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Services in Development

An Agenda for Research in ASEAN

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SERVICES IN DEVELOPMENT

An Agenda for Research in ASEAN

Edited by

Sieh Lee Mei Ling

FOREWORD

This publication contains papers given at a regional workshop on the service sector sponsored by the IDRC and held in Singapore in December 1987. Scholars from each country in ASEAN attended (except Indonesia and Brunei) together with officials from UNCTAD, CIDA, the International Service Institute and the North-South Institute, for the purpose of examining the role of services in economic growth in Southeast Asia. Country presentations were in two parts. First, a macro overview was given of services normally in a comparative context with the goods sector. This sought to determine the overall contribution of services towards output, GPD, employment, foreign exchange earnings as well as its growth and productivity performance. A second paper was then presented on the micro level, looking at individual service industries which have emerged as important economic forces. Collectively, these papers constitute the most up-to-date and analytical document currently available on the service sector in ASEAN. While our knowledge remains highly inadequate, both theoretically and empirically, this volume does move towards filling this void somewhat. We hope it will stimulate further activities of this kind.

Anne V. Whyte
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EDITOR'S NOTE

This volume contains a set of papers presented at a regional workshop on 'Services in Development' in November 1987, Singapore. The workshop was convened to review the present state of knowledge with respect to the position, trends, direction and problems of the development of the services sector within the economies of Asean. Besides providing an understanding of the services sector to enable formulation of development policies and strategies, the papers further attempted to identify issues in the sector that require research and investigation in the near future. This involved taking stock of past studies and work currently being undertaken, as well as discussion of policy support or lack of support of specific service industries that are emerging as important subsectors.

For each of the Asean countries (except Brunei), two papers were read, one focussing on macroeconomic aspects of services and economic development and the other on microeconomic issues in the expansion of service subsectors or industries. Unfortunately, the papers from Indonesia were not presented. As expected for a field which is relatively new for researchers, perception, thought and modality of the paper writers varied considerably across countries. This was especially so for the discussions on microeconomic service issues where work has hardly begun even amongst the developed countries.

Finally, I would like to record our gratitude to Michiko Hayashi of the Manufactures Division of UNCTAD for addressing the workshop (although the paper which will be published as a UNCTAD document cannot be included in this volume). The participation of Dorothy Riddle of the International Services Institute, Janette Mark of the North South Institute of Ottawa, Norma Burlington of the Canadian International Development Agency and Chan Ah Ha of the Economic Planning Unit of the Malaysian Government are greatly appreciated. Last but not least, the workshop from which this publication stems would not have been possible without the support of the International Development Research Centre of Canada. Their contribution towards development in Asean should be deeply acknowledged.

Sieh Lee Mei Ling
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THE SERVICES SECTOR IN SINGAPORE: A MACRO APPROACH

Koh Ai Tee, Paul Johnson and Kau Ah Keng

INTRODUCTION

Asean economies, including Singapore, are now at the crossroads of decision with regard to a search for new strategies for development. After more than a decade of dynamic growth in the 1970s and early 2980s, most countries in the group appear to have hit an economic plateau in recent years. In 1985, economic growth rates were negative in Brunei, Malaysia, the Philippines, and Singapore, while exports fell in all Asean countries. Thailand was the only country which managed to grow, albeit moderately at 4 per cent. Although the situation appears to be bottoming out by 1986 and early 1987, certain international developments suggests that Asean is in for a period of slower growth than in the past.

First, the sharp decline in commodity prices in the 1980s, to the extent that it persists, will mean continued decline in export revenues for Asean countries. The prices of tin, rice, palm oil, and rubber (major exports of Asean) have experienced declines in the 1980s. What is worrisome is that many of the demand and supply factors behind such declines appear to be long term in nature, signifying the need to undertake longer-term structural remedies and search for new growth strategies that would minimise dependence on commodity exports. For instance, demand for raw materials in production has fallen, due to technological improvements, increased miniaturization, and substitution of man-made materials. The shift toward high technology-and-service-oriented industries in developed countries, may indicate a long run trend toward lower demand for several primary commodities. World food surpluses have been created in part through farm subsidies and artificially high price supports in many developed countries. This has occurred alongside the attainment of self-sufficiency in several formerly large food importers such as China and India through improvements in agricultural productivity and in incentives to farmers. To exacerbate the above conditions, oil price declines have had adverse effects on many Asean countries such as oil-exporting Brunei, Indonesia, Malaysia and Singapore, although they have helped lower petroleum import bills for the Philippines and Thailand.

Second, protectionism is on the rise in the major industrial country markets, which account for the largest shares of Asean trade. Such protectionism has reduced Asean prospects for significant strides to be made through exports of manufactured goods.

What the above scenario implies is the increasing need for Asean economies to seek ways and means to diversify their economic structure to include dependence not only on commodity, oil, and manufactured good

exports, but also to explore the possibility of developing competency in services with a view toward developing a long run capability in the export of services. In this respect, the relationship between services and economic development is attracting increasing attention in recent years among Asean circles. This interest is particularly heightened by the fact that data on services within Asean countinues to be scanty and knowledge on services still at a fairly infant stage. While poor data availability has in the past discouraged research in services, it has become less of a deterrent in the present climate of searching for new solutions to growth.

In the Singapore context, increasing policy attention is being paid to services for at least three reasons. First, the high growth rates of the early eighties were largely attributable to the vigorous expansion of international services, viz. transport, communications, banking, finance, business and other professional services. Second, it is increasingly being recognised that unlike the demand for goods, there is less of a limit on the per capita consumption of services. The strong demand for services is shown by the growth rate of world services trade, which is double that of world merchandise trade. As such, the Economic Committee has strongly recommended promotion of services exports so as to 'aim for a share of the increasing world trade in services' (p. 141). Third, Singapore has a comparative advantage in services which places it in an excellent position to benefit from the worldwide shift towards greater trade in this area. Her comparative strength in services arises from among others, her strategic location, well-developed communications and transportation infrastructure, a long tradition in commerce, and a relatively well-educated and numerate workforce. Over the last 20 years, she has built up expertise in various sophisticated services, such as air and sea port management, town and city planning, hotel management, engineering consultancy, and business services, for which there exists international demand.

The next section discusses the definition of services as adopted in this paper. This is followed by a macro overview of the services sector, done in a comparative context with the goods sector. It seeks to determine the overall contribution of the service sector towards Singapore's output, GDP, employment, foreign exchange earnings, as well as review its growth and productivity performance and its variability over time. This would provide valuable background information for assessing the role of services in the next stage of Singapore's development. Given Singapore's heavy dependence on foreign investors for her development, the role of foreigners in services is also examined. Are foreigners expected to play an important role in Singapore's drive towards services promotion? The third section then examines the policy environment surrounding the promotion of services. Following a description of policy tools employed in this regard, some important questions are examined. For instance, does promotion equal effectiveness? What ought to be the proper balance between reliance on the invisible hand of the market vis-a-vis the visible hand of government? Does the government have the capability to 'pick winners' in services? - a question often asked in regard to manufacturing as well.

DEFINITION

Services are generally taken to refer to intangible output. They tend to be less easily identifiable and more diffuse than commodities. As such, theoretical attempts to define services have met with great difficulties. Hill (1977) for example, defines a service as '... a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as a result of the activity of some other economic unit, with the prior agreement of the former persons or economic unit'. Smith (1973) approaches the definitional issue in a different way by describing some quantifiable characteristics which differentiate services from other economic activities. These features include high value-added to total inputs ratio, high labour intensity, high proportion of female, self-employed, part-time labour, and a low dependence on physical indicators for the measurement of real output. The latter definition is not entirely satisfactory since the universality of these characteristics is something that has yet to be established. It suffices to say that at this juncture, there is as yet no agreement among economists as to what constitutes a service. Thus different perceptions of the service sector have resulted in some writers choosing to include utilities and construction and exclude transportation and communications from the domain of services. The latter coverage differs from prevailing international convention, adopted by the ILO and OECD for example, which defines the services sector as comprising wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, public administration and defence, and community and personal services. While definitional issues are important and should continue to be explored, they will not be addressed in this paper which will follow the ILO/OECD definition.

MACRO OVERVIEW OF THE SERVICES SECTOR

The services sector in Singapore has occupied an important position in the Singapore economy in that it accounted for some 62 - 64 per cent of GDP as well as employment over the last decade (Tables 1 and 2). This share has been fairly consistent over the decade, with changes varying by less than 3 percentage points. Thus from the standpoint of provision of income and jobs, the services sector is more important than the goods sector.

However, from the standpoint of total exports and foreign exchange earnings, the goods sector is superior (Table 3). In 1983, only one-fifth of exports from Singapore to abroad was in services compared to four-fifths for goods. However, the contribution to foreign exchange earnings by services was more than proportionate to their share of exports, being some 45 per cent. Thus in terms of foreign exchange earnings per unit of exports, services does substantially better than goods, with a net foreign exchange earnings ratio of 0.6613, which is three times higher than that of goods of 0.2137.

In terms of growth performance, the services sector as a whole has performed progressively better over time. In contrast, the goods sector which began with an impressive 27 per cent growth in the sixties, saw

that growth more than halved to 11 per cent in the seventies, and further slowing down to a mere 5 per cent in the first half of the eighties (Table 3). The goods sector has grown faster than the overall economy for two decades in the sixties and seventies, but has begun to lag behind it by the 1980s. In contrast, services although trailing the overall economy in the 1960s has by the 1970s and 1980s grown faster than it. It is interesting to note that in Singapore's first recession in twenty years in 1985, services were fairly resilient, managing a respectable 4 per cent growth rate, while the goods sector plunged sharply by 8 per cent.

Not only is the goods sector's growth trend moving lower over time, this growth has also been more variable than that of the services sector, the recession years of 1985/86 aside (Table 5). Thus if stability in growth is viewed as a desirable element in development, since it reduces uncertainty, the goods sector appears to perform worse than the services sector, albeit the gap between them is fairly small.

Furthermore, according to Lee (forthcoming), if one dates the transformation of the Singapore economy from 1961, one is struck by how the services sector was able to increase by more than six times, from S$1,750 million in 1961 to S$11,250 million in 1985, despite little more than a doubling of the labour force from about half a million in 1961 to 1.2 million in 1985.

Lee also reports that in 1985, the tertiary sector accounted for about 64 per cent of the employed labour force, which is lower than its 69 per cent share of the economy. The services sector, far from being diminished by the proposed industrialization of Singapore, was highly productive despite employing a lower percentage of men than women as 62.6 per cent of males compared to 66.0 per cent of females were in tertiary-sector employment. In the last five years, these employment percentages have not changed very much; in fact the total number employed between 1981 and 1985 has only risen from 1.12 to 1.15 million persons, barely a one per cent increase annually. In other words, the growth of the services sector has been in a manner which did not require much extra employment.

SECTORAL CHARACTERISTICS

GDP and Employment Contribution

In terms of income generation at current prices, the latest figures for 1985 show the Finance and Business Services industry to be the largest, accounting for some one-fifth of overall GDP. See Table 1. This industry has shown remarkable growth over the last decade, moving from second position during the late 1970s to the top position by 1983. The rise of the industry was spurred in part by the growth of communication, especially as international banking required swift and direct contacts between the financial centres of the world. Technological improvements made lower international telephone and telex rates possible at a time when a changing international culture demanded fast turn-around times for business transactions. The high cost of production in the advanced countries in the late sixties and early

seventies encouraged multinational corporations to look to a place like Singapore to locate manufacturing and associated production.

The Commerce industry, traditionally the largest service industry has been shrinking in size over the last decade, shifting from top position to second place by 1983. Transport and Communications' share of GDP has held steady over this period, rising slightly from 11 per cent in 1975 to 13 per cent in 1985. The growth of this sector paralleled the development of Singapore as an offshore production platform for multinationals from the USA, Japan and Europe. Such a platform required efficient communication and economical transportation, both of which were developed through the transformation of the port of Singapore and her airport, and the merger of overseas and domestic telecommunications into a single authority. The status of Singapore as an international centre was also upgraded by the oil-exploration boom following the oil-price increases of 1974 and 1979. Many oil-exploration activities were based around Singapore which in turn meant close contact with corporate headquarters abroad. 'Other Services' has been stable around 10 to 11 per cent.

The growth and importance of the Finance and Business Services and Transport and Communications industries are even more dramatic if constant price GDP figures are used. In 1960, these two service industries accounted for about a third of the services sector. Twenty-five years later in 1985, they together accounted for more than half of the services sector (Table 3).

Measured by the number of jobs, the latest ranking of services industries is: Commerce (23.1%), Other Services (22.6%), Transport and Communications (9.9%) and Finance and Business (8.7%). Thus the industry that generates the highest income (Finance and Business Services) requires the least amount of workers, signifying relatively higher labour productivity compared to other sectors (further details are discussed below). In contrast, 'Other Services' earns the least income yet absorbs workers on a scale that is comparable to the Commerce sector. Labour productivity in this industry therefore is one of the lowest among the various service industries.

Foreign Exchange Earnings and Exports

Due to the fact that a major portion of its services are traded, Transport and Communications ranks number one in terms of export generation and foreign exchange earnings. See Table 4. This is followed by the Commerce industry (2nd), Financial and Business Services (3rd) and Other Services (4th). Other Services being generally transacted at home and therefore non-traded, generates the least exports and foreign exchange earnings.

Contribution to Growth

Over the last 26 years, the star performers in terms of growth are Financial and Business Services, and Transport and Communications, with the former registering double-digit growth throughout the 1960s, 1970s and 1980s and the latter performing likewise since the 1970s. Not only did it grow faster than the overall economy, it also grew more rapidly than the services sector taken as a whole according to Table 5. Other

Services is the laggard here, with growth rates trailing behind not only the services sector but also the total economy. Since the 1970s, Commerce has also grown much slower than the services sector and the economy. Not only are Financial and Business Services and Transport and Communications fast growers, they were also more resilient during the 1985-86 recession registering positive growth rates which superceded that of the overall economy.

Although Commerce and Other Services are slow growers lagging consistently behind the economy over the last quarter century, Other Services is less vulnerable to the business cycle compared to Commerce. Other Services has grown at a fairly consistent rate of around 6 per cent over the last two and half decades, and still managed a positive 4 to 5 per cent during the 1985-86 recession. The Commerce sector on the other hand has shown a consistent downward trend in growth throughout the 1960s, 1970s and the 1980s, and was hit more severely than other services, albeit less severely than the goods sector during the business downturn in 1985-86.

Variability

The recession of 1985-86 has contributed to greater variability in GDP for the services sector and the economy as a whole. Within services, although Transport and Communications and Finance and Business Services are the fast growers compared to Trade and Other Services, the former are more variable than the latter. See Table 6. Other Services, although a slow grower, is the most stable sector. Transport and Communications, Finance and Business services register high growth rates but are extremely unstable. Therein lies the trade-off. An economy that seeks to promote these fast growers has got to live with greater instability in growth.

Productivity and Productivity Growth

In terms of value added per worker, the ranking amongst the services industries has been quite consistent over the last decade, with Finance and Business Services topping the list, followed by Transport and Communications (2nd), Trade (3rd) and Other Services (4th). See Table 7.

Finance, Transport, Communications and Business Services record productivity levels which far supercede manufacturing and the overall economy. Commerce exhibits productivity levels which mirror quite closely the economy-wide average, while Other Services is below this average, as well as below the level in manufacturing.

However, although Other Services exhibits the lowest productivity level, growth in productivity is much faster than Commerce (Table 8) and it is likely that in time to come, the productivity level of Other Services may overtake that of Commerce.

Although Transport and Communications started from a lower productivity base than Finance and Business Services (and even Commerce), the growth rate of productivity has been the largest for this sector, so that by 1986, the productivity gap between Finance and Business Services and the Transport and Communications industry has narrowed substantially. From an efficiency standpoint, it would appear that reallocation of

labour from the lower productivity and productivity growth industries such as Other Services and Commerce towards the high productivity industries such as Finance and Business Services and Transport and Communications, would enhance economic growth.

Foreigner's Share in Services vs Manufacturing

Over the last decade, 1975-85, foreigners in services contributed 9 per cent to GDP compared to foreigners' contribution in Manufacturing and Construction of 17 per cent. Therefore foreigners are certainly more dominant in manufacturing than in services. Foreigners' contribution in both services and manufacturing seem to be stabilizing at around 16 per cent for manufacturing and 10 per cent for services in the last few years (Table 9).

In the area of wholesale and retail trade, restaurants and hotels (for which data are available for 1975 and 1983), foreign ownership has risen from 22.4 per cent in 1975 to 38.6 per cent in 1983 (Table 9). The latter share is by no means insignificant if we take into account the fact that the Commerce sector is the largest single industry in terms of overall GDP contribution.

Foreign ownership in the other services in 1974 (the latest Census of Services 1984 did not provide such information) is as follows: Finance (15%), Real Estate and Business Services (18%), Transport (10%), Insurance (6%), Recreational and Cultural (26%), and Personal, Household, Social, Community and Other Services (10%)(Table 11). Within the above services, foreigners' share has been extremely high in merchant banking (52%), engineering, architectural and technical services (89%), and advertising and market research services (51%). While it is hard to generalize from data for a single year, it seems fairly clear that foreigners play an important role in services which require a high degree of skills.

SERVICES PROMOTION

Services promotion took on new impetus as reflected in the establishment of the Services Promotion Division (SDP) in the Economic Development Board in the first quarter of 1986. The immediate objective of the Division was to identify new investment opportunities in the services sector and to promote them through the EDB's international network of offices. Thus besides promotion of investment in the goods sector, the securing of investment in services became a new policy objective of the Singapore Government.

It is now recognized that the services sector holds considerable promise as a source of future economic growth. In 1985, the services sector in Singapore accounted for 52 per cent of GDP and 44 per cent of employment. Its productivity, measured as valued added per worker, was 29 per cent above the national average and 1.3 times that of manufacturing. Local content was about 3 times that of manufacturing. Services accounted ror 45 per cent of the country's net foreign exchange earnings. Over the five years from 1981 to 1985, services grew at 8 per

cent compared with 6 per cent for the overall economy. (EDB Annual Report 1985-86).

Services to be Emphasized

The SPD will concentrate on services which have the potential to be

- internationally tradeable,
- make maximal use of Singapore's limited brainpower resources
- generate domestic spin-offs for economic activities.

The following sub-sectors (which in 1985 contributed 27 per cent of GDP) have been identified for active promotion by the EDB.

- technical/engineering services & consultancy
- educational services
- laboratory & testing services
- medical services
- agrotechnology
- leisure/entertainment/cultural services
- exhibition/advertising & public relation services
- publishing services
- financial services
- transport services
- telecommunications
- computer & information services
- management & business consultancy
- warehousing & distribution
- professional services (e.g. legal servicxes, accounting, auditing)
- trade-related services

The SDP will also encourage MNCs to consider Singapore as their Asia-Pacific regional base and provide headquarter services to their companies outside Singapore. This is in line with the Government's intention to support fully the development of Singapore as a Total Business Centre.

Rationale for Promotion of Services

'Our investment promotion efforts no longer focus on manufacturing alone. This is important, as our present niche as a manufacturing base is constantly being challenged by the other NICs. They have more resoources and cheaper labour than we do. While we will not abandon manufacturing, we must move aggressively into services, particularly knowledge-based advantage. This is the way to develop into an international total business centre' (Budget Statement 1987 delivered in Parliament on March 4, 1987 (p. 8) by the Minister of Finance Dr. Richard Hu, Information Division, Ministry of Communications & Information).

Incentives

EDB-administered tax incentives for services include

- the Pioneer Service Incentive

- the Investment Allowance Incentive

- the Operational Headquarters Incentive (introduced in early 1986)

Tax Incentives

The various forms of tax incentives available for service industries are described briefly below.

Operational Headquarters (OHQs) incentive was introduced in 1986 to attract international companies to Singapore, to manage and provide a full range of services to subsidiaries in the region. OHQs are desirable as they bring with them substantial and pervasive direct and indirect benefits to the economy. Four companies have already been awarded the OHQ incentive.

Pioneer incentive was extended from manufacturing to service industries in 1986.

Promotion of Offshore Services was initiated by the extension of the Export Incentive under the Economic Expansion Incentives Act, previously covering only manufacturing, to cover export of selected services, which include, amongst others, consultancy, management, construction, technical and engineering services.

The incentive will be extended to qualifying services undertaken with respect to offshore projects. Under the scheme, 90 per cent of the qualifying export income would be exempt from tax. Provision will be made for an export base to be set where export income below the base would be subject to full corporate tax. The incentive will be for an initial period of 5 years but can be extended. Incentive will take effect from year of assessment 1988.

Withholding Tax on Margin Deposits in Financial Futures and Loco-London Gold Trading. To further encourage the growth of gold and financial futures trading and increase SIMEX (Singapore International Monetary Exchange) members' international competitiveness, interest paid by SIMEX members on margin deposits for transactions in gold and

financial futures are exempted from withholding tax, with effect from year of assessment 1988.

To further enhance Singapore's importance as a physical gold trading centre and active gold and deferred gold market (the latter being commonly known as Loco-London gold), interest paid by SIMEX members to non-residents in respect of transactions in Loco-London gold will be exempted from withholding tax.

Extension of 10 Per Cent ACU to Securities Trading. International securities trading has been observed to be expanding geographically and it is expected that 24-hour trading in such securities will soon be a reality. To allow Singapore to tap this activity and to establish herself as a centre for the trading of international securities in the Asian time zone, and to further accelerate the development of her capital market and fund management activities, with effect of year of assessment 1988, the following income earned by Asian Currency Units and Securities companies approved by the Monetary Authority of Singapore would be taxed at a concessionary rate of 10 per cent.

a. commission and fee income from transacting in non-Singapore dollar securities on behalf of non-residents (presently such income is already exempt for ACUs), and

b. income derived from trading in non-Singapore dollar securities with non-residents, other ACUs and other approved securities firms.

Promotion of Trade Services. The Trade Development Board is actively pursuing

- improvement of warehousing and distribution facilities

- encouragement of more feeder lines to use Singapore as the pivotal cargo port of this region

- use of the Pioneer Service Incentive to encourage countertrading companies to set up their regional offices here. To date, six such companies have been awarded the incentive. They are expected collectively to generate S$4 billion worth of business over the next three years.

The pioneer status provides an exemption from income tax on profits from countertrading for a period of 5 years, with the possibility of a further extension.

OPPORTUNITIES AND CHALLENGES FACING SERVICES SECTOR GROWTH

Besides recent measures to promote services growth, both international and domestic trends suggest higher growth of services compared to goods in the near foreseeable future and Singapore is well placed to reap part of the benefits of this growth. The findings of the Services Sector Subcommittee, one of several subcommittees formed to study the 1985 recession, show that:

'More and more manufactured products, e.g. office and communication equipment, computers, aircraft, require services operation. As a result, services exports have expanded with the growth in merchandise trade. Besides services associated with manufacturing exports, many services independent of the trade in goods have also become increasingly important in international trade. These services reflect the growing role played by information exchange and communications in an interdependent global economy.' (p. 27 and 28)

The policy option espoused since 1966 of becoming a global city meant that Singapore would follow world trends. While this global orientation is being re-emphasized in the Economic Committee's Report, the nature of this re-emphasis has the effect of placing significant weight on grooming Singapore to become a service centre of the region and eventually the world:

'Our future lies in being plugged into the international network of trade and communications, not in disconnecting ourselves in a vain effort to insulate Singapore from the influences and disturbances of the outside world.'

The Committee further recommended that Singapore move beyond being a mere production base for MNCs to being an 'international total business centre'. In other words, Singapore will not depend only on companies coming here to make or assemble products designed elsewhere. She should seek to attract companies to Singapore to establish operational headquarters which are responsible for subsidiaries throughout the region. Conditions should be such that these headquarters would find it worthwhile to do product development work, manage their treasury activities, and provide administrative, technical and management services to their subsidiaries (para. 22 of the Executive Summary).

'Then, it becomes worthwhile for them to establish a plant in Singapore, to produce goods or services for export'.

In other words, Singapore should aim to be a services centre first with the resultant effect of making it attractive to be a manufacturing centre. The second important recommendation of the Committee was that Singapore should become a major exporter of services:

'Services account for an increasing share of our GDP, and our service exports have been growing as quickly as world trade in services. Scope for growth is still huge. We need to promote not just Singapore-based activities like tourism or banking, but also offshore-based activities, like construction firms building hotels in China, and salvage firms operating in the Middle East ... we have expertise in hotel management, air and sea port management, town and city planning. These skills should be systematically marketed' (para. 63 of the Executive Summary).

Overall, the Report came out strongly in favour of promoting banking and finance, transport and communications, and international services largely because of their rapid growth and the potential of sustaining this growth given positive support. However, any purposeful planning for the growth of these two industries are not without its challenges. These

are well enunciated by the Economic Committee and cited by Lee (forthcoming):

'The financial services sector is now entering a critical period of consolidation and redirection. The external environment is rapidly changing. The sector has experienced a sharp decline in growth since the end of 1984... A conducive domestic environment is needed to respond quickly to the new trends. This requires urgent measure, in particular, changes in our tax regime and a more developmental approach by Government'.

Similarly, concerning Transport and Communications, the Committee noted:

'Transport and Communications have grown steadily, increasing their contribution to GDP from 11% in 1975 to 13% in 1984. However, transport growth peaked in the late seventies. Communications was able to maintain its high level of growth, mainly because of technological improvements and the changing international business environment, which demand rapid transactions. However, growth in telex and domestic telephone services has slowed down considerably ...'

SUMMARY AND AREAS FOR FUTURE RESEARCH

This paper adopts the ILO/OECD definition of services to include wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, public administration and defence, and community and personal services.

The macro overview of the services sector shows the following features.

(a) The relative superiority of the services sector over the goods sector from the standpoint of provision of income and jobs. However, the goods sector continue to be more important in terms of generation of total exports and foreign exchange earnings. Despite this, it is important to note that the net foreign exchange earnings ratio of services, namely, foreign exchange earnings per unit of exports, is three times higher than that of goods. If Singapore succeeds in significantly boosting its services exports, services may well replace the goods sector to be the top foreign exchange earner for the economy.

(b) In terms of growth performance, the services sector has performed progressively better over time than goods. Although trailing the overall economy in the 1960s, the services sector has performed better than average since the 1970s and 1980s. Services were also more resilient than goods during Singapore's first-ever recession in twenty years in 1985.

(c) The better growth performance of services in contrast to goods has also been accompanied by less variability in growth. Furthermore, the services sector has exhibited greater labour productivity (level and growth-wise) than goods.

Sector-wise, the latest figures for 1985 show Finance and Business Services to be the largest industry in terms of GDP contributions at both current and constant prices. Transport and Communications is the second largest, at constant prices, followed closely by Commerce (third) and Other Services, a distant fourth. The ranking in current prices is Finance and Business (1st), Commerce (2nd), Transport and Communications (3rd) and Other Services (4th).

Although more variable than average, the best growth performers in the last two and a half decades are Financial and Business Services, and Transport and Communications, compared to below-average growth exhibited by Commerce and Other Services. The former two industries absorb relatively less labour yet generates the most value added. As such, they also exhibit higher-than-average productivity levels and growth, with Transport and Communications being the star performer. The latter is also the number one service export generator and foreign exchange earner. Although foreigners are more dominant in the manufacturing than services sector, the foreigners' share in services forming 10 per cent of GDP is not insignificant when compared to their share of 16 per cent in the manufacturing sector.

Active promotion of services is of fairly recent origin, being spearheaded by the setup of the Services Promotion Division in the Economic Development Board as recently as in 1986. Services targetted for promotion are those that are internationally tradeable, that make maximal use of Singapore's limited brainpower resources, and that generate domestic spin-offs for economic activities. These include technical and engineering services and consultancy, educational services, laboratory and testing services, medical services, financial services, transport and communication, computer and information services, management and business consultancy, trade-related services and the like.

Although on the surface, there appears to be substantial promotional efforts and incentives directed at promoting services as an additional source of growth, aimed not at replacing but alongside manufacturing, serious research ought to be directed at studying the effectiveness of these measures in actually generating growth. Since promotion does not equal effectiveness, it is important to study the macro impact of measures aimed selectively at services promotion to ensure that they do not cancel out or are inconsistent with measures targetted at promoting manufacturing. Secondly, serious productivity studies at a more disaggregated level than the current industry level ought to be conducted. This will allow a finer breakdown of services into more homogeneous entities and facilitate targetting for services promotion. Thirdly, the linkage between services and economic growth has to be rigorously studied and its nature and limitations understood in order to form a solid empirical basis for promoting services as a new engine of growth. Fourth, more micro studies of selected services with growth potential ought to be conducted so as to better understand how to promote them. These include computer information technology, transport and communication, banking and finance, tourism, and selected business services.

TABLE 1

CONTRIBUTION TO GDP: SERVICES VS. GOODS, 1975-85

	Percentage Share of GDP at Current Prices					
	1975	1977	1979	1981	1983	1985
SERVICES	64.5	64.1	63.2	62.0	62.5	64.1
Trade	26.4	26.0	24.3	20.5	19.0	17.4
Transport & Comm.	11.1	13.0	13.8	13.5	13.2	13.4
Finance & Business	15.5	14.4	14.9	18.8	19.8	21.5
Other Services	11.5	10.7	10.2	9.2	10.5	11.8
GOODS	35.5	35.9	36.8	38.0	37.5	35.9
Manufacturing	23.6	24.7	27.3	27.8	23.3	22.6

Source: Yearbook of Statistics, 1985-86, Department of Statistics, Singapore.

TABLE 2

CONTRIBUTION TO EMPLOYMENT: SERVICES VS. GOODS, 1978-86

	Percentage Share of Employment					
	1978	1979	1981	1983	1985	1986
SERVICES	63.2	63.1	62.4	62.9	63.9	64.3
Commerce	23.5	23.3	22.7	22.7	23.5	23.1
Transport & Comm.	11.4	11.6	11.5	11.3	10.1	9.9
Finance & Business	6.7	7.1	7.6	8.1	8.7	8.7
Other Services	21.7	21.2	20.6	20.8	21.5	22.6
GOODS	36.8	36.9	37.6	37.1	36.1	35.7
Manufacturing	28.2	28.9	29.3	27.8	25.5	25.2

Source: Yearbook of Statistics, 1985-86, Department of Statistics, Singapore.

TABLE 3

INDUSTRY COMPOSITION OF TERTIARY SECTOR OUTPUT
(S$ million at 1968 factor cost

Year	Commerce	Transport and Communi-cations	Finance and Business Services	Other Services	Less Imputed Bank Services
1960	713	298	248	392	-36
(Percentage Share	44.2	18.4	15.3	24.3	-2.2)
1970	1538	593	716	724	-107
(Percentage Share	44.3	17.2	20.7	20.9	-3.1)
1978	2734	1773	1525	1198	-409
1979	2929	2038	1707	1265	-590
1980	3139	2299	2048	1337	-894
(Percentage Share	39.6	29.0	25.8	16.9	-11.3)
1981	3319	2656	2163	1417	1102
1982	3513	2976	2573	1551	1283
1983	3667	3215	2852	1688	1461
1984	3880	3532	3218	1763	1771
1985	3820	3637	3682	1831	1830
1986 (up to end of 3rd Quarter)					
(Percentage Share	22.4	24.0	30.5	11.5	-11.6)

Source: Table 3, Lee (forthcoming).

TABLE 4

FOREIGN EXCHANGE EARNINGS: SERVICES VS. GOODS, 1983

A table of exports and net foreign exchange earnings in 1983 shows the importance of services for net earnings, although manufacturing is by far the major gross earner:

Industry	Exports (S$ million)	Net Foreign Exchange Earnings (S$ million)	Net Foreign Exchange Earnings Ratio
Agriculture and Quarry	127.6	84.5	0.6622
Manufacturing	38994.2	8244.8	0.2114
Utilities	66.8	40.6	0.6078
Construction	8.9	5.7	0.6404
Commerce	3325.3 (2)	2902.7 (2)	0.8729 (1)
Transport and Communications	5938.3 (1)	3102.7 (1)	0.5225 (4)
Financial and Business Services	935.9 (3)	724.5 (3)	0.7741 (3)
Other Services	121.4 (4)	94.8 (4)	0.7809 (2)
Total	49518.4	15200.3	0.3070
GOODS[a]	39197.5 (79.2%)	8375.6 (55.1%)	0.2137
SERVICES[b]	10320.9 (20.8%)	6824.7 (44.9%)	0.6613

a Agriculture, Quarrying, Manufacturing, Utilities, Construction

b Commerce, Transport & Communications, Financial & Business Services, and Other Services

Figures in parentheses represent ranking among the services sectors.

Source: 1983 Input-Output Tables of Singapore, Department of Statistics, Singapore.

TABLE 5

GDP GROWTH

	Growth Rate of GDP (at 1968 factor cost) Annual Percentage Change				
	1960-70	1970-80	1980-86	1985	1986
Goods Sector	26.5	10.5	4.7	-8.7	-1.2
Service Sector	8.2	9.8	8.3	4.0	4.1
Trade	8.5	7.6	3.9	-1.7	-0.3
Transport and Comm.	7.4	14.8	10.0	3.3	9.2
Financial and Business	11.3	12.1	13.4	10.4	3.5
Other Services	6.3	6.7	6.1	4.0	4.6
Total GDP	9.3	9.5	6.1	-1.8	1.9

Sources: Economic and Social Statistics Singapore 1960-82, Department of Statistics.
Economic Survey of Singapore 1985, Ministry of Trade and Industry.
Economic Survey of Singapore 1986, Ministry of Trade and Industry.

TABLE 6

VARIABILITY OF GDP

	Coefficient of Variation of GDP (at 1968 factor cost)	
	1960-84	1960-86
Goods Sector[a]	65.34	64.34
Manufacturing	68.74	67.01
Services Sector	63.09	65.60
Trade	50.56	50.87
Transport and Communication	82.93	84.36
Financial and Business	79.13	83.44
Other Services	45.16	47.88
Total GDP	60.81	61.53

a Includes Agriculture and Fishing
Quarrying
Manufacturing
Utilities
Construction

Sources: Economic and Social Statistics Singapore 1960-82, Department of Statistics.
Economic Survey of Singapore 1985, Ministry of Trade and Industry.
Economic Survey of Singapore 1986, Ministry of Trade and Industry.

TABLE 7

PRODUCTIVITY, 1980-86

	GDP at 1968 Factor Cost Per Worker ($'000 per Worker)								
	1970	1975	1980	1981	1982	1983	1984	1985	1986
Manufacturing	7.0	7.6	9.0	23.1	9.0	9.5	10.4	10.5	11.6
Trade	10.1	10.8	10.9	13.6	13.7	13.8	14.7	14.1	14.3
Transport & Comm.	7.5	11.9	19.5	20.9	22.7	24.4	28.9	31.2	34.9
Finance & Business Services	27.8	26.7	27.2	30.4	32.8	33.9	36.5	40.4	42.2
Other Services	4.1	5.1	6.0	6.2	6.6	6.9	7.3	7.4	7.4
Economy Total	7.8	9.7	11.3	12.0	12.4	13.1	14.1	14.1	14.5

Source: Economic & Social Statistics, 1960-82, Department of Statistics. Economic Survey of Singapore, 1985, 1986, Ministry of Trade and Industry.

TABLE 8

PRODUCTIVITY GROWTH, 1980-86

	Productivity Growth at 1968 Factor Cost (%)
Manufacturing	5.9
Trade	2.8
Transport & Communications	9.8
Finance & Business Services	7.4
Other Services	3.6
Economy Total	4.9

Source: Economic Survey of Singapore 1986, Ministry of Trade and Industry, Singapore.

TABLE 9

FOREIGNERS' SHARE IN SERVICES VS MANUFACTURING
(in percentage)

Year	Share of Majority-owned Foreign Firms in Manufacturing Value Added (1)	Manufacturing Share of GDP (2)	Foreign Manufacturers' Contribution to GDP (3)=(1)x(2)	Share of Resident Foreigners and Foreign Cos. in GDP (4)	Share of Foreign Services Firms in GDP (5)=(4)-(3)
1975	62.7	24.1	15.1	22.9	7.8
1976	64.1	24.8	15.9	22.6	6.7
1977	65.2	25.2	16.4	21.5	5.1
1978	63.5	26.0	16.5	26.0	9.5
1979	67.3	28.2	19.0	30.4	11.4
1980	67.4	28.5	19.2	30.6	11.4
1981	67.7	29.1	19.7	28.7	9.0
1982	66.6	25.6	17.0	27.4	10.4
1983	63.2	24.5	15.5	25.7	10.2
1984	63.0	24.7	15.6	25.7	10.1
1985	64.8	24.0	15.6	25.9	10.3
Decade (75-85) Average			16.9		9.3

Source: Singapore Yearbook of Statistics 1985/86, Department of Statistics, Singapore.
Singapore Census of Industrial Production, various, years, Department of Statistics, Singapore.

TABLE 10

FOREIGNERS' SHARE OF CAPITAL/FUNDS OF LIMITED COMPANIES
IN THE COMMERCE SECTOR, 1975, 1983
(in percentage)

	Foreigners' Share of Total Capital/Funds of Limited Companies as at end of	
	1975	1983
Wholesale, Retail Trade Restaurants & Hotels	22.4	38.6
Wholesale	27.6	40.2
Retail Trade	13.8	34.2
Restaurants & Hotels	8.2	35.0

Source: Census of Wholesale, Retail Trade, Restaurants and Hotels, 1975, Department of Statistics, Singapore.
Census of Wholesale, Retail Trade, Restaurants and Hotels, 1983, Department of Statistics, Singapore.

TABLE 11

FOREIGNERS' SHARE OF CAPITAL/FUNDS OF LIMITED COMPANIES IN SELECTED SERVICES, 1974
(in percentage)

	Foreigners' Share of Capital/ Funds of Limited Companies as at end of 1974
FINANCIAL SERVICES	14.9
of which	
Commercial banks (includ. ACUs)	12.0
Merchant banks	52.4 (6.6)*
Finance companies	20.7
Investment companies	6.3
Money-lenders	5.0
Stock, shares & bond brokers	2.0
REAL ESTATE & BUSINESS SERVICES	17.9
of which	
Real estate & housing development	9.3
Legal, accounting, auditing, book-keeping & data processing	12.3
Engineering, architectural & technical services	89.1 (9.6)*
Advertising & market research	51.0 (1.8)*
TRANSPORT SERVICES	10.1
INSURANCE SERVICES	5.8
RECREATIONAL & CULTURAL SERVICES	25.5
Motion picture series	22.7
Theatrical producers, entertainment, & radio broadcasting services	91.8 (9.6)*
PERSONAL & HOUSEHOLD SERVICES	10.6
SOCIAL, COMMUNITY & RELATED SERVICES	10.0

* Figures in parentheses represent the share of that particular service within the service group under which it belongs. For example, merchant banks account for 6.6% of capital/funds within the Financial Services group. Similarly, engineering, architectural & technical services account for 9.6% of capital within Real Estate and Business Services.

