 B c)
a <b>Consultancy re hardware installation</b>	
b <b>Software implementation services</b> except for programming and systems maintenance	<i>CPC 8314*</i> ; <i>CPC 8316</i>
c <b>Data processing services</b> except over the public telecoms network (see 2Cn)	on-line info processing, <i>CPC 8596*</i>
d <b>Data base services</b> except over the public telecoms network (see 1Fn)	on-line access services, <i>CPC 842*</i>
e <b>Other, includes</b> maintenance, repair of computer & peripheral equip. ( Note: this is scheduled as 1Fn, below); training for clients, and other professional computer	<i>CPC 8713</i> <i>CPC 9290*</i>

training		
C. Research and development <<1 C>>	279	Research and development
D. Real estate services ( with 1F n, below)		Part of EBOPS 284 Other business services, below
E. Rental/leasing services without operator. <<1 E>>	272	Operational leasing services (Includes video rentals CPC 7322 of EBOPS 288 below)
Services relating to		
a. Ships	272 less CPC 7312,	Other machinery and equipment of d below, which includes computers (73124), other office machinery/ equipment (73123) and telecoms equipment 73125).
b. Aircraft		
c. Other transport equipment and		
e. Other ,including household goods and video tapes are unscheduled		
d <b>Relating to other machinery and equipment</b>		
F. Other business services		
a,b <b>Advertising; market research and public opinion polling</b> <<1 F a,b>>	278	Advertising, market research, and public opinion polling
c <b>Management consulting service</b> <<1 F c,d>>	277	Business and management consulting and public relations services
<b>General management consulting only</b> A range of specific consulting is unscheduled Note: certain parts of 1Ff +g deal with consulting		CPC 831 less CPC 83111(general) (possibly CPC 83115*)
d Services related to management consulting (significant elements may fall in EBOPS 285,opposite)	285	Services between related enterprises n.i.e.
e Technical testing and analysis		Technical services CPC 83561;69, are covered at EBOPS 280 above .
m Related scientific and technical consulting Note: certain parts of 1Ff +g also deal with technical Testing		Also covered at EBOPS 280 above (possibly CPC 835*) All of e+m opposite are covered by CPC 835 at 280)
<b>Primary and fee/contract services</b> <<1 F f,g,h,i,j,r>>		Primary and fee/contract services 283, 284*
f,g,h, Services incidental to primary production	283*	Agricultural, mining...
Note: various (sub-CPC) consulting and technical items are scheduled in f (agriculture+ forestry), and in g( fishing). See Notes just above on 1Ff+g.		Most may be covered in EBOPS 280 above
h <b>Services incidental to mining</b> (at oil/gas fields only)		CPC 8621*
i Services incidental to manufacturing	283*	...and on-site processing. of CPC 861,862I These processing services largely refer to contract production abroad which stays abroad and uses own or others' inputs. Can be extended to cover some further contract production in EBOPS
r <b>Printing and publishing</b> (except newspapers)	284*	for example, in printing & publishing, CPC 8692.
j Services incidental to energy distribution		CPC 8622 covers various energy-related fee/ contract flows for electricity transmission or local gas/water distribution if applicable.

Miscellaneous business services <<1 F k, l,n.o,p q,s,t>> <<1 A I; and 1 D>>	284 * (most) Other business services cover many remaining business services. Also listed here are Real estate of 1D above and certain veterinary services of CPC 932 to facilitate linkage to EBOPS. Excludes CPC 8313 (at EBOPS 280 and 282).
n Maintenance, repair of equipment , except computer and transportation equipment (found at 1Be and at 11Ad, 11Bd, 11Cd, 11Ed, 11Fd) Note: Scheduled item for maintenance and repair of office equipment including computers is covered at EBOPS 263 Computer services, above.	
l Investigation and security services	CPC 852
q Packaging services	CPC 854*
t Other of which Translation services are scheduled	CPC 8391
o,p,s rest of t represent other unscheduled services	
..... 1Ai, veterinary services (not distributed elsewhere)	CPC 932 , if distributed, comprises 9321 for pet animals ( to EBOPS 897) 9322 for livestock ( to EBOPS 283, above ) 9329 for other animals; related labs and hospital services (also to EBOPS 283)
1 D Real estate services	Note: CPC 7211, 7221 apply for cross-border trade; while all of CPC 721, 722 apply for FATS, as these codes include immoveable assets. Services of hotel management are scheduled at 9D with CPC72112;72212