Source: Census of Services 1974 Vol. 1 and 2, Department of Statistics, Singapore.

REFERENCES

Hill, T.P., 'On Goods and Services', Review of Income and Wealth, Series 23, 1977, p. 318.

Krause, Lawrence B., Koh Ai Tee, and Lee (Tsao) Yuan, The Singapore Economy Reconsidered, Singapore: Institute of Southeast-Asian Studies, 1987.

Lee, Soo Ann, 'Expansion of the Service Sector', in Paul Wheatley and Kernail Sandhu (eds), Management of Success: The Singapore Case, Oxford University Press, forthcoming.

Singapore Government, 'Census of Services 1974 Vol. 1 and 2', Department of Statistics.

Singapore Government, 'Census of Wholesale, Retail Trade, Restaurants and Hotels, 1975', Department of Statistics.

Singapore Government, 'Census of Wholesale, Retail Trade, Restaurants and Hotels, 1983', Department of Statistics.

Singapore Government, 'Economic and Social Statistics Singapore 1960-82', Department of Statistics.

Singapore Government, 'Economic Survey of Singapore 1985', Ministry of Trade and Industry.

Singapore Government, 'Economic Survey of Singapore 1986', Ministry of Trade and Industry.

Singapore Government, 'Singapore Census of Industrial Production', various years, Department of Statistics.

Singapore Government, 'Singapore Input-Output Tables 1983', Department of Statistics, January 1987.

Singapore Government, 'Singapore Yearbook of Statistics, 1985-86', Department of Statistics.

Singapore Government, Singapore Economy: New Directions, Ministry of Trade and Industry, February 1986.

Singapore Government, Report of the Services Sector Subcommittee, Ministry of Trade and Industry, 1986.

Smith, A.D., The Measurement and Interpretation of Service Output Changes, London: National Economic Development Office, 1973, p. 2-10.

THE SERVICES SECTOR IN SINGAPORE: A MICRO APPROACH

Paul Johnson, Kau Ah Keng and Koh Ai Tee

INTRODUCTION

The role of the services sector in development is not well understood, either empirically or theoretically. Investigation into services facts, theories and problems is necessary to advance our knowledge of this area especially insofar as they have implications for policy. This paper aims to give an overview of the historical trends of some key services sector variables for the case of Singapore. Special attention will be given to the microeconomic aspects of services development.

This paper focuses on intra-sectoral data rather than on making comparisons with the goods sector. Of course, the division of development into separate 'microeconomic' and 'macroeconomic' issues is to some extent artificial, and inevitably there will be some overlap in discussion of the two areas. The main variables of interest are GDP, employment and number of establishments, together with questions of shifts in market share and government policy.

Any paper on services encounters definitional problems. In order to facilitate detailed intra-sectoral comparisons, services will be defined according to the industries included in Singapore's 'Census of Services'. This has the effect of excluding Commerce Trade, although many international organisations such as the ILO and OECD would include them in services. A discussion of economic trends which takes a broader view of the services sector including Commerce Trade, while emphasizing inter-sectoral comparisons, is found in Koh, Johnson and Kau's paper in this volume.

The next section gives an outline of the two main schemes for subdividing the services sector, followed by a description of the main historical trends in the key variables. Following, a brief profile of the major services industries will be discussed. The fourth section analyses shifts in market share between the industries whilst the final section explores problems and prospects for the services sector, both in terms of economic research and of development.

OVERVIEW OF THE SERVICES SECTOR

There are two main schemes of subdividing the services sector in Singapore. The 1984 'Census of Services', the eighth in a series of statistical inquiry conducted by the Department of Statistics, (comprising two narrow censuses in 1967 and 1972, two full censuses in 1974 and 1984, and full surveys in 1976, 1978, 1980 and 1982) uses a scheme which covers all establishments including statutory boards and non-profit organisations engaged in the following activities:

- Transport, Storage and Communications
- Financing and Insurance
- Real Estate and Business Services
- Social, Community and Personal Services
- Non-profit Organisations

The census specifically excludes Government ministries and departments, foreign missions, taxi operators and domestic services. Also, the retail Commerce/Trade industry is not included in the census or in the previous inquiries. The decision whether to include retail trade in this study of the services sector was partly dependent on the question of consistency in making inter-industry comparisons via the census figures. It was decided to omit this industry from the paper. Hence, the term 'services sector' will exclude the Commerce/Trade industry which is being included in the 'goods sector'.

The 1983 input-output tables use a scheme which is the basis for several other official sources, including the 'Economic Survey of Singapore'. This scheme divides the economy into various goods industries, plus:

- Transport and Communications
- Financial and Business Services
- Other Services

The sources following this scheme give figures for a much longer time period than the census/survey series, but as can be seen, at a less disaggregated level.

The relative importance of various service industries depends on the measures adopted. In terms of GDP, Financial and Business Services has grown to become the biggest service industry over the period 1960-86 (Table 1). A combination of census and survey data gives a more detailed breakdown of the services sector for 1974-84. As can be seen from Chart 1, both the Financial and Insurance industry and the Real Estate and Business Services industry have increased their shares of the sector, a trend which is consistent with the 1960-86 long-term increase in the

importance of Financial and Business Services. More extensive analysis of trends in market shares of value added and other major variables using the shift-share technique is described later on.

The ranking of the industries changes when employment is considered. Table 2 shows how employment shares have varied over the period 1957-1986. Chart 2 gives a more detailed picture of the 1974-84 period. From this chart, it can be seen that the share of the Transport, Storage and Communications and Non-profit industries have declined while that of the others have risen. Nevertheless Transport, Storage and Communications still dominates in terms of total employment, although the level of productivity in Financial and Insurance and Real Estate and Business Services was higher than in the other three industries according to the 1984 census.

The number of establishments provides a third criterion. Using available data for 1974 to 1984, Chart 3 shows shares of industries in the services sector in terms of establishments. Here the first two industries on the list have maintained their shares, while Real Estate and Business Services has increased theirs at the expense of the last two industries.

Foreign exchange earnings is worth considering (although census data is not available in this case), if only because the relative importance of the industries is quite different relative to GDP and employment measures. Table 3 shows that Transport and Communications generates the most net foreign exchange earnings, although it should be pointed out that the manufacturing sector generates more net foreign exchange than the entire service sector. In terms of earnings ratio, Financial and Business and Other Services are significantly higher than Transport and Communications.

Table 4 uses non-census data to rank the different sectors in terms of their shares of GDP, employment, foreign exchange earnings, and net foreign exchange earnings ratio. Whilst the ranking of the sectors according to employment and establishments using census data is shown in Table 5.

Both tables show swings in relative positions, with very different rankings for different categories and years. Census data shows very different rankings for Financing and Insurance and Real Estate and Business Services, although the gap between the two industries has closed substantially over the 1974-84 period. Nevertheless one can conclude that Real Estate and Business Services currently dominates in terms of value added and number of establishments, with Transport and Communications maintaining dominance in employment and net foreign exchange earnings.

In the section on 'Problems and Prospects for the Services Sector' below, the possibility of using data on legal organisation of industries within the sector for research purposes is discussed. Consequently, a brief outline of the pattern of legal organisation is in order. According to the 1984 census, the principal form of organisation for the Transport, Storage and Communications industry is the sole proprietorship, with public limited companies being the least common form. Majority of the sole proprietorships are in land transport.

Services allied to transport are dominated by private limited companies. Financing and Insurance Services consist mostly of private limited companies, with partnerships being the least common. Real Estate and Business Services are mostly private limited companies, with few public limited companies. Social, Community and Personal Services firms consist mainly of sole proprietorships[1], with few public limited companies. Non-profit Organisations are listed as having 'other' forms of legal organisation.

PROFILE OF THE SERVICES SECTOR

The 1974 and 1984 censuses contain information that permits analysis of the different industries for many variables of interest. This section discusses the breakdown of industries according to the type of legal organisation, employment size, years in operation, size of operating receipts, as well as some key per-establishment statistics.

Legal Organisation

Table 6 demonstrates that the dominant form of legal organisation varies significantly by industries. Sole proprietorships comprise 48.7 and 58.4 per cent of the Transport, Storage and Communications industry for 1984 and 1974 respectively. Only 0.8 per cent (both in 1984 and 1974) of this industry comprises public limited companies. At this point therefore, the data suggests that operations in the transport industry are typically small in size.

In terms of a shift over time, sole proprietorships and partnerships have lost some share in the Transport, Storage and Communications industry, while private limited companies have gained an extra 14.7 per cent. The reasons for the shift is not clear. It may be due to the tendency of taking advantage of greater economies of scale as the economy becomes more developed.

The Finance and Insurance industry is dominated by private limited companies with 57.0 and 34.1 per cent of total establishments in 1984 and 1974 respectively. There are a substantial number of public limited companies, the proportion of which has stayed fairly constant at around 25 per cent. Given the likely economies of scale in banking and insurance it is not surprising that this industry contains so many public companies.

The analysis for Real Estate and Business Services, and Social, Community and Personal Services, is complicated by the joint figures of these two subsectors in the 1974 figures. Using only the 1984 figures Real Estate and Business Services firms are dominated by private limited companies (51.6 per cent) while public companies form the smallest share with 4.1 per cent. However, sole proprietorships account for 68.9 per cent of Social, Community and Personal Services firms. The share of more complex organisational forms such as public companies represents only 0.1 per cent. Consequently, one would expect the typical firm in this industry to be relatively small.

Employment Size

One way to measure firm size is through the number of employees. Given the large share of sole proprietorships in Transport, Storage and Communications, it is not surprising to find from Table 7 that 42.9 per cent of the establishments in 1984 have no more than one employee. On the other hand, given the increasing share of private limited companies over time one would expect the share of mid-size firms in this industry to be increasing - but that does not seem to be the case. The share of firms with less than 5 employees increased, while that of larger establishments decreased. By 1984, the share of companies with more than 100 employees had fallen to just 0.9 per cent which is almost equal to the share of public companies as a form of legal organisation. It may be the case, therefore, that in this industry 100 employees is an approximate benchmark for determining when a firm is likely to be a public company.

The Finance and Insurance industry demonstrates a distinct pattern of change - every employment size category except the lowest (0 or 1 person) experienced a fall in the share of total establishments, to the point where a significant number of private and/or public companies must be included in the lowest category of size for 1984. Another aspect is the degree to which changes differ across categories. For example, the highest category (more than 100 persons) experienced a loss from 2.5 per cent to 1.5 per cent. The categories immediately below experienced less severe falls.

As was the case for Table 6, separate analysis of Real Estate and Business Services data is only possible for 1984. The share of total establishments is greatest for the lowest (0 or 1 person employed) category, and steadily decreases as firm size increases. For Social, Community and Personal Services the share peaks at the 2-4 persons category, and declines thereafter. Some differences between the two industries illustrate the weak correlation between establishment size and legal organisation.

Non-profit establishments show a distinct trend toward smaller size, with a substantial increase in the share of the lowest category from 64.1 to 75.9 per cent, at the expense of larger establishments.

Years in Operation

Only the 1984 census provides information on years in operation. See Table 8. Not surprisingly, all industries with the exception of Non-profit Organisations have fewer old establishments of 25 years or more than newer ones established less than 2 years ago. The Real Estate and Business Services industry has the greatest proportion of new establishments with 22.2 per cent while the Finance and Insurance industry has the greatest share for old establishments with 8.3 per cent. The Non-profit Organisations industry has a substantial proportion of old establishments of 24.4 per cent. Overall, the pattern of years in operation seems quite regular and similar between the first four industries.

Size of Operating Receipts

The distribution of this variable varies substantially between 1974 and 1984. For both the Transport, Storage and Communication industry and the Finance and Insurance industry, the share of establishments with the lowest level of receipts of less than $10,000 has declined. For Real Estate and Business Services, as well as Social, Community and Personal Services, the numbers for 1974 are combined - which makes it difficult to draw implications from 1974 data. Gross receipts from Non-profit Organisation establishments tend to be low, with a changing pattern over 1974-84. For example, the share of establishments with gross receipts of less than $10,000 fell from 56.3 per cent to 37.0 per cent, while the share of those in the $20,000 - $49,999 category rose from 10.4 per cent to 17.5 per cent, and those in the $50,000 - $99,999 category rose from 4.9 per cent to 10.0 per cent.

Per-establishment Statistics

Tables 10 and 11 summarise some per-establishment statistics for different industries. It can be seen that the fast growth in Finance and Insurance as well as the Real Estate and Business Services industries is concurrent with the fast growth in per-establishment values for these two industries in terms of operating receipts, operating surplus, value added and value-added per person. Per-establishment fixed assets however, seem to have grown relatively slowly for the Finance and Insurance Services industry.

A SHIFT-SHARE ANALYSIS OF SERVICES SECTOR PERFORMANCE

Shift-share analysis can be used to identify differentials in growth for some variables of interest between two time periods. It is a form of trend analysis. However, it measures changes that have taken place in market shares over time rather than through absolute values or percentages (Green & Allaway, 1985). This technique was originally developed for regional economics (Brown 1969; Reynolds 1980). It has also been applied to measure brand performance (Yandle 1979).

The technique is applied here to analyse changes that have taken place within the services sector in Singapore. Between 1974 and 1984 when censuses of the sector were taken. Three variables selected for analysis include employment, value added and number of establishments. Shift-share analyses are carried out to study growth differentials over the two years. Questions such as how the various industries within the services sector have contributed to the creation of employment can be answered.

Contribution to Employment

As revealed in Table 12, employment in the services sector rose from 169,683 in 1974 to 269,161 in 1984, an increase of almost 60 per cent. In terms of absolute growth, the Real Estate and Business Services industry contributed the bulk of the increase with 36,655 jobs, followed by the Transport, Storage and Communications industry which registered an increase of 20,362 jobs. In terms of percentage growth, the Real Estate

and Business Services industry still took the lead with an increase of 104 per cent between 1974 and 1984. However, the Finance and Insurance industry was second with a growth rate of 94 per cent, but the significance of the contribution of each industry could well vary depending on whether absolute values or percentages are used.

Shift-share analysis provides us with a clearer picture of the contribution made by the different industries. In terms of employment, the growth rate for the sector between 1974 and 1984 was 58.6 per cent. If each and every industry within the sector could achieve the same rate, the expected employment figure for each industry in 1984 should be listed in the third column of Table 12. Comparing the differences between the second and third columns, it is seen that some of the sectors were unable to achieve the average growth rate of the industry. The over-attainment (positive shift) and under-attainment (negative shift) figures are reported in the fourth column. If we consider all the positive shifts together, it is evident that the Real Estate and Business Services industry contributed most (62.7 per cent) to employment creation between 1974 and 1984. This was followed by the Finance and Insurance industry at 27 per cent and the Social, Community and Personal Services industry at 10 per cent. On the other hand, although the Transport, Storage and Communications industry contributed over 20,000 jobs in absolute terms, it lost out in terms of differential growth as measured by shift-share analysis.

Contribution to Value Added

The total value added contributed by the services sector amounted to $3,000 million in 1974 according to Table 13. This rose to over $14,500 million in 1984 which was about five times the value registered 10 years ago. In terms of absolute growth, the Real Estate and Business Services industry reported an improvement of $3,680 million, the largest figure among the five industries compared. This was followed quite closely by the figure of $3,440 million in the Finance and Insurance industry. The Transport, Storage and Communications industry was third with an increase of $3,154 million. The remaining two industries averaged about $600 million increase. When measured by growth in percentages, again the Real Estate and Business Services industry and the Finance and Insurance industry predominated, as shown in the eighth column of Table 13.

However, shift-share analysis reveals that although the Transport, Storage and Communications industry was significant in absolute growth and in percentage increase for the period under consideration, it registered a negative shift of 79 per cent. The two dominant industries, Real Estate and Business Services as well as Finance and Insurance, reported a positive shift of 52 per cent and 48 per cent respectively, thus being the star performers in terms of contribution to value added.

Contribution to Number of Establishments

As shown in Table 14, there were 14,605 enterprises in the services sector in 1974 and 30,562 in 1984, an increase of 109 per cent from 1974. When comparing the absolute increase for each of the five industries, Real Estate and Business Services recorded the largest increase of over 6,500 establishments between the two years under consideration. With the exception of the Non-profit Organisations industry, the other three

industries registered an increase of between two to three thousand establishments. When measured in terms of percentage growth, the Real Estate and Business Services industry fared the best with a 277 per cent increase, with the Finance and Insurance sector second with 152 per cent (eighth column of Table 14).

A shift-share analysis of the growth in the number of establishments confirmed that the Real Estate and Business Services industry recorded the most significant positive shift of almost 88 per cent while the Finance and Insurance industry registered a positive shift of 12 per cent. On the other hand, the Social, Community and Personal Services industry as well as the Non-profit Organisations industry suffered a negative shift of 48 and 46 per cent respectively (sixth column of Table 14). Although the Transport, Storage and Communications industry reported an absolute increase of 2,936 establishments, they suffered a negative shift of 6 per cent.

Comparison of Service Industries Performance

As revealed in Tables 12, 13, and 14, the various industries of the services sector have made improvements in terms of employment creation, contribution to value added and number of establishments started between the two years considered. However, applying shift-share analysis enables us to examine the growth in a different way. In Table 15, it is evident that the Real Estate and Business Services industry has out-performed all the other industries in the various variables investigated. Similarly, the Finance and Insurance industry has also shown good performance, especially in its contribution to value added. The remaining three industries have lagged behind in relative share although managing to show improvement when measured in absolute or percentage growth during the period.

PROBLEMS AND PROSPECTS FOR THE SERVICES SECTOR

According to the 1986 'Economic Survey', the Singapore's GDP was estimated to comprise 53 per cent services even if Commerce is excluded. Financial and Business Services constituted the main component of services accounting for 22.2 per cent, followed by Transport and Communications with 21.0 per cent and Other Services industries with 10.1 per cent. It is therefore imperative that the service industries be accorded due recognition in its contribution to the economic development of Singapore.

Research

In Singapore, as elsewhere, research into issues concerning the services sector issues is at a relatively basic level compared with the work done on goods industries. This reflects not only the difficulties of collecting statistics on services transactions, but also the analytical difficulties experienced by theoreticians in this area. Indeed, it is probably fair to say that economists do not as yet have a satisfactory theory of international trade in services. However, services issues may have begun to receive higher priority in research

programmes worldwide, due to the latest round of GATT negotiations which push governments into taking greater interest in services research.

A country with a small academic community (such as Singapore) can maximise the return from its research efforts by focusing on a few key areas - Business and Finance plus Transport and Communications being obvious candidates. In order to avoid duplication of effort it would be advisable for Singaporean researchers to monitor developments of overseas research closely. This is especially so in the theoretical area, where new results are less likely to be country-specific.

Applied microeconomic research into Singapore's major services export markets would benefit the firms attempting to exploit niches within these markets. To the extent that such benefits are 'internal' to the firm, the private sector should bear the burden of financing much of this work. To what extent this research yields benefits that, while external to individual firms, are internal either to Singapore or Asean vis a vis the rest of the world, is unclear. Ideally, it is this work which the government should promote to the greatest extent.

The statistical basis for such research already exists, since Singapore is fortunate to have a relatively good set of services data, especially insofar as it has the 'Census of Services' and the regular 'Survey of Services'. This data gives Singapore valuable information on key variables in the sector. The value of this material is enhanced by the fact that few countries conduct such comprehensive data on services. Apart from specific industry studies, this material could be used to study services issues on a theoretical level which could proceed on the basis of data on factor proportions, input-output linkages, and other variables fundamental to growth and trade theory. An alternative approach, however, would be to use accounting/legal data, by taking the view that the services sector is distinguished from the goods sector by the nature of the contracts between the agents involved. The nature of this contract was described by Hill (1977) as involving a change in the condition of a person or good as a result of the actions of the service-provider where no transfer of ownership of the object being changed takes place. This point is discussed at length by Findlay (1986).

The form of legal organisation adopted in the services sector may have a significance beyond mere statistics, if the idea of trade in services as a particular contractual arrangement is valid. Findlay (1987) has suggested that the 'externalization' of services, i.e. the contracting out of service activities by firms, as opposed to performing the activities in-house where they may not appear in the services statistics, involves shifting to a particular way of organizing production. Whether the firm will choose to externalize these activities will depend on the costs of monitoring performance, degrees of risk aversion and other factors familiar from the literature on the principal-agent problem. Such factors might be expected to influence the choice of legal organization by a firm. Thus, on closer inspection, it may be the case that a theory explaining services externalization could give predictions regarding the pattern of legal organization in the sector. Consequently, such a theory of externalization might be indirectly tested. Of course other factors, such as economies of scale, will also affect the choice given that the scale of operations has implications for organisational form.

Another aspect of the theory of services is the importance of externalities. Theories of growth have yet to explain satisfactorily the expansion of the services sector and the precise nature of its contribution to development. However, Romer (1987) briefly describes how new growth theories are attempting to include the role of input specialization and externalities due to accumulated knowledge. Given aspects of services trade such as the importance of the role of information in the production process, these new theories may yield valuable insights into issues of services growth. For example, analysis of the role of government in promoting services industry should ideally study the external economies arising under alternative schemes of licensing technology.

Development

The continued development of the service sector in Singapore is not an easy task. There are several problems which need to be overcome. First, the small domestic market for services inevitably determines that future development must be geared towards external markets, be they in the Asean region or beyond. The exporting of services is no less competitive than the case of goods. Singapore must compete for services revenue by offering quality performance at competitive prices. To do that, a pool of expertise must be developed as well as a conducive environment for service industries to grow.

Secondly, the imposition of trade and other restrictions aimed a thwarting the free-flow of services among nations is being practised by an increasing number of countries. For instance, the expansion of air-transport services cannot be secured without long and arduous negotiations over many months or years. Similarly, the development of tourism is hindered by restrictions on the free-flow of tourists. For example, the exit tax placed on the nationals of a country who wish to visit another country is an additional burden. Although this may have been done with the intention of restricting the out-flow of foreign exchange, it has a damaging effect on tourism development. It is expected that such restrictions will continue to be imposed in the short-term future.

Another problem which is relevant to the Singapore situation is the shortage of labour, both skilled and unskilled, which must be readily available to man service operations. In Singapore, the construction industry and the maid service sector have depended on the in-flow of foreign workers to a great extent. Recently, the retail industry has also requested a relaxation in conditions on the employment of foreign workers. As the services sector is greatly dependent on the supply of labour, this shortage will limit its potential growth. As a result, Singapore may need to concentrate on a sub-group of services industries which are less labour intensive.

Closely related to the shortage of labour is the necessity of developing an adequate supply of professionals, be they in finance, tourism, medical services or research and development. This shortage may be solved by the importation of experienced people from overseas. However, the healthy long-term development of the industry must ultimately depend on the nurturing of local expertise.

The Report of the Economic Committee 1986 has made a number of recommendations for the strategic development of the service industry in Singapore. The report identified four main categories, viz:

(a) Transport and Communications, including warehousing and distribution.

(b) Business Services, including professional services, e.g. computer services, architectural and engineering services and some technical services like agrotechnology.

(c) Personal and Social Services, including medical, educational, cultural and entertainment services; and

(d) Banking and Financial Services.

In the case of transport services, Singapore is bestowed with a favourable geographic position in South East Asia. Also, she has developed one of the best airports in the world. In 1986, 44 international airlines operated over 550 scheduled services a week into and out of the airport, linking Singapore to 88 cities in 51 countries. This airport received a total of 2.7 million visitors in 1986. Singapore's seaport is reputed to be one of the world's busiest in terms of shipping tonnage. About 30,000 vessels call at the port annually with approximately 600 shipping lines providing links to some 300 ports worldwide.

The efficient air and sea port facilities, coupled with modern telecommunciation services, have provided the necessary infra-structure to make Singapore a hub not only for the Asia-Pacific region, but also for the world. Singapore also has the potential to become a warehousing and distribution centre for the region. It is therefore not surprising that the Economic Report has suggested that efforts be increased in this direction.

The share of the Financial and Business industry in GDP grew from 16.6 per cent in 1980 to 22.2 per cent in 1986, and will continue to be an important pillar of the Singapore economy. However, as the external environment affecting this industry is rapidly changing, it is crucial that the sector be responsive and adapt to such changes rapidly. The emergence of similar centres in the region, such as Hong Kong and Sydney, is going to pose great challenges for Singapore. One must also not neglect the fact that the more established centre in Asia - Tokyo is also liberalising its rules and regulations to enable previously excluded firms to enter the Japanese market. Singapore must be prepared to face up to such competition if it is to stay in the arena.

The Economic Report has identified several areas of growth for this industry. It believes that Singapore should develop into a risk management centre, with active trading in foreign exchange, money market operations, capital market instruments[11] trading in equity and futures. In addition, Singapore can also become a fund management centre like Switzerland and Hong Kong. Other areas which need to be developed

include capital markets, financial and commodity futures, reinsurance and so on.

Professional services which have export potential must also be further nurtured. Such services may include legal services, medical services, accounting, advertising, management consultancy, hotel management, construction engineering (management, consulting and design), scientific testing services and so on. With the excellent infrastructure Singapore possesses in telecommunication and transport, all these services have great potential for export.

On the other hand, publishing services can also be actively promoted. Singapore presently serves as a publishing and printing centre for many newspapers and magazines. She should continue to attract greater participation from even a broader group of publishers and printers. Similarly, Singapore can also serve as a regional centre for education. Pedagogical programmes in the areas of language, computer, management and so on can be offered to attract students from other parts of the world. With her geographical location, and English being widely spoken, the potential in this respect cannot be overlooked.

Singapore can also play an important role in the promotion of research and development, particularly in the areas of agrotechnology and information technology. Singapore firms can offer such research and development services to companies located overseas at competitive prices. Similarly, multinational corporations can locate their research centres in Singapore to serve their global needs.

The Economic Report has stressed that 'services provide the greatest scope for further growth'. It is expected that services will expand much faster than other sectors of the economy in the next decade. It is therefore essential for Singapore to remove any impediments to growth and to produce a systematic plan for the aggressive marketing of services overseas. Moreover, foreign companies should also be encouraged to set up operations in Singapore to sell their services. In areas where Singapore is still inexperienced, this strategy of attracting foreign participation in service production will help to achieve her aim of becoming an important regional or even global service provider in the years to come.

The development plan for the service industry as mapped out by the Economic Report entails a twin approach, employing both a push as well as a pull strategy. The push strategy is to actively promote services, the way the government has done for the promotion of the manufacturing industry. In this respect, both local companies and mutlinational enterprises should be nurtured. However, special attention should be directed at assisting local firms to improve their service providing capability and efficiency such that foreign companies may be induced to develop joint-ventures with them. On the other hand, the Economic Development Board must work towards attracting leading international service companies to set up operations in Singapore. Through this means, it is hoped that transfer of service technology can be effected to the benefit of Singapore in the long run. The Trade Development Board is also required to make marketing thrusts overseas for Singapore as a 'total Singapore capability'.

Fiscal incentives could be provided to [3]'pull in' or encourage more service firms, both local and foreign, to establish operations. Some of these incentives may include first, reduced rates of tax for income from export of services; secondly, liberal application of 'pioneer status' for service firms; thirdly, tax exemption on royalty income.

Another strategy which can help to develop and modernize the Singapore services sector is to attract a free-flow of professional talent and expertise into Singapore. Such professionals must be readily available to facilitate the setting up of services operations, be they in medicine, accounting, advertising, banking or other fields.

In conclusion, the promotion of the services sector must be given top priority in the future to ensure continued growth of Singapore. The strategy formulated for the services selected should be predicated on a detailed competitor analysis so that Singapore can develop an unique niche in the marketplace. Although there are problems to be overcome in such strategy, an explicit cognizance of such problems will at least facilitate the search for a workable solution.

It must, however, be stressed that the emphasis given to the development of the services sector should not preclude the significant contribution made by the manufacturing industry. In fact, it is imperative that both the manufacturing and services sector should form the twin engines to drive the economic development of Singapore in the years ahead. Productivity in both these sectors must continue to rise in order to steer the economy out of possible decline.

TABLE 1

SHARES OF GROSS DOMESTIC PRODUCT[a]

	Share of GDP (Percentages)			
	1960	1970	1980	1986[p]
Transport and Comm.	13.8	11.4	17.9	21.0
Financial and Business	11.5	13.7	16.6	22.2
Other Services	18.2	13.9	10.2	10.1

a Include bank service charges
p Projected

Source: Economic Survey of Singapore 1986, Ministry of Trade and Industry.

TABLE 2

EMPLOYMENT SHARES

	Share of Total Employment (Percentages)			
	1957	1970	1980	1986
Transport and Comm.	10.7	12.1	11.1	9.9
Financial and Business	4.6	4.0	7.4	8.7
Other Services	30.7	26.8	20.9	22.6

Source: Economic and Social Statistics 1960-82, Department of Statistics. Economic Survey of Singapore 1986, Minsitry of Trade and Industry.

TABLE 3

FOREIGN EXCHANGE EARNINGS

	Share of Net Foreign Exchange Earnings (Percentages)	Earnings[a] Ratio
Transport and Comm.	20.4	0.5225
Financial and Business Services	4.8	0.7741
Other Services	0.6	0.7809

a Net foreign exchange earnings divided by exports

Source: Singapore Input-Output tables 1983, Department of Statistics.

TABLE 4

RANKING OF INDUSTRIES WITHIN THE SERVICE SECTOR USING NON-CENSUS DATA

Ranking According to:	GDP		Employment		Net Foreign Exchange Earnings	Net Foreign Exchange Earnings Ratio
	1960	1986p	1957	1986	1983	1983
Transport and Communication	2	2	2	2	1	1
Financial and Business	3	1	3	3	2	2
Other Services	1	3	1	1	3	1

p Projected

Sources: Economic and Social Statistics 1980-82, Department of Statistics.
Economic Surveys 1985, 1986, Ministry of Trade and Industry.
Singapore Input-Output Table 1983, Department of Statistics.

TABLE 5

RANKING OF INDUSTRIES WITHIN THE SERVICE SECTOR USING CENSUS DATA

	Value Added		Employment		Establishments	
	1974	1984	1974	1984	1974	1984
Transport, Storage Communications	1	2	1	1	3	3
Financing and Insurance	3	3	5	4	5	5
Real Estate and Business Services	2	1	2	2	4	1
Social, Community and Personal Services	4	4	3	3	1	2
Non-profit Organisations	5	5	4	5	2	4

Sources: Census of Services 1974 and 1984.

TABLE 6

LEGAL ORGANISATIONS BY INDUSTRY
(Percentage Distribution)

Type of Organisation	TSC		FIS		RE & BS		SCPS		NPO	
	1974	1984	1974	1984	1974	1984	1974[a]	1984	1974	1984
Sole Proprietorship	58.4	48.7	19.6	10.6	61.4	31.7	-	68.9	-	-
Partnership	21.0	16.6	18.4	5.8	21.2	12.4	-	22.8	-	-
Private Ltd Co.	18.6	33.3	34.1	57.0	14.6	51.6	-	7.4	-	-
Public Ltd Co.	0.8	0.8	25.5	24.9	1.1	4.1	-	0.1	-	-
Others	1.2	0.5	2.4	1.6	1.8	0.6	-	0.9	-	-
Total	2944	5880	1327	3341	7146	8966	-	7777	-	-

a For 1974, REB 7 SCPS were jointly reported as one group.

Sources: Report on the Census of Services 1974 and 1984, Department of Statistics.

TABLE 7

EMPLOYMENT SIZE BY INDUSTRY
(Percentage Distribution

Employment Size	TSC		FIS		RE & BS		SCPS		NPO	
	1974	1984	1974	1984	1974	1984	1974[a]	1984	1974	1984
0 or 1 person	39.7	42.9	27.3	51.9	20.7	47.5	-	31.1	64.1	75.9
2 - 4 persons	23.6	26.4	29.0	17.0	45.0	27.1	-	44.3	20.1	11.8
5 - 9 persons	16.4	14.8	16.0	10.4	20.4	12.5	-	17.6	5.2	4.9
10 - 14 persons	6.3	5.2	8.8	5.5	5.4	4.5	-	2.9	2.5	1.7
15 - 24 persons	5.3	4.9	7.6	5.7	4.0	3.8	-	1.8	2.6	1.5
25 - 49 persons	4.8	3.5	4.9	4.7	2.8	2.7	-	1.3	3.1	2.0
50 - 99 persons	2.4	1.6	3.9	3.3	1.1	1.2	-	0.5	1.7	1.6
100 persons & over	1.6	0.9	2.5	1.5	0.6	0.7	-	0.4	0.7	0.6
Total	2944	5880	1327	3341	7146	8966	-	7777	3188	4598

a For 1974, REB & SCPS were jointly reported as one group.

Sources: Report on the Census of Services 1974 and 1984, Department of Statistics.

TABLE 8

YEARS IN OPERATION BY INDUSTRY
(Percentage Distribution)

	TSC		FIS		RE & BS		SCPS		NPO	
	1974	1984	1974	1984	1974	1984	1974[a]	1984	1974	1984
Less than 1 yr	-	7.2	-	4.4	-	9.5	-	7.0	-	3.2
1 - < 2 yrs	-	10.8	-	6.0	-	12.7	-	8.4	-	4.0
2 - < 4 yrs	-	21.8	-	18.2	-	23.6	-	13.2	-	9.0
4 - < 6 yrs	-	16.2	-	13.3	-	16.2	-	14.4	-	11.5
6 - < 8 yrs	-	10.9	-	7.6	-	9.1	-	12.9	-	6.5
8 - <10 yrs	-	9.0	-	7.0	-	7.8	-	9.2	-	7.2
10 - <15 yrs	-	17.0	-	21.0	-	13.0	-	14.3	-	12.7
15 - <25 yrs	-	5.0	-	14.0	-	5.2	-	12.9	-	21.4
25 yrs & over	-	2.0	-	8.3	-	2.9	-	7.5	-	24.4
Total	-	5880	-	3341	-	8966	-	7777	-	4598

Source: Report on the Census of Services 1984, Department of Statistics.

TABLE 9

SIZE OF OPERATING RECEIPTS BY INDUSTRY
(Percentage Distribution)

Size of Operating Receipts (Singapore $)	TSC		FIS		RE & BS		SCPS		NPO[b]	
	1974	1984	1974	1984	1974	1984	1974[a]	1984	1974	1984
Less than $10000	24.9	2.9	24.6	12.2	21.7	12.2	-	9.9	56.3	37.0
$ 10000-$ 19999	20.2	17.9	11.4	6.9	20.3	8.8	-	15.3	16.0	14.9
$ 20000-$ 49999	12.8	20.3	12.3	12.2	22.8	17.2	-	23.6	10.4	17.5
$ 50000-$ 99999	9.9	13.3	7.8	9.5	13.0	14.6	-	19.2	4.9	10.0
$ 100000-$ 199999	19.8	12.6	14.8	9.5	16.0	14.3	-	15.3	8.6	7.1
$ 200000-$ 499999	c	13.4	c	10.0	c	15.0	-	10.8	c	6.0
$ 500000-$ 999999	4.6	6.7	7.7	6.9	2.7	7.2	-	3.1	2.4	2.4
$1000000-$1999999	7.8	5.4	21.5	6.2	3.5	4.6	-	1.6	1.4	2.7
$2000000-$4999999	d	4.2	d	9.3	d	3.5	-	0.9	d	1.8
$5000000 & over	d	3.3	d	17.3	d	2.6	-	0.3	d	0.7
Total	2944	5880	1327	3341	7146	8966	-	7777	3188	4598

a For 1974, REB and SCPS were jointly reported as one group.

b Gross Receipts rather than operating receipts.

c Combine $100000 - $199999 and $200000 - $499999.

d $1000000 & above

Sources: Report on the Census of Services 1974 and 1984, Department of Statistics.

TABLE 10

PER-ESTABLISHMENT STATISTICS FOR DIFFERENT INDUSTRIES

Industry	Operating Receipts		Operating Surplus		Value Added		Fixed Assets	
	1974	1984	1974	1984	1974	1984	1974	1984
	(Thousand Singapore Dollars)							
Transport, Storage & Communications	877	1918	136	57	397	735	651	2709
Financing & Insurance Services	3422	13411	645	1422	519	1236	416	879
Real Estate & Business Services	231	1516	43	51	132	492	279	1770
Social, Community & Personal Services	a	209	-	29	-	111	-	281
Non-profit Organisations	103	317	-	-	63	170	102	319

a For 1974, REB & SCPS were jointly reported as one group.

Sources: Report on the Census of Services 1974 & 1984, Department of Statistics.

TABLE 11

PER-ESTABLISHMENT STATISTICS FOR DIFFERENT INDUSTRIES

Industry	Value Added Per Person	
	1974 (Thousand S'pore Dollars)	1984
Transport, Storage & Communications	18	50
Financing & Insurance Services	36	110
Real Estate & Business Services	16[a]	61
Social, Community & Personal Services	-	20
Non-profit Organisations	9	26

a For 1974, REB & SCPS were jointly reported as one group.

Sources: Report on the Census of Services 1974 and 1984, Department of Statistics.

TABLE 12

A SHIFT-SHARE ANALYSIS OF EMPLOYMENT GROWTH 1974-84

Industry	1974	1984	Expected Growth	Net Shift	% Shift +	% Shift -	Absolute Growth	% Growth
Transport, Storage & Communications	66095	86457	104843	-18386		72.0	20362	31.0
Financing & Insurance	19338	37599	30675	6924	27.1		18261	94.0
Real Estate & Business Services	35232	71887	55887	16000	62.7		36655	10.4
Social, Community & Personal Services	25505	43071	40458	2613	10.2		17566	69.0
Non-profit Organisation	23513	30147	37298	-7151		28.0	6634	28.0
Total	169883	269161	269161					

Sources: Census of Services 1974 and 1984, Department of Statistics.

TABLE 13

A SHIFT-SHARE ANALYSIS OF GROWTH OF VALUE-ADDED 2974-84

	1974	1984	Expected Growth	Net Shift	% Shift +	% Shift -	Absolute Growth	% Growth
Transport, Storage & Communications	1169	4323	5651	-1328		78.7	3154	270
Financing & Insurance	688	4128	3326	802	47.5		3440	500
Real Estate & Business Services	729	4409	3524	885	52.5		3680	504
Social, Community & Personal Services	212	859	1025	-166		9.8	647	305
Non-profit Organisation	202	782	976	-194		11.5	580	287
Total	3000	14502	14502					

Sources: Census of Services 1974 and 1984, Department of Statistics.

TABLE 14

A SHIFT-SHARE ANALYSIS OF GROWTH OF ESTABLISHMENTS 1974-84

	1974	1984	Expected Growth	Net Shift	% Shift +	% Shift -	Absolute Growth	% Growth
Transport, Storage & Communications	2944	5880	6161	-281		6.2	2936	100
Financing & Insurance	1327	3341	2777	564	12.4		2014	152
Real Estate & Business Services	2381	8966	4982	3984	87.6		6585	277
Social, Community & Personal Services	4765	7777	9971	-2194		48.2	3012	63
Non-profit Organisation	3188	4598	6671	-2073		45.6	1410	44
Total	14605	30562	-	0			15957	109

Sources: Census of Services 1974 and 1984, Department of Statistics.

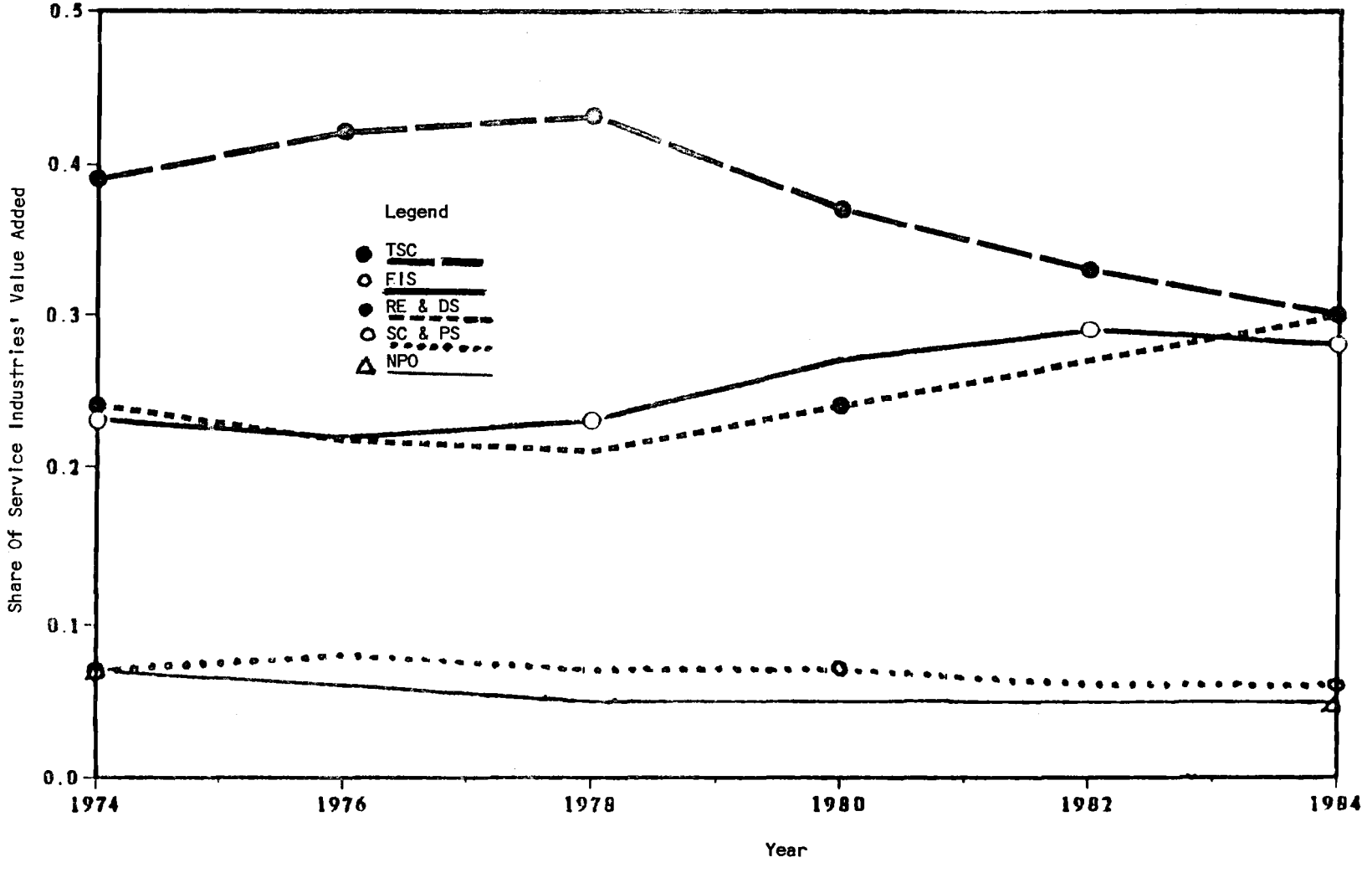
TABLE 15

SUMMARY OF SHIFTS IN SHARE OF EMPLOYMENT, VALUE ADDED, ESTABLISHMENTS 1974-84

Industry	Employment		Value Added		Establishment	
	+% Shift	-% Shift	+% Shift	-% Shift	+% Shift	-% Shift
Transport, Storage & Communications		72.0		79.0		6.0
Financing & Insurance	27.0		48.0		12.0	
Real Estate & Business Services	63.0		52.0		88.0	
Social, Community & Personal Services	10.0			10.0		48.0
Non-profit Organisation		28.0		11.0		46.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

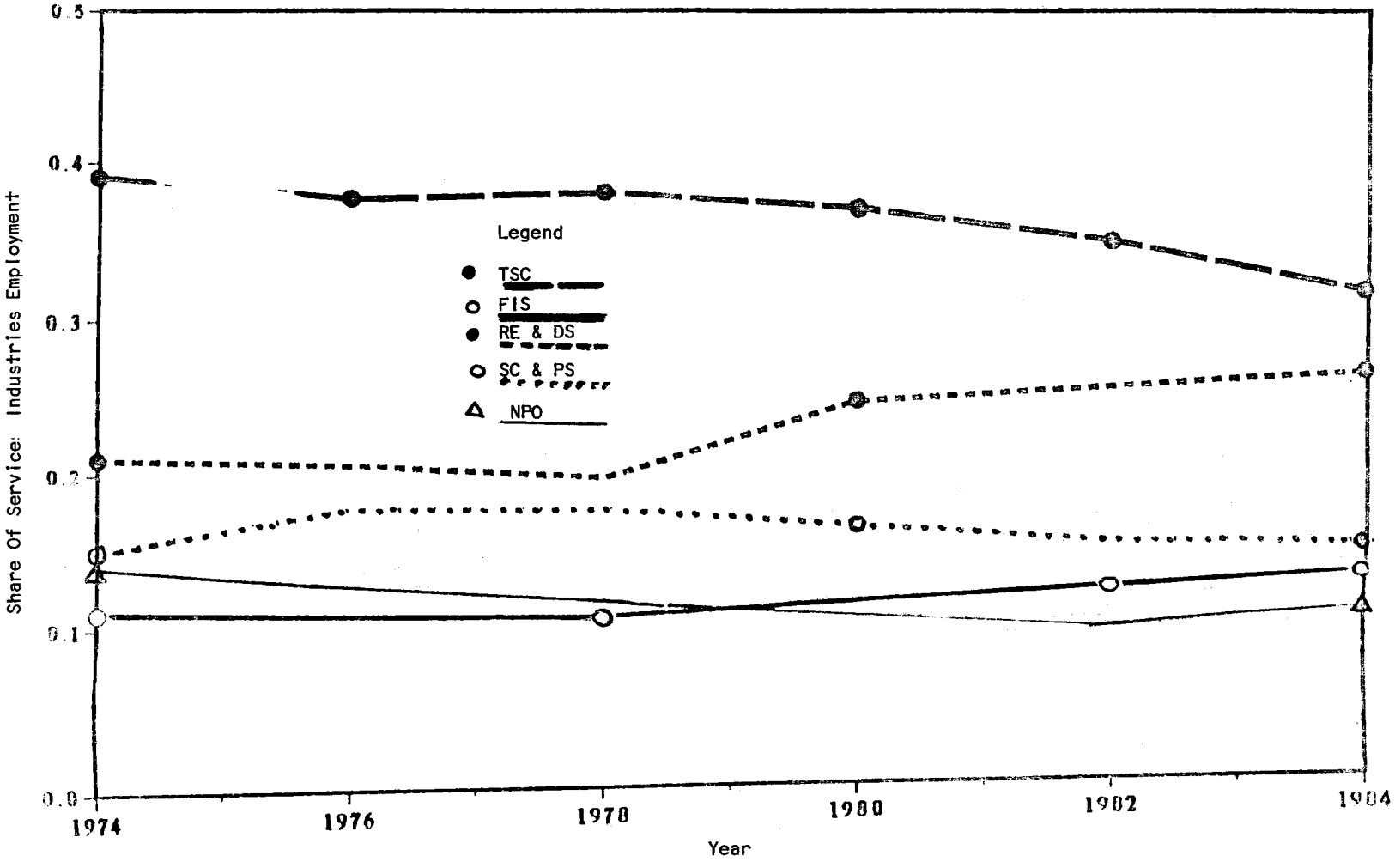
Sources: Census of Services 1974 and 1984, Department of Statistics.

Chart 1 : Share Of Service Industries In Terms Of Value Added



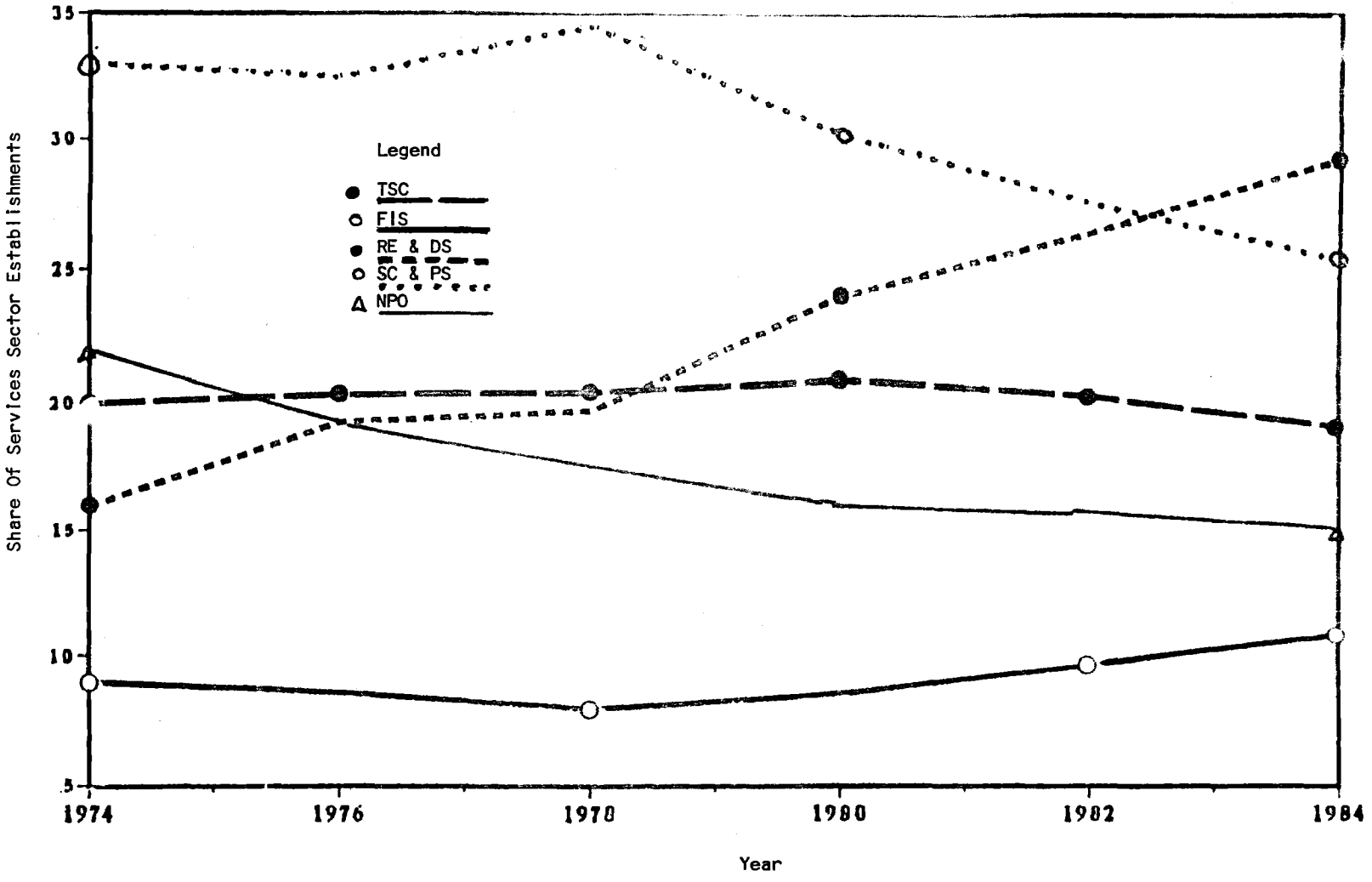
Sources: Census of services 1974 and 1984
Survey of services 1976, 1980 and 1982

Chart 2 : Share Of Service Industries In Terms Of Employment



Source: Census of services 1974 and 1984
Survey of services 1976, 1978, 1980 and 1982

Chart 3 : Share Of Service Industries In Terms of Establishments



Sources: Census of services 1974 and 1984
Survey of services 1976, 1978, 1980 and 1982

REFERENCES

Brown, J., 'Shift and Share Projections of Regional Economic Growth', Journal of Regional Science, 9 (April), p. 1-18.

Development Bank of Singapore as a Countertrade Centre: The Role of Banks, Occasional Paper No. 6, October 1986.

Findlay, C., 'A Framework for Services Trade Policy Questions', Pacific Economic Paper 126, September 1986.

Findlay, C., 'The Activity Composition of Services Exports', Australia-Japan Research Centre, April 1987.

Green, R. and Allaway, A., 'Identification of Export Opportunities: A Shift-share Approach', Journal of Marketing, Volume 49 (Winter 1985), p. 83-88.

Hill, T.P., 'On Goods and Services', Review of Income and Wealth, Series 23, 1977, p. 318.

Koh, Johnson and Kau, 'The Service Sector in Singapore: A Macro Appraoch', 1987.

Reynolds, C., 'A Shift-share Analysis of Regional and Sectoral Productivity Growth in Contemporary Mexico', International Institute for Applied Systems Research Report, RR-80-41, 1980.

Romer, P., 'Growth Based on Increasing Returns Due to Specialization', American Economic Review, Volume 77 No. 22, May 1987.

Singapore Government, 'Economic and Social Statistics Singapore 1960-1982', Department of Statistics.

Singapore Government, 'Economic Survey of Singapore 1985', Ministry of Trade and Industry.

Singapore Government, 'Economic Survey of Singapore 1986', Ministry of Trade and Industry.

Singapore Government, 'Report on the Census of Services 1974, Volume 1 Real Estate, Business, Social and Personal Services', Department of Statistics, July 1977.

Singapore Government, 'Report on the Census of Services 1974, Volume II Transport, Storage, Communication, Financing and Insurance Services and Non-Profit Organisations', Department of Statistics, July 1977.

Singapore Government, 'Report on the Census of Services 1984', Department of Statistics, January 1987.

Singapore Government, 'Report on the Survey of Services 1976', Department of Statistics, April 1979.

Singapore Government, 'Report on the Survey of Services 1982', Department of Statistics, September 1984.

Singapore Government, 'Singapore Input-Output Tables 1983', Department of Statistics, January 1987.

Yandle, B., 'Identifying Brand Performance by Shift-share Analysis', Journal of the Academy of Marketing Science, 6 (Winter 1979), p. 126-137.

THE SERVICES SECTOR IN THE PHILIPPINES

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INTRODUCTION

The services sector, in terms of share of total national product, is the single most important sector in the Philippines, more so than agriculture and industry. Here, we consider the services sector to comprise transportation, storage and communication, trade, finance, housing, government and private services, categories as used in the Philippine national accounts. In terms of current prices, this sector accounted for 46 per cent of total GNP in 1967, the share lowering to 37 per cent in 1974 and rising to slightly more than 40 per cent in the eighties. In terms of constant prices, the service sector accounted for 42 per cent in 1967 and close to 40 per cent in 1986 (see Tables 1b and 2b).

In terms of employment, the services sector accounted for around 25 per cent of employed persons in 1956, going up to more than 30 per cent in the seventies and eighties (see Tables 3a and 3b). It is second to agriculture in providing jobs to the labour force and has been slowly absorbing the labour force released from both the agricultural and industrial sectors.

Even with this it is believed that the size of the services sector is underestimated for two reasons: first, the informal services sector is quite large and is not captured in our figures, and secondly, informal surveys done on establishments classified under the manufacturing sector show that many of the firms actually provide business services such as trading of machineries and repair and maintenance. But these firms are listed under the manufacturing and not the services sector.

Therefore, it is undeniable that the services sector is a crucial component of the economy. But it is one of the most neglected areas of research. Much of the data presented in this paper are culled from direct sources and not based on analytical studies specifically on the services sector.

COMPONENTS OF THE SERVICES SECTOR

First of all, we note a disparity in the share of the services sector in terms of current prices and in constant prices. The higher percentages when current prices are used point to the trend where the price index for the services sector is growing slightly faster than the overall GNP price deflator. This is evident in Table 4b which shows the

ratio of the implicit price index of the service sector to GNP price deflator as over 100 per cent (using 1972 as base year) except for 1973 to 1976.

More importantly, the heterogeneity of the services sector can be gleaned from the tables presented. The trade sector, starting in the late seventies, has price indices much higher than the overall GNP price deflator (see Table 4b). Thus in current prices, the trade sector share of GNP has been growing from 15 per cent in 1967 to 21 per cent in 1986 while the constant prices, it is moving up more slowly (see Tables 1b and 2b). The reason why prices for the trading sector is going up much faster than those for the other sectors is an important research topic that can be explored.

The share of housing services (real estate and ownership of dwellings) has been falling rapidly through the years, while that of transport and storage has been increasing slightly. Transport and storage, like trade, is one sector whose price indices seem to be growing much faster than the GNP price deflator since late seventies. This is particularly true for land and air transport as well as storage services. Communication is one sector whose share has been growing slowly although its price has not been increasing as much as the overall GNP price deflator.

More interestingly, government and private services have had their price increasing much more slowly than the GNP price deflator (with the clear exception of medical and health services). Thus in terms of current prices, the shares of government and private services are falling, while in constant prices, they are quite stable.

All in all, the movement of relative prices in the services sector is an interesting study that must be made. The interplay of demand and supply including technological and organizational changes in the various services sub-sectors would be reflected in the movement of these relative prices.

The non-price explanations for the changes in the shares of the various components of the services sector are equally important, and we will discuss these more at length at a later stage.

A CLOSER VIEW OF EMPLOYMENT IN THE SERVICES SECTOR

Going back to Table 3b, it must be pointed out that in terms of employment in the services sector, the components that absorb much of the labour are wholesale and retail trade (the commerce category used in 1956, 1965, 1971, and 1975 includes wholesale and retail trade and finance and housing, but the bulk of the employment is in trade) and community, social and personal services. It must be pointed out that it is also in these sectors where female workers are heavily employed. Thus, the services sector provides the most important source of employment for female workers whilst agriculture is the main source of employment for male workers. Around 50 per cent of female workers in the Philippines are found in the services sector. From another viewpoint, female workers accounted for around one-third of employed persons in the

surveys, but in the services sector, more than 50 per cent of the workers surveyed were females. The female participation rate in the services sector vis-a-vis the other sectors is an important area of research. Differential wages and productivity in these areas would contribute to further insights in the status of the female labour force.

THE SERVICES SECTOR AND THE STRUCTURE OF THE ECONOMY

The services sector cannot be studied in a vacuum and therefore should be studied as part of the entire economy. The interaction among its components as well as with agriculture and industry is an important task for us. Fortunately, the Philippines has an adequate set of input-output data for 1974, 1979 and 1983. We will use these tables in the subsequent analyses.

Table 5 gives us the 1983 input-output coefficients for 25 sectors. Sectors 20 to 24 comprise the sectors of transportation, storage and communications, wholesale and retail, finance, insurance and housing, government services and private services, respectively. Some conclusions are deduced.

1. As expected, all the above, except government services (which is assumed to enter directly to final output demand of government), are used in all the other sectors of the economy. The coefficients with other sectors are higher for transportation, storage, and communication (sector 20) and wholesale and retail trade (sector 21).

2. Looking at columns 20 to 24, one also sees that the technical coefficients of labour from the service sectors are higher than the industrial sectors (sectors 7 to 19) but lower than the agricultural and agro-based sectors (sector 1 to 7).

3. We should note that among the service sectors, transportation, communication and storage as well as private services are more dependent on intermediate inputs (the later comprising more than 40 per cent of gross output) though not as much as the industrial sectors (sectors 7 to 19). Wholesale and retail trade as well as finance and housing are not very dependent on intermediate inputs. (Government services are assumed to depend wholly on labour services).

4. Trade and finance and housing (together with forestry and logging) exhibit the highest share of operating surplus in the entire economy.

5. Also, it is interesting to indicate that in the interlinkages among sectors, the service sectors (sectors 20 to 24) are more interlinked with one another (i.e. the input-output coefficients for sectors 20 to 24 are, in the main, higher within these sectors). An obvious exception is the transportation sector which has a high dependence on petroleum products.

To summarize, we see that the services sector has a higher labour share than industry but less than that of agriculture, which is consistent with the analysis of the national accounts and employment

statistics. Transportation, communications and storage as well as private services are relatively more dependent on inputs from other sectors than trade and finance (and housing). The latter two, however, exhibit the highest rate of operating surplus among all sectors. The service sectors are relatively more dependent (with respect to inputs) among themselves than on other sectors (with the striking exception of the transportation sector).

Finally, in the study of interlinkages, we may want to study the potential for forward and backward linkages of the various service sectors. Forward linkage indicates the importance of the sector as a supplier of input services to other sectors and its potential of multiplying its indirect effects 'forward' to more sectors. Backward linkage measures the importance of the sector as a purchaser of inputs and services from the other sectors and its potential of multiplying its indirect effects 'backward' to more sectors. The input-output framework allows us to give measures for these.[2] The measures are given in Tables 6a, 6b, 6c for the years 1974, 1979 and 1983, respectively. We can see clearly that the measure of forward linkage for trade is the highest in the whole economy and is even growing (from 2.6 in 1974 to 3.2 in 1983). Transportation, communication and storage (among the service sectors) is next and is becoming increasingly important in terms of forward linkage. It grew from a measure of 1 in 1974 to 1.2 in 1979 to 1.6 in 1983. Conversely, the finance/insurance/real estate sector has a measure that is decreasing through the years (from 1.4 in 1974 to 1.25 in 1979 to 1 in 1983). Private services also maintains a slightly above average measure for forward linkage. Government services, as expected, has a low measure of forward linkage since it rarely inputs to other sectors.

In terms of backward linkages, all the service sectors rank below average. This means that services do not depend, relative to the other industries, on inputs from other sectors. This is one characteristic that distinguishes the services sector from the industrial sector.

LABOUR PRODUCTIVITY AND INCOME ELASTICITY FOR THE SERVICES SECTORS

Labour productivity and income elasticities are two of the most important sets of variables which we need to study in order to explain the relative shares of the service sector in both output and employment. The theory proposed by Fuchs and Baumol (see Inman, 1985) is that the services sector's growth in the share of employment may be the result of declining labour productivity so that output share may be stable, or slightly increasing or even declining, but labour productivity is falling fast so that employment in the service sector increases relative to output growth. On the other hand, income elasticity for services can explain its decreasing or increasing share in the total output as the income per capita increases (or, during crisis periods decreases) through time. We will discuss this more at length after we present the pertinent data below.

Table 7 gives us indicators of labour productivity. They were derived by dividing the value added in each sector (at constant 1972 prices, obtained from Table 2a) by the number of employed persons in the sector (obtained from Table 3a). The results are as expected. The

industrial sector has the highest labour productivity measure, followed by the services sector. The sector with the smallest productivity is agriculture, fishery and forestry. Among the components of each sector, however, there are some variations. Financing, insurance, real estate and business services display very high productivity measures, comparable with those in the industrial sector. Community, social and personal services display the lowest productivity measures in the service sector, only slightly higher than that of agriculture. One can also see that the crisis period 1983-86 (especially 1985 and 1986) saw productivity measures dropping in the industrial and services sectors. Hardest hit are the finance, insurance, real estate, and business services, mining and quarrying and construction.

For measures of income elasticities, although direct estimates were not obtainable, a study by Lim and Bautista (1987) gives the expenditure share of the various consumption sectors to various income classes. (This is not quite the same as income elasticity but this is the closest we can get to). On the basis of the 1978 survey of the National Census and Statistics Office (NCSO), Table 8a shows that income class 1 is the lowest income class whereas income class 17 is the highest. As can be gleaned from the table, housing forms a bigger share of expenditures especially as we go from income class 9 up. Personal care services do not seem to have any big changes in the percentage share of expenditures as one goes up to higher income groups. The shares of medical care, transport, recreation, education, personal effects, and miscellaneous goods and services all increase as we go up the ladder of income classes.

If we transform these consumption sectors to the input-output sectors for 1979 (via what is called the consumption transformation matrix, shown in Table 8b) we see that banking, transportation/storage and communication and services (both government and private) all have an increasing share of expenditures as we go up the ladder of income classes. Trading has more or less a constant share through all the income groups.

With these data, one would expect that the services sector should be growing as income per capita increases, as the latter has been growing in the Philippines until 1981. However, this has not been borne out by our data, particularly the share in constant prices (Table 2b). The explanation for this will have to be analyzed, with the distribution of income through the years bearing a most important role.

SERVICES AND THE INTERNATIONAL SECTOR

Table 9 gives us the degree of self-sufficiency by sector. This measures the ratio of supply of goods or services for the sector over the domestic home demand for the same sector. The table shows that the services sector is highly self-sufficient, with percentages over 100 per cent. This is perhaps why the services sector is traditionally classified under non-tradeables. This also shows that the Philippines has not benefitted from the present trend of increased service exports in East Asian countries. In the three broad categories, the services sector is the most self-sufficient, followed by agriculture and then by industry. This shows that the services sector in general can supply

domestic demand without much importation. Table 10 gives us the export-output ratio, the import-output ratios and the net export ratio for the sectors in the 1979 input-output table. One can see clearly that the import and export-output ratios are close to zero except for the export-output ratios of transport/storage/communication and services. The composition of these export and import services is something which the paper cannot deal with due to limited time and resources.

There are reports in the international arena that foreign investments have effected transnationalization of goods producing activities that incorporate a wide range of service inputs hence integrating goods and services via vertical integration. In the more developed countries, the rise of producer services or business services as specialized entities, instead of being service departments of an industrial firm, has been accompanied by strong international capital movement in these fields. High technology information and computer, and biotech industries have sprouted and have also generated international capital flows. In more common transactions, transnational leases of franchises, patents and the like abound. This international flow of factor services is a field many multilateral agencies are interested in these days. In the Philippines, the transnationalization of goods and services and the international flow of business services, except in the growing but minute field of computers, have not been very prominent (although this is not documented in the present paper).

Table 11 is lifted from the paper of Gloria M. Arroyo on trade in services. It shows earnings and payments in merchandise and non-merchandise trade, which indicate some of the flows of factor and non-factor services. On the earnings side, the biggest inflow is from the 'other' items, half of which is comprised of overseas construction remittances. Remittances from contract workers constitute another big source of earnings. On the payment side, interest payment on foreign debt makes up more than half of the entire outflow. It must also be pointed out that the Philippines is a net importer of freight and merchandise insurance and has a positive net balance from travel and government earnings.

MACRO POLICIES AFFECTING THE SERVICES SECTOR.

Overall macro development plans rarely touch on the services sector in a comprehensive way. The prevalent perception is that agricultural, trade and industrial policies should be given priority since most of the service sectors or industries are 'followers' in economic development. The exceptions of course are the banking sector (since financial and monetary policies are key ingredients to the government policies), the tourist industry (because of its obvious role in foreign exchange earnings), and social services of the government (for distributive and poverty alleviation purposes).

The overall thrust of the development plan of the Philippines is to undertake import liberalization, privatization of government enterprises, financial liberalization and, in general, policies that will release the market forces that have been stymied in the past regime. The government is, however, having a tough time with these policies as monopolies in all

spheres are fighting and lobbying to protect their own turf. As we saw in the previous sections, trade and finance (and housing) have the highest operating surplus, and very high concentration may be indicated. Whether liberalization will erase this concentration is something that remains to be seen.

Trade, finance, housing, transportation and communications, are indeed 'followers' in the sense that agriculture and industry must have, in general, some dynamism before these service sectors, which directly or indirectly, serve these industries, become important. But these service sectors must also display efficiency and dynamism or else tight bottlenecks and hindrances to the growth of the economy will occur.

Macro policies on banking and the government service sectors are dealt with in most government plans. The present government has made a commitment, which it followed in 1986 and 1987, to allot higher budgets to education, manpower training, medical and health services, and social welfare projects. In this regard, we may see some increased spending on social services of the government. This, however, may not be reflected in the macro national accounts since this will be reflected more in the composition of government services. Financial liberalization in the monetary sector is an objective the government is pushing for in earnest. This means reducing financial intermediation costs and allowing market forces to determine the interest rate. Although the National Economic Development Authority has proclaimed a policy of free entry in the banking sector, resistance from the Central Bank in allowing new banks to arise in the rural areas (where many rural banks are in terrible financial distress) and high capitalization requirements have not brought about healthy competition in the banking sector. More importantly, the entire financial system has not recovered from the economic crisis of 1983 to the present. Even with some sort of recovery underway in 1987, there has not been a rush of borrowing from most industrial firms.

Finally, we go to foreign investments in the services sector. In the main, firms in the services sector are restricted to not more than 40 per cent foreign equity. This stipulation rules most industries in the Philippines. There has been a growing sentiment also in many nationalistic circles to completely Filipinize that is, firms to be 100 per cent Filipino-owned in the telecommunications, education and advertising industries. But this has not succeeded. Offshore bank units (OBUs) and some unviersal banks are allowed to operate in the Philippines but these are mainly involved in dollar transactions. They are allowed to deposit in or lend to local banks in foreign currency deposit units (FCDUs). They are, however, heavily regulated by the Central Bank.

In terms of personal services, Philippine law prescribes permanent residence as qualification for any examination or registration for private practice in any profession. Patents, franchises, trade names and the like may be registered provided they are actually in use in commerce and services for not less than two months.

In summary, foreign entry to the services sector is mainly restricted to the 40 per cent foreign equity rule and the standard international agreements on private practice and franchises in the western world.[3]

AREAS FOR FURTHER RESEARCH

The data and analysis we have presented above point to the tremendous amount of potential work that can and must be done in the services sector. Here are some of the suggested areas of research:

1. Does the Philippines follow the Kuznets pattern of development with a constant share for the services sector in total output but an increasing share in employment? If so, what are the factors contributing to this trend?

2. Related to the above, what do income elasticities and labour productivities have to do with the share of the service sector in total output and in total employment? Does the Fuchs-Baumol explanations apply to the Philippines wherein:

   a) A high income elasticity for services will assure that the services sector will get a bigger share of both output and employment? In the Philippines this has not been validated. Probably, income distribution may have to be taken into account in order to explain demand for the services sector instead of just looking at income per capita.

   b) The entry of previously non-marketed services in the marketplace (e.g. day care centers, restaurants, all sorts of business services such as computer and information services, legal, accounting services that used to be in-house) may spur a rise in the share of the services sector.

   c) The declining productivity of labour in the service sector vis-a-vis the industrial sector may mean a rising share of the services sector in terms of employment. In the Philippines labour productivity in the service sector has been below that of the industrial sector but since the seventies, no major movement in productivity has been clearly demonstrated. Perhaps this may be one reason why the services sector has maintained its share in employment to somewhere above 30 per cent since the seventies.

3. The above Fuchs-Baumol studies are based on data for developed countries. What is important is to study the differences in the composition of the services sector as well as its interlinkage with the other sectors between developed and developing countries. The differences may explain the findings of Summers (Inman, 1985) that prices of the service sectors vis-a-vis that of GNP price deflator are much higher in developed than in developing countries.

4. The heterogeneous nature of the services sector necessitates more studies on the sectoral components of the sector. The diverse measures we presented on productivities, backward and forward linkages, reliance on intermediate inputs, the different shares for labour and operating surplus (recall the tremendously high share of operating surplus for trade and finance) should be analyzed for the different items classified under services. Technological and organizational changes in these sectors, relative price movements,

increasing demand -- all of these will be useful in shedding light on the future of the different industries in the services sector.

5. The services sector is a big employment source for women. Are the areas where women are employed those of higher or lower productivities? Is the future of these sectors bright for women workers? Are real wages for women commensurate to their labour productivity (vis-a-vis male workers)?

6. The underground or informal services sector is sometimes talked of as a haven for the unemployed? How big is this sector? Are labour productivities in this sector extremely low? How does this sector interact with the unemployed and underemployed labour force?

7. What would be the effect on the services sector if the government's programs of import, trade, financial liberalization as well as other government policies push through? This study would have to look deeply into the interlinkage of the services sector with agriculture and industry.

There are many other areas of study that can be explained here, such as the international aspect of services. The author hopes that this paper may bring about initial insights and incentives for researches to be done in such an important and fertile field.

TABLE 1a

GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(in million pesos at current prices: 1967, 1970-1986)

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	7540	11782	14780	16040	21074	29386	32996	37341	41668
II. INDUSTRIAL SECTOR	8173	12581	14760	17442	23441	33350	38692	45688	54577
1. Mining & quarrying	436	1181	1187	1346	2407	3097	2000	2128	2488
2. Manufacturing	6155	9574	11417	13388	17715	24608	28544	32545	39318
3. Construction	1346	1515	1781	2240	2755	4709	7060	9784	11356
4. Electricity, gas and water	236	311	375	468	564	936	1088	1231	1415
III. SERVICE SECTOR	13311	18085	20580	22593	27271	36902	42915	50899	59386
1. Transportation, Storage & Comm.	12233	1783	2172	2418	2913	3664	4771	6072	8583
a. Transport & storage	1061	1484	1813	2029	2435	3061	4025	5175	7578
Land	393	557	737	861	1055	1196	1738	2595	4008
Water	311	397	467	511	595	777	865	1049	1249
Air	118	173	204	223	292	460	601	672	813
Storage and services incidental to transpt	239	357	405	434	493	628	821	859	1508
b. Communication	162	299	359	389	478	603	746	897	1005
2. Trade	4258	6080	6569	7074	9463	14313	15972	19075	22276
3. Finance & housing									
a. Banks	443	701	949	1093	1306	1865	2536	2843	3296
b. Non-banks	108	253	282	300	468	729	1097	1320	1557
c. Insurance	267	392	478	618	744	1039	1218	1401	1580
d. Real estate	785	955	1176	1224	1146	1366	1511	1447	1477
e. Ownership of dwellings	1934	2136	2177	2379	2656	2511	2976	3337	3798
4. Services	4293	5785	6777	7487	8575	10779	13014	15404	16819
a. Government	1836	2475	3004	3357	3773	4703	5863	7267	7473
b. Private	2457	3310	3773	4130	4802	6076	7151	8137	9346
Educational	247	325	390	448	494	606	736	841	966
Medical & health	245	311	359	408	557	880	1143	1420	1614
Business	357	515	571	674	780	887	1055	1094	1172
Recreational	180	251	292	352	415	554	610	656	831
Personal	602	573	700	645	704	875	939	1011	1181
Hotels & restaurants	424	759	781	861	930	1201	1410	1676	1944
Others	402	576	680	742	922	1073	1258	1439	1638
Net factor income from abroad	-290	-697	-521	-549	-170	310	-338	-1216	-1351
GROSS NATIONAL PRODUCT at market prices	28734	41751	49599	55526	71616	99948	114265	132712	154280

Source: Philippine Statistical Yearbook 1977, 1984, 1986
National Economic Development Authority (NEDA), and additional data from NEDA.