2. Communications services  
(Includes internet access and audio-visual services)

A.,B. Postal and courier services <<2 A,B>>	246 Postal and courier services
C. Telecommunications <<2 C>> Over the public telecommunications network as below	247* Telecommunication services covered by 1 CPC 8411 (wired services) 2 8412 (wireless services) 3 8413 (satellite services) 4 8420* (on-line access, see also 1Bd)
“Basic” services	Parts of:
a Voice telephone service	1,2
b,c Switched communications services	1,2,3,4
d Telex services (Note: scheduled as b.)	1,2,3,4
e Telegraph services (Note: scheduled as c.)	1,2
f Facsimile services (Note: scheduled as d.)	1,2,3
g Private leased circuit services	1,2,3,4
“Value-added” services	
h, i Electronic mail; voice mail	1,2,3,4
j On-line information and data-base retrieval (database access portion)	1,2,3,4 4
k EDI (electronic data interchange)	1,2,3,4
l Enhanced/value-added facsimile services...	1,2,3,4
m Code and protocol conversion	has no CPC coding
n On-line information/data processing	CPC 8596*
“Other” services	
o 5 items scheduled ( part of ‘Related telecoms services’ of the Provisional CPC)	Widely dispersed in CPC 1.0; not distinguished here.

<p>D. <b>Audiovisual services</b> &lt;&lt;2 D&gt;&gt;  Excludes fees for distribution rights which are time- and geographically- limited (out of GATS scope).</p> <p>a <b>Film/video production &amp; distribution</b>  (excluding any promotional and advertising services)  Excludes post-production/ other support services</p> <p>c <b>Radio, TV program production</b>  (no films)</p> <p>e Sound recording</p> <p>d Radio, TV transmission services</p>	<p>288 <b>Audiovisual and related services</b>  Includes <i>CPC 7322</i> (video rentals) of 1Ee, and performance/author services of 10E below (parts of <i>CPC 96310 &amp; 20</i>, not in D opposite).</p> <p><i>CPC 96112; 96142, 49</i></p> <p><i>CPC 96121*</i></p> <p>included with '1,2,3' in EBOPS 247 above</p>
<p>3. <b>Construction and related engineering services</b> &lt;&lt;3&gt;&gt;</p> <p>A., B. <b>Construction for buildings and for civil engineering</b></p> <p>C. <b>Installation</b> and prefab assembly</p> <p>D. Building completion and finishing</p> <p>E. Other</p>	<p>249 <b>Construction services</b>  Includes rentals of construction equipment with operator (<i>CPC 548</i> - not classified to 1E of TGATS); some site work is covered at EBOPS 280 instead of 3 E. opposite.</p> <p>Prefab assembly <i>CPC 544</i>  essentially <i>CPC 547; 5421*</i>  essentially <i>CPC 545; 548</i></p>
<p>4. <b>Distribution services</b> &lt;&lt;4 A,B,C; D&gt;&gt;</p> <p>A. <b>Commission agents' services</b></p> <p>B.,C. Wholesaling and retailing  (largely applies for FATS)</p> <p>D. Franchising</p>	<p>271* <b>Trade related services (except merchandising)</b>  Essentially represented by <i>CPC 612</i>, except referred to as 'Wholesale trade on a fee or contract basis', and excluding fees (as does A. opposite) for sales of motor vehicles; but including telecoms equipment sales and service part of <i>CPC 7542</i>, at 2 C o, above)</p> <p><i>CPC 6111, 61181,61281;621* to 625*</i>  Note: No <i>CPC 1.0</i> coding for Merchandising or for Franchising (<i>CPC 7334*</i> in <i>CPC 1.1</i>).</p>
<p>5. <b>Education services</b> &lt;&lt;5&gt;&gt;</p> <p>A., B. <b>Primary and secondary education services</b>  (except for pre-school education)</p> <p>C. <b>Higher education services</b></p> <p>D. <b>Adult education services</b></p> <p>E. Other education services</p>	<p>895 <b>Education services</b>  Note: many services of 5. opposite would be covered at EBOPS 242, Education-related expenditures by travelers (on tuition, board etc.) EBOPS 895 largely covers distance education, services provided by instructors abroad, etc.</p> <p><i>CPC 9221</i></p> <p><i>CPC 923</i></p> <p><i>CPC 929</i></p>
<p>6. <b>Environmental services</b> &lt;&lt;6&gt;&gt;  Has expanded scheduling ( sub-CPC level) of 6 A (3 items), and all CPC codes for 6B through 6E.</p>	<p>282 <b>Waste treatment and depollution services</b></p> <p>Note: EBOPS presentation would extend 282 by shifting <i>CPC 83131</i> on Environmental consulting from EBOPS 284 to form a basic "environmental services" grouping.</p>