TABLE Ia (contd)

GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(in million pesos at current prices: 1967, 1970-1986)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	47334	55516	61757	69391	76721	84546	139505	162519	163801
II. INDUSTRIAL SECTOR	61961	79796	98162	111613	122571	138179	186154	200544	198941
1. Mining & quarrying	3333	5810	8095	6849	6106	7021	9714	11529	10198
2. Manufacturing	44404	54093	65993	75151	83133	95172	137251	150523	154719
3. Construction	12525	17769	21311	26268	29302	30730	31209	27506	22685
4. Electricity, gas & water	1699	2124	2763	3345	4030	5256	7980	10986	11339
III. SERVICE SECTOR	69308	85165	106089	124270	141293	161370	214807	246396	260130
1. Transportation, Storage & Comm.	9894	12377	16444	19618	21376	24378	33820	38263	39078
a. Transport & storage	8732	10907	14528	17311	18735	20818	28245	32204	32330
Land	4661	5881	7992	9792	10650	12120	17619	20262	20399
Water	1394	1744	2148	2382	2459	2606	3139	3484	3377
Air	969	1164	1529	1785	1940	2105	2899	3077	3103
Storage & services incident. to transpt.	1708	2118	2859	3352	3686	3987	4588	5381	5451
b. Communication	1162	1470	1916	2307	2641	3560	5575	6059	6748
2. Trade	26433	33517	42050	49765	56536	66094	99711	118370	121243
3. Finance & housing									
a. Banks	4147	5534	6630	7300	8460	9633	6207	25	1708
b. Non-banks	1798	2138	2955	2163	2139	2398	2264	2227	1241
c. Insurance	1626	1934	2864	3396	3926	4222	5369	6502	6783
d. Real estate	1651	1805	2396	2956	3589	4315	3773	3331	3897
e. Ownership of dwellings	4358	5195	5661	6797	8027	9434	13590	18003	18662
4. Services	19401	22665	27089	32275	37420	40896	50073	59675	67518
a. Government	8735	9894	11517	13930	16389	17539	21254	26007	31753
b. Private	10666	12771	15572	18345	21031	23357	28819	33668	35765
Educational	1113	1324	1574	1835	2198	2472	3114	4021	4288
Medical & health	1908	2326	2884	3419	3969	4603	5698	6920	7546
Business	1401	1706	2062	2405	2651	3046	3709	5106	5440
Recreational	934	1087	1346	1568	1721	1802	2200	2406	2663
Personal	1301	1580	1866	2201	2627	2765	3245	3404	3682
Hotels & restaurants	2203	2647	3272	3885	4532	4991	6656	7499	8039
Others	1806	2101	2568	3032	333	3678	4197	4312	4107
Net factor income from abroad	-536	480	-930	-1630	-5162	-5350	-13111	-14941	-12426
GROSS NATIONAL PRODUCT at market prices	178067	220957	265078	303644	335423	378745	540466	609459	6223872

TABLE 1b

PERCENTAGE SHARE
GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(at current prices 1967, 1970-1986

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	26.24	28.22	29.80	28.89	29.43	29.40	28.88	28.14	27.01
II. INDUSTRIAL SECTOR	28.44	30.13	29.76	31.41	32.73	33.37	33.86	34.43	33.38
1. Mining & quarrying	1.52	2.83	2.39	2.42	3.36	3.10	1.75	1.60	1.61
2. Manufacturing	21.42	22.93	23.02	24.11	24.74	24.62	24.98	24.52	25.48
3. Construction	4.68	3.63	3.59	4.03	3.85	4.71	6.18	7.37	7.36
4. Electricity, gas and water	0.82	0.74	0.76	0.84	0.79	0.94	0.95	0.93	0.92
III. SERVICE SECTOR	46.32	43.32	41.49	40.69	38.08	36.92	37.56	38.35	38.49
1. Transportation, Storage and Communication	4.26	4.27	4.38	4.35	4.07	3.67	4.18	4.58	5.56
a. Transport & storage	3.69	3.55	3.66	3.65	3.40	3.06	3.52	3.90	4.91
Land	1.37	1.33	1.49	1.55	1.47	1.20	1.52	1.96	2.60
Water	1.08	0.95	0.94	0.92	0.83	0.78	0.76	0.79	0.81
Air	0.41	0.41	0.41	0.40	0.41	0.46	0.53	0.51	0.53
Storage and services incident. to transpt.	0.83	0.86	0.82	0.78	0.69	0.63	0.72	0.65	0.98
b. Communication	0.56	0.72	0.72	0.70	0.67	0.60	0.65	0.68	0.65
2. Trade	14.82	14.56	13.24	12.74	13.21	14.32	13.98	14.37	14.44
3. Finance & housing									
a. Banks	1.54	1.68	1.91	1.97	1.82	1.87	2.22	2.14	2.14
b. Non-banks	0.38	0.61	0.57	0.54	0.65	0.73	0.96	0.99	1.01
c. Insurance	0.93	0.94	0.96	1.11	1.04	1.04	1.07	1.06	1.02
d. Real estate	2.73	2.29	2.37	2.20	1.60	1.37	1.32	1.09	0.96
e. Ownership of dwellings	6.73	5.12	4.39	4.28	3.71	2.91	2.60	2.51	2.46
4. Services	14.94	13.86	13.66	13.48	11.97	10.78	11.39	11.61	10.90
a. Government	6.39	5.93	6.06	6.05	5.27	4.71	5.13	5.48	4.84
b. Private	8.55	7.93	7.61	7.44	6.71	6.08	6.26	6.13	6.06
Educational	0.86	0.78	0.79	0.81	0.69	0.61	0.64	0.63	0.63
Medical & health	0.85	0.74	0.72	0.73	0.78	0.88	1.00	1.07	1.05
Business	1.24	1.23	1.15	1.21	1.09	0.89	0.92	0.82	0.76
Recreational	0.63	0.60	0.59	0.63	0.58	0.55	0.53	0.49	0.54
Personal	2.10	1.37	1.41	1.16	0.98	0.88	0.82	0.76	0.77
Hotels & restaurants	1.48	1.82	1.57	1.55	1.30	1.20	1.23	1.26	1.26
Others	1.40	1.38	1.37	1.34	1.29	1.07	1.10	1.08	1.06
Net factor income from abroad	-1.01	-1.67	-1.05	-0.99	-0.24	0.31	-0.30	-0.92	-0.88
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE Ib (contd)

PERCENTAGE SHARE
GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(at current prices: 1967, 1970-1986)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	26.58	25.13	23.30	22.85	22.87	22.32	25.81	26.67	26.30
II. INDUSTRIAL SECTOR	34.80	36.11	37.03	36.76	36.54	36.48	34.44	32.91	31.94
1. Mining & quarrying	1.87	2.63	3.05	2.26	1.82	1.85	1.80	1.89	1.64
2. Manufacturing	24.94	24.48	24.90	24.75	24.78	25.13	25.39	24.70	24.84
3. Construction	7.03	8.04	8.04	8.65	8.74	8.11	5.77	4.51	3.64
4. Electricity, gas and water	0.95	0.96	1.04	1.10	1.20	1.39	1.48	1.80	1.82
III. SERVICE SECTOR	38.92	38.54	40.02	40.93	42.12	42.61	39.74	40.43	41.76
1. Transportation, Storage and Communication	5.56	5.60	6.20	6.46	6.37	6.44	6.26	6.28	6.27
a. Transport & storage	4.90	4.94	5.48	5.70	5.59	5.50	5.23	5.28	5.19
Land	2.62	2.66	3.01	3.22	3.18	3.20	3.26	3.32	3.27
Water	0.78	0.79	0.81	0.78	0.73	0.69	0.58	0.57	0.54
Air	0.54	0.53	0.58	0.59	0.58	0.56	0.54	0.50	0.50
Storage & services incident. to transpt	0.96	0.96	1.08	1.10	1.10	1.05	0.85	0.88	0.88
b. Communication	0.65	0.67	0.72	0.76	0.79	0.94	1.03	0.99	1.08
2. Trade	14.84	15.17	15.86	16.39	16.86	17.45	18.45	19.42	19.47
3. Finance & housing									
a. Banks	2.33	2.50	2.50	2.40	2.52	2.54	1.15	0.00	0.27
b. Non-banks	1.01	0.97	1.11	0.71	0.64	0.63	0.42	0.37	0.20
c. Insurance	0.91	0.88	1.08	1.12	1.17	1.11	0.99	1.07	1.09
d. Real estate	0.93	0.82	0.90	0.97	1.07	1.14	0.70	0.55	0.63
e. Ownership of dwellings	2.45	2.35	2.14	2.24	2.39	2.49	2.51	2.95	3.00
4. Services	10.90	10.26	10.22	10.63	11.16	10.80	9.26	9.79	10.84
a. Government	4.91	4.48	4.34	4.59	4.89	4.63	3.93	4.27	5.10
b. Private	5.99	5.78	5.87	6.04	6.27	6.17	5.33	5.52	5.74
Educational	0.63	0.60	0.59	0.60	0.66	0.65	0.58	0.66	0.69
Medical & health	1.07	1.05	1.09	1.13	1.18	1.22	1.05	1.14	1.21
Business	0.79	0-.77	0.78	0.79	0.79	0.80	0.69	0.84	0.87
Recreational	0.52	0.49	0.51	0.52	0.51	0.48	0.41	0.39	0.43
Personal	0.73	0.72	0.70	0.72	0.78	0.73	0.60	0.56	0.59
Hotels & restaurants	1.24	1.20	1.23	1.28	1.35	1.32	1.23	1.23	1.29
Others	1.01	0.95	0.97	1.00	0.99	0.97	0.78	0.71	0.66
Net Factor income from abroad	-0.30	0.22	-0.35	-0.54	-1.54	-1.41	-.243	-2.45	-1.99
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 2a

GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(in million pesos at constant 1972 prices: 1967, 1970-1986)

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	13052	14734	15457	16040	17026	17465	18218	19671	20646
II. INDUSTRIAL SECTOR	12766	15048	16222	17442	19586	20710	22690	24904	27554
1. Mining & quarrying	664	1093	1282	1346	1400	1403	1445	1491	1742
2. Manufacturing	9846	11823	12611	13388	15252	15981	16537	17481	19532
3. Construction	1978	1738	1889	2240	2433	2745	4101	5254	5568
4. Electricity, gas and water	278	394	440	468	501	581	607	678	712
III. SERVICE SECTOR	18275	21232	21847	22593	24319	25964	27453	28387	29790
1. Transportation, Storage and Communication	1684	2056	2184	2418	2657	2933	3277	3875	4235
a. Transport & storage	1476	1721	1854	2029	2220	2453	2730	3244	3545
Land	522	643	745	861	980	1002	1113	1616	1761
Water	444	448	469	511	544	637	663	757	793
Air	198	222	232	223	246	330	395	320	325
Storage and services incident. to transpt	312	408	408	434	450	484	559	551	666
b. Communication	208	335	330	389	437	480	547	631	690
2. Trade	6173	7069	7121	7074	7860	8315	8492	9312	10048
3. Finance & housing									
a. Banks	694	925	1028	1093	1164	1190	1519	1560	1645
b. Non-banks	169	333	305	300	417	616	657	722	777
c. Insurance	418	517	517	618	663	663	731	768	788
d. Real estate	1203	1216	1243	1224	1078	1050	1102	796	730
e. Ownership of dwellings	2201	2235	2270	2379	2407	2517	2555	1841	1850
4. Services	5733	6881	7179	7487	8073	8680	9120	9513	9717
a. Government	2431	3051	3235	3357	3633	3784	3963	4170	4074
b. Private	3302	3830	3944	4130	4440	4896	5157	5343	5643
Educational	327	375	433	448	489	548	595	653	692
Medical & health	325	358	391	408	531	664	735	798	824
Business	472	593	587	674	702	731	787	806	841
Recreational	214	296	307	352	391	437	441	402	434
Personal	806	626	721	645	646	665	631	644	667
Hotels & restaurants	567	869	784	861	854	985	1020	1100	1196
Others	564	713	721	742	827	866	948	940	989
Net factor income from abroad	-869	-979	-605	-549	-50	600	169	-244	-201
GROSS NATIONAL PRODUCT at market prices	43224	50035	52921	55526	60881	64739	68530	72718	77789

Source: Philippine Statistical Yearbook 1977, 1984, 1986.
National Economic Development Authority (NEDA), and additional data from NEDA.

TABLE 2a (contd)

GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(in million pesos at constant 1972 prices: 1967, 1970-1986)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	21620	22595	23732	24608	25378	24845	25409	26252	27233
II. INDUSTRIAL SECTOR	29598	32343	33471	34963	35714	35955	32282	29000	28204
1. Mining & quarrying	1809	2134	2236	2175	2016	1966	1755	1768	1558
2. Manufacturing	21108	22239	23175	23959	24535	25108	23319	21541	21717
3. Construction	5913	7121	7139	7830	8079	7689	5866	4258	3382
4. Electricity, gas and water	768	849	921	999	1084	1192	1342	1433	1547
III. SERVICE SECTOR	31579	33408	35503	36636	37907	39120	36236	34551	35333
1. Transportation, Storage and Communication	4501	4613	4827	5040	5165	5266	5032	4953	5084
a. Transport & storage	3754	3807	3937	4066	4123	4153	3860	3813	3852
Land	1879	1915	1957	2051	2091	2149	2193	2200	2235
Water	817	845	853	841	818	792	644	613	607
Air	358	317	332	342	351	354	376	367	369
Storage and services incident. to transpt.	700	730	795	832	863	858	647	633	641
b. Communication	747	806	890	974	1042	1113	1172	1140	1232
2. Trade	10697	11525	12224	12731	13103	13930	14073	14066	14337
3. Finance & housing									
a. Banks	1893	2248	2298	2240	2309	2411	1006	4	223
b. Non-banks	844	867	1025	655	596	610	367	293	162
c. Insurance	751	772	983	1024	1094	1077	870	855	886
d. Real estate	741	697	792	880	962	1055	628	442	482
e. Ownership of dwellings	1935	1976	2023	2165	2291	2425	2263	2391	2309
4. Services	10217	10710	11331	11901	12387	12346	11997	11547	11850
a. Government	4288	4484	4769	5081	5339	5294	5585	5453	5811
b. Private	5927	6226	6562	6820	7047	7052	6412	6094	6039
Educational	715	747	786	821	865	877	855	890	866
Medical & health	873	923	972	1012	1032	1064	1016	1067	1085
Business	883	946	1017	1068	1096	1120	947	965	948
Recreational	447	459	477	494	505	493	457	402	420
Personal	699	730	756	779	807	774	690	597	599
Hotels & restaurants	1290	1360	1440	1500	1569	1536	1467	1386	1391
Others	1020	1061	1114	1146	1173	1188	980	787	730
Net factor income from abroad	273	390	-77	-166	-1460	-1301	-2283	-2037	-1676
GROSS NATIONAL PRODUCT at market price	83070	88736	92629	96041	97539	98619	91644	87766	89094

TABLE 2b

PERCENTAGE SHARE
GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(at constant 1972 prices: 1967, 1970-1986)

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	30.20	29.45	29.21	28.89	27.97	26.98	26.58	27.05	26.54
II. INDUSTRIAL SECTOR	29.53	30.07	30.65	31.41	32.17	31.99	33.11	34.25	35.42
1. Mining & quarrying	1.54	2.18	2.42	2.42	2.30	2.17	2.11	2.05	2.24
2. Manufacturing	22.78	23.63	23.83	24.11	25.05	24.69	24.13	24.04	25.11
3. Construction	4.58	3.47	3.57	4.03	4.00	4.24	5.98	7.23	7.16
4. Electricity, gas and water	0.64	0.79	0.83	0.84	0.82	0.90	0.89	0.93	0.92
III. SERVICE SECTOR	42.28	42.43	41.28	40.69	39.95	40.11	40.06	39.04	38.30
1. Transportation, Storage and Communication	3.90	4.11	4.13	4.35	4.36	4.53	4.78	5.33	5.44
a. Transport & storage	3.41	3.44	3.50	3.65	3.65	3.79	3.98	4.46	4.56
Land	1.21	1.29	1.41	1.55	1.61	1.55	1.62	2.22	2.26
Water	1.03	0.90	0.89	0.92	0.89	0.98	0.97	1.04	1.02
Air	0.46	0.44	0.44	0.40	0.40	0.51	0.58	0.44	0.42
Storage and services incident. to transpt.	0.72	0.82	0.77	0.78	0.74	0.75	0.82	0.76	0.86
b. Communication	0.48	0.67	0.62	0.70	0.72	0.74	0.80	0.87	0.89
2. Trade	14.28	14.13	13.46	12.74	12.91	12.84	12.39	12.81	12.92
3. Finance & housing									
a. Banks	1.61	1.85	1.94	1.97	1.91	1.84	2.22	2.15	2.11
b. Non-banks	0.39	0.67	0.58	0.54	0.68	0.95	0.96	0.99	1.00
c. Insurance	0.97	1.03	0.98	1.11	1.09	1.02	1.07	1.06	1.01
d. Real estate	2.78	2.43	2.35	2.20	1.77	1.62	1.61	1.09	0.94
e. Ownership of dwellings	5.09	4.47	4.29	4.28	3.95	3.89	3.73	2.53	2.38
4. Services	13.26	13.75	13.57	13.48	13.26	13.41	13.31	13.08	12.49
a. Government	5.62	6.10	6.11	6.05	5.97	5.85	5.78	5.73	5.24
b. Private	7.64	7.65	7.45	7.44	7.29	7.56	7.53	7.35	7.25
Educational	0.76	0.75	0.82	0.81	0.80	0.85	0.87	0.90	0.89
Medical & health	0.75	0.72	0.74	0.73	0.87	1.03	1.07	1.10	1.06
Business	1.09	1.19	1.11	1.21	1.15	1.13	1.15	1.11	1.08
Recreational	0.56	0.59	0.58	0.63	0.64	0.68	0.64	0.55	0.56
Personal	1.86	1.25	1.36	1.16	1.06	1.03	0.92	0.89	0.86
Hotels & restaurants	1.31	1.74	1.48	1.55	1.40	1.52	1.49	1.51	1.54
Others	1.30	1.43	1.36	1.34	1.36	1.34	1.38	1.29	1.27
Net factor income from abroad	-2.01	-1.96	-1.14	-0.99	-0.08	0.93	0.25	-0.34	-0.26
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 2b (contd)

PERCENTAGE SHARE
GROSS NATIONAL PRODUCT BY INDUSTRIAL ORIGIN
(at constant 1972 prices: 1967, 1970-1986)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	26.03	25.46	25.62	25.62	26.02	25.19	27.73	29.91	30.57
II. INDUSTRIAL SECTOR	35.63	36.45	36.13	36.40	36.62	36.46	35.23	33.04	31.66
1. Mining & quarrying	2.18	2.40	2.41	2.26	2.07	1.99	1.92	2.01	1.75
2. Manufacturing	25.41	25.06	25.02	24.95	25.15	25.46	25.45	24.54	24.38
3. Construction	7.12	8.02	7.71	8.15	8.28	7.80	6.40	4.85	3.80
4. Electricity, gas and water	0.92	0.96	0.99	1.04	1.11	1.21	1.46	1.63	1.74
III. SERVICE SECTOR	38.01	37.65	38.33	38.15	38.86	39.67	39.54	39.37	39.66
1. Transportation, Storage and Communication	5.42	5.20	5.21	5.25	5.30	5.34	5.49	5.64	5.71
a. Transport & storage	4.52	4.29	4.25	4.23	4.23	4.21	4.21	4.34	4.32
Land	2.26	2.16	2.11	2.14	2.14	2.18	2.39	2.51	2.51
Water	0.98	0.95	0.92	0.88	0.84	0.80	0.70	0.70	0.68
Air	0.43	0.36	0.36	0.36	0.36	0.36	0.41	0.42	0.41
Storage and services incident. to transpt	0.84	0.82	0.86	0.87	0.88	0.87	0.71	0.72	0.72
b. Communication	0.90	0.91	0.96	1.01	1.07	1.13	1.28	1.30	1.38
2. Trade	12.88	12.99	13.20	13.26	13.43	14.13	15.36	16.03	16.09
3. Finance & housing									
a. Banks	2.28	2.53	2.48	2.33	2.37	2.44	1.10	0.00	0.25
b. Non-banks	1.02	0.98	1.11	0.68	0.61	0.62	0.40	0.33	0.18
c. Insurance	0.90	0.87	1.06	1.07	1.12	1.09	0.95	0.97	0.99
d. Real estate	0.89	0.79	0.86	0.92	0.99	1.07	0.69	0.50	0.54
e. Ownership of dwellings	2.33	2.23	2.18	2.25	2.35	2.46	2.47	2.72	2.59
4. Services	12.30	12.07	12.23	12.39	12.70	12.52	13.09	13.16	13.30
a. Government	5.16	5.05	5.15	5.29	5.47	5.37	6.09	6.21	6.52
b. Private	7.13	7.02	7.08	7.10	7.22	7.15	7.00	6.94	6.78
Educational	0.86	0.84	0.85	0.85	0.89	0.89	0.93	1.01	0.97
Medical & health	1.05	1.04	1.05	1.05	1.06	1.08	1.11	1.22	1.22
Business	1.06	1.07	1.10	1.11	1.12	1.14	1.03	1.10	1.06
Recreational	0.54	0.52	0.51	0.51	0.52	0.50	0.50	0.46	0.47
Personal	0.84	0.82	0.82	0.81	0.83	0.78	0.75	0.68	0.67
Hotels & restaurants	1.55	1.53	1.55	1.56	1.61	1.56	1.60	1.58	1.56
Others	1.23	1.20	1.20	1.19	1.20	1.20	1.07	0.90	0.82
Net factor income from abroad	0.33	0.44	-0.08	-0.17	-1.50	-1.32	-2.49	-2.32	-1.88
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 3a

EMPLOYED PERSONS BY MAJOR INDUSTRY, BY SEX (in thousands)

MAJOR INDUSTRY GROUP	October 1956			October 1965			November 1971			August 1975		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. AGRICULTURE, FISHERY AND FORESTRY	3391	1153	4584	4493	1231	5725	5030	1292	6321	6080	1688	2768
2. INDUSTRY	596	625	1181	872	577	1442	1326	640	1967	1421	785	2207
a. Mining & quarrying	30	3	31	23		24	58	1	59	51	2	54
b. Manufacturing	344	618	926	535	577	1101	805	634	1439	879	772	1651
c. Electricity, gas, water and sanitary services	25	3	26	20		22	46	2	49	41	5	46
d. Construction	197	1	198	294		295	417	3	420	450	6	456
3. SERVICES	936	953	1890	1795	1463	2888	2095	2134	4228	2088	2416	4504
a. Commerce	333	469	803	460	654	1114	676	883	1559	692	931	1623
b. Transport, storage and communication	222	6	228	330		339	509	20	529	469	23	492
c. Government, community, business & recreational serv.	259	133	392	448	260	708	676	520	1196	702	632	1335
d. Domestic services	62	270	332	448	431	500	96	570	666	97	686	782
e. Personal services other than domestic	60	75	135	109	118	227	138	141	278	128	144	272
4. INDUSTRY NOT ADEQUATELY	23	24	47	24	24	47	14	13	27	24	15	39
TOTAL	4946	2755	7702	7184	3296	10102	8464	4079	12543	9613	4904	14518

Source: Philippine Statistical Yearbook 1986
National Economic Development Authority (NEDA)

TABLE 3a(Contd.)

EMPLOYED PERSONS BY MAJOR INDUSTRY, BY SEX (in thousands)

MAJOR INDUSTRY GROUP	3rd Quarter 1981			3rd Quarter 1983			3rd Quarter 1985			4th Quarter 1986		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. AGRICULTURE, FISHERY AND FORESTRY	6608	2320	8928	6946	2934	9880	7233	2465	9698	7703	2715	10418
2. INDUSTRY	1691	856	2545	1845	919	2764	1860	953	2807	1828	972	2799
a. Mining & quarrying	75	6	80	95	7	102	120	8	128	141	12	152
b. Manufacturing	975	833	1807	1004	883	1887	1003	919	1922	967	939	1906
c. Electricity, gas and water	58	8	66	67	11	78	59	14	73	53	10	63
d. Construction	583	9	592	679	18	697	678	12	684	667	11	678
3. SERVICES	2950	3025	5974	3136	3432	6568	3427	3866	7292	3655	4053	7709
a. Wholesale and retail trade	687	1269	1956	745	1452	2197	860	1751	2611	953	1902	2855
b. Transportation, storage & communication	705	29	734	794	37	831	889	42	931	825	35	860
c. Financing, insurance, real estate, & business services	201	123	324	214	142	356	232	111	342	236	118	355
d. Community, social and personal services	1357	1604	2960	1383	1801	3184	1446	1962	3408	1641	1998	3639
4. INDUSTRY NOT ADEQUATELY DEFINED	1	3	4									
TOTAL	11249	6203	17452	11926	7286	19212	12519	7282	19801	13186	7740	20926

Source: Philippine Statistical Yearbook 1986
National Economic Development Authority (NEDA)

TABLE 3b

PERCENTAGE SHARE
EMPLOYED PERSONS BY MAJOR INDUSTRY

MAJOR INDUSTRY GROUP	October 1956			October 1965			November 1971			August 1975		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. AGRICULTURE, FISHERY AND FORESTRY	68.56	41.85	59.52	62.54	37.38	56.67	59.43	31.67	50.39	63.25	34.42	53.51
2. INDUSTRY	12.05	22.69	15.33	12.14	17.51	14.27	15.67	15.69	15.68	14.78	16.01	15.20
a. Mining & quarrying	0.61	0.11	0.40	0.32		0.24	0.69	0.02	0.47	0.53	0.04	0.37
b. Manufacturing	6.96	22.43	12.02	7.45	17.51	10.90	9.51	15.54	11.47	9.14	15.74	11.37
c. Electricity, gas, water and sanitary services	0.51	0.11	0.34	0.28		0.22	0.54	0.05	0.39	0.43	0.10	0.32
d. Construction	3.98	0.04	2.57	4.09		2.92	4.93	0.07	3.35	4.68	0.12	3.14
3. SERVICES	18.92	34.59	24.54	24.99	44.39	28.59	24.75	52.32	33.71	21.72	49.27	31.02
a. Commerce	6.73	17.02	10.43	6.40	19.84	11.03	7.99	21.65	12.43	7.20	18.98	11.18
b. Transport, storage and communication	4.49	0.22	2.96	4.59		3.36	6.01	0.49	4.22	4.88	0.47	3.39
c. Government, community, business & recreational serv.	5.24	4.83	5.09	6.24	7.89	7.01	7.99	12.75	9.54	7.30	12.89	9.20
d. Domestic services	1.25	9.80	4.31	6.24	13.08	4.95	1.13	13.97	5.31	1.01	13.99	5.39
e. Personal services other than domestic	1.21	2.72	1.75	1.52	3.58	2.25	1.63	3.46	2.22	1.33	2.94	1.87
4. INDUSTRY NOT ADEQUATELY DEFINED	0.47	0.87	0.61	0.33	0.73	0.47	0.17	0.32	0.22	0.25	0.31	0.27
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 3b(Contd.)

PERCENTAGE SHARE
EMPLOYED PERSONS BY MAJOR INDUSTRY

MAJOR INDUSTRY GROUP	3rd Quarter 1981			3rd Quarter 1983			3rd Quarter 1985			4th Quarter 1986		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. AGRICULTURE, FISHERY AND FORESTRY	58.74	37.40	51.16	58.24	40.27	51.43	57..78	33.85	48.98	58.42	35.08	49.78
2. INDUSTRY	15.03	13.80	14.58	15.47	12.61	14.39	14.86	13.09	14.18	13.86	12.56	13.38
a. Mining & quarrying	0.67	0.10	0.46	0.80	0.10	0.53	0.96	0.11	0.65	1.07	0.16	0.73
b. Manufacturing	8.67	13.43	10.35	8.42	12.12	9.32	8.01	12.62	9.71	7.33	12.13	9.11
c. Electricity, gas and water	0.52	0.13	0.38	0.56	0.15	0.41	0.47	0.19	0.37	0.40	0.13	0.30
d. Construction	5.18	0.15	3.39	5.69	0.25	3.63	5.42	0.16	3.45	5.06	0.14	3.24
3. SERVICES	26.22	48.77	34.23	26.30	47.10	34.19	27.37	53.09	36.83	27.72	52.36	36.84
a. Wholesale and retail trade	6.11	20.46	11.21	6.25	19.93	11.44	6.87	24.05	13.19	7.23	24.57	13.64
b. Transportation, storage & communication	6.27	0.47	4.21	6.66	0.51	4.33	7.10	0.58	4.70	6.26	0.45	4.11
c. Financing, insurance, real estate, & business services	1.79	1.98	1.86	1.79	1.95	1.85	1.85	1.52	1.73	1.79	1.52	1.70
d. Community, social and personal services	12.06	25.86	16.96	11.60	24.72	16.57	11.55	26.94	17.21	12.45	25.81	17.39
4. INDUSTRY NOT ADEQUATELY DEFINED	0.01	0.05	0.02									
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 4a

IMPLICIT PRICE INDEX NUMBERS FOR GROSS NATIONAL PRODUCT
(Base Year: 1972 = 100)

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	57.8	80.0	95.6	100.0	123.8	168.3	181.1	189.8	201.8
II. INDUSTRIAL SECTOR	64.0	83.6	91.0	100.0	119.7	161.0	170.5	183.5	198.1
1. Mining & quarrying	65.7	108.1	92.6	100.0	171.9	220.7	138.4	142.7	142.8
2. Manufacturing	62.5	81.0	90.5	100.0	116.1	154.0	172.6	186.2	201.3
3. Construction	68.0	87.2	94.3	100.0	113.2	171.5	172.2	186.2	204.0
4. Electricity, gas and water	84.9	78.9	85.2	100.0	112.6	161.1	179.2	181.6	198.7
III. SERVICE SECTOR	72.8	85.2	94.2	100.0	112.1	142.1	156.3	179.3	199.3
1. Transportation, Storage and Communication	72.6	86.7	99.5	100.0	109.6	124.9	145.6	156.7	202.7
a. Transport & storage	71.9	86.2	97.8	100.0	109.7	124.8	147.4	159.5	213.8
Land	75.3	86.6	98.9	100.0	107.7	119.4	156.2	160.6	227.6
Water	70.0	88.6	99.6	100.0	109.4	122.0	130.5	138.6	157.5
Air	59.6	77.9	87.9	100.0	118.7	139.4	152.2	210.0	250.2
Storage and services incident. to transpt	76.6	87.5	99.3	100.0	109.6	129.8	146.9	155.9	226.4
b. Communication	77.9	89.3	108.8	100.0	109.4	125.6	136.4	142.2	145.7
2. Trade	69.0	86.0	92.2	100.0	120.4	172.1	188.1	204.8	221.7
3. Finance & housing									
Banks	63.8	75.8	92.3	100.0	112.2	156.7	167.0	182.2	200.4
Non-banks	63.9	76.0	92.5	100.0	112.2	156.7	167.0	182.8	200.4
Insurance	63.9	75.8	92.5	100.0	112.2	156.7	166.6	182.4	200.5
Real estate	65.3	78.5	94.6	100.0	106.3	130.1	137.1	181.8	205.3
Ownership of dwellings	87.9	95.6	95.9	100.0	110.3	115.7	116.5	181.3	205.3
4. Services	74.9	84.1	94.4	100.0	106.2	124.2	140.7	161.9	173.1
a. Government	75.5	81.1	92.9	100.0	103.9	124.3	143.4	174.3	183.4
b. Private	74.4	86.4	95.7	100.0	108.2	124.1	138.7	152.3	165.8
Educational	75.5	86.7	90.1	100.0	101.0	110.6	123.7	128.8	139.6
Medical & health	75.4	86.9	91.8	100.0	104.9	132.5	155.5	177.9	195.9
Business	75.6	86.8	97.3	100.0	111.1	121.3	134.1	135.7	139.4
Recreational	74.7	84.8	95.1	100.0	106.1	126.8	138.3	163.2	191.5
Personal	74.7	91.5	97.1	100.0	109.0	131.6	148.8	157.0	177.1
Hotels & restaurants	74.8	87.3	99.6	100.0	108.9	121.9	138.2	152.4	162.5
Others	71.3	80.8	94.3	100.0	111.5	123.9	132.7	153.1	165.6
GROSS NATIONAL PRODUCT at market prices	66.5	83.4	93.7	100.0	117.6	154.4	166.7	182.5	198.3

Source: Philippine Statistical Yearbook 1977, 1984, 1986
National Economic Development Authority (NEDA), and additional data from NEDA.

TABLE 4a(Contd.)

IMPLICIT PRICE INDEX NUMBERS FOR GROSS NATIONAL PRODUCT
(Base Year: 1972 = 100)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	218.9	245.7	260.2	282.0	302.3	340.3	549.0	619.1	601.5
II. INDUSTRIAL SECTOR	209.3	247.1	293.3	319.2	343.2	384.3	576.7	691.5	705.4
1. Mining & quarrying	184.2	272.3	362.0	314.9	302.9	357.1	553.5	652.1	654.6
2. Manufacturing	210.4	243.9	284.8	313.7	338.8	379.1	588.6	698.8	712.4
3. Construction	211.8	249.6	298.5	335.5	362.7	399.7	532.0	646.0	670.8
4. Electricity, gas and water	221.2	250.2	300.0	334.8	371.8	440.9	594.6	766.6	733.0
III. SERVICE SECTOR	219.5	254.9	298.8	339.2	372.7	412.5	592.8	713.1	736.2
1. Transportation, Storage and Communication	219.8	268.3	340.7	389.2	413.9	462.9	672.1	772.5	768.7
a. Transport & storage	232.6	286.5	369.0	425.8	454.4	501.3	731.7	844.6	839.3
Land	248.1	307.1	408.8	477.4	509.3	564.0	803.4	921.0	912.7
Water	170.6	206.4	251.8	283.2	300.6	329.0	487.4	568.4	556.3
Air	270.7	367.2	460.5	521.9	552.7	594.6	771.0	838.4	840.9
Storage and services incident. to transpt	244.0	290.1	359.6	402.9	427.1	464.7	709.1	850.1	850.4
b. Communication	155.6	182.4	215.3	236.9	253.5	319.9	475.7	531.5	547.7
2. Trade	247.1	290.8	334.0	390.9	430.1	474.5	708.5	841.5	845.7
3. Finance & housing									
Banks	219.1	246.2	288.5	325.9	366.4	399.6	617.0	625.0	765.9
Non-banks	213.0	246.6	288.3	330.2	358.9	393.1	616.9	760.1	766.0
Insurance	216.5	250.5	291.4	331.6	358.9	392.0	617.1	760.5	765.6
Real estate	222.8	259.0	302.5	335.9	373.1	409.0	600.8	753.6	808.5
Ownership of dwellings	225.2	262.9	279.8	313.9	350.4	389.0	600.5	752.9	808.2
4. Services	189.9	211.6	239.1	271.2	302.1	331.3	417.4	516.8	569.8
a. Government	203.7	220.7	241.5	274.2	306.9	331.3	380.6	476.9	546.4
b. Private	179.9	205.1	237.3	269.0	298.4	331.2	449.5	552.5	592.2
Educational	155.7	177.2	200.3	223.5	254.2	281.9	364.2	451.8	495.2
Medical & health	218.6	252.0	296.7	337.8	384.6	432.6	560.8	648.6	695.5
Business	157.9	180.3	202.8	225.2	241.7	272.0	391.7	529.1	573.8
Recreational	209.9	236.8	282.2	317.4	340.1	365.5	481.4	598.5	634.1
Personal	186.1	216.4	246.8	282.5	325.9	357.2	470.3	570.2	614.7
Hotels & restaurants	170.8	194.6	227.2	259.0	288.9	324.9	453.7	541.1	577.9
Others	177.1	198.0	230.5	264.6	283.9	309.6	428.3	547.9	562.6
GROSS NATIONAL PRODUCT at market prices	214.4	247.7	286.2	316.2	343.9	384.1	575.4	677.4	685.2

Source: Philippine Statistical Yearbook 1977, 1984, 1986
National Economic Development Authority (NEDA), and additional data from NEDA.

TABLE 4b

RATIO OF IMPLICIT PRICE INDEX NUMBERS TO GROSS NATIONAL PRODUCT PRICE DEFLATOR
(Base Year : 1972 = 100)

INDUSTRY	1967	1970	1971	1972	1973	1974	1975	1976	1977
I. AGRICULTURE, FISHERY AND FORESTRY	86.92	95.92	102.03	100.00	105.27	109.00	108.64	104.00	101.77
II. INDUSTRIAL SECTOR	96.24	100.24	97.12	100.00	101.79	104.27	102.28	100.55	99.90
1. Mining & quarrying	98.80	129.62	98.83	100.00	146.17	142.94	83.02	78.19	72.01
2. Manufacturing	93.98	97.12	96.58	100.0	98.72	99.74	103.54	102.03	101.51
3. Construction	102.26	104.56	100.64	100.00	96.26	111.08	103.30	102.03	102.87
4. Electricity, gas and water	127.67	94.60	90.93	100.00	95.75	104.34	107.50	99.51	100.20
III. SERVICE SECTOR	109.47	102.16	100.53	100.00	95.32	92.03	93.76	98.25	100.50
1. Transportation, Storage and Communication	109.17	103.96	106.19	100.00	93.20	80.89	87.34	85.86	102.22
a. Transport & storage	108.12	103.36	104.38	100.00	93.28	80.83	88.42	87.40	107.82
Land	113.23	103.84	105.55	100.00	91.58	77.33	93.70	88.00	114.78
Water	105.26	106.24	106.30	100.00	93.03	79.02	78.28	75.95	79.43
Air	89.62	93.41	93.81	100.00	100.94	90.28	91.30	115.07	126.17
Storage and services incident. to transpt	115.19	104.92	105.98	100.00	93.20	84.07	88.12	85.42	114.17
b. Communication	117.14	107.07	116.12	100.00	93.03	81.35	81.82	77.92	73.47
2. Trade	103.76	103.12	98.40	100.00	102.38	111.46	112.84	112.22	111.80
3. Finance & housing									
Banks	95.94	90.89	98.51	100.00	95.41	101.49	100.18	99.84	101.06
Non-banks	96.09	91.13	98.72	100.00	95.41	101.49	100.18	100.16	101.06
Insurance	96.09	90.89	98.72	100.00	95.41	101.49	99.94	99.95	101.11
Real estate	98.20	94.12	100.96	100.00	90.39	84.26	82.24	99.62	102.02
Ownership of dwellings	132.18	114.63	102.35	100.00	93.79	74.94	69.89	99.34	103.53
4. Services	112.63	100.84	100.75	100.00	90.31	80.44	84.40	88.71	87.29
a. Government	113.53	97.24	99.15	100.00	88.35	80.51	86.02	95.51	92.49
b. Private	111.88	103.60	102.13	100.00	92.01	80.38	83.20	83.45	83.61
Educational	113.53	103.96	96.16	100.00	85.88	71.63	74.21	70.58	70.40
Medical & health	113.38	104.20	97.97	100.00	89.20	85.82	93.28	97.48	98.79
Business	113.68	104.08	103.84	100.00	94.47	78.56	80.44	74.36	70.30
Recreational	112.33	101.68	101.49	100.00	90.22	82.12	82.96	89.42	96.57
Personal	112.33	109.71	103.63	100.00	92.69	85.23	89.26	86.03	89.31
Hotels & restaurants	112.48	104.68	106.30	100.00	92.60	78.95	82.90	83.51	81.95
Others	107.22	96.88	100.64	100.00	94.81	80.25	79.60	83.89	83.51
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 4b(Contd.)

RATIO OF IMPLICIT PRICE INDEX NUMBERS TO GROSS NATIONAL PRODUCT PRICE DEFLATOR
(Base Year : 1972 = 100)

INDUSTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986
I. AGRICULTURE, FISHERY AND FORESTRY	102.10	99.19	90.92	89.18	87.90	88.60	95.41	91.39	87.79
II. INDUSTRIAL SECTOR	97.62	99.76	102.48	100.95	99.80	100.05	100.21	102.09	102.95
1. Mining & quarrying	85.91	109.93	126.48	99.59	88.08	92.97	96.29	96.27	95.53
2. Manufacturing	98.13	98.47	99.51	99.21	98.52	98.70	102.29	103.16	103.98
3. Construction	98.79	100.77	104.30	106.10	105.47	104.06	92.45	95.35	97.90
4. Electricity, gas and water	103.17	101.01	104.82	105.88	108.11	114.79	103.33	113.18	106.98
III. SERVICE SECTOR	102.38	102.91	104.40	107.27	108.37	107.39	103.02	105.28	107.45
1. Transportation, Storage and Communication	102.52	108.32	119.04	123.09	120.35	120.52	116.80	114.04	112.19
a. Transport & storage	108.49	115.66	128.93	134.66	132.13	130.51	127.15	124.68	122.50
Land	115.72	123.98	142.70	150.98	148.10	146.84	139.61	135.96	133.21
Water	79.57	83.33	87.98	89.56	87.41	85.65	84.70	83.91	81.20
Air	126.26	148.24	160.90	165.05	160.72	154.80	133.98	123.77	122.73
Storage and services incident. to transpt	113.81	117.12	125.65	127.42	124.19	120.98	123.23	125.50	124.12
b, Communication	72.57	73.64	75.23	74.92	73.71	83.29	82.67	78.46	79.94
2. Trade	115.25	117.40	116.70	123.62	125.07	123.54	123.12	124.23	123.42
3. Finance & housing									
Banks	102.19	99.39	100.80	103.07	106.54	104.04	107.22	92.27	111.78
Non-banks	99,35	99,56	100.73	104.43	104.36	102.34	107.20	112.21	111.80
Insurance	100.98	101.13	101.82	104.87	104.36	102.06	107.24	112.27	111.74
Real estate	103.92	104.56	105.70	106.23	108.49	106.48	104.41	111.25	118.00
Ownership of dwellings	105.04	106.14	97.76	99.27	101.89	101.28	104.35	111.15	117.96
4. Services	88.57	85.43	83.54	85.77	87.85	86.25	72.54	76.29	83.16
a. Government	95.01	89.10	84.38	86.72	89.24	86.25	66.14	70.40	79.75
b. Private	83.91	82.80	82.91	85.07	86.77	86.23	78.11	81.56	86.43
Educational	72.62	71.54	69.99	70.68	73.92	73.39	63.29	66.70	72.27
Medical & health	101.96	101.74	103.67	106.83	111.83	112.63	97.46	95.75	101.51
Business	73.65	72.79	70.86	71.22	70.28	70.81	68.07	78.11	83.75
Recreational	97.90	95.60	98.60	100.38	98.90	95.16	83.66	88.35	92.55
Personal	86.80	87.36	86.23	89.34	94.77	93.00	81.73	84.18	89.71
Hotels & restaurants	79.66	78.56	79.39	81.91	84.01	84.59	78.84	79.88	84.34
Others	82.60	79.94	80.54	83.68	82.55	80.60	74.43	80.88	82.11
GROSS NATIONAL PRODUCT at market prices	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 5

MATRIX OF TECHNICAL COEFFICIENTS (25 x 25): 1983

Sector Code	Description	1	2	3	4	5	6	7
1	Agri. crops incl. agri. services	0.0573152	0.0061851	0.0013162	0	0	0	0.2996586
2	Livestock and poultry	0	0.1155152	0	0	0	0	0.1263528
3	Fishery	0	0	0.0135210	0	0	0	0.0003147
4	Forestry & logging	0.0001444	0	0.0000027	0.0539784	0.0038178	0.0053680	0.0003147
5	Metallic mining	0	0	0	0	0	0	0
6	Non-metallic mining	0	0	0.0004608	0	0	0	0.0000004
7	Food manufactures	0	0.2486918	0.0341181	0	0	0	0.1488550
8	Beverage & tobacco	0	0	0.0002153	0	0	0	0
9	Textile & leather products	0.0008109	0	0.0007607	0.0000184	0.0000624	0	0.0010638
10	Wood and wood products	0.0005615	0	0.0030479	0.0005740	0.0011028	0.0019343	0.0000618
11	Paper, publishing & printing	0.0024094	0.0014083	0.0004311	0.0003125	0.0001989	0.0007600	0.0001485
12	Chem & chem prods exp petroleum	0.0536014	0.0200925	0.0112138	0.0028747	0.0460143	0.0191609	0.0050187
13	Petroleum prods	0.0048047	0.0081702	0.0697118	0.0529692	0.0841972	0.0926073	0.0274128
14	Non-metallic mineral prods	0.0005408	0	0.0000594	0.0023755	0	0	0.0000537
15	Basic metal ind	0	0	0.0000459	0.0000607	0.0215545	0.0000678	0.0004506
16	Metal prods & machinery	0.0010671	0.0001424	0.0061701	0.0118008	0.0246711	0.0190272	0.0057808
17	Misc mfts & scrap	0.0007492	0.0000450	0.0000213	0.0000086	0.0070342	0.0158075	0.0002158
18	Construction	0.0000294	0.0012275	0	0	0.0027788	0.0150035	0.0000430
19	Elec, gas & water	0.0001510	0.0109419	0.0010275	0.0005795	0.0432628	0.0198275	0.0156743
20	Transport, storage & communication	0.0115819	0.0221480	0.0294935	0.0195439	0.0077210	0.0144782	0.0146317
21	Wholesale & retail trade	0.0289573	0.0735572	0.0398097	0.0257960	0.0560919	0.0416872	0.0701074
22	Finance, insur & real estate	0.0019372	0.0016685	0.0068194	0.0018644	0.0007867	0.0026744	0.0007260
23	Govt services	0	0	0	0	0	0	0
24	Private services	0.0065246	0.0035652	0.0024789	0.0073264	0.0100401	0.0207157	0.0010402
25	Notional industry	0	0	0	0	0	0	0
Sub-total		0.1711869	0.5133595	0.2207261	0.1800837	0.3093352	0.2691202	0.7453868
32	Salaries & wages	0.4507012	0.2319212	0.3122293	0.2408894	0.2007984	0.3372585	0.0804848
33	Operating surplus	0.3781118	0.2547192	0.4670444	0.5790267	0.4898662	0.3936212	0.1741283
Sub-total		0.8288130	0.4866404	0.7792738	0.8199162	0.6906647	0.7308797	0.2546131
Total		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

Source: The Interindustry Accounts of the Philippines: 1983 Update, National Economic

TABLE 5

MATRIX OF TECHNICAL COEFFICIENTS (25 x 25): 1983 (Contd.)

Sector Code	Description	8	9	10	11	12	13	14
1	Agri. crops incl. agri. services	0.0357000	0.0479658	0.0000870	0	0.0346474	0	0
2	Livestock and poultry	0	0	0	0	0	0	0
3	Fishery	0	0	0	0	0	0	0
4	Forestry & logging	0	0	0.4046307	0.0322165	0.0017704	0	0
5	Metallic mining	0	0	0	0	0.0000154	0	0.0002664
6	Non-metallic mining	0	0.0000002	0	0.0004521	0.0028941	0.4973782	0.1300616
7	Food manufactures	0.1075761	0.0080451	0	0	0.1029510	0	0
8	Beverage & tobacco	0.2353619	0	0	0	0.0011736	0	0
9	Textile & leather products	0.0003422	0.2874761	0.0054046	0.0144655	0.0057782	0	0.0005705
10	Wood and wood products	0.0015527	0.0002279	0.0769705	0.0038344	0.0000957	0.0000419	0.0009207
11	Paper, publishing & printing	0.0108998	0.0012765	0.0004247	0.3157679	0.0067570	0.0003603	0.0113019
12	Chem & chem prods exp petroleum	0.0116510	0.0609582	0.0262793	0.0607855	0.2840674	0.0120225	0,0202852
13	Petroleum prods	0.0243408	0.0375095	0.0725352	0.0396015	0.0323028	0.0087078	0.2247999
14	Non-metallic minerals prods	0.0050544	0.0000997	0.0004280	0.0004870	0.0148121	0.0001265	0.0656177
15	Basic metal ind	0	0.0000063	0.0064318	0.0009646	0.0010940	0.0001499	0.0062316
16	Metal prods & machinery	0.0043145	0.0012045	0.0036035	0.0124076	0.0066167	0.0031214	0.0047189
17	Misc mfts & scrap	0.0018368	0.0305115	0.0013382	0.0081303	0.0111561	0.0006346	0.0091249
18	Construction	0.0001504	0.0000503	0.0000939	0.0020559	0.0004138	0.0002888	0.0011381
19	Elec, gas & water	0.0129418	0.0187723	0.0150628	0.0375177	0.0265867	0.0003533	0.0170964
20	Transport, storage & communication	0.0159987	0.0166393	0.0238194	0.0283206	0.0204792	0.0295792	0.0201111
21	Wholesale & retail trade	0.0611102	0.0602204	0.0752717	0.0660540	0.0677157	0.0878760	0.0561680
22	Finance, insur & real estate	0.0025300	0.0025800	0.0025854	0.0085406	0.0067879	0.0031069	0.0030241
23	Govt services	0	0	0	0	0	0	0
24	Private services	0.0137993	0.0041794	0.0043662	0.0166027	0.0247657	0.0217578	0.212231
25	Notional industry	0	0	0	0	0	0	0
Sub-total		0.5451613	0.5777238	0.7193337	0.6482053	0.6528819	0.6655059	0.5926611
32	Salaries & wages	0.0984966	0.1768417	0.1059476	0.1151811	0.1048179	0.0133961	0.1071156
33	Operating surplus	0.3563420	0.2454343	0.1747186	0.2366134	0.2423001	0.3210979	0.3002232
Sub-total		0.4548386	0.4222761	0.2806662	0.3517946	0.3471180	0.3344940	0.4073388
Total		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

Source: The Interindustry Accounts of the Philippines: 1983 Update, National Economic

TABLE 5

MATRIX OF TECHNICAL COEFFICIENTS (25 x 25): 1983(Contd.)

Sector Code	Description	15	16	17	18	19	20	21
1	Agri. crops incl. agri. services	0	0	0	0	0	0.0003195	0
2	Livestock and poultry	0	0	0	0	0	0.0026018	0
3	Fishery	0	0	0.1435159	0	0	0.0043035	0
4	Forestry & logging	0	0	0.0030353	0.0046215	0.0073472	0	0
5	Metallic mining	0.0932325	0.0024351	0	0	0	0	0
6	Non-metallic mining	0	0.0001587	0.0001073	0.0184907	0	0.0000001	0
7	Food manufactures	0	0	0	0	0	0.0121450	0
8	Beverage & tobacco	0	0	0	0	0	0.0033083	0
9	Textile & leather products	0	0.0005216	0.0292482	0.0001722	0.0000391	0.0002498	0.0002677
10	Wood and wood products	0.0001300	0.0032125	0.0058846	0.0934188	0.0000487	0.0010753	0.0021044
11	Paper, publishing & printing	0.0000959	0.0018010	0.0048231	0.0012862	0.0011925	0.0056729	0.0126464
12	Chem & chem prods exp petroleum	0.0167604	0.0450169	0.1778444	0.0329226	0.0146854	0.0294486	0.0131271
13	Petroleum prods	0.0594816	0.0250313	0.0245899	0.0230111	0.4754598	0.1670708	0.0070797
14	Non-metallic mineral prods	0.0019026	0.0039207	0.0038933	0.0725012	0.0046047	0.0004929	0.0013290
15	Basic metal ind	0.4153548	0.1701103	0.0059768	0.0605213	0.0011470	0.0008735	0
16	Metal prods & machinery	0.0034039	0.2156572	0.0155245	0.0741867	0.0227065	0.0698915	0.0045023
17	Misc mfts & scrap	0.0003345	0.0054587	0.0520162	0.0015298	0.0000512	0.0004598	0.0019588
18	Construction	0.0015557	0.0008589	0.0004573	0.0023858	0.0006583	0.0008680	0.0066029
19	Elec, gas & water	0.0323174	0.0217721	0.0226850	0.0138548	0.0332112	0.0093263	0.0197395
20	Transport, storage & communication	0.0178309	0.0369331	0.0228906	0.0118851	0.0180145	0.0546867	0.0387492
21	Wholesale & retail trade	0.0783014	0.0682799	0.0805614	0.0415032	0.0664418	0.0534316	0.0117552
22	Finance, insur & real estate	0.0045899	0.0092032	0.0055772	0.0020408	0.0009637	0.0071519	0.0533826
23	Govt services	0	0	0	0	0	0	0
24	Private services	0.0054083	0.0169921	0.0089626	0.0118179	0.0100986	0.0325019	0.0472908
25	Notional industry	0	0	0	0	0	0	0
Sub-total		0.7307006	0.6273642	0.6075942	0.4661506	0.6566710	0.4558807	0.2205363
32	Salaries & wages	0.0407004	0.1577932	0.1875778	0.1719018	0.1159371	0.2520291	0.2519605
33	Operating surplus	0.2285988	0.2148425	0.2048278	0.3619475	0.2273918	0.2920900	0.5275030
Sub-total		0.2692993	0.3726357	0.3924057	0.5338493	0.3433289	0.5441192	0.7794636
Total		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.000000

Source: The Interindustry Accounts of the Philippines: 1983 Update National Economic

TABLE 5

MATRIX OF TECHNICAL COEFFICIENTS (25 x 25): 1983(Contd.)

Sector Code	Description	22	23	24
1	Agri. crops incl. agri. services	0	0	0.0048854
2	Livestock and poultry	0	0	0.0172785
3	Fishery	0	0	0.0182269
4	Forestry & logging	0	0	0.0000434
5	Metallic mining	0	0	0
6	Non-metallic mining	0.0008232	0	0.0000049
7	Food manufactures	0	0	0.0867213
8	Beverage & tobacco	0	0	0.0010761
9	Textile & leather products	0.0006171	0	0.0055407
10	Wood and wood products	0.0027617	0	0.0016722
11	Paper, publishing & printing	0.0165275	0	0.0159365
12	Chem & chem prods exp petroleum	0.0063329	0	0.0206192
13	Petroleum prods	0.0031240	0	0.0206208
14	Non-metallic mineral prods	0.0106099	0	0.0022307
15	Basic metal Ind	0.0002214	0	0
16	Metal prods & machinery	0.0051211	0	0.0112025
17	Misc mfts & scrap	0.0015065	0	0.0077846
18	Construction	0.0056801	0	0.0059383
19	Elec, gas & water	0.0062252	0	0.0455139
20	Transport, storage & communication	0.0177314	0	0.0307447
21	Wholesale & retail trade	0.0111627	0	0.0336102
22	Finance, insur & real estate	0.0129075	0	0.0142126
23	Govt services	0	0	0
24	Private services	0.0675650	0	0.0657408
25	Notional Industry	0	0	0
Sub-total		0.1689180	0	0.4096052
32	Salaries & wages	0.1535111	1	0.3038385
33	Operating surplus	0.6775707	0	0.2865562
Sub-total		0.8310819	1	0.5903947
Total		1.0000000	1.0000000	1.0000000

Source: The Interindustry Accounts of the Philippines: 1983 Uptake National Economic

TABLE 6a

FORWARD AND BACKWARD LINKAGE EFFECTS - 1974

Code	Input/Output 1974	Forward Linkage	Backward Linkage
1	Trad'l dom crops	1.17454	0.66906
2	Trad'l exp crops	1.51608	0.72286
3	Ntrad'l dom crops	0.73376	0.62402
4	Ntrad'l exp crops	0.63724	0.67606
5	Livestock & poultry	1.12588	0.82149
6	Fishery	0.62773	0.65807
7	Forestry & logging	1.05522	0.71223
8	Mining	1.81924	0.79475
9	Rice milling	0.57595	1.13651
10	Sugar milling	0.63883	0.98662
11	Dairy prods	0.70619	1.18106
12	Coconut oil	0.84465	0.90744
13	Meat prods	0.76159	1.18161
14	Other mftd foods	0.88369	1.14020
15	Bev prods	0.61736	0.94253
16	Cigar/tobacco mftg	0.66640	0.96797
17	Textile goods	1.16876	1.32205
18	Wearing apparel	0.58675	1.23053
19	Lumber, plywood & veneer	0.79708	1.12135
20	Furnitures & fixtures	0.59035	1.11227
21	Paper & paper prods	1.33198	1.03205
22	Pub & printing	0.64051	0.97643
23	Leather & prods	0.61384	1.14893
24	Rubber prods	0.68574	1.19023
25	Basic industrial chem	1.52244	1.05730
26	Other chem prods	1.58423	1.16121
27	Petrol prods	2.16411	1.06143
28	Hydraulic cement	0.65410	1.20004
29	Other nmetal mineral prods	0.73150	1.05222
30	Basic metal prods	2.45733	1.44168
31	Metal prods	0.82153	1.34270
32	Machinery	0.63472	1.08237
33	Elect l machinery	0.66940	1.04815
34	Transport equipt	0.63152	0.93650
35	Misc mfts, n.e.c. scrap	0.71353	1.12814
36	Construction	0.63287	1.05940
37	Utilities	0.96237	1.01642
38	Transpo/comm/storage	1.04249	0.90077
39	Trade	2.57941	0.69550
40	Fin/ins/real est	1.45651	0.69262
41	Govt services	0.55434	1.00087
42	Priv services	1.38824	0.86634

Source: The 1974 Input-Output Table, National Economic and Development Authority, 1975. (Additional processing by Philippine Center for Policy Studies).

TABLE 6b

FORWARD AND BACKWARD LINKAGE EFFECTS - 1979

Code	Input/Output 1979	Forward Linkage	Backward Linkage
1	Trad'l dom crops	1.13076	0.70472
2	Trad'l exp crops	1.74612	0.66349
3	Ntrad'l dom crops	1.32699	0.61328
4	Ntrad'l exp crops	0.58150	0.71182
5	Livestock & poultry	1.15051	0.98672
6	Fishery	0.61199	0.69007
7	Forestry & logging	1.24081	0.64625
8	Mining	2.33649	0.73354
9	Rice & corn milling	0.71066	1.04539
10	Sugar milling & refining	0.63644	0.96288
11	Milk & other dairy prods	0.70834	1.19919
12	Crude coco, veg/anml oils/fats	1.00819	1.02521
13	Refined (ckg) oil & margarine	0.56901	1.18162
14	Slaught'g & pkg, meat & prods	0.71347	1.21776
15	Flour & other grain mills	0.59342	1.01173
16	Animal feeds	0.84236	1.19459
17	Misc food mfts	0.71874	1.13881
18	Beverage prods	0.54159	0.99959
19	Cigar & tobacco mfts	0.72332	1.06652
20	Textile goods	1.03713	1.07682
21	Wearing apparel & ftwr	0.53502	1.04450
22	Lumber, plywood & veneer	0.53715	1.07226
23	Other wood, cork & cane prods	0.51575	1.18835
24	Furnitures & fixtures	1.43537	1.18346
25	Paper & paper prods	0.58095	1.11951
26	Publishing & printing	0.59824	1.14143
27	Leather & leather prods	0.88959	1.04239
28	Rubber & plastic prods	0.65865	1.15222
29	Drugs & medicines	0.75812	1.13970
30	Industrial chemicals	1.53601	1.01163
31	Fertilizers	0.77407	1.10763
32	Other chemical prods	1.45331	1.06510
33	Petroleum prods	2.72716	0.97233
34	Cement	0.55368	1.12629
35	Glass/other nmetal mine prods	0.64705	0.96717
36	Basic metal prods	2.57232	1.31972
37	Fabricated metal prods	0.74417	1.26928
38	Mach & equip't exc elect'l	0.58309	1.13428
39	Elect'l mach/apparatus/applnc	0.69351	1.18206
40	Transport equip't	0.74784	1.00375

(contd)

TABLE 6b (contd)

Code	Input/Output 1979	Forward Linkage	Backward Linkage
41	Misc mfts, n.e.c. scrap	0.66080	1.11595
42	Construction	0.57004	1.00445
43	Utilities	1.04253	1.05022
44	Trans/comm/storage	1.20194	0.86835
45	Comm'l trade	3.01105	0.63110
46	Fin/ins/real est	1.25969	0.61744
47	Gov't services	0.50066	0.74125
48	Priv services	1.2843911	0.85819

Source: The 1979 Input-Output Table, National Economic & Development Authority, 1980. (Additional processing by Philippine Center for Policy Studies).

TABLE 6c

FORWARD AND BACKWARD LINKAGE EFFECTS - 1983

Code	Input/Output 1983	Forward Linkage	Backward Linkage
1	Trad'l dom crops	1.46441	0.66676
2	Trad'l exp crops	1.50662	0.63868
3	Ntrad'l dom crops	0.98789	0.54128
4	Ntrad'l exp crops	0.59196	0.61318
5	Livestock & poultry	1.28308	0.99314
6	Fishery	0.71267	0.68067
7	Forestry & logging	1.16491	0.62900
8	Mining	2.35486	0.77353
9	Rice & corn milling	0.63258	0.99686
10	Sugar milling & refining	0.55987	1.00272
11	Milk & other dairy prods	0.70109	1.23321
12	Crude coco, veg/anml oils/fats	1.31360	1.06013
13	Refined (ckg) oil & margarine	0.60846	1.22569
14	Slaught'g & pkg, meat & prods	0.77117	1.21984
15	Flour & other grain mills	0.74449	1.09813
16	Animal feeds	0.85265	1.11438
17	Misc food mfts	0.79089	1.11064
18	Beverage prods	0.56825	0.96650
19	Cigar & tobacco mfts	0.69963	1.04151
20	Textile goods	0.95295	1.07474
21	Wearing apparel & ftwr	0.49491	1.02590
22	Lumber, plywood & veneer	0.85867	1.02196
23	Other wood, cork & cane prods	0.48712	0.98025
24	Furniture & fixtures	0.47918	1.12860
25	Paper & paper prods	1.08274	1.18581
26	Publishing & printing	0.55255	1.11402
27	Leather & leather prods	0.55282	1.22276
28	Rubber & plastic prods	1.24935	1.16238
29	Drugs & medicines	0.62278	1.13393
30	Industrial chemicals	1.54690	1.11688
31	Fertilizers	0.68904	1.16437
32	Other chemical prods	0.82854	1.10206
33	Petroleum prods	2.98780	0.99776
34	Cement	0.54801	1.09510
35	Glass/other nmetal mine prods	0.64061	0.96515
36	Basic metal prods	2.01527	1.27956
37	Fabricated metal prods	0.81278	1.25295
38	Mach & equip't exc elect'l	0.59352	1.12434
39	Elect'l mach/apparatus/applnc	0.84158	1.15380
40	Transport equip't	0.68885	1.15099

(contd)

TABLE 6c (contd)

Code	Input/Output 1983	Forward Linkage	Backward Linkage
41	Misc mfts, n.e.c. scrap	0.69807	1.04433
42	Construction	0.54563	0.96369
43	Utilities	1.36830	1.11565
44	Trans/comm/storage	1.56675	0.92266
45	Comm'l trade	3.23974	0.67242
46	Fin/ins/real est	1.01106	0.63409
47	Gov't services	0.47750	0.71220
48	Priv services	1.25790	0.87580

Source: The Interindustry Accounts of the Philippines: 1983 Update, National Economic and Development Authority. (Additional processing by Philippine Center for Policy Studies).

TABLE 7

LABOUR PRODUCTIVITY MEASURE
1971, 1975, 1981, 1983, 1985 and 1986
(in thousands of pesos, 1972 prices per employed person)

	1971	1975	1981	1983	1985	1986
MAJOR INDUSTRY GROUP						
1. AGRICULTURE, FISHERY AND FORESTRY	2.45	2.35	2.76	2.51	2.71	2.61
2. INDUSTRY	8.25	10.28	13.74	13.01	10.33	10.08
a. Mining and quarrying	21.73	26.76	27.19	19.27	13.81	10.25
b. Manufacturing	8.76	10.02	13.26	13.31	11.21	11.39
c. Electricity, gas and water	8.98	13.20	15.14	15.28	19.63	24.56
d. Construction	4.50	8.99	13.23	11.03	6.23	4.99
3. SERVICES	5.17	6.10	6.13	5.96	4.74	4.58
a. Wholesale and retail trade	4.57	5.23	6.51	6.34	5.39	5.02
b. Transportation, storage & communication	4.13	6.66	6.87	6.34	5.32	5.91
c. Financing, insurance, real estate, and business services	a/	a/	21.49	21.29	11.65	11.44
d. Community, social and personal services	3.35	3.82	4.02	3.88	3.39	3.26
Total	4.22	4.72	5.50	5.13	4.43	4.26

a The classification for these years is different.
Items in finance, insurance, real estate, and business services are classified under either commerce (which includes trade and banking sectors) or community, social, business and personal services.

Sources: Tables 2a and 3a.

TABLE 8a

SHARE OF CONSUMPTION GOODS BY INCOME GROUPS
(In Percent)

	1	2	3	4	5	6	7	8
cereals	0.278	0.302	0.248	0.238	0.236	0.236	0.219	0.124
fish	0.105	0.09	0.107	0.1	0.1	0.01	0.099	0.097
meat & eggs	0.049	0.054	0.064	0.053	0.059	0.06	0.063	0.068
milk	0.008	0.013	0.012	0.015	0.017	0.017	0.02	0.02
roots	0.103	0.104	0.102	0.1	0.093	0.087	0.079	0.073
miscellanous	0.065	0.064	0.062	0.06	0.068	0.063	0.061	0.059
outside home	0.014	0.005	0.006	0.009	0.007	0.006	0.006	0.006
beverages	0.017	0.015	0.017	0.017	0.017	0.015	0.018	0.019
tobacco	0.033	0.026	0.026	0.027	0.03	0.028	0.027	0.026
housing	0.085	0.072	0.083	0.071	0.079	0.079	0.081	0.089
fuel	0.061	0.053	0.052	0.059	0.051	0.052	0.051	0.056
HH furnishing	0.012	0.014	0.018	0.015	0.019	0.015	0.019	0.018
HH operations	0.026	0.023	0.021	0.023	0.021	0.02	0.021	0.021
clothing	0.056	0.059	0.069	0.081	0.077	0.081	0.086	0.078
personal care	0.019	0.015	0.018	0.019	0.018	0.018	0.019	0.02
medical care	0.008	0.013	0.015	0.017	0.014	0.017	0.017	0.018
transport	0.015	0.021	0.021	0.023	0.024	0.026	0.034	0.027
recreation	0.005	0.009	0.011	0.008	0.011	0.009	0.012	0.013
education	0.011	0.016	0.016	0.021	0.022	0.024	0.028	0.031
personal effects	0.005	0.003	0.005	0.007	0.006	0.009	0.007	0.007
misc goods & serv	0.027	0.029	0.027	0.037	0.031	0.038	0.033	0.04

Source: Lim and Bautista, "The Impact of Income Redistribution on the Composition of Output Demand," Philippine Review of Economics and Business.

TABLE 8a(Contd.)

SHARE OF CONSUMPTION GOODS BY INCOME GROUPS
(In Percent)

	9	10	11	12	13	14	15	16	17
cereals	0.2	0.187	0.171	0.146	0.132	0.109	0.122	0.087	0.046
fish	0.088	0.089	0.08	0.07	0.067	0.058	0.056	0.04	0.026
meat & eggs	0.07	0.076	0.078	0.079	0.079	0.084	0.076	0.069	0.049
milk	0.02	0.023	0.026	0.022	0.023	0.025	0.025	0.023	0.015
roots	0.07	0.063	0.058	0.049	0.045	0.04	0.04	0.032	0.02
miscellanous	0.059	0.058	0.052	0.05	0.044	0.04	0.041	0.03	0.019
outside home	0.007	0.012	0.018	0.012	0.012	0.015	0.017	0.016	0.095
beverages	0.018	0.019	0.016	0.014	0.016	0.015	0.02	0.012	0.011
tobacco	0.026	0.026	0.024	0.2	0.019	0.019	0.019	0.011	0.008
housing	0.096	0.094	0.102	0.112	0.126	0.126	0.12	0.178	0.154
fuel	0.046	0.043	0.046	0.044	0.039	0.047	0.042	0.035	0.032
HH furnishing	0.019	0.025	0.023	0.029	0.034	0.033	0.033	0.035	0.016
HH operations	0.02	0.021	0.021	0.023	0.021	0.025	0.03	0.032	0.03
clothing	0.077	0.08	0.088	0.083	0.071	0.076	0.073	0.068	0.06
personal care	0.018	0.02	0.02	0.021	0.02	0.018	0.017	0.016	0.014
medical care	0.018	0.019	0.017	0.02	0.023	0.023	0.017	0.021	0.014
transport	0.034	0.033	0.04	0.052	0.074	0.06	0.072	0.075	0.084
recreation	0.021	0.016	0.018	0.026	0.025	0.031	0.035	0.024	0.019
education	0.039	0.042	0.053	0.056	0.051	0.062	0.053	0.066	0.037
personal effects	0.008	0.009	0.007	0.012	0.017	0.016	0.014	0.016	0.016
misc goods & serv	0.046	0.045	0.042	0.06	0.062	0.078	0.078	0.114	0.235

Sources: Lim and Bautista, "The Impact of Income Redistribution on the Composition of Output Demand, "Philippine Review of Economics and Business.

TABLE 8b

SHARE OF CONSUMPTION OF PRODUCER GOODS BY INCOME CLASSES
In Percent (Baserun)

	1	2	3	4	5	6	7	8
Agri.	0.195045	0.187199	0.203023	0.192358	0.199728	0.187142	0.180978	0.179805
Forestry	0.006366	0.005392	0.006216	0.005317	0.005917	0.005917	0.006066	0.006666
Mining	0.000467	0.000396	0.000456	0.000390	0.000434	0.000434	0.000445	0.000489
pfood	0.413421	0.429816	0.397482	0.377223	0.396174	0.378651	0.365229	0.361824
Textiles	0.036242	0.038333	0.045010	0.052163	0.050109	0.052163	0.055721	0.050622
Wood	0.009589	0.009633	0.011434	0.011339	0.012024	0.011705	0.012851	0.012390
Paper	0.001347	0.001519	0.001606	0.001541	0.001667	0.001533	0.001795	0.001892
Chemicals	0.028417	0.026154	0.026865	0.029883	0.027417	0.028474	0.028586	0.030440
Petroleum	0.027735	0.024887	0.024536	0.026910	0.024395	0.024713	0.025420	0.026535
Cement	0.001686	0.001766	0.002195	0.001839	0.002247	0.001905	0.002266	0.002248
Metals	0.013306	0.013171	0.017052	0.017114	0.018575	0.019281	0.019976	0.020263
Tr ecpt	0.003822	0.005350	0.005350	0.005860	0.006115	0.006624	0.008663	0.006879
E/g/w	0.010656	0.009259	0.009084	0.010307	0.008909	0.009084	0.008909	0.009783
Const	0.041688	0.035565	0.039270	0.036351	0.037663	0.037853	0.038372	0.042154
Trade	0.098877	0.098250	0.098852	0.099969	0.099282	0.099229	0.100034	0.099575
Banking	0.014604	0.014161	0.014446	0.016420	0.015299	0.017344	0.016041	0.018719
T/s/c	0.033555	0.037174	0.037051	0.039761	0.040112	0.041553	0.046709	0.045152
Services	0.063164	0.061967	0.070064	0.075247	0.073925	0.076387	0.091929	0.085556

Source: Lim and Bautista, "The Impact of Income Redistribution on the Composition of Ouput Demand," Philippine Review of Economics and Business.

TABLE 8b(Contd.)

SHARE OF CONSUMPTION OF PRODUCER GOODS BY INCOME CLASSES
In Percent (Baserun)

	9	10	11	12	13	14	15	16	17
Agri.	0.171745	0.169046	0.157998	0.147899	0.142959	0.136777	0.132603	0.118128	0.111716
Forestry	0.007190	0.007040	0.007639	0.008388	0.009437	0.009437	0.008988	0.013332	0.011534
Mining	0.000528	0.000517	0.000561	0.000616	0.000693	0.000693	0.00066	0.000979	0.000847
Pfood	0.350421	0.344684	0.324746	0.292356	0.276302	0.259404	0.272419	0.217706	0.199456
Textiles	0.050109	0.052640	0.057409	0.054951	0.048019	0.051026	0.049156	0.046258	0.039177
Wood	0.012845	0.013896	0.014563	0.015686	0.016410	0.016479	0.016136	0.018539	0.014086
Paper	0.002409	0.002189	0.002418	0.003002	0.002829	0.003403	0.003696	0.003217	0.002534
Chemicals	0.030201	0.031486	0.030702	0.035593	0.035132	0.038442	0.039123	0.046487	0.062523
Petroleum	0.024135	0.023234	0.025079	0.026289	0.026910	0.028782	0.029139	0.029369	0.028217
Cement	0.002414	0.002985	0.002786	0.003395	0.003920	0.003856	0.003823	0.004406	0.002608
Metals	0.023635	0.026095	0.024675	0.033496	0.039564	0.040337	0.038836	0.042146	0.034267
Tr ecpt	0.008663	0.008408	0.010192	0.013249	0.018855	0.015288	0.018345	0.01911	0.021403
E/g/w	0.008036	0.007512	0.008036	0.007686	0.006813	0.008210	0.007337	0.006114	0.005590
Const	0.042733	0.041455	0.044858	0.048019	0.052026	0.053546	0.050472	0.069679	0.060611
Trade	0.098420	0.098833	0.098738	0.100384	0.101423	0.101129	0.101879	0.100916	0.095680
Banking	0.021025	0.020575	0.020330	0.02638	0.028070	0.032745	0.032271	0.047372	0.080833
T/s/c	0.050516	0.050062	0.057288	0.064573	0.073217	0.071192	0.074004	0.078599	0.072264
Services	0.094969	0.099438	0.111976	0.118030	0.117414	0.129245	0.121106	0.137634	0.156648

Source: Lim and Bautista, "The Impact of Income Redistribution on the Composition of Output Demand," Philippine Review of Economics and Business.

TABLE 9

DEGREE OF SELF-SUFFICIENCY BY SECTOR
(In Per Cent)

	1979	1983
AGRICULTURAL GROUP	102.3	99.4
1. Crops	101.7	97.6
2. Livestock and poultry	99.8	99.9
3. Fishery	101.0	101.0
4. Forestry and logging	117.6	106.5
INDUSTRY GROUP	91.2	90.4
5. Metallic mining	334.6	535.3
6. Non-metallic mining/quarrying	12.3	11.0
7. Food processing	111.8	107.9
8. Beverage and tobacco manufacture	99.1	99.1
9. Textiles and leather products	105.8	108.9
10. Wood and wood products	161.8	139.3
11. Paper, publishing and printing	80.0	80.7
12. Chemicals and chemical products	75.0	72.3
13. Petroleum products	89.9	93.7
14. Non-metallic mineral products	94.8	97.1
15. Basic metals	67.7	71.7
16. Metal products and machinery	51.7	59.8
17. Miscellaneous manufactures and scrap	76.5	79.3
18. Construction	100.3	101.5
19. Electricity, gas and water	100.0	100.0
COMMERCE-SERVICES GROUP	107.0	108.4
20. Transportation, communication and storage	109.1	106.6
21. Wholesale and retail trade	110.1	111.4
22. Finance, insurance and real estate	103.7	100.2
23. Government services	100.0	100.0
24. Private services	105.8	121.1
ALL SECTORS	97.1	96.9

Source: The Interindustry Accounts of the Philippines: 1983 Update, National Economic and Development Authority, 1987.

TABLE 10

EXPORT-OUTPUT, IMPORT-OUTPUT AND LABOUR-OUTPUT RATIOS
BASED ON 1979 INPUT-OUTPUT TABLE

	Export-Output Ratio	Import-Output Ratio	Labour-Output Ratio	Net Export-Output Ratio
Agriculture & fish.	0.03839	-0.02631	0.32533	0.01208
Forestry	0.14999	-0.00736	0.21083	0.14262
Mining	0.65759	-1.24158	0.20288	-0.58399
Processed food	0.06006	-0.02795	0.08674	0.03212
Textiles	0.23442	-0.10142	0.14332	0.13300
Wood, rubber & plastic	0.12713	-0.18374	0.10629	-0.05662
Paper, printing	0.11387	-0.29351	0.16295	-0.17964
Chem. prods.	0.24045	-0.24740	0.08315	-0.00696
Petroleum prods.	0.01641	-0.12845	0.01137	-0.11204
Cement & non met. pr.	0.05293	-0.10795	0.11517	-0.05502
Metals, mach. & misc.	0.17332	-0.75871	0.09907	-0.58539
Transp. eqpt.	0.04546	-1.07337	0.21272	-1.02791
Elect., gas, water	0.00000	0.00000	0.10531	0.00000
Construction	0.00514	-0.00253	0.14602	0.00261
Trade	0.09193	0.00000	0.30695	0.09193
Banking	0.07623	-0.00789	0.22901	0.06833
Transp. stor. & comm.	0.15903	-0.07592	0.24438	0.08311
Services	0.12439	-0.08656	0.47863	0.03783

Source: 1979 Input-Output Table, NEDA.
Joseph Lim and Carlos Bautista, "The Impact of Income Redistribution on the Composition of Output Demand," Philippine Review of Economics and Business.