7. Financial services	
A. Insurance services including reinsurance <<7 A>>	253 Insurance services Includes group pensions as well as term life in CPC 71311
a Life insurance, and individual and group pensions	
b Non-life insurance	
Accident and health	CPC 7132
Other direct – as vehicle, freight, fire, etc	CPC 7133
c Reinsurance services, scheduled at 7 A	CPC 714
d Services auxiliary to insurance of which: Broking, consultancy, adjusting and actuarial services (Misc supporting services and services auxiliary to pension funds are unscheduled)	CPC 7169
B. Banking and other financial services <<7 B>>	260 Financial services except insurance and FISIM
Many specific items below the level of CPC breakouts: a,b,c,d,e,f,g,i,k,l of GNS/W/120 appear as scheduled. h,j money broking; clearing/settling are unscheduled.	both are elements of CPC 71553
8. Health related and social services <<8>> (none scheduled)	
A. Hospital services	896 Health services (human) Includes professional services of 1 A h,j ( CPC 9312; 93191 ) Excludes social services (see 897*below) Note: many services of 8. opposite, would be covered at EBOPS 241, Health-related expenditures by travelers (on medical charges, etc.). EBOPS 896 largely covers remote care delivery, services provided by practitioners working abroad, etc. CPC 9311
B. Other human health services	CPC 93192,93,99
C. Social services	897* Social services (CPC 933)
9. Tourism and travel related services <<9.>>	
A. Hotels and restaurants* <<9 A>> Hotels, full-service restaurants and catering Other lodging, food service ,and beverage service are unscheduled	236 Travel, except go ods of EBOPS 869 (out of scope) 870 Accommodation, food and beverage serving  CPC 63 less CPC's 6311, 6321 and 23
B. Travel agencies & tour operators incl. reservations <<9B>>	
C. Tour guides <<9C>>	CPC 6782
D. Other <<9 D>> Hotel management services  All other travel	Covered at EBOPS 284 (see Note at end of 1 F, Real estate) EBOPS 236 excepting goods; less (870, CPC 67811, 12 &13, and CPC 6782)
10. Recreational, cultural and sporting services <<10., 12*>>	
A. Entertainment services (as theater, concerts, etc)	897* (most) Other personal, cultural and recreational services than Education and Health. Excludes Social services ( CPC 933) to 8 C above.
B. New agency services	889 News agency services CPC 962,963,9691
C. Libraries, archives, museums ,other cultural	CPC 844 CPC 8451,52; 964