TABLE 11

NON-MERCHANDISE TRADE
(in million dollars; percentage shares in parentheses)

Item	1978	1979	1980	1981	1982	1983	1984	1985 P
NON-MERCHANDISE TRADE, NET	-107	-311	-399	-309	-1040	-740	-823	26
EARNINGS	1484	1655	2222	2896	2983	3127	2626	3288
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Freight & mdse. insurance	82	91	100	106	101	100	135	167
	(6)	(5)	(5)	(4)	(3)	(3)	(5)	(5)
Travel	210	238	320	344	450	465	366	506
	(14)	(14)	(14)	(12)	(15)	(15)	(14)	(15)
Investment income	181	213	341	529	369	375	325	359
	(12)	(13)	(15)	(18)	(12)	(12)	(12)	(11)
of which: Interest	179	200	336	519	365	374	321	346
	(12)	(12)	(15)	(18)	(12)	(12)	(12)	(11)
Government	204	193	233	259	281	292	257	373
	(14)	(12)	(10)	(9)	(9)	(9)	(10)	(11)
Personal income	291	365	421	546	810	944	659	694
of which:	(20)	(22)	(19)	(19)	(27)	(30)	(25)	(21)
Contract workers	209	265	300	384	642	660	473	598
	(14)	(16)	(14)	(13)	(22)	(21)	(18)	(18)
Others	516	555	807	1112	972	951	884	1189
	(35)	(34)	(36)	(38)	(33)	(30)	(34)	(36)
PAYMENTS	1591	1966	2621	3205	4023	3867	3449	3262
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Freight & mdse. insurance	411	471	568	533	596	495	358	340
	(26)	(24)	(22)	(17)	(15)	(13)	(10)	(10)
Other transportation	91	170	192	248	220	167	91	38
	(6)	(9)	(7)	(8)	(5)	(4)	(3)	(1)
Travel	51	74	106	126	147	221	19	37
	(3)	(4)	(4)	(4)	(4)	(6)	(1)	(1)

(contd)

TABLE 11 (contd)

Item	1978	1979	1980	1981	1982	1983	1984	1985 P
Investment expense	587 (37)	779 (40)	1173 (45)	1564 (49)	2192 (54)	2147 (56)	2359 (68)	2394 (73)
of which:								
Profits, earnings, & div.	85 (5)	95 (5)	159 (6)	128 (4)	158 (4)	136 (4)	87 (3)	134 (4)
Interest expense	440 (28)	626 (32)	975 (37)	1374 (43)	1990 (49)	1985 (51)	2257 (65)	2250 (69)
Government	104 (7)	92 (5)	121 (5)	110 (3)	107 (3)	135 (3)	45 (1)	22 (1)
Others	347 (22)	380 (19)	461 (18)	624 (19)	761 (19)	702 (18)	577 (17)	431 (13)

P Preliminary.

Source: Gloria M. Arroyo, "A National Study of Trade in Services of the Philippines", 1986 (Original data from the Central Bank of the Philippines).

FOOTNOTES

1. The author would like to thank Fe Lisondra and Maria Peregrina Makabenta for doing the computer work, and Drs. Koh Ai Tee and Dorothy Riddle for valuable comments during the workshop. Special thanks should also be given to Jean Marie Villar and Rosita Santos for typing the drafts and the final output.

2. The measure of forward linkage for sector i is given by the formula

$$U_i = \frac{\sum_{j=1}^{n} r_{ij}}{\frac{1}{n}\sum_{i=1}^{n}\sum_{j=1}^{n} r_{ij}}$$

where r_{ij}'s are the elements in the inverse matrix. A measure of more than 1 indicates that the sector provides more inputs to the economy more than the average sector.

The measure of backward linkage for sector j is given by the formula:

$$U_j = \frac{\sum_{i=1}^{n} r_{ij}}{\frac{1}{n}\sum_{i=1}^{n}\sum_{j=1}^{n} r_{ij}}$$

Again a measure of more than 1 indicates that the sector purchases inputs from the economy more than the average.

3. For more details on government policies on services, please look at Gloria M. Arroyo, "A National Study of Trade in Services of the Philippines", 1986.

REFERENCES

Arroyo, Gloria M, 'A National Study of Trade in Services of the Philippines, 1986.

Onman, Robert (ed.), Managing the Service Economy: Prospects and Problems, Cambridge University Press, Cambridge, 1985.

Kuznets, Simon, Modern Economic Growth, Yale University Press, New Haven and London, 1976.

Philippine Statistical Yearbook, National Economic and Development Authority, 1977, 1984, 1986.

Lim, Joseph Y. and Bautista, Carlos, 'The Impact of Income Redistribution on the Composition of Output Demand', Philippine Review of Economics and Business, Vol. XXIII, Nos. 3 and 4 (September & December 1986).

THE SERVICES SECTOR IN THE PHILIPPINES: MICROECONOMIC ISSUES FOR RESEARCH

Epictetus E. Patalinghug[1]

INTRODUCTION

This paper discusses the current knowledge and work on services in the Philippines, with emphasis on studies dealing with key service subsectors or industries. Basically, our objective is to grasp the nature and extent of the Philippine service sector so that we can eventually identify the microeconomic issues and problems needing future research which would deem useful in the formulation of development policies and strategies.

The second part of the study discusses the conceptual considerations that deals, directly or indirectly, with the way researchers view the coverage of the services sector, the level of aggregation of such studies, and the contribution of this sector to the economy. The third part reviews the literature on the structure and performance of selected service industries, and points out areas for improvement. Part four examines the work done relating to government policies and regulations as well as the issues and problems identified with international transactions in services. The last part identifies the issues that need additional analytical work.

CONCEPTUAL CONSIDERATIONS

Definitions

In 1986, the services sector in the Philippines contributed 39 per cent of real Gross Domestic Product (GDP), 40 per cent of real Gross National Product (GNP), and 37 per cent of employment. Nevertheless, there is a scarcity of studies dealing with services in the Philippines. Several of these studies use different definitions of 'services'. For instance, earlier studies (Bhalla 1970; Tidalgo and Jurado 1978; and Oshima and Yiu 1979) employed a narrow definition similar to those used by Kuznets (1966) and Fuchs (1967) which defined 'services' to include wholesale and retail trade; banking, insurance and finance; real estate; government services; business services; personal services; and professional services. A broader definition which does not exclude transportation and communication, and gas, water and electricity has been utilized in recent studies.[2]

Changes in government classification of major sectors and subsectors also create difficulties in making comparisons of time-series data.

Official government budget statistics give the following categorization: (1) economic services which include the following subsectors: agriculture, industry, utilities, and infrastructure; (2) social services composed of education, health, housing, and population; (3) national defense; and (4) general services. However, official national accounts statistics follow the following classification: (1) agriculture, fishery, and forestry composed of agricultural crops, livestock and poultry, fishery and forestry; (2) industry comprising of mining and quarrying, manufacturing, construction, and electricity, gas and water; and (3) services which include transportation, storage, communication, trade, finance, housing, private services, and government services. The concept of services in the national accounts statistics is identical to a broader definition of services if all public utilities such as electricity, gas, and water would be classified under services. Arroyo (1984, 1986) used two types of classifications of the services sector: (a) that measured from the national income accounts, and (b) that derived from the balance of payments accounts. An example of how these two definitions differ can be illustrated by the way they treat construction activity. Construction activity is included in the services category in the balance of payments accounts, but is classified as part of the industrial sector in the national income accounts. Studies following a slightly broader definition of services (Arroyo 1984, 1986) have included construction activity in the services sector, but excluded gas, water, and electricity. The national accounts data have been utilized by researchers because they are periodically available, and their classification is comparable to that followed in the national income statistics of other developing countries. The definition of 'services' utilized in this study follows the national accounts definition which includes transportation, storage, and communication but excludes construction as well as gas, water and electricity.

Sectoral Indicators

Table 1 presents the relative shares of the services sector in terms of employment from 1976 to 1986. The data support the labour-absorptive role of the services sector inasmuch as it is the only major industry group that shows a secular increase in its share of total employment overtime. What is strikingly interesting about Table 1 is the so-called 'industrial division of labour by sex' -- that is, the relative employment concentration of the males in agriculture and the females in services.

Table 2 shows the relative shares of employment in services by region for 1986. Employment in agriculture dominates that of services in all regions except those in the National Capital Region and Region 3. More on this later.

Tables 3 and 4 show the average annual growth rates of GDP and employment, respectively. Before 1983 (the start of the current economic crisis), services' growth rate was the slowest among the major sectors. However, during the crisis subperiod (1983-1987), the decline in services was less than that in industry. Employment analyses using data before 1975 (Mijares and Ordinario 1972; Tidalgo and Jurado 1978; and Tidalgo 1980) also noted the rapid growth of labour-absorption in services. Our estimates confirm earlier trends. Particularly interesting is the rapid growth of employment in services during the years of economic crises. It

has been commonly mentioned that the small-and-medium scale service industries (such as restaurants, car repair shops, tailoring shops, and beauty shops) did not have a wait-and-see attitude in their investment behaviour. However, the government sector has a major share in services. The rapid growth of employment in services might lend empirical support to the so-called 'residual hypothesis' (Oshima and Yiu, 1979) which states that when the growth of per capita income is slower than the growth of the labour force, the services sector serves as the depository of workers not needed in the major goods-producing sectors where land and capital requirements put a limit on its labour-absorptive capacity. The implication of this hypothesis is that the rapid growth in services employment explains the low income and low level of productivity in this sector. As Levitt (1972, p. 51) suggested, service industries will be viewed as something residual as long as they fall to incorporate 'the same kinds of technological, labour-saving and systems approaches that now thrive in manufacturing operations'.

Arroyo (1986) has also pointed out that the shares of personal income of contract workers and overseas construction remittances in the composition of trade in services have increased since 1980.

Key Service Industries

Fuchs (1964) has suggested that the criteria for choosing particular industries should include the following: availability of data, size, analytical interest, and policy consideration. Table 1 also shows the contribution of each service industry to employment, Table 6 presents the growth rates of the different industries during the last two years, and Table 7 indicates the relative contribution of particular service industries to GDP and employment.

The evidence reveals that in terms of GNP contribution, wholesale and retail trade had been the fastest growing service subsector from 1976 to 1986. But in terms of employment contribution, community, social, and personal services had been the fastest growing subsector over the same period (see Table 5).

Looking back at Tables 1 and 2, we observe that within the services sector, trade, community, social, and personal services have the largest shares in total sector employment. However, the males are mostly concentrated in trade, transportation, storage, and communication services. The females, on the other hand, are concentrated in trade, finance, insurance, real estate, business, community, social, and personal services. In terms of regional concentration, services are concentrated in the National Capital Region, particularly in trade, community, social, and personal services. This seems to be expected considering that majority of government and trade services are transacted in Metropolitan Manila. The dominance of employment in services compared to that in agriculture in Region 3 (Central Luzon) can be explained by the high share of community, social and personal services (20.73 per cent) which is relatively higher than the national average (17.07 per cent). The presence of the huge U.S. military facilities explains this region's relatively higher share with respect to this particular service category compared to other regions. The employment data also confirm the findings of earlier studies which likewise observed that the services sector in the Philippines was dominated by wage-and-salary female

workers, particularly concentrated in domestic services, and predominantly located in the urban areas (Tidalgo and Jurado, 1978).

In terms of its contribution to real GNP, wholesale and retail trade contributes 13 per cent in 1976 and over 16 per cent in 1986. Government and private services account for approximately 13 per cent from 1976 to 1986. Almost half of this subsector's share is contributed by government services; and private services (educational, medical and health, business, recreational, personal, and hotels and restaurants) account for the rest. Finance and housing (banks, non-banks, insurance, real estate, and ownership of dwellings) comprise the third biggest service subsector in terms of share of real GNP from 1976 to 1986. Within this subsector, ownership of dwellings and banks contribute more than half of this subsector's share. The fourth most important service subsector is accounted by transportation, storage, and communication which contribute over 5 per cent for the period examined.

THE STRUCTURE AND PERFORMANCE OF SELECTED SERVICE INDUSTRIES

A micro analysis of service industries requires data disaggregated at the level of the firm. Table 8 lists the sources of available data on selected services. Number of establishments, total revenues, total assets, average firm size, market share, product price, number of employment per establishment, location, and ownership structure can be estimated for selected industries from these sources. Issues such as continuity, consistency, comparability, coverage, sufficiency, and timing will still have to be tackled by the researcher who utilizes these available data. The desirabilityof periodically collecting complete, comparable, consistent, and continuous firm-level data for this sector is needed. However, the nature of existing data does not prevent researchers from undertaking industry analysis. The following discussion summarizes industry-level studies in the Philippines.

Tourism

Arroyo, and San Buenaventura (1983) and Arroyo (1983) have documented the employment impact of tourism. Using the input-output model, these studies measured the total (direct and indirect) employment effect of tourism and observed that tourism employs 87 persons per one million pesos of output (only commerce ranks higher than tourism in terms of total employment effect). Tucker, et al (1984) have likewise employed the input-output model to measure the impact of tourism revenues on the Philippine economy.[3] The total value-added impact of tourism was about 0.72 per cent of total GDP in 1980, while the compensation effect was about 0.98 per cent of total wage payments. Firm-specific studies (Arroyo and San Buenaventura 1983) give a detailed description of the structure and performance of a tourist firm. However, studies on industry characteristics in terms of ownership structure (foreign versus domestic), kind of services provided, capital intensity, level of technology, and market performance are clearly lacking.

Banking

A highly regulated industry like banking guarantees some basic information collected by the regulatory agency -- the Central Bank -- from the individual firms. Nevertheless, the confidential nature of the data explains the lack of published studies at the firm-level. Some industry-level studies (Saldana 1984) analyze the impact of bank regulation, such as capitalization requirement, on the structure and performance of the commercial banking system. The growth of the average size of commercial banks and the degree of concentration in terms of sales and assets have also been estimated. Performance indicators such as return on net worth, loans to deposit, and liabilities to net worth ratios have been measured using time-series data. Some results show that total revenues of the banking industry grew by 140 per cent between 1971 and 1981 and four-firm concentration ratios were higher than 40 per cent. Studies dealing with factor intensity and productivity on this industry are clearly lacking.

Education

The structure of Philippine education sector is unique because it is dominated by profit-maximizing private firms facing utility-maximizing customers. Cost and return data on educational institutions are available on request. Number of students enrolled, average tuition fees, teacher salaries, cost of administration, and cost of books and supplies can be estimated. Miao (1971) has documented the relative performance among private religious, proprietary, and state institutions. This study observed that for the social classes which could not afford to enrol at the expensive (and high-return) religious and state institutions, private investment in proprietary institutions yielded higher returns compared to those yielded by financial options within reach of these low-income households. The implications here is that even 'low-quality' educational institutions provide the best investment options for poor households, and these institutions not only provide educational services, but they likewise enhance equity. Studies that need to be undertaken for this industry include length of the work week, capital per worker, composition of the labour force, and the impact of these variables on productivity.

Information Services[4]

Recent empirical studies (Patalinghug and Jussawalla 1983; Jussawalla and Dworak 1984; and Patalinghug 1986) have estimated the size of the information sector of the economyc using an input-output framework. Input-output coefficients, census data on number of establishments per industry, number of workers per industry, value added per establishment, and wage compensation per establishment are available to undertake this kind of study. These studies indicated that the size of the primary information sector is nearly 12 per cent of value-added in 1974.[5] Evidently, the Philippines cannot yet be classified as an information economy, but 12 per cent is a significant figure. A significant penetration of information activities in economic production, advances in communication technology and improvements in information-handling capabilities are bound to influence input productivities and incomes that will eventually affect the country's pattern of employment and production structure. It is common knowledge, however, that one of the most concentrated areas of business ownership and state control is

communications (Sussman, 1982). Major telecommunications enterprises dealing with financing, telephone switching equipment, cable communications, telecommunications equipment, international carrier, troposcatter communications, TV manufacturing, satellite earth stations and equipment, and TV and ratio broadcast equipment are owned by a few political-business families in cooperation with principal foreign partners such as Siemens, GTE, Western Union International, Cable & Wireless, ITT, RCA, Plessey, and Marubeni. What needs to be done in studies dealing with information services is to separate analyses of information as a commodity (telephone, telegraph, radio, television and other tangible final information goods) from those that treat it as a resource -- the flows and contents of information that are transmitted through the technical infrastructure. Either viewed as a commodity or a resource, future studies should examine whether information indeed brings important economic benefits to organizational decision-making by reducing costs, minimizing uncertainty, and increasing efficiency of decision-making. Another research issue that needs empirical documentation is the hypothesis that small and medium-size enterprises are particularly prone to require assistance from producer services presumably because it 'reinforces their adaptability and competitiveness' (UNCTAD 1986, p. 2). The contribution of information services in developing an efficient manufacturing industry, keeping abreast of product and market developments, and linking hotels and resorts into global networks of travel agents, among others, needs further analysis especially in a developing economy like the Philippines.

Supply Conditions

A comprehensive documetation of supply and demand conditions facing the service industries in the Philippines has yet to be undertaken. As mentioned earlier, number of establishments, degree of competition, and ownership structure can be determined for selected industries.

A priority research issue on supply aspects refers to the nature of services output and the degree of product development. It is important, at this point, to describe the concept of services.

How are services different from goods? Services producers cannot accumulate a stock or inventory of their output because services must be consumed as they are produced. The problem of making customers aware of the benefits they are receiving affects service producers because services are less amendable to advance testing than goods. And service producers have a tremendous quality control problem because services are highly labour-intensive both in their production and delivery methods (Levitt 1981). The relative absence of an aggressive product development programme in key service industries in the Philippines needs to be examined. A determination as to whether the nature of the output determines the degree of product differentiation would be an interesting undertaking to pursue. Service delivery is in itself perceived as a mechanism for product differentiation because it is labour-intensive, and thus it builds in some degree of personal discretion for each output delivered. An important research work on this issue is to study the tradeoff between the employment effect of service industries and the quality- and efficiency-enhancing effect of adopting labour-saving techniques in these industries.

The resemblance of public utilities to industry with respect to the degree of capital intensity of technology has been commonly used (Kuznets 1966, Bhalla 1970) to justify the exclusion of public utilities in the definition of services. The underlying implication is that service industries are labour-intensive by definition. Furthermore, if the 'residual' hypothesis is to be embraced, it likewise implies that the type and composition of inputs attracted to services are mostly the low-paid, low-skill and unproductive female workers. But this circumstantial evidence is not definitive. What needs to be done is to make a detailed analyses of the nature of the service input. The extent of unionization in the sector has also been advanced as the major factor responsible for the recent trend in the Philippines where service production organizations (big banks and major government agencies) purchased janitorial and maintenance services from external sources. Again, this phenomenon needs to be documented. What explains this trend? What are the significant factors affecting compensation policy? How effective is the firm's performance appraisal system? What is the style of leadership? And what is the importance of human relations in service firms?

Productivity differences within the service sector have yet to be researched in the Philippines. We need to know the relationship between productivity change and output change, impact of the length of the work week on productivity, industry differences in the quality of labour employed, and effect of capital per worker on industry performance. It has also been argued (De Salvia 1969) that peak-load pricing is more socially desirable in pricing non-storable products (such as services) which are produced and consumed simultaneously. We need to know why peak-load pricing is yet to be embraced by Philippine service industries.

Demand Conditions

Our knowledge of demand conditions facing service firms is limited to a few confidential firm-level studies which were undertaken either internally or by consulting firms. Marketing research firms have been traditionally contracted to estimate the market size and to produce a socio-demographic profile of actual and potential buyers. But a more important research issue on demand conditions must deal with the issue of how crucial is market segmentation in service industries and what type of segmentation is appropriate in the Philippines. An investigation as to whether service consumers are price-sensitive or quality-sensitive would probably have a higher policy payoff. The greatest challenge in Philippine demand research is to verify the popular belief that 'colonial mentality' -- that is, Filipinos prefer foreign products (regardless of quality) to local ones -- dominates the motivation to buy. Would clients give preference to hiring the services of a foreign consulting company inspite of its higher price compared to that offered by a local counterpart? This seems to be the implication of the 'colonial mentality' hypothesis. Another issue that needs to be looked at involves the demand elasticity of personal services vis-a-vis professional services. Is there a tendency for these elasticities to be relatively less elastic in the urban areas? If so, what factors are responsible for this differential response? What would be the pattern of demand faced by small- and medium-scale firms? Is price more important than product quality for a small-sized firms? Is repeat purchase more dominant in these firms because of greater personal rapport between buyers and

sellers? Or does repeat purchase suffer because services are treated as a purely human task which brings more room for idiosyncracy, error, and delay?

GOVERNMENT POLICIES AND REGULATIONS

It seems that in the Philippines detailed information on governmental measures affecting individual service sectors, the problems identified with the international transactions of services, and the issues raised in connection with these transactions have been analyzed elsewhere (Arroyo 1984, 1986). The inescapable conclusion from the studies has been to suggest a stronger Philippine position at the GATT meetings so as to 'reflect the principle of more favourable treatment for developing countries' (Arroyo, 1986, p. 45). The concerns of the Philippines are concentrated in the following sectors: banking, insurance, maritime transport, air transport, films, construction, accounting, legal services, tourism, health services, and labour exports. Since developing countries suffer from a technology-gap vis-a-vis developed countries, the 'industrialization' of services should not be at their expense -- its labour-absorbing service sectors should not be adversely affected by recent technological developments in industrialized countries which may raise the barriers to the entry of the products of developing countries in the international market for services. Furthermore, as recently stressed by UNCTAD (1986, pp. 16-17), 'significant increases in economies of scale in certain basic infrastructural activities ... can increase industrial concentration and increase the frequency of monopolistic practices'.

Bautista (1980) pointed out the existence of various forms of restrictive clauses in technology transfer agreements (see Table 9). This study documented the existence of restrictive clauses in 82 per cent of total contracts entered into between local partners and transnational enterprises. Although government regulations allow the existence of restrictive business clauses in certain 'meritorious case' -- such as when the technology being transferred needs a longer gestation period, the presence of restrictive clauses in most of the contracts could not be explained by this factor. The underlying explanation could most probably be attributed to the insistence of the licensor to attach too many strings to such agreements. Another explanation is apparently a lack of awareness by local partners of existing government regulations affecting transactions of this kind. This perception is reinforced by an observation (Bautista, 1980) that there was a substantial decrease in the frequency of restrictions among contracts signed by export-oriented firms. Since restrictive practices of transnational firms are evident in the Philippine setting, the next research agenda calls for an analyses of the relationship between these restrictive business practices and the formation of oligopolistic market structures. Specific domestic measures affecting service firms and industries will not be enough as borne out by recent experience. Raising these trade issues at the Trade Negotiating Committee is another appropriate option,[6] considering that these issues are basically international in nature. Bhagwati (1977) has further discussed that the critical differences in perspective on substantial issues are responsible for the dispute between developed and developing countries over the inclusion of services in trade negotiations. In particular, 'developing countries see the developed countries as seeking

concessions on service trade in exchange for removal of the latter's existing and potential barriers on trade in goods, rather than establishing quid pro quos within the service compact itself' (Bhagwati 1987, p. 549). Another issue is the much more pervasive application of regulation to services than to goods. It is argued that 'the regulations imposed on the provider can critically affect the service transactions'. We ought to verify the validity of this assertion not just on international trade in services but also on domestic trade in services particularly in baking, cleaning, travel, insurance, medical, freight-hauling, food, maintenance, and telephone services.

Nevertheless, an analysis of government policies and regulations favourable to the service industries would be helpful. The current privatization policy in the Philippines that approved the sale of big enterprises (e.g., Philippine Airlines, Manila Hotel, Commercial Bank of Manila, etc.) needs to be assessed whether it is a well-though out development strategy or simply a fad currently in vogue in the ASEAN region.

SUGGESTIONS FOR FUTURE RESEARCH

The findings summarized in previous sections are based on a substantial body of research. Additional analytical work is nevertheless needed to assess the impact of individual service firms and industries in a particular developing country like the Philippines, and to evaluate the potential effectiveness of suggested policies affecting service firms and industries.

Evidence of the significance of undertaking such analysis is reflected in the current focus on trade-in-services issues in the work of ASEAN and UNCTAD. This concern emphasizes the need to devise in-depth analysis of the role services play in each country. Examination of the following questions would be essentially helpful:

1. The importance of a particular service industry to the Philippine economy, its pertinent characteristics in terms of market structure, market performance, and factor intensity, and the degree of interdependence among key service industries deserve some deeper analysis.

2. Development of a comprehensive database at the industry-level is an important requirement for a complete documentation of service industries and its characteristics.

3. Industry analysis should be encouraged. The structure and performance of Philippine tourism industry have not yet been fully analyzed.

4. Further work is needed on the role of services in enhancing the adaptability and competitiveness of small- and medium-scale firms.

5. A detailed documentation of supply and demand conditions facing the service industries in the Philippines has yet to be undertaken. On the supply side, the nature of service output, degree of product

differentiation, extent of unionization, type of compensation policy, and existence of employee appraisal system are interesting issues to pursue.

6. On the demand side, market segmentation and socio-demographic profiles of services consumers would have a higher policy payoff.

7. Another research issue deals with the relationship between restrictive business practices and the formation of oligopolistic market structures. One concern is the question of how and to what extent government policies and regulations contribute to the emergence of these structures. An analysis of how government policies can support service industries would likewise be helpful.

Other issues include: Do productivity and growth tend to be positively correlated in service industries? What explains the different rates of absorption of skilled labour in different industries? What changes have occurred with respect to the length of the work week in service industries? What would be the impact of such factors as increases in capital per worker, economies of scale and composition of the labour force on capital-intensive service industries such as transportation and communication? What would be the impact of such variables on labour-intensive service industries such as tailoring shops and beauty shops? To what extent are particular service industries essential for the production and export of goods? To what extent can regional cooperation among ASEAN countries overcome technical, financial, marketing and regulatory constraints which may obstruct the establishment of service organizations in each member country? Particularly important is the identification of substantive issues in which ASEAN countries share common interests so that they can present a united front at the multilateral trade negotiations.

The pursuit of the above research issues will not only identify the extent and causes of inefficiency, but will also enhance a full understanding of the role services play in domestic economy, international trade, investment and growth.

It is hoped that this type of study is replicated in other developing countries and that useful region-wide view of the changes in structure and performance that are occurring within the between ASEAN countries will emerge.

TABLE 1

EMPLOYED PERSONS BY MAJOR INDUSTRY GROUP, BY SEX: 1976 TO 1986
(PERCENTAGE SHARE)

MAJOR INDUSTRY GROUP AND SEX	THIRD QUARTER 1976	THIRD QUARTER 1977	THIRD QUARTER 1978	THIRD QUARTER 1980	THIRD QUARTER 1981	THIRD QUARTER 1982	THIRD QUARTER 1983	THIRD QUARTER 1984	THIRD QUARTER 1985	THIRD QUARTER 1986
BOTH SEXES	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1. AGRICULTURE, FISHERY & FORESTRY	53.80	51.84	52.99	51.66	51.16	51.35	51.43	49.61	48.99	49.96
2. INDUSTRY	15.16	15.09	13.49	15.17	14.58	14.23	14.39	14.82	14.18	13.33
a. Mining and Quarrying	0.57	0.36	0.38	0.57	0.46	0.43	0.53	0.70	0.65	0.73
b. Manufacturing	11.22	11.08	9.53	10.65	10.35	10.02	9.82	9.84	9.71	9.25
c. Electricity, Gas and Water	0.36	0.29	0.31	0.35	0.38	0.31	0.41	0.41	0.37	0.30
d. Construction	3.01	3.36	3.27	3.59	3.39	3.48	3.63	3.87	3.46	3.05
3. SERVICES	30.71	32.40	33.42	33.13	34.23	34.42	34.19	35.57	36.83	36.71
a. Wholesale and Retail Trade	9.82	9.40	10.23	10.14	11.21	11.02	11.44	12.41	13.19	13.66
b. Transportation, Storage and Communication	4.21	4.72	4.40	4.47	4.21	4.36	4.33	4.45	4.70	4.08
c. Fin'g, Ins., Real Estate and Bus. Ser.	9.75	2.34	2.27	2.05	1.86	2.20	1.85	1.87	1.73	1.89
d. Community, Soc. and Personal Ser.	6.93	15.94	16.52	16.46	16.96	16.82	16.57	16.83	17.21	17.07
4. INDUSTRY NOT ADEQUATE DEFINED	0.34	0.67	0.09	0.04	0.02	-	-	0.01	-	-
MALE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1. AGRICULTURE, FISHERY & FORESTRY	61.78	60.45	59.75	59.39	58.74	59.72	58.24	57.84	57.77	58.66
2. INDUSTRY	15.24	14.12	14.35	15.88	15.03	14.43	15.47	15.85	14.86	13.66
a. Mining and Quarrying	0.81	0.51	0.54	0.77	0.67	0.60	0.80	1.00	0.96	1.09
b. Manufacturing	9.54	8.39	8.52	9.29	8.67	8.19	8.42	8.26	8.01	7.34
c. Electricity, Gas and Water	0.49	0.39	0.43	0.49	0.52	0.42	0.56	5.36	0.47	0.41
d. Construction	4.40	4.82	4.86	5.34	5.18	5.22	5.69	6.06	5.42	4.82
3. SERVICES	22.61	24.80	25.80	24.68	26.22	25.84	26.30	26.29	27.37	27.68
a. Wholesale and Retail Trade	6.06	5.40	5.55	5.13	6.11	5.91	6.25	6.62	6.87	7.35
b. Transportation, Storage and Communication	5.92	6.54	6.40	6.41	6.27	6.42	6.66	6.79	7.10	6.28
c. Fin'g, Ins., Real Estate and Bus. Ser.	7.42	2.22	2.30	2.13	1.79	2.05	1.79	1.82	1.85	1.94
d. Community, Soc. and Personal Ser.	3.21	10.63	11.54	11.00	12.06	11.46	11.60	11.06	11.55	12.10
4. INDUSTRY NOT ADEQUATE DEFINED	0.37	0.64	0.11	0.05	0.01	-	-	0.01	-	-
FEMALE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1. AGRICULTURE, FISHERY & FORESTRY	37.12	33.63	38.36	36.05	37.40	35.88	40.27	35.76	33.84	35.36
2. INDUSTRY	14.98	15.68	15.36	14.91	13.80	13.87	12.61	13.05	13.08	12.77
a. Mining and Quarrying	0.07	0.04	0.07	0.21	0.10	0.10	0.10	0.19	0.11	0.12
b. Manufacturing	14.74	15.41	15.04	14.41	13.43	13.41	12.12	12.48	12.62	12.47
c. Electricity, Gas and Water	0.09	0.07	0.07	0.09	0.13	0.10	0.15	0.21	0.19	0.10
d. Construction	0.09	0.16	0.18	0.20	0.14	0.26	0.25	0.16	0.16	0.08
3. SERVICES	47.64	49.96	46.20	49.02	48.77	50.25	47.10	51.20	53.08	51.87
a. Wholesale and Retail Trade	17.69	18.47	18.49	19.68	20.46	20.47	19.93	22.17	24.04	24.26
b. Transportation, Storage and Communication	0.65	0.76	0.50	0.68	0.47	0.57	0.51	0.51	0.58	0.39
c. Fin'g, Ins., Real Estate and Bus. Ser.	14.61	2.68	2.12	1.87	1.98	2.49	1.95	1.97	1.52	1.81
d. Community, Soc. and Personal Ser.	14.69	28.05	25.09	26.79	25.86	26.72	24.72	26.56	26.94	25.41
4. INDUSTRY NOT ADEQUATE DEFINED	0.26	0.74	0.07	0.02	0.05	-	-	-	-	-

Source of Basic Data: 1987 PHILIPPINE STATISTICAL YEARBOOK

TABLE 2

EMPLOYED PERSONS BY MAJOR INDUSTRY AND BY REGION: THIRD QUARTER 1986
(PERCENTAGE SHARE)

MAJOR INDUSTRY GROUP	TOTAL	NATIONAL CAPITAL REGION	REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8	REGION 9	REGION 10	REGION 11	REGION 12
1. AGRICULTURE, FISHERY & FORESTRY	49.96	1.51	57.08	68.85	37.54	43.86	56.93	59.67	53.19	66.54	64.40	55.65	59.28	63.70
2. INDUSTRY	13.33	24.70	13.15	6.10	16.60	18.31	13.46	8.47	14.88	8.15	7.19	10.60	9.63	8.51
a. Mining and Quarrying	0.73	0.05	2.75	0.36	0.42	0.34	0.85	0.31	1.37	0.22	0.19	1.38	1.52	0.00
b. Manufacturing	9.25	18.64	6.72	3.41	11.20	13.03	9.85	6.26	11.00	5.69	5.25	6.53	5.45	6.73
c. Electricity, Gas and Water	0.30	0.54	0.36	0.09	0.37	0.23	0.33	0.26	0.34	0.07	0.39	0.54	0.19	0.30
d. Construction	3.05	5.47	3.32	2.24	4.61	4.71	2.43	1.64	2.17	2.17	1.36	2.15	2.47	1.48
3. SERVICES	36.70	73.75	29.84	24.95	45.91	37.87	29.67	31.92	33.12	25.38	28.40	20.88	31.09	27.50
a. Wholesale and Retail Trade	13.66	21.67	10.26	7.09	16.02	14.80	12.21	12.93	12.49	12.28	11.67	0.13	13.74	12.17
b. Transportation, Storage and Communication	4.08	8.74	3.32	2.60	7.12	5.87	2.82	2.36	2.85	1.95	2.53	2.92	3.04	1.68
c. Financing, Insurance, Real Estate, and Business Services	1.89	9.13	1.30	0.72	2.04	1.54	0.98	0.62	2.16	0.52	0.97	1.00	1.01	0.49
d. Community, Social and Personal Services	17.07	34.21	14.96	14.54	20.73	15.66	13.66	16.01	15.62	10.63	13.23	16.83	13.30	13.16
4. INDUSTRY NOT ADEQUATELY DEFINED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source of Basic Data: 1987 PHILIPPINE STATISTICAL YEARBOOK

TABLE 3

AVERAGE ANNUAL GROWTH RATE OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN
(at constant 1972 prices)

Sector	1975-1982	1987-1987	1975-1987	1975-1986
Agriculture, Fishery & Forestry	4.86	(13.00)	(0.59)	3.75
Industry	6.74	(17.03)	(1.75)	2.25
Services	4.72	(15.06)	(1.81)	2.41
Gross Domestic Product	5.44	(14.14)	(1.46)	2.70

Source: 1975-1984 data from 1986 Philippine Statistical Yearbook.
1985-1987 data from National Accounts of the Philippines, First Semester 1985 to First Semester 1987, National Economic and Development Authority.

TABLE 4

AVERAGE ANNUAL GROWTH RATE OF EMPLOYMENT BY INDUSTRIAL ORIGIN

Sector	1976-1985a	1976-1982	1982-1985
Agriculture, Fishery & Forestry	3.09	3.16	2.97
Industry	3.06	2.19	4.52
Services	6.56	6.37	6.87

Source: 1986 Philippine Statistical Yearbook.

a Annual growth rate is the average of eight years because of the absence of 1979 data.

TABLE 5

AVERAGE ANNUAL GROWTH OF EMPLOYMENT AND OUTPUT
IN SERVICES: 1976 TO 1986

Industry	Output	Employment
Wholesale and Retail Trade	4.45	8.25
Transportation, Storage and Communication	2.818	3.74
Financing, Insurance, Real Estate and Business Services	-1.73	-6.04
Community, Social and Personal Services	2.331	19.59
Total	2.182	6.24

Source of Basic Data: 1987 Philippine Statistical Yearbook.

TABLE 6

GROWTH RATES OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN
1ST SEMESTER 1985 TO 1ST SEMESTER 1987
(AT CONSTANT PRICES)

INDUSTRY	1985-86 I	1985-86 II	1986-87 I
1. AGRI., FISHERY, FORESTRY	1.97	5.67	0.69
a. Agricultural crops	4.77	4.53	-1.32
b. Livestock & Poultry	-0.04	5.96	6.03
c. Fishery	-3.06	12.1	3.39
d. Forestry	-10.75	-2.94	-4.48
2. INDUSTRY SECTOR	-7.36	2.52	8.34
a. Mining & Quarrying	-14.71	-8.91	15.43
b. Manufacturing	-0.77	2.48	6.93
c. Construction	-34.28	6.42	14.12
d. Elect., Gas & Water	6.80	9.08	7.29
3. SERVICE SECTOR	2.41	2.12	4.61
a. Transportation	3.51	1.78	2.18
b. Trade	1.52	2.31	5.77
c. Finance & Housing	5.02	-1.09	5.56
d. Private Services	-3.63	1.09	1.11
e. Government Services	8.63	4.52	6.90
GROSS DOMESTIC PRODUCT	-0.99	3.27	4.58

Source: National Income Accounts of the Philippines,
First Semester 1985 to First Semester 1987,
National Economic and Development Authority.

TABLE 7

RELATIVE CONTRIBUTION OF SERVICE SUBSECTORS
(Percent)

INDUSTRY	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
I. GDP													
Transportation	11.94	13.65	14.22	14.25	13.81	13.60	13.76	13.63	13.46	13.73	14.34	14.39	14.32
Trade	54.84	52.48	53.17	53.39	54.13	54.49	53.76	34.57	35.61	38.40	40.71	40.58	40.09
Finance & Housing	33.22	33.51	32.62	32.35	32.06	31.92	32.48	19.13	19.37	15.13	11.53	11.50	11.94
Private Services								32.68	31.56	32.74	17.64	17.09	16.45
Government Services											15.78	16.45	17.20
II. EMPLOYMENT													
Transportation		13.72	14.58	13.16		13.50	12.29	12.68	12.52	12.77			
Trade		31.98	29.00	30.62		30.62	32.74	32.03	34.90	35.81			
Finance & Housing		31.75	7.23	6.80		6.20	5.42	6.41	5.27	4.69			
Private Services		22.55	49.19	49.43		49.68	49.55	48.48	47.31	46.74			
Government Services													

Source: GDP data, same as Table 3
Employment data, 1986 Philippine Statistical Yearbook.