<p>services</p> <p>D. Sporting and other recreational services</p> <p><b>Sport teams, promotion, venue operations;</b> <b>Recreation parks, beach services</b></p> <p>E. Other</p> <p>Other personal, cultural and recreational services, and Domestic services, where tradable,</p>	<p><i>CPC 965 ( less 965I,52 [sports, parks of 10 C]); 966; 9692 (includes gambling, betting), 9693,99</i></p> <p>Note: Two CPC categories of 12. opposite, <i>CPC 97</i>. <i>CPC 98</i> ; (<i>CPC 95</i> and <i>99</i> are excluded) are added here to facilitate linkage to <b>EBOPS coverage</b>.</p> <p>Note: <i>CPC 9723</i> ,Physical well-being services, covers services of spas.</p>
<p>11. Transport services</p> <p>Four TGATS components below:</p> <p>&lt;&lt;11 A&gt;&gt; &lt;&lt;11 C (including any D)&gt;&gt; &lt;&lt;11 B, E, F, G&gt;&gt; &lt;&lt;11 H, I&gt;&gt;</p>	<p>205 <b>Transportation</b></p> <p>Four basic components :</p> <p>Sea Air ( including any Space transactions) Other modes, and Supporting services</p>
<p>A. <b>Maritime transport services</b></p> <p>a <b>Passenger transportation</b> (except cabotage)</p> <p>b <b>Freight transportation</b> (except cabotage)</p> <p>c Rentals of vessels with crew</p> <p>d Maintenance and repair of vessels</p> <p>e <b>Pushing and towing services</b></p> <p>f (other) Supporting services for maritime transport</p> <p><b>3 vessel piloting and servicing items scheduled</b></p>	<p>206 <b>Sea transport</b></p> <p>207 Sea transport, passenger <i>CPC coding not available for cabotage</i></p> <p>208 Sea transport, freight <i>CPC coding not available for cabotage CPC 6513</i>, if not included indistinguishably with 207 and 208 above</p> <p>209 Sea transport, other <i>CPC 87149*</i>( sea portion) or with 232 below if mode cannot be determined.</p> <p><i>CPC 673*</i>, <i>676*</i> or with 232 below if mode cannot be determined.</p>
<p>B. Internal waterways transport</p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Rentals of vessels with crew</p> <p>d Maintenance and repair of vessels</p> <p>e.f Pushing, towing services and other supporting services for internal waterway transport</p>	<p>227 <b>Inland waterways transport</b></p> <p>228 Inland waterways transport, passenger</p> <p>229 Inland waterways transport, freight <i>CPC 6523</i>, if not included indistinguishably with 228 and 229 above.</p> <p>230 Inland waterways transport, other <i>CPC 87149*</i>( inland portion) : <i>MSITS</i> assigns with 232 below . <i>CPC 6524</i>, <i>673*</i>, <i>676*</i> or with 232 below if mode cannot be determined.</p>
<p>C. <b>Air transport services</b></p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Rentals of aircraft with crew</p> <p>d <b>Maintenance and repair of aircraft</b></p> <p>e (other) Supporting services for air transport; also space transport of 11D. <b>sales/marketing of air transport services</b> is scheduled</p>	<p>210 <b>Air transport</b></p> <p>211 Air transport, passenger</p> <p>212 Air transport, freight <i>CPC 6640</i>, if not included indistinguishably with 211 and 212 above.</p> <p>213 Air transport, other <i>CPC 87149*</i> (air portion), or with 232 below if mode cannot be determined. <i>CPC 677</i>, or with 232 below if mode cannot be determined. covered at <b>EBOPS 278</b> above</p>

<p>E. Rail transport services</p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Pushing and towing services</p> <p>d Maintenance and repair of rail transport equipment (includes rail car cleaning services)</p> <p>e (other) Support services for rail transport  (includes rail station security)</p>	<p>219 Rail transport</p> <p>220 Rail transport, passenger</p> <p>221 Rail transport, freight</p> <p>223 Rail transport, other CPC 6413</p> <p>CPC 87149* (rail portion), or with 232 below if mode cannot be determined.</p> <p>CPC 674, or with 232 below if mode cannot be determined.</p> <p>may fall in EBOPS 897 (CPC 852)</p>
<p>F. Road transport services</p> <p>a Passenger transportation</p> <p>b Freight transportation</p> <p>c Rentals of commercial vehicles with operator  of cars and busses with operator rental of trucks is unscheduled</p> <p>d Maintenance and repair of road transport equipment</p> <p>e (other) Supporting services for road transport</p>	<p>223 Road transport</p> <p>224 Road transport, passenger</p> <p>225 Road transport, freight CPC 64222,23, &amp; 6425 if not included indistinguishably with 224 and 225 above.</p> <p>CPC 64225</p> <p>226 Road transport, other CPC 87141,42,43, or with 232 below if mode cannot be determined</p> <p>CPC 675, or with 232 below if mode cannot be determined.</p>
<p>G. Pipeline transport</p>	<p>231 Pipeline transport and electricity transmission EBOPS covers electricity transmission not on a fee/contract basis (CPC 6911); to be deducted here</p>
<p>H.I. Services auxiliary to all modes of transport, and Other unspecified transport services</p> <p>Cargo handling</p> <p>Storage and warehousing</p> <p>Navigational aids (with 11A, B)</p> <p>Other supporting services not associated with a particular mode Freight forwarding</p> <p>Other multi-modal support services</p>	<p>232 Other supporting and auxiliary transport services Includes the following services, also listed opposite to frame Thailand's commitments.</p> <p>Cargo handling (CPC 671)</p> <p>Storage and warehousing (CPC 672)</p> <p>Navigational aids (CPC 673), with EBOPS 232: ideally deducted here and shown with 11A,B</p> <p>Other supporting services not associated with a particular mode (CPC 679) CPC 6791*</p> <p>CPC 679 less CPC 6791*</p>