TABLE 8

SOURCE OF AVAILABLE DATA ON SELECTED SERVICES IN THE PHILIPPINES

DATA	SOURCE	ACCESSIBILITY
I. Tourism Services		
Total tourists receipts	Department of Tourism	Published
Number of visitors	Department of Tourism	Published
Average days of stay	Department of Tourism	Published
Number of foreign visitor Arrivals by nationality	Department of Tourism	Published
Cost of Registered Tourist Project	Department of Tourism	Must be requested.
Matrix of Input-Output Coefficients	Asian Institute of Tourism	Must be requested.
II. Banking and Financial Services		
Total Revenues	SGV & Co., Study of Commercial Banks in the Philippines	Must be requested.
Total Assets	SGV & Co., Study of Commercial Banks in the Philippines	Must be requested.
AVerage Bank Size	SGV & Co., Study of Commercial Banks in the Philippines	Must be requested.
Money supply	Central Bank Monthly Statistical Indicators	Published
Loans	Factbook: Philippine Financial System	Published
Deposit	Factbook: Philippine Financial System	Published
Interest Rates	Central Bank Monthly Statistical Indicators	Published
Capital & Investments	Factbook: Philippine Financial System	Published
III. Transport Services		
Number of Establishments	Land Transportation, Franchise and Regullatory Board	To be requested
Number of Operators	Land Transportation, Franchise and Regullatory Board	To be requested
Number of Motor Vehicles Registered	Philippine Statistical Yearbook	Published
Coastwise Shipping Movement	Philippine Statistical Yearbook	Published
IV. Communication Services		
Number of Licensed Radio Stations	Philippine Statistical Yearbook	Published
Telecommunications Facilities and Broadcasting Stations	Philippine Statistical Yearbook	Published

TABLE 9

Types of Restrictive Clauses

TYPE OF RESTRICTIVE CLAUSES	NUMBER OF AGREEMENTS			
	Subsidiaries/ Majority Foreign Capital Participation Companies	Minority Foreign Capital Participation Companies	Purely Technical Collaboration Agreements	Total
A. Exports restrictions such as the following: permission of licensor prior to export; exports permitted only to certain countries; exports prohibited; and exports restricted to licensor's agents/distributors	6	11	14	31
B. Tied-in purchase of raw materials/ equipment	4	7	8	19
C. Payment of minimum royalty		3	5	8
D. Royalty-free grantback of licensee's improvements	6	9	11	26
E. Patent/process improvement of accruing to licensor	1	2	1	4
F. Post-termination restriction on on use of know-how	4	14	12	30
G. Agreement construed or disputes according to laws other than the Philippines; Agreement silent on governing law	9	24	23	56
H. Venue of arbitration other than Philippines/neutral country	2	6	8	16
I. Period in excess of 5 years/ indefinite	4	4	7	15
J. Automatic renewal of agreement	2	13	5	20
K. Philippine taxes on royalties shouldered by licensee	4	12	10	26
L. Sole liability by licensee for infringement suits	3	3	4	10

Source: Lilia Bautista, (1980), Table 9.

FOOTNOTES

1. The author wishes to thank Sotero S. Ngayan for his research assistance.

2. Studies on the information economy (see Patalinghug and Jussawalla 1983; Jussawalla and Dworak 1984; and Patalinghug 1986) likewise follow a broader definition of 'information services'. These studies consider the information activities of the goods-producing industries as part of the so-called 'secondary information sector'.

3. In this study tourist expenditures have been allocated to the following sectors: hotels, restaurants, transport, recreational services, retail trade, other services, and an aggregated manufacturing sector.

4. The concept of information services is similar to what UNCTAD (1986) calls 'producer' or 'business' services.

5. Jussawalla and Cheah (1983) have indicated that the size of Singapore's information sector was about 24 per cent of its GDP in 1973, about twice the size of the Philippine estimate.

6. A group of medium-sized developing countries led by Brazil and India opposed the position of developed countries led by the U.S. to augment GATT to handle a potential services agreement. The compromise agreed at Punta del Este was that both groups would operate under the aegis of the Trade Negotiating Committee (Bhagwati 1987).

REFERENCES

Arroyo, Gloria, 'The Employment Impact of Tourism in the Philippines', School of Economics, University of the Philippines, Mimeographed, 1983.

Arroyo, Gloria, 'The Services Sector in the Philippines', Working Paper No. 2, ASEANAustralia Joint Research Project, 1984.

Arroyo, Gloria, 'A National Study of Trade in Services of the Philippines', Mimeographed, 1986.

Arroyo, Gloria and Mariano San Buenaventura, 'The Economic and Social Impact of Tourism', ESIA/WID Discussion Paper No. 83-1 School of Economics, University of the Philippines, 1983.

Bautista, Lilia, Transfer of Technology Regulations in the Philippines, Geneva, UNCTAD, 1980.

Bhagwati, Jagdish, 'Trade in Services and the Multilateral Trade Negotiations', World Bank Economic Review, Volume 1 No. 4, 1987, p. 549-569

Bhalla, A.S., 'The Role of Services in Employment Expansion', International Labour Review, Volume 101 No. 5, 1970, p. 519-539.

De Salvia, Donald, 'An Application of Peak-Load Pricing', Journal of Business, Volume 42 No. 4, 1969, 458-476.

Fuchs, Victor, Productivity Trends in the Goods and Services Sectors, 1929-1961: A Preliminary Survey, New York, National Bureau of Economic Research, 1964.

Fuchs, Victor, The Service Economy, New York, National Bureau of Economic Research, 1967.

Jussawalla, Meheroo and Chee-Wah Cheah, 'Towards An Information Economy: The Case of Singapore', Information Economics and Policy, Volume I No. 2, 1983, p. 161-176.

Jussawalla, Meheroo and Stephen Dworak, 'The Primary Information Sector of the Philippines: A Phase I Case Study'. A Paper presented to the Workshop on Measurement of the Primary Information Sectors of Ten Pacific Region Countries, Honolulu, November 19-24, 1984.

Kuznets, Simon, Modern Economic Growth, New Haven, Yale University Press, 1966.

Levitt, Theodore, 'Production-Line Approach to Service', Harvard Business Review, Volume 54 No. 5, 1972, p. 63-74.

Levitt, Theodore, 'Marketing Intangible Products and Product Intangibles', Harvard Business Review, Volume 59 No. 3, 1981, p. 94-102.

Miao, Evelyn, The Structure and Performance of the Proprietary Institutions of Higher Education in the Philippines, Ph.D. Dissertation, University of Wisconsin, 1971.

Mijares, Tito and Candido Ordinario, 'Labour Absorption in the Philippines and the Reliability of Employment Data', Statistical Reporter, Volume XVI No. 3, 1972, p. 31-60.

Oshima, Harry and Cheng Woon Yiu, 'Postwar Growth of the Service Sector in Asian Countries: A Macro Comparative View', Philippine Review of Economics and Business, Vol, XVI, Nos. 3 & 4, 1979, p. 1-32.

Patalinghug, Epictetus, 'A Critique of Current Information Policies and Practices as They Affect National Development', in Bernardo Villegas, et al., The Philippines at the Crossroads: Some Visions for the Nation, Manila, Center for Research and Communication, 1986.

Patalinghug, Epictetus and Meheroo Jussawalla, 'The Information Sector of the Philippine Economy'. Discussion Paper No. 83-14, College of Business Administration, University of the Philippines.

Saldana, Cesar, 'The Commercial Banking System: Structure, Performance and the Impact of the Capital Buildup Program of 1972', Philippine Review of Economics and Business, Volume XXI Nos. 3 & 4, 1984, p. 145-164.

Sussman, Gerald, 'Telecommunications Technology: Transnationalizing the New Philippine Information Order', Media, Culture and Society, Volume 4 No. 4, 1982, p. 377-390.

Tidalgo, Rosa Linda, Wages and Wage Structure in the Philippines, 1957 to 1969, Manila, University of the Philippines, 1980.

Tidalgo, Rosa Linda and Gonzalo Jurado, 'The Informal Services Sector in the Greater Manila Area', Philippine Review of Business and Economics, Volume XV No. 1, 1978, p. 17-62.

Tucker, Ken, Greg Seow and Mark Sunberg, ASEAN-Australian Trade in Tourist Services, Economic Papers No. 11, ASEAN-Australia Joint Research Project.

UNCTAD, Services and the Development Process, Geneva, United Nations Conference on Trade and Development, 1986.

SERVICES IN DEVELOPMENT: A MACRO REVIEW FOR THAILAND

Sorrayuth Meenaphant

INTRODUCTION

The importance of the services sector in the Thai economy is demonstrated by its large share of GDP and by its share of current payment account. In the 1980s, the sector accounted for well over 50 per cent share of GDP, or between 150-200 billion baht (hereafter all values are in Thai baht), and approximately 30 per cent of international receipts. The importance of service industries is further exemplified by their labour employment which has steadily risen from 21 per cent share in 1979 to the current share of 35 per cent, thus helping to absorb urban unemployment and alleviate rural labour surplus.

Despite the importance of services to the national economy, a full understanding of the role of services in the development process has yet to be reached. Difficulties in the study of services are often attributed to their heterogeneous characteristics and intangible or invisible nature, thus problems of quantification are encountered. Consequently, present economic policies do not take adequate account of the potential effects of service industries on economic and social development. The effects of policies directed at production and trade of goods on the services sector are also not considered. Except for a few prominent industries such as tourism and banking, services often received little attention in the process of national economioc planning. The lack of understanding of and the poor attention given to service industries now pose problems for the government when policies concerning service industries are required, particularly on traded services. Moreover, as the production and trade structures shift from goods to services and from traditional services to high technological services, regulatory measures and laws that are primarily designed for goods become inapplicable. Changes are necessary to face new international competition and cooperation. But, this crucial change is likely to face uncertainty unless the nature and significance of service industries are better understood.

This paper presents a macro review of Thailand's services sector. It is intended to provide an understanding of the nature and role of service industries in the Thai economy, their structural relationships with other economic activities, their contribution to international trade, and general government policies and measures regulating service industries, especially traded services. The review leads to the identification of current issues facing Thailand especially when increasing international pressures for trade liberalization on services are about to be negotiated in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT).

SERVICES IN THE THAI ECONOMY

A Macro Overview

In Thailand the services sector, as classified by the National Economic and Social Development Board (NESDB) and reported in the national accounts, comprises:

a) Construction;
b) Electricity and water supply;
c) Transportation and communication;
d) Wholesale and retail trade;
e) Banking, insurance and real estate;
f) Ownership of dwellings;
g) Public administration and defence; and
h) Other services not included above.

On the basis of this classification, income (in 1972 prices) generated by the services sector was estimated at about 173.8 billion bahts in 1982. More recently in 1986, real services income rose to about 211.9 billion bahts, an increase of 22 per cent within the four-year period. In terms of GDP, the services sector has always contributed to at least 50 per cent of the national economy. Table 1 presents the percentage distribution of GDP in 1972 constant price by the three broad sectors: agriculture, manufacturing, and services. The share of the services sector was slightly over 50 per cent in the period 1970 to 1980. In 1980, services accounted for 52.08 per cent of GDP but by 1985 the share increased to 54.5 per cent. The percentage distribution of GDP also indicates a significant structural change in the Thai economy over the past two decades. The agricultural share of GDP has been continuously declining from 32.2 per cent in 1970 to about 23.2 per cent in the current year. However, the manufacturing sector has grown from 17.2 per cent of GDP in 1970 to 22.3 per cent in 1985 which may be attributed to continuing efforts of the government to accelerate domestic industrialization.

Among service activities, the most important activity in terms of value added is retail and wholesale trade which generated the largest share of about 30 per cent of the total value added of service industries (Table 2). However, in terms of average annual real growth rate, high growth rates of over 10 per cent have been recorded for electricity, banking and finance, insurance and real estate, medical and health, hotel and restaurant, and personal services between 1976 and 1985. The trend among service industries reflects a structural change within the services sector as activities move from a complementary role of facilitating commodity trade and distribution to a more sophisticated one that is oriented towards personal and business services.

Economic Linkages of Services

Services are interlinked with the rest of the economy in several ways. Services may be either consumed as final outputs by households or used as intermediate inputs by themselves and by others. This interlinkage relationship is usually analyzed by making use of input-output tables. The 1975 Thailand input-output table is used.

Direct intermediate linkages. As indicated by the percentage of direct intermediate input shares in Table 3, the service industries acquired most of their direct intermediate inputs from the manufacturing sector and services sector itself. Of the twelve service industries listed, five industries obtained over 50 per cent of their intermediate inputs from the manufacturing sector, and another six industries acquired over 30 per cent. The smallest proportion of manufacturing sector input is in real estate, with an input of only 11.29 per cent. Electricity and transportation acquired over 70 per cent of their input, mainly petroleum products, from the manufacturing sector. There is also a significant intra-relationship among service industries. All service industries require no less than 25 per cent of their direct intermediate inputs from other service industries (Table 3). Real estate, which has the largest share, acquires 87 per cent of its direct intermediate inputs from the services sector, while another six industries obtain over 50 per cent.

Input from the agriculture and mining sector into service industries cannot be regarded as important. The restaurant and hotel industry has the largest input share from the agricultural sector with 11.86 per cent, while construction and public works have large percentage shares of input from the mining sector with 6.16 and 11.48 per cent respectively.

Intersectoral relationships between the services sector and other sectors are also shown by the distribution of output from the services sector as direct intermediate inputs for other sectors. Table 4 indicates that large shares of service output are used as intermediate inputs by service industries themselves and by the manufacturing sector. Thus, forward linkages reflect a pattern that is similar to that of backward linkages discussed earlier.

Most service industries also provide their output for final consumption. Except for electricity and business services, the service industries listed provide well over 50 per cent of their output for final demand (Table 5). Over 98 per cent of real estate, public works and public services are for final consumption. Only electricity and business services provide over 60 per cent of their output for intermediate use.

Total intermediate linkages. In a system of inter-industry relationship, any industry producing one unit of output requires both direct and indirect uses of intermediate inputs from other industries as well as itself. Thus, the total amount of intermediate inputs supplied by an industry is the sum of direct and indirect uses of its output in the other industries. Table 6 shows a percentage distribution of total intermediate inputs supplied to the service industries by the four major sectors. When both direct and indirect intermediate inputs are considered, the strong linkage between the manufacturing sector and the services sector, shown earlier in Table 3, has reduced substantially. The manufacturing sector's share in total intermediate inputs supplied to service industries is far below that of the services sector. The strong intra-sectoral relationships of service industries are indicated by the high percentage shares in total intermediate inputs provided by the sector. All service industries obtained over 55 per cent of their total intermediate inputs from themselves, while eight of them acquired more than 70 per cent. The percentage shares in total intermediate inputs supplied by the agriculture and mining sectors are relatively small compared with the manufacturing and services sectors.

The services sector's total output linkages with other sectors are measured by the percentage shares of total intermediate inputs supplied to each sector by the service industries. Similar to total input linkages, the manufacturing and services sectors obtained relatively large proportions of their total intermediate inputs from service industries (Table 7). There is also a strong intra-sectoral relationship amongst services themselves. Earlier in Table 4, when direct intermediate inputs were considered, only four service industries provided at least 50 per cent of their output as inputs to the services sector. The number rises to 12 when indirect intermediate inputs are included. Water works and supply, public works, communication, real estate and public services provide almost all of their intermediate services to other service industries. The share of the manufacturing sector in total intermediate inputs supplied by the services sector is below that of services. Trade service is the only industry supplying much of its total intermediate services to the manufacturing sector. Both the agriculture and mining sectors require relatively insignificant proportions of total intermediate inputs from the services sector. Transportation, banking and insurance are the main service industries providing total intermediate inputs to these two sectors.

Forward and backward linakges. The importance of the services sector, in its relationship with other sectors, is further illustrated by the indices for backward and forward linkage effects. This is computed from the inverse matrix of the net domestic input-output table. The forward linkage index represents the normalised amount of output generated by one unit of final demand of each sector, whereas the backward linkage index is the measurement of normalised output of other sectors generated by one unit increase in any sector's final demand.

Table 8 shows the backward and forward linkage effects of service industries for the Thai economy in 1975. Trade had the highest forward linkage index at 3.35, compared with its backward linkage index of 0.81. Electricity, restaurants and hotels, transportation, banking and insurance industries have forward linkage indices higher than one, indicating high demand for their output as intermediate inputs by other industries. Public services has the lowest forward linkage index of 0.65. Backward linkage indices among service industries are relatively low, indicating the sector's weak demand for output from other sectors. Building and construction has the highest backward linkage index of 1.19 while public services has the lowest index of 0.72.

INTERNATIONAL TRADE IN SERVICES

According to the Bank of Thailand services are reported in the balance-of-payments statistics as follows:-

a) Freight and insurance on merchandise;
b) Other transportation;
c) Travel;
d) Investment income;
e) Government (not included elsewhere); and
f) Other services.

These service transactions in the payments account conform to the IMF balance-of-payments reporting system. But the classification is in need of revision to further break down the transactions into more specific components. This is especially so for transactions reported in the other services category, which has become largest in the credit account because of rising income from Thai workers abroad.

Between 1970 and 1985 Thailand's merchandise trade expanded more than ten fold from 40 billion in 1970 to 440 billion baht in 1985. See Table 9. Trade in services also increased though at a slightly lower rate. Services trade rose from 16 billion to 155 billion baht during the period. Table 9 shows that in the early 1970s traded services accounted for about 30 to 40 percentage share of total trade. But the share has declined to about 20 to 25 per cent in the late 1970s due to the abrupt increase of crude oil price which caused a huge rise in the value of merchandise imports, particularly in 1976. The share of services trade however recovered to its pre-1976 level at about 30 per cent after 1981.

Surpluses in services trade and unrequited transfers were two important transactions that helped Thailand reduce her large deficits in merchandise trade. But in later years (shown in Table 9), the deficits became larger as a result of rising oil prices and costs of imported raw material. Together with services trade deficits experienced between 1975 and 1978 and stagnant unrequited transfers, substantial increase in balance of payments deficits resulted in the late 1970s. In spite of favourable services trade balance in the 1980s, the deficit grew larger as a result of low commodity prices in world markets and oil prices which are still high.

Structure of Trade in Services

The structure of trade in services between 1970 and 1985 is shown in Table 10 and its share in total traded services in Table 11. Clearly, travel and investment income were consistently the most important services traded, accounting for almost 60 per cent of total trade in services. Although government n.i.e. had very large shares in the early 1970s its share fell to 3.64 per cent in 1985 as compared with 37 per cent in 1970. Conversely, 'other trade services' which comprised mainly labour income from abroad and personal and business services grew steadily from 11 per cent in 1970 to 25 per cent in 1985. The remaining shares in total services trade composed of freight and insurance and other transportation.

Travel has always earned large amounts of foreign exchange for Thailand. In 1970 travel receipts amounted to 2.2 billion baht, increasing every year to 31.8 billion in 1985 except for 1976 because of some unfavourable events. Travel income comprising mainly of receipts from tourists is expected to expand to surpass income from other major traditional exports, to become Thailand's leading foreign exchange earner in 1987, the 'Visit Thailand Year'. Travel payments also increased rapidly as more Thais travel abroad. Travel payments rose from 1.3 billion in 1970 to 7.7 billion bahts in 1985. Clearly, Thailand enjoyed substantial surpluses of travel income for every year shown in Table 12. However, it should be noted that overseas travel by Thais is expected to rise as Thais become more affluent, and as international travel costs and organized overseas tours become relatively inexpensive.

Investment income is another important service trade activity comprising reinvested earnings and direct investment from foreign firms or residents and public enterprises or official institutions. In the 1970s, receipts and payments of investment income were generally not too different (Table 10). Since 1980 however investment income payments have increased substantially that payments far exceed receipts. In 1985, the receipts amounted to only 6.6 billion as compared with 44.8 billion bahts for payments.

The ratio of service receipts to payments between 1970 and 1985 is shown in Table 13. It provides a measure of Thailand's performance in traded services. Thailand's favourable position (as measured by values higher than one) was weakened in recent years when compared with the early 1970s. Among favourable services, travel had the largest trade surplus as receipts exceeded payments by up to 4 times in some years. In 1985, Thailand's trade surplus for travel services amounted to 24 billion bahts. Other services also grew rapidly in recent years resulting in surplus trade balances valued at 22 billion baht in 1985. Receipts from 'other services' traded consisted of non-merchandise insurance premiums and claims, and other miscellaneous services such as labour services, management fees, communication, advertising, rentals and agents' expenses. The largest receipts came from labour services supplied by Thai workers in the Middle East.

Clearly, the only unfavourable tradeable service for Thailand was investment income transactions. Table 13 shows that Thailand began having an unfavourable balance in investment services in the late 1970s which deteriorated in the 1980s. By 1985, the receipts to payments ratio was 0.14, indicating a large trade deficit of such service transactions. This trend is not expected to improve soon as Thailand continues to rely heavily on direct foreign investment in its promotion of domestic industrialization. Consequently, large investment income will be remitted back to foreign investors.

Pattern of Trade in Services

Due to limited data on origins and destinations of trade in services prior to 1976, the analysis of the pattern of service trade is based on data for the period 1976-80.

In terms of regional share of traded services, the United States and Canada and other OECD countries had strong trade relationships with Thailand (Table 14). While US and Canada accounted for 30 per cent of the total service payments, other OECD countries accounted for about 40 per cent of the total service receipts. Among other OECD countries, Japan, the United Kingdom and West Germany were the important trading partners for services, particularly in travel. Australia and New Zealand's share in total service receipts ranged from less than 1 per cent to 4 per cent. The share of other ASEAN countries was about 8 to 10 per cent on both accounts. For unclassified countries, Hong Kong and Saudi Arabia were the most important. Saudi Arabia's service trade with Thailand, which was absent in 1976, rose to over 4 billion baht in 1980. Most of Saudi Arabia's service trade consisted of labour services.

Thailand's trade in services with ASEAN countries and Australia was relatively small with Singapore as the leading trade partner (among ASEAN countries) followed by Malaysia (Table 15). In 1976 traded services with Singapore amounted to 1.2 billion baht and expanded to 3 billion in 1980. Freight and travel were the important items. Most services traded with Malaysia was travel which in 1979 contributed as much as 1 billion baht to Thailand's service receipts. Trade in services with the Philippines and Indonesia was minimal, again concentrated mainly in travel. This also applied to Thailand's trade in services with Australia.

Travel was the dominant service traded within the region, followed by freight and insurance, investment income and other services. Despite Thailand's large surplus on the travel balance, travel deficits existed with Singapore and the Philippines over the period 1976-80. Singapore also had sizeable surpluses on freight and insurance and investment income. Except for 1977, Thailand had substantial deficits on its traded service balance with Singapore from 1976 to 1980. Deficits with the Philippines has also arisen in recent years. However, Thailand has been enjoying surpluses with Malaysia and Indonesia in all categories of traded services under government n.i.e. Although Thailand's traded service balance with Australia was favourable for most years, investment income showed a consistent deficit during the period.

SERVICES REGULATION AND GOVERNMENT MEASURES

Need for Domestic Regulation

Despite the importance of services in the domestic economy and for international trade, the role of the services sector is yet to be clearly understood which has often resulted in inadequate attention being paid to the impact of regulations in the services sector upon the economy. Regulations may induce inefficiency and impose excessive economic costs. But reasons for supporting and protecting the domestic production and trade of certain service activities which are basically not different from those given for manufacturing include the following. First, the famous infant-industry argument that the country has a legitimate need to promote and protect certain domestic service activities from foreign competition in order to be self-reliant applies to banking, insurance and transport. Such industries are regarded as too small to compete with multinational firms without protection.

Secondly, national security is clearly of prime importance in the case of regulating public transport (air and maritime), banking and telecommunication. Thirdly, there is a need to protect consumers by regulating rates charged by utility services or to ensure satisfactory standards and public safety. Public utilities whose rates are subject to government regulation include electricity, water supply, public transport and insurance.

Thus, an overall deregulation of service activities based on economic justification alone will not be possible without strong resistance from arguments of national security and social interests. To reconcile the conflicting goals of competitive efficiency on the one hand

and legitimate public interests on the other is indeed a delicate and difficult task.

Regulatory Measures and Policies on Service Activities

Regulation of the services sector is not strikingly different from that of other sectors. Agricultural and manufacturing sectors are mostly regulated through price controls or subsidies. But for services, government regulation may include a variety of measures other than taxes and subsidies, such as control of the rates charged; control of entry; control of licensing; government ownership; and close supervision by government agencies. These measures of regulation may be directed at domestic service activities, but they certainly have their effects on international activities as well. International transactors of services often face additional measures designed to discriminate against foreign competitors especially for activities that are considered crucial for public interests, such as banking and telecommunication. Specific measures include discretionary and restrictive licensing, procurement practices, administrative and technical regulations, discriminating taxes, subsidies and surcharges, and exchange controls. Immigration and alien occupation regulations are also major impediments directly affecting foreign entry into domestic service activities.

Alien service business regulation. According to the Revolutionary Party's Announcement No. 281, 24 November 1972, certain types of business activity are prohibited from foreign participation or are required to have some degree of participation by Thai nationals. The government identifies and classifies these restricted business activities into three categories as follows:

Category A includes all activities reserved only for Thai nationals or juristic companies that are majority owned by Thais. Existing foreign enterprises either terminate their operations or convert them into enterprises which are at least 51 per cent Thai-owned. Service industries in this category include internal trade of local agricultural products, real estate, building construction, and business services of accounting, law, architecture, advertising, brokerage or agency, auctioning, haircutting, hairdressing and beautification.

Category B. In this category, existing foreign enterprises, as of 26 November 1972, are allowed to continue their operations for an indefinite period, provided that an appropriate certificate is obtained from the Ministry of Commerce. The enterprises are prohibited from increasing production or sales by more than 30 per cent of the amount recorded in the fiscal year 1972. The administration of this regulation has so far been ineffective. Furthermore, no new branches can be established without government approval. New foreign firms are also prohibited from being established unless they have been granted promotional status by the Board of Investment. Service industries in this category cover trade in antiques, tourist guides, hotels (except hotel management), all businesses defined by law as service premises, photograph processing and developing, laundry, dressmaking, and domestic land, water and air transport.

Category C. As in Category B, existing foreign firms are allowed to continue subject to the same regulations. However, new firms can be

established without a promotional grant from the Board of Investment, but are subject to certain ministerial regulations regarding the ratio of Thai to foreign capital, and the ratio of Thai directors to foreign directors. This category includes selling of food or beverages for promotion of tourism, retailing of machinery, equipment and tools, and all businesses not listed explicitly in Categories A and B.

Alien occupation regulation. Foreign-owned service activities are also affected by government regulations on alien occupations which specify types of occupation reserved for Thais and impose various conditions on other occupations. The control on foreign labour services severely affects labour mobility and the structure of service trade pattern. First introduced in 1941 by the proclamation of the Occupations and Professional Assistance Act, B.E. 2484 (1941), the regulation was later replaced by the Revolutionary Party Announcement No. 322 in 1972, and further strengthened by Royal Decree B.E. 2516 in 1973. The restrictions affecting services trade may be summarised as follows:

(a) With some exceptions, all non-Thai nationals working in Thailand, regardless of occupation, are required to possess work permits.

(b) A work permit holder is prohibited from changing occupation, locality or employer. A new work permit is required to make such changes.

(c) Aliens working in service activities promoted by the Board of Investment are governed by special laws (such as Petroleum Act B.E. 2514 1971), and work permits will be granted for the duration prescribed by such laws.

(d) Work permits are not required for aliens working in Thailand under the following circumstances: under an agreement between Thai and foreign governments; carrying out an urgent and necessary assignment for a period not exceeding 15 days; working on an assignment for the benefit of services designated by a Royal Decree; and working with persons who are exempt from obtaining work permits.

(e) Aliens are allowed to apply for work permits in any occupations that are not absolutely banned to aliens either for commercial or income purposes. The prohibited list of alien occupations consists of consulting services in civil engineering, architectural services, accounting services, law services, clerical and secretarial services, brokerage or agency, auction, shop salesman, vending, haircutting, hairdressing or beautification services and tourist guide.

Immigration regulation. While immigration requirements for foreigners are applied with little or no intention to protect domestic services activities, the regulations may nevertheless affect some traded service activities, particularly tourism. Furthermore, the regulations for obtaining permanent resident status and the differential income tax rates based on immigrant status have spillover effects on investment income.

An alien may enter Thailand as an immigrant, or as a non-immigrant for a temporary stay or as a tourist. Non-immigrants and tourists are not permitted to stay for more than 30 days, but this may be extended by

up to 30 days. The decision to grant a residence certificate to an immigrant is based on the immigration quota, set for each country in each year by the Ministry of Interior.

Exchange control. The government has enacted a number of laws and ministerial regulations to control foreign exchange. The first Exchange Control Act was introduced in 1952. According to the Act, all financial transactions involving foreign exchange and repatriation of investment earnings and capital require approval from the Foreign Exchange Division of the Bank of Thailand. Except in cases where general exemption has been granted, all proceeds of foreign exchange acquired by exports must be sold to the Bank of Thailand within seven days from the date of acquisition, at the official rate, which is lower than the market rate. Holders of foreign exchange, such as tourists, must declare currency in excess of US$2000 to the Customs Officer at the port of entry. For a resident, no more than US$550 is allowed. Anything in excess of this amount must be sold to an authorised bank within seven days.

The exchange control measures also prohibit the importation of goods and services unless the foreign currency for such imports has been purchased in accordance with the conditions prescribed by the government. Purchase of foreign currency for purposes other than payment of merchandise imports must satisfy a set of procedures specified for each category of transaction. These transactions will be examined in detail since they are mostly service-related activities.

(a) Freight charges. Freight charges on imports or exports, and charges for passengers travelling by conveyances managed by non-Thai nationals or by foreign registered enterprises, are allowable in foreign currency after deduction of the expenses incurred in Thailand. For Thai nationality-managed enterprises, the net amount of foreign exchange that may be purchased is limited to the excess of expenses over receipts.

(b) Insurance premiums. Insurance premiums earned by foreign insurance companies or agents of those companies registered abroad are allowable in foreign currency only for the net amount after deduction of expenses. This excludes life insurance premium, except when the policy has been issued before 12 October 1979, or written to the holder when overseas. An insurance company is permitted to purchase foreign currency for payment of re-insurance premiums at the actual amount to be paid as per contract. Payments for foreign compensation claims for inferior/deterioration in quality, or short shipment of exports, are also permitted in foreign currency if reliable survey notes or documents with the findings underwritten by an arbitrator are submitted with the application.

(c) Fees. Certain service fees such as royalties, or patent fees, licence fees, subscription fees, education fees, and allowances for families or relatives living abroad, are also allowed in foreign currency upon submission of an appropriate form and transaction contracts.

Capital inflows and outflows require approval from the government. An exchange guarantee for repatriation of investment capital and earnings may be obtained from the government. Usually the repatriation of investment and earnings is guaranteed if the firms are granted promotional status. However, such a guarantee may be withdrawn when the

government deems that capital outflow will jeopardise foreign exchange reserves.

Differential tax treatments. In Thailand, taxation of income arising from business activity is restricted only to a juristic company or partnership. Therefore, government enterprises created by special statute, such as the Industrial Finance Corporation of Thailand (IFCT), the Telephone Organisation of Thailand and the Port Authority, are not subject to income tax. However, government enterprises organised as limited companies are subject to income tax. These are, for example, the Thai Airways Company, the Thai Airways International Company and the Thai Maritime Navigation Company.

Juristic entities set up under foreign law which are neither companies nor partnerships, such as the Export-Import Bank of the United States of America, are exempt from tax. Other foreign juristic companies and partnerships, incorporated under either foreign or Thai laws, are subject to income tax on the net profit arising from their business activities in Thailand. Although foreign companies are required to pay income tax at the normal corporate income tax rate, companies involved in international transportation receive different tax treatment. Tax is levied at the rate of 1 per cent of the fares or freight, fees and any other income collectable in Thailand before deduction of expenses.

Some business entities may receive income tax exemption in accordance with agreements on avoidance of double taxation made between Thailand and foreign governments, or under special laws such as the Petroleum Income Tax Act.

Investment Promotion Act. Since 1960 Thailand has actively promoted domestic industrialisation. The Investment Promotion Act offers a variety of incentives to attract foreign investors. These incentives include guarantees against nationalisation, competition from new government enterprises, monopolisation and price controls. Promoted industries are offered protection against competing foreign imports, exemption from import duties and/or business taxes on imported inputs and machinery; remittances of returns on invested capital; permission to acquire land for business purposes; liberal entry of necessary foreign technicians; and an allowance for losses during tax holidays, to be used as deductions against net profits in later years. A more favourable incentive package is also available to promoted industryies designated by the government, and export oriented enterprises.

REGULATION IN SELECTED SERVICE INDUSTRIES

Advertising

According to the Alien Business Decree, advertising is prohibited from any foreign participation after 26 November 1972. Those firms existing before that date were allowed either to terminate their operations or to convert, before 29 November 1974, into an at least 51 per cent Thai-owned enterprise. A new advertising enterprise is only permitted if majority of shares and numbers of shareholders are Thai nationals. Work permits are required for foreign personnel working in

advertising and are normally issued for a period of six months. A licence for foreign exchange exemption is required for imported advertising pictures showing for a limited period of time.

Banking

Banking in Thailand is subject to strict government controls. A commercial bank is required to have at least three-quarters of the total amount of outstanding shares owned by Thai nationals and three-quarters of its directors must be Thais. A foreign bank requires a licence to operate from the Ministry of Finance and it must comply with certain conditions. For example, it must maintain assets in Thailand in accordance with the government's criteria regarding the amounts, types, and procedure on amounts of money brought in from outside Thailand, and on amounts of bank reserves, including reserves for repayment of debt. Existing banks are allowed only one branch in Bangkok.

Other Service Industries

Foreign participation in service activities is mostly restricted to a minority holding. For example, movie-making firms and fruit and vegetable packaging firms for export must be at least 60 per cent owned by Thai nationals. International trading firms must be registered as public companies, or their stockholders, boards of directors, and executives must consist wholly of Thais. Silo-drying firms are required to have at least 70 per cent of registered capital owned by Thais. Foreign participation in insurance is also restricted to a minority. A foreign insurance firm is prohibited from offering a full line of services without governmment approval.

The government also prohibits foreign firms from operating any domestic transportation. Preferential treatment is also given to local firms dealing with international transport. For example, foreign firms operating international freight and air carrier services are taxed on gross income while local firms are taxed on net profits. Discriminating purchase by the government is also a common practice in the insurance and transportation industries.

CURRENT ISSUES AND FUTURE DIRECTION OF SERVICES DEVELOPMENT

Despite the multitude of government interventions in the services sector, there has been an emerging trend towards reduced control in certain service industries. Several factors work in favour of deregulation. First, inefficiency in services provision by public enterprises has caused inadequate supply of services and often incurs huge accumulated losses. Such inefficiencies have become a financial burden to the government and also a bottleneck to the country's development process. To cope with the problem, the government has attempted to privatise some of the poorly managed public enterprises especially those offering domestic transport and maritime services.

Secondly, the rapid development of advanced technology and information system has forced the government to deregulate telecommunication services to allow for more competition and foreign

participation. Thirdly, international discussions on liberalization of trade in services under the GATT to include services in its agreements forces the government to consider its policies. As a member of GATT, Thailand has to participate in the current round of multilateral trade negotiations. Finally, pressure from the United States for liberalization of certain traded services along with the need to protect intellectual property rights from domestic piracy in return for GSP privileges has been mounting. In recent years, Thailand has encountered problems in bilateral trade negotiations with the U.S. concerning intellectual property rights vis-a-vis continuing GSP privileges for Thai export of canned tuna, steel pipes, apparels and textile products to the U.S.

Several specific issues on liberalization of trade in services have emerged. First, the issue of market accessability through trade liberalization differs from that for goods. In the case of goods, trade liberalization is conceptually clear in that it means improved access to markets by reducing trade barriers and obstructive trade policies. But, for trade in services the concept becomes less transparent as the right of establishment must be considered. That is, when foreign service activities are established within the border, capital, management and even labour may have to move along across the border. Such perfect mobility of factors of production (capital and labour) creates problems for immigration, financial practices and procedures including those on exchange control regulations. Should labour and capital be allowed to move freely across the country's border remains a question.

Secondly, the issue of comparative disadvantage of domestic firms when compared with economies of scale enjoyed by large multinational firms operating on a world-wide basis. Coupled with advanced technology and access to information and global communication networks, which are hardly available to local service firms, large multinational service firms will certainly threaten Thai suppliers when service trade is liberalised. The traditional theory of comparative advantage which explains merchandise trade patterns according to the country's relative factor endownments is a static concept that may not apply to trade in services. Service production activities are mostly dynamic in nature, governed by changing technology and innovation. Thus, in spite of relatively abundant resources, Thailand cannot be assured of benefitting or gain from liberalized trade in services.

Thirdly, the issue of national interest to safeguard certain service industries for purposes of managing domestic monetary policy and defense are legitimate difficulties that must be considered. The extent to which services trade liberalisation should be allowed without letting it undermine national interest remains a problem. Each country has, of course, a different set of national interests depending upon its political and economic strengths. To strike an acceptable balance of regulation and obligation between two negotiating countries is something that will not be achieved easily. Liberalisation of trade in services must take into consideration justified regulations that are adequate to protect the national interests of all concerned.

Finally, the principle of non-discriminatory treatment under GATT rules (National Treatment on Internal Taxation and Regulation: Article III) may apply to trade in services. The principle has been used as a

basic argument by the Thai government to counter U.S. charges against regulated domestic markets of certain service activities such as banking, leasing, insurance, and international transport.

With so many unsettled issues particularly on international trade in services and insufficient understanding of the role of services in the development process, negotiation for general agreements will be difficult. Industrialized countries led by the U.S. would like to see more traded services liberalized in order to improve and strengthen their trade positions in world markets in which their comparative advantage has shifted from merchandise exports to service exports. But for developing countries like Thailand, there exists a suspicion that they would really gain from liberalized services trade especially from the viewpoint of public interests and economic losses due to new competition. This is the most contentious issue before GATT members to be resolved in the current multilateral round of trade negotiations.

Meanwhile, several of the issues concerning the services sector that need more elaborate studies in order that its role in the development process can be better understood for future direction include the following:

- The shifting of comparative advantage in traded services
- Service import competition and domestic adjustment;
- Trade in intellectual property rights;
- Limits to service trade cooperation;
- International service factor mobility: labour migration and capital movements.

CONCLUSIONS

This paper has provided an overview of Thailand's economic structure with special reference to the services sector. The contribution of the services sector to the country's economic growth and trade over the past two decades has been examined. During this period, the services sector generally accounted for over 50 per cent of Thailand's GDP whilst trade in services represented about 30 per cent of total trade activities. In terms of value, travel, investment income and labour income were the most important trade activities.

The pattern of trade in services was analysed from available data between 1976 and 1980 to show that Thailand had strong trade relations with the United States, other OECD countries and other ASEAN countries. Among ASEAN, Singapore was the leading trade partner. Travel was the major service traded among ASEAN countries and with Australia. The 1975 input-output tables show that the traded service industry had the highest forward linkage effects. Generally, service industries had the tendency of having higher forward linkage effects than backward effects.

Most traded services in Thailand are subject to government regulations which prohibit aliens from certain service activities and occupations or allow them only a minority participation. In addition, exchange controls, differential tax treatments, subsidies through promotional licensing, and discriminatory purchasing procedures are also

important in controlling trade in services. To liberalize service trade controls, the government is concerned with the issues of national interests, competitive disadvantage and domestic market accessability. However, GATT's current multilateral round of trade negotiations and bilateral trade negotiations with the U.S. have stimulated discussion of service activities and government policies. Issues of intellectual property rights and potential benefits of liberalization of trade are particularly important. But a full understanding of the role of the services sector in the development process is still lacking. Consequently, government policies on service activities are not clearly defined. Efforts for further studies of the services sector should be encouraged to remedy this serious shortcoming.

TABLE 1

PERCENTAGE DISTRIBUTION OF GDP AT CONSTANT 1972 PRICE BY INDUSTRY, 1970-1985

Industry	Average 1970-1975	Average 1976-1980	1981	1982	1983	1984	1985
Agriculture	31.06	27.16	24.96	24.22	23.72	23.22	23.21
Manufacturing	18.63	21.76	22.20	22.13	22.35	22.67	22.30
Services	51.31	51.08	52.84	53.65	53.93	54.09	54.49
GDP	100	100	100	100	100	100	100

Source: National Economic and Social Development Board.

TABLE 2

VALUE-ADDED OF SERVICES, 1976-1985
(Billion Baht, at 1972 Prices)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Electricity	3.3	3.8	4.1	4.7	5.0	5.8	6.2	6.7	7.4	8.1
Water Supply	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.8
Transportation & Communication[a]	13.4	14.5	16.2	17.7	18.8	20.2	21.7	23.3	24.6	26.2
Retail and Wholesale	38.8	41.2	43.7	45.5	48.2	51.1	52.8	55.1	57.4	59.5
Bank and Finance	9.2	10.3	12.0	13.9	15.7	17.3	19.3	21.9	24.2	26.4
Insurance & Real Estate	1.0	1.3	1.5	1.7	1.7	1.9	2.1	2.4	2.8	3.0
Education	5.6	0.2	7.1	7.8	8.4	9.5	10.4	10.7	10.8	11.2
Medical & Health	2.7	3.1	3.5	3.9	4.3	4.8	5.4	5.9	6.3	6.7
Recreation and Entertainment	2.0	2.0	2.1	2.3	2.6	2.9	3.0	3.3	3.6	3.9
Domestics	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7
Hotels & Restaurants	6.5	7.1	8.2	8.9	9.9	10.6	11.5	11.9	12.8	13.5
Personal Services[b]	1.1	1.2	1.4	1.4	1.5	1.6	1.8	1.9	2.1	2.3
Business Services[c]	2.4	2.6	3.0	3.2	3.3	3.5	3.8	4.0	4.3	4.5
Ownership of Dwellings	3.7	3.8	4.1	4.3	4.5	4.7	4.9	5.2	5.4	5.6
Public Adminsitration[d]	8.9	9.6	10.2	11.6	12.4	13.2	13.8	14.5	14.1	14.9

a Both public and private.

b Laundries, barber shops and other personal services.

c Religious organizations, welfare institutions, legal services, trade associations, etc.

d Including defence.

Source: NESDB

TABLE 3

INTERSECTORAL LINKAGES: DIRECT INTERMEDIATE INPUTS
(AT PRODUCER'S PRICEO SUPPLIED TO SERVICES INDUSTRIES, 1975

Industry	Agriculture	Mining	Manufacturing	Services
Electricity	-	0.65	74.45	24.90
Water works and supply	-	-	47.36	52.64
Building construction	1.34	6.16	65.16	27.34
Public works	0.60	11.48	62.75	25.17
Trade	0.02	-	32.12	67.86
Restaurants and hotels	11.86	0.04	57.61	30.49
Transportation	0.11	-	72.95	26.94
Communication	-	-	23.97	76.03
Banks and insurance	0.06	-	32.89	67.05
Real estate	1.95	-	11.29	86.76
Business services	0.01	-	33.82	66.17
Public services	2.02	-	49.29	48.69
Other services	0.87	0.01	46.54	52.58

Source: Computed from Thailand Input-Output Joint Project, Input-Output Table of Thailand for Analytical Use, 1975, Table 6.1.

TABLE 4

INTERSECTORAL LINKAGES; DIRECT INTERMEDIATE INPUTS (AT PRODUCER'S PRICE) SUPPLIED TO VARIOUS SECTORS BY SERVICES, 1975

Industry	Agriculture	Mining	Manufacturing	Services
Electricity	0.36	0.48	62.20	36.96
Water works and supply	4.32	2.50	62.54	30.64
Building construction	9.28	6.57	50.67	33.48
Public works	-	-	62.03	37.97
Trade	6.36	0.71	74.33	18.60
Restaurants and hotels	0.26	4.51	56.07	39.16
Transportation	10.66	3.98	48.47	36.89
Communication	0.15	0.34	38.49	61.02
Banks and insurance	21.11	6.63	43.21	29.05
Real estate	3.30	0.12	36.38	60.20
Business services	0.03	3.29	52.74	43.94
Public services	-	-	40.36	59.64
Other services	2.10	0.77	19.71	77.42

Source: See Table 3.

TABLE 5

INTERSECTORAL LINKAGES: PERCENTAGE OF SERVICE INDUSTRY OUTPUT SUPPLIED FOR INTERMEDIATE AND FINAL USE, 1975

Industry	Intermediate Use	Final Use
Electricity	65.96	34.04
Water works and supply	38.85	61.15
Building construction	7.56	92.44
Public works	2.00	98.00
Trade	26.40	73.60
Restaurants and hotels	14.74	85.26
Transportation	24.49	75.51
Communication	37.28	62.72
Banks and insurance	43.60	56.40
Real estate	1.02	98.98
Business services	63.53	36.47
Public services	0.54	99.46
Other services	15.73	84.27

Source: See Table 3.

TABLE 6

INTERSECTORAL LINKAGES: TOTAL INTERMEDIATE INPUTS (AT PRODUCER'S PRICE) SUPPLIED TO SERVICES INDUSTRIES, 1975

Industry	Agriculture	Mining	Manufacturing	Services
Electricity	0.45	13.37	29.34	56.84
Water works and supply	0.59	5.29	23.22	70.90
Building construction	2.16	4.88	35.03	57.93
Public works	0.99	7.79	35.38	55.84
Trade	1.29	0.94	10.65	87.12
Restaurants and hotels	8.08	1.30	24.12	66.50
Transportation	0.93	8.79	28.38	61.92
Communication	0.50	3.91	14.71	80.88
Banks and insurance	1.10	1.24	12.19	85.46
Real estate	0.56	0.86	7.53	9.05
Business services	0.93	1.46	20.61	77.00
Public services	0.78	0.86	8.32	90.04
Other services	1.26	2.13	20.43	76.18

Sources: See Table 3.

TABLE 7

INTERSECTORAL LINKAGES: TOTAL INTERMEDIATE INPUTS (AT PRODUCER'S PRICE) SUPPLIED TO VARIOUS SECTORS BY SERVICES, 1975

Industry	Agriculture	Mining	Manufacturing	Services
Electricity	2.05	0.86	26.64	70.44
Water works and supply	0.69	0.37	8.21	90.73
Building construction	2.62	1.52	19.59	95.64
Public works	0.20	0.05	4.11	95.64
Trade	5.12	1.10	61.56	32.20
Restaurants and hotels	2.35	1.62	31.24	64.79
Transportation	5.79	2.08	37.15	54.98
Communication	0.47	0.17	7.41	91.95
Banks and insurance	6.61	1.99	28.43	62.97
Real estate	0.20	0.07	3.16	96.57
Business services	1.01	0.74	18.70	79.55
Public services	0.07	0.03	1.29	98.61
Other services	1.03	0.45	13.84	84.68

Source: See Table 3.

TABLE 8

BACKWARD AND FORWARD LINKAGES EFFECTS OF SERVICE INDUSTRIES

Industry	Forward	Backward
Electricity	1.31	1.10
Water works and supply	0.73	1.02
Building construction	0.91	1.19
Public works	0.67	1.13
Trade	3.35	0.81
Restaurants and hotels	1.20	1.11
Transportation	1.64	1.01
Communication	0.73	0.93
Banks and insurance	1.26	0.83
Real estates	0.67	0.74
Business services	0.84	1.00
Public services	0.65	0.72
Other services	0.92	0.93

Source: Thailand Input-Output Joint Project, Input-Output Table of Thailand for Analytical Use, 1975, Table 6.19.

TABLE 9

MERCHANDISE AND SERVICES TRADE 1970-1985
(Billion Baht, Current Year Prices)

	Average 1970-1975	Average 1976-1980	1981	1982	1983	1984	1985
Merchandise, Export, F.O.B.	29.58	90.44	150.2	157.2	145.0	173.5	191.7
Merchandise, Import, C.I.F.	42.25	124.17	216.0	193.3	234.2	242.2	253.3
Merchandise Balance	-12.67	-33.73	-65.8	-36.1	-89.2	-68.7	-61.6
Service Receipts	12.70	24.68	51.3	59.2	67.1	72.7	85.8
Service Payments	10.50	25.56	45.3	50.4	50.5	57.5	70.6
Service Balance	2.20	0.88	6.0	8.8	16.6	15.2	15.2
Unrequited Transfer (Net)	2.10	1.54	3.6	4.2	6.3	4.1	4.4
Current A/C Balance	-4.13	-28.82	-59.8	-27.3	-72.6	-53.5	-46.4
Total Trade) Service) Merchandise)) Trade Ratio)	0.34	0.23	0.26	0.31	0.31	0.31	0.35
Total Trade) Service to) Total)) Trade Ratio)	0.26	0.21	0.26	0.30	0.30	0.30	0.35

Source: Bank of Thailand.

TABLE 10

TRADE IN SERVICES
(Billions of Baht, Current Year Prices)

	Average 1970-1975	Average 1976-1980	1981	1982	1983	1984	1985
RECEIPTS	12.7	24.74	51.40	59.27	67.14	72.74	85.88
Freight & Insurance on Merchandise	0.84	2.38	4.79	5.05	5.96	7.06	9.24
Other Transportation	0.67	1.71	2.12	3.30	3.59	4.02	3.58
Travel	3.12	9.29	21.46	23.88	25.05	27.32	31.77
Investment Income	2.08	3.82	5.78	5.64	5.22	5.21	6.66
Government, N.I.E.	4.56	1.74	2.30	2.30	2.60	2.53	3.89
Other	1.39	5.75	14.95	19.10	24.71	26.60	30.75
PAYMENTS	6.27	20.17	45.36	50.47	50.56	57.54	70.63
Freight & Insurance on Merchandise	0.54	1.75	3.16	3.50	2.89	3.69	4.37
Other Transportation	0.39	1.18	2.18	2.28	3.06	2.75	3.53
Travel	1.61	4.05	6.02	6.15	7.90	7.29	7.62
Investment Income	2.12	9.40	26.50	30.62	29.16	35.43	44.83
Government, N.I.E.	0.36	0.54	1.60	1.57	1.46	1.23	1.95
Other	1.21	3.22	5.87	6.35	6.10	7.15	8.33
NET SERVICES	6.43	4.57	6.04	8.80	16.58	15.20	15.25
Freight & Insurance in Merchandise	0.30	0.63	1.63	1.55	3.07	3.37	4.87
Other Transportation	0.28	0.53	0.06	1.02	0.53	1.27	0.05
Travel	1.51	5.24	15.44	17.73	17.15	20.03	24.15
Investment Income	-0.04	-5.58	-20.72	-24.98	-23.94	-30.22	-38.17
Government, N.I.E.	4.20	1.20	0.70	0.73	1.14	1.30	1.94
Other	0.18	2.53	9.08	12.75	28.61	19.45	22.42

Source: Bank of Thailand.

TABLE 11

SHARE OF VARIOUS INDUSTRIES IN TOTAL SERVICES TRADE 1970-1985
(Percentage)

	Average 1970-1975	Average 1976-1980	1981	1982	1983	1984	1985
Freight and Insurance on Merchandise	7.27	9.19	8.48	7.66	7.39	8.14	8.63
Other Transportation	5.58	6.43	4.34	4.92	5.52	5.14	4.47
Travel	24.93	29.70	28.36	27.28	27.89	26.49	25.12
Investment Income	22.14	29.43	33.33	33.02	29.16	31.18	32.86
Government, N.I.E.	25.93	5.07	3.93	3.46	3.31	2.82	3.64
Other Services	13.70	19.97	21.42	23.17	26.19	25.88	24.93
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Calculated from Table 10.

TABLE 12

TRADED SERVICE BALANCE, 1970-1985
(Billion Baht, Current Year Price)

	Average 1970-1976	Average 1976-1980	1981	1982	1983	1984	1985
Freight & Insurance on Merchandise	0.30	0.63	1.63	1.55	3.08	3.36	4.86
Other Transportation	0.28	0.53	-0.06	1.01	0.53	1.27	0.04
Travel	1.51	5.24	15.42	17.72	17.15	20.02	24.14
Investment Income	-0.04	-5.58	-20.72	-24.98	-23.93	-30.21	-38.17
Government, N.I.E.	4.20	1.20	0.68	0.73	1.15	1.30	1.94
Other	0.18	2.53	9.08	12.75	18.60	19.447	22.42
Total	6.43	4.57	6.04	8.79	16.57	15.19	15.25

Source: Calculated from Table 10.

TABLE 13

PROPORTION OF SERVICES TRADED (RECEIPT/PAYMENTS) 1970-1985

	Average 1970-1975	Average 1976-1980	1981	1982	1983	1984	1985
Freight and Insurance on Merchandise	1.55	1.36	1.51	1.44	2.06	1.91	2.11
Other Transportation	1.71	1.44	0.97	1.44	1.17	1.46	1.01
Travel	1.93	2.29	3.55	3.88	3.17	3.74	4.16
Investment Income	0.98	0.40	0.21	0.18	0.17	0.14	0.14
Government, N.I.E.	12.66	3.22	1.42	1.46	1.17	2.05	1.99
Other Services	1.14	1.78	2.54	3.00	4.04	3.71	3.69
Total	2.02	1.22	1.13	1.17	1.32	1.26	1.21

Source: Calculated from Table 10.

TABLE 14

TRADED SERVICE RECEIPTS AND PAYMENTS, BY REGION, 1976-80
(million baht and percentage[a])

	1976		1977		1978		1979		1980	
	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments
ASEAN	1000.6	1061.5	1337.7	972.3	2280.2	1305.8	2903.8	1759.2	1678.9	2398.6
	(7.2)	(8.6)	(9.1)	(7.9)	(10.3)	(8.1)	(9.9)	(7.8)	(6.6)	(9.0)
Australia-New Zealand	621.3	172.2	603.6	175.0	540.4	177.4	550.8	198.3	207.8	243.3
	(4.4)	(1.4)	(4.1)	(1.4)	(2.4)	(1.1)	(1.9)	(0.9)	(0.8)	(0.9)
USA-Canada	3856.2	4476.2	3824.3	4325.5	5113.6	5422.1	6525.2	8251.4	6277.2	10460.7
	(27.6)	(36.2)	(25.9)	(35.0)	(23.1)	(33.6)	(22.3)	(36.7)	(24.4)	(39.2)
Other OECD	5486.8	3363.0	7041.1	3814.1	10025.1	4808.2	12649.9	5650.6	8871.6	7096.1
	(39.2)	(27.2)	(47.7)	(30.8)	(45.3)	(29.8)	(43.2)	(25.1)	(34.4)	(26.6)
(Japan)	(1331.9)	(1309.1)	(1669.6)	(1275.4)	(2690.0)	(1676.7)	(3193.6)	(1915.9)	(2529.7)	(2309.3)
	(9.5)	(10.6)	(11.3)	(10.3)	(12.2)	(10.4)	(10.9)	(8.5)	(9.8)	(8.7)
Other countries and international agencies	3028.4	3277.9	1965.0	3079.6	4159.0	4441.3	6679.3	6633.5	8726.5	6469.4
	(21.6)	(26.5)	(13.3)	(24.9)	(18.8)	(27.5)	(22.8)	(29.5)	(33.9)	(24.3)
Total	13993.3	12350.8	14771.2	12366.5	22118.3	16154.8	29309.0	22493.0	25762.9	26668.1
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

a May not add up to 100 per cent due to rounding.

b Excluding freight and insurance payments on merchandise as their data by country are not available.

Source: Bank of Thailand.

TABLE 15

ASEAN TRADE IN SERVICES, 1976-80
(million baht and percentage[a])

	1976		1977		1978		1979		1980	
	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments
Indonesia	172.2	45.5	268.2	29.2	283.6	25.3	508.9	83.6	273.8	73.3
	(11.1)	(3.7)	(14.3)	(2.6)	(10.3)	(1.7)	(15.1)	(4.3)	(14.8)	(2.8)
Malaysia	359.6	191.4	490.3	128.2	1168.4	205.8	1323.4	210.5	339.3	319.2
	(23.3)	(15.6)	(26.1)	(11.3)	(42.5)	(14.0)	(39.2)	(10.8)	(18.3)	(12.1)
Philippines	75.3	87.4	88.0	98.3	205.8	108.6	124.3	113.6	37.5	139.5
	(4.9)	(7.1)	(4.7)	(8.7)	(3.9)	(7.4)	(3.7)	(5.9)	(2.0)	(5.3)
Singapore	393.5	737.2	991.2	715.9	722.4	966.1	947.2	1351.5	1037.3	1866.6
	(25.5)	(60.2)	(52.7)	(63.0)	(26.3)	(65.6)	(28.0)	(69.6)	(56.0)	(71.0)
Australia	544.3	163.9	544.0	163.2	467.9	166.2	469.9	182.5	164.2	230.7
	(35.2)	(23.4)	(28.9)	(14.4)	(17.0)	(11.3)	(13.9)	(9.4)	(8.9)	(8.8)
Total	1544.9	1225.4	1881.7	1135.5	2748.1	1472.0	3373.7	1941.7	1852.1	2629.3
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

a May not add up to 100 per cent due to rounding.

Source: Bank of Thailand.

SERVICES IN THAILAND - A CASE STUDY OF TOURISM

Sirisopak Buraphadeja

INTRODUCTION

Before the 1970s the Thai economy had been dominated by agriculture in terms of contribution to both GDP and total employment. Since the First Six Year Economic Development Plan of 1961, rapid economic growth has been achieved. Major industrial policies have been implemented through investment incentives to boost industrialization. The success has also caused structural changes in the Thai economy because as the industrial and services sectors become more important, the agricultural sector faces problems of international competition and protection by industrialized countries.

The role of the services sector of the Thai economy has increased substantially over the last two decades due to a decline in government regulation on business establishments, the growing application of computers and technological innovation, and the continued expansion of franchise chains. The sector's growth, at a real compound rate of around 8 per cent a year over the last two decades, was faster than that of GDP at 4.2 per cent on average (Table 1). In 1986, the services sector expanded 7.0 per cent compared to 5.2 per cent in 1985. Recreation and entertainment associated with hotels and restaurants increased sharply at 22.8 per cent and 6.9 per cent respectively in 1986. The increase in the number of tourists at 11.3 per cent accounted for much of the expansions (Table 2). The composition of various service subsectors in terms of value added at current prices is provided in Table 3 whilst Table 4 shows details of the category labelled as 'services' in Table 3.

CONTRIBUTION OF THE SERVICES SECTOR

Employment

The services sector has become an important source of employment, second only to the agricultural sector. In 1960, the share of employment in this sector was already about 14 per cent while that for manufacturing and mining was only 3.6 per cent. By 1984, the services sector's share of employment rose to 22.1 per cent while that for manufacturing and mining remained at 8.1 per cent (Table 5).

Table 6 shows that activities that require high labour inputs were those concentrated in the services sector especially public

administration, education, sanitary and similar services, research and scientific services.

Balance of Trade

The compound growth rates of exports and imports from 1975 to 1985 were 18.6 per cent and 14.9 per cent respectively. As a result, trade deficit has been reduced by 3.8 per cent per year (Table 7). The export of goods and services in current prices expanded by 14.5 per cent while imports dropped 1.0 per cent in 1986, resulting in a surplus of 35,935 million baht. The deficit of 20,539 million baht in 1986 in the trade (merchandise) account was lower than the corresponding figure of 61,635 million baht the year before. The surplus of 56,474 million baht on the 1986 balance of services account that resulted was remarkable as it contributed to the overall surplus on the current account for the first time after 16 continuous years of deficit. See Table 8. Apart from improvements in the export of goods, the export of tourist services has been increasing at significant rates as discussed below.

TOURISM IN THAILAND

The flow of tourists into Thailand has increased many folds since the early 1960s and this trend is expected to continue into the future. For the past 5 years, the increase averaged 10 per cent per annum, the only exception was 1983 which recorded a drop of 1.2 per cent. See Table 9.

About 3.2 million tourists are expected to visit the country in 1987 again reflecting an increase of 10 per cent whilst total revenue expected from tourism would be in the region of 40,000 to 42,000 million baht. By the end of 1987 which has been designated the 'Visit Thailand Year', income would have been more than double that of 1981. The Tourism Authority of Thailand reported that 1,325,279 tourists have visited the country during the first six months of 1987 which represent an increase of 11.3 per cent over the corresponding period last year.

A breakdown of tourist arrivals for 1986 in Table 10 shows that 979,757 arrived by air (up 10.2 per cent), 327,429 by land (up 10.3 per cent) and 18,093 by sea (up 15.7 per cent).

Visitors from the Asia-Pacific region totalled 766,297, accounting for the largest share of 57.8 per cent of all tourist arrivals, followed by Europeans, Americans, South Asians, visitors from the Middle East, and those from Africa. Table 10 also shows the changes of arrivals by geographical region between 1985 and 1986. Tourists from the Middle East showed the only decline whilst those from all other regions recorded increase. In particular, visitors from Africa increased sharply by 21.6 per cent between the two years.

Nationality-wise, Malaysians remained the largest single group of visitors to the country during January - June followed by the Japanese, Singaporeans, Americans, and the British. Table 11 shows the marked increase of British arrivals by 21.1 per cent compared with 17.2 per cent

for Singaporeans, 13.4 per cent for Malaysians, 12.1 per cent for Americans and 11.6 per cent for the Japanese.

Table 12 shows the importance of tourism as a foreign exchange earner. Revenue from tourism in 1986 amounted to 1,421 million U.S. dollars which was an increase of 21.3 per cent from the previous year. Compared to other sources of foreign exchange earnings, the tourism industry ranks first (Table 13).

Surveys on tourists' expenditure carried out by the Tourism Authority of Thailand shows the average daily expenditure per person for 1986 as 2,233 baht. Figures for earlier years are shown in Table 14. The composition of tourist expenditures classified into 6 categories, namely accommodation, food, shopping, local transport and tour, entertainment and others are detailed in Table 15.

A recent study commissioned by the Singapore Tourist Promotion Board showed that Bangkok is more expensive than Kuala Lumpur and Singapore but cheaper than Jakarta for tourists. Tourists spend an average of US$61 a day in Kuala Lumpur on hotel accommodation, food, local transport, sight seeing and others. Singapore costs the tourists US$67 while expenses in Bangkok averaged US$83 per day. However, the proportion of the daily expenses spent on entertainment was not examined.

THE HOTEL INDUSTRY

It is recognised that the hotel industry contributed most to the development of tourism in Thailand. The increasing number of tourists is partly due to the attractive and modern conditions of the hotels. Other factors include Thailand's comparatively low cost of living, its exotic oriental atmosphere, the relative low prices of goods and services and the many cultural and historical places of interest. The hotel industry was given a boost by the Board of Investment since the early 1960s. The rapid development of hotels in the late 1960s and early 1970s had been described as a hotel boom. Details of accommodation establishments in the major cities and by region are shown in Tables 16 and 17 respectively.

According to a survey of Asian hotels in 1986, the Oriental Hotel in Bangkok was ranked the best hotel in Asia by business travellers. The same hotel was also named the world's best hotel for the sixth successive year by the New York - based 'Institutional Investor'. Factors considered important were convenient location, comfortable rooms, generally good service, design and decoration, and popularity.

Between 1972-1977, the daily average occupancy levels for all classes of hotels in Bangkok varied between 62 to 72 per cent, reaching as high as 79 per cent in 1979. In 1984 to 1986, the hotel business experienced a modest growth. The average occupancy rate of first class hotels in Bangkok increased from 65.4 per cent to 66.5 per cent on average between 1985 and 1986. Details are shown in Table 18.

The demand for hotel rooms can be estimated as follows.

$$\frac{(T)\ (L)}{(A)} = (R)\ (O)\ (365)$$

T = number of tourists

L = average length of stay

A = average number of tourists staying in each room

R = number of hotel rooms demanded

O = occupancy rate

365 = number of days in the year

Solving for R gives the estimated demand for accommodation.

Clearly, there was an excess supply of rooms in 1986 as 18,904 rooms were available in Bangkok whilst demand was about 10,000 rooms. In view of the excess supply, the sixth plan of the Tourist Authority of Thailand should not encourage additional investment for hotels in Bangkok.

Despite the increase in the number of tourists, the hotel industry is not free from problems. Perhaps the most important problem lies in the oversupply of hotel rooms which has lead to discounting of room rates as a strategy to reduce the glut. Some hotels offer as much as 50 per cent discount during off-seasons.

ECONOMIC SIGNIFICANCE OF TOURISM

The revenue from international tourism in terms of U.S. dollars increased only slightly from US$1,171 million in 1985 to about US$1,421 million in 1986. But when converted into Thai baht, the increase is not insignificant due to recent devaluation of the baht. Total revenue increased from 27,317 million baht in 1984 (at 23.64 baht per U.S. dollar) to 31,676 million baht in 1985 (at 27.13 baht per U.S. dollar). The decline in the number of Thai travellers since 1983 and the increase in the number of foreign visitors had contributed to the improvement of the tourism account.

The above calculation was based only on gross estimates, especially in the case of income from international tourists' spending. However, when import propensity was taken into account, the net impact on the balance of payments would be lower. It was estimated that the import content of tourism service was 34.3 per cent, that is, net income was only 65.7 per cent of the gross. Hence the net effect on the balance of payments would actually be lower than what the statistics may apparently convey. (Indhapanya and Atikul, 1985).

As far as employment effects of tourism is concerned, it was estimated that the ratio of tourists expenses per employment for domestic tourism was about 82,566 baht per person, that is, every domestic tourist expense of 82,566 baht can generate one man year of employment. The ratio for international tourist was 73,199 baht per person. Using input-output tables, it was estimated that the employment effects of domestic tourism will be highest in the services sector (35.8 per cent) followed by the manufacturing sector (27.5 per cent) and the agricultural sector (5.1 per cent). For international tourism, employment generation in the services sector accounted for 42.7 per cent while employment generation for manufacturing and agricultural sectors were estimated at 32.4 per cent and 5.9 per cent respectively.

On the income side, one million baht of domestic tourist expenditure could generate a direct income of 529,000 baht and indirect income of 1,532,000 baht in 1983, to give a total income of 2,061,000 baht. Direct income generated by one million baht of foreign tourist expenditure amounted to 524,000 baht while yielding indirect income of 1,536,000 baht, totalling 2,060,000 baht.

The impact of tourist expenditures varied from industry to industry. Domestic tourists spent 66.1 per cent on services, 33.9 per cent on manufactured goods while foreign tourists spent 59.8 per cent on services and 40.3 per cent on manufactured products. Both domestic and foreign tourists do not spend directly on agricultural and mining product. Both domestic and foreign tourists contributed to GDP most in terms of services (65.7 per cent) and secondly through the manufacturing sector (17.4 per cent). Contributions to the agricultural and mining sectors were insignificant (9.1 and 7.8 per cent respectively). Although foreign tourists spent 23,879 million baht in Thailand in 1982, 8,181 million baht worth of goods and services were imported for their consumption, which represented 34.3 per cent of their expenditure. Thailand, therefore earned only 15,697 million baht of net foreign exchange in 1982 from foreign tourists. In that year, foreign exchange earned from tourists accounted for 26.5 per cent of total receipts from services.

Despite the foreign exchange generated, tourism has brought about several concerns such as uneven income distribution effects. The development of the tourist industry would benefit investors either nationals or from abroad at a cost to the local people in the sense that the cost of living would be pushed up by touristic activities (Somchai Ratanakomut 1987). Moreover, the development of tourism might have some adverse effects on Thai culture. It is often noted that women's welfare and women's rights have been adversely affected, whilst the real economic gains from tourist sector employment might not be as high and permanent as expected.

Tourism was mentioned only briefly in the Second Five Year Economic Development Plan (1967-1971) for at that time the sub-sector was rather insignificant. However, the Fourth Plan began to stress tourism as one of the major sources of foreign exchange earnings as traditional sources were either inadequate or were experiencing decline (including US grants/aid and other foreign inflows). Although more emphasis on tourism was made by the Fifth Plan, it was not till the Sixth Plan that the subsector is promoted vigorously as a major foreign exchange earner and a significant provider of employment. Incentives for the promotion of

service industries though not as well spelt out as those for investment in agriculture and manufacturing are nevertheless taken into consideration under the existing list of activities eligible for concessions.

For services traditionally provided by the Government, such as public utilities, social services, transport and communication, irrigation, public health, education (especially higher education), a shift in policy is evident since the Fifth Plan (1982-1986). The government has found it increasingly burdensome to subsidise many of the infrastructural services, hence the need to privatise. Road tolls will be collected to cover the cost of new express ways. Private universities are now allowed to operate. Health is another area which the private sector is encouraged to develop. For example, private hospitals for the urban middle class have mushroomed. Undoubtedly the Sixth Plan will put more emphasis on encouraging the private sector to play a more active role in providing different kinds of services include infrastructure facilities to the public.

TABLE 1

ANNUAL COMPOUND GROWTH RATES OF GDP AT CONSTANT PRICES, 1961-85
(per cent)

	1961-65	1965-70	1970-75	1975-80	1980-85
Agriculture	5.2	6.0	5.2	3.2	3.8
Mining	14.2	8.9	-0.8	13.9	4.6
Manufacturing	11.4	10.7	9.6	10.5	5.4
Services	8.7	10.1	6.1	8.7	5.9
Construction	13.0	8.8	-0.4	14.3	1.2
Electricity & water supply	13.6	26.2	14.9	11.8	9.7
Transport	7.6	7.9	7.8	7.0	6.9
Trade	7.8	10.3	6.2	6.1	4.3
Banking, insurance, real estate	14.7	17.4	10.6	12.6	11.0
Ownership of dwellings	2.2	4.6	3.7	4.6	4.5
Public administration	6.0	8.6	5.3	8.1	3.7
Other services	7.8	8.6	6.3	9.6	7.1
Total	7.7	8.7	6.3	7.6	5.2

Source: Bank of Thailand.

TABLE 2

GROWTH RATE OF GROSS DOMESTIC PRODUCT AT 1972 PRICES
BY INDUSTRIAL ORIGIN
(Per Cent)

	1982	1983	1984	1985	1986[e]
Agriculture:	1.0	3.8	3.3	3.2	-0.7
Crops	2.4	3.4	3.9	3.4	-2.2
Livestock	4.2	4.4	4.3	2.8	3.8
Fisheries	-11.2	9.1	-4.1	4.1	6.4
Forestry	-7.4	-1.9	4.2	-3.0	0.5
Non-agriculture:	5.1	6.6	6.2	3.2	4.7
Mining and quarrying	-4.2	-0.4	22.7	10.8	1.4
Manufacturing	4.4	7.3	6.3	0.8	6.7
Construction	-2.6	5.5	11.0	0.6	0.7
Electricity and water supply	6.7	8.8	10.1	10.2	6.9
Transportation and communication	7.5	7.3	5.6	5.0	5.2
Wholesale and retail trade	3.3	4.3	4.3	2.9	3.9
Banking, insurance and real estate	11.4	14.3	10.4	2.9	1.0
Ownership of dwellings	4.5	4.9	3.7	4.2	3.9
Public administration and defence	4.9	4.8	-2.7	5.6	2.4
Service - Hotels - Entertain - Others	8.9	5.4	5.8	5.2	7.0
Total GDP	4.1	5.9	5.5	3.2	3.5

e estimate

Source: National Economic and Social Development Board, National Income of Thailand, 1986, Bangkok.

TABLE 3

GROSS NATIONAL PRODUCT AND NATIONAL INCOME AT CURRENT MARKET PRICE BY INDUSTRIAL ORIGIN
(Millions of Baht)

	1982	1983	1984	1985	1986[e]
Agriculture	188742	204443	191278	178533	183037
Crops	139852	149973	139547	127051	124905
Livestock	23608	28840	26328	24371	26669
Fisheries	14150	14466	13129	14807	17564
Forestry	11132	11164	12274	12304	13699
Mining and quarrying	14807	16480	21291	29240	23347
Manufacturing	164649	176200	196257	209014	226571
Construction	43040	47129	52772	54373	55682
Electricity and water supply	14454	16319	18884	24070	28182
Transportation and and communication	63133	73706	83588	95160	101827
Wholesale and retail trade	159849	165812	181993	189736	204095
Banking, insurance and real estate	61021	72381	80577	84922	87248
Ownership of dwellings	9912	11210	12337	13608	14909
Public administration and defence	37349	42551	49182	47136	49139
Services	89170	98690	106704	115562	124325
Gross domestic product, (GDP)	846126	924913	988863	1014354	1098362
Plus: Net factor income payment from the rest of the world	-26376	-25370	-31776	-40919	-42600
Gross national product, (GDP)	819750	899543	957087	1000435	1055762
Less: Indirect taxes less subsidies	83904	100947	111397	112575	121248
Provision for consumption of fixed capital	65649	73386	81773	89845	96290
National Income, (NNP)	670197	725210	763917	798015	838224
Per capita GNP (baht)	16906	18188	18991	19501	20266

e estimate

Source: Same as Table 2.

TABLE 4

GROSS DOMESTIC PRODUCT ORIGINATED FROM SERVICES
AT CURRENT MARKET PRICES
(Millions of baht)

	1982	1983	1984	1985	1986[e]
Education	27874	31206	32857	34445	36254
Medical and health	11725	13518	14905	16614	17761
Recreation and entertainment	3653	3954	4344	4292	5054
Domestics	4099	4503	4812	5133	5497
Hotels and restaurants	32288	34861	37343	41165	44389
Laundries, barber shops and other personal services;	4218	5241	5975	6769	7490
Trade associations; etc.	5313	5897	6468	7144	7880
Total value added	89170	98680	106704	115562	124325

e estimate

Source: Bank of Thailand.

TABLE 5

EMPLOYED PERSONS BY INDUSTRY 1960-84

	Thousands					Percent					Growth I*			
	1960	1970	1975	1979	1984	1960	1970	1975	1979	1984	1960-70	1970-75	1975-79	1979-84
Agriculture	11334	13202	13271	15019	18130	82.3	79.3	72.7	70.5	69.7	1.5	0.1	3.1	3.8
Mining	29	86	82	91	117	0.2	0.5	0.4	0.4	0.5	11.5	-1.0	2.6	5.2
Manufacturing	471	683	1356	1725	1986	3.4	4.1	7.4	8.1	7.6	3.8	14.7	6.2	2.9
Tertiary	1938	2681	3522	4446	5766	14.1	16.2	19.5	21.0	22.1	3.2	5.6	6.0	5.8
Construction	69	181	206	410	533	0.5	1.1	1.1	1.9	2.1	10.1	2.6	18.7	5.4
Utilities	15	25	41	54	131	0.1	0.2	0.2	0.3	0.5	5.2	10.3	7.1	19.4
Transport	166	268	381	425	517	1.2	1.6	2.0	1.9	2.0	4.9	7.8	2.8	4.0
Commerce	779	876	1372	1742	2213	5.7	5.3	7.5	8.1	8.5	1.2	9.4	6.2	4.9
Services	655	1184	1522	1815	2365	4.7	7.1	8.3	8.5	9.1	6.1	6.2	4.5	5.4
Other	252	146	-	-	5	1.9	0.8	-	-	0.2	-	-	-	-

* Annual compound growth rate.

Source: NSU Labour Force Survey July-August (1975, 1979, 1984).
NSU Population Census (1960, 1970).

TABLE 6

LABOUR REQUIREMENT PER ONE UNIT OF SELECTED PRODUCTION, 1985
(baht)

	180 Sector I/O Code	Direct	Indirect	Total
1. Rubber	016	0.42	0.01	0.43
2. Matches	091	0.12	0.13	0.25
3. Non-residential building	139	0.19	0.11	0.30
4. Retail trade	146	0.27	0.04	0.31
5. Hotels and lodging	146	0.09	0.23	0.32
6. Postal and telecommunication	159	0.32	0.07	0.39
7. Life insurance service	161	0.02	0.11	0.31
8. Non-life insurance in service	162	0.23	0.09	0.32
9. Public administration	165	0.86	0.00	0.86
10. Sanitary and similar services	166	0.72	0.03	0.75
11. Education	167	0.79	0.04	0.83
12. Research and scientific services	168	0.58	0.07	0.65

Source: Input-Output Table or Thailand for Analytical Uses, 1980.

TABLE 7

TRADE DEFICIT
(Million baht, Current Prices)

	180 Sector I/O Code	1975 Amount	1985 Amount	Compound Annual Growth Rate (%)
1. Exports (f.o.b.)	805306	55104	303328	18.6
2. Imports (c.i.f.)	401404	79356	319712	14.9
3. Trade deficit (1-2)		-24252	-16384	-3.8
4. Gross domestic product	209402403	358741	1172601	12.6
5. Trade deficit per GDP (%)		6.76	1.04	

Source: Social Research Institute, Chulalongkorn University, 1986.

TABLE 8

INTERNATIONAL TRADE AND SERVICES
(Millions of baht)

	1982	1983	1984	1985	1986[e]
1. Exports	210818	206964	241950	270849	310010
1.1 Goods	157203	145076	173520	191703	228008
1.2 Services	53615	61888	68430	79146	82010
2. Imports	211784	254073	262557	276993	274075
2.1 Goods	193320	234278	242284	253338	248539
2.2 Services	18464	19795	20273	23655	25536
3. Balance of trade (1.1 - 1.2)	-36117	-89202	-68764	-61635	-20539
4. Balance of services (1.2 -2.2)	35151	42093	48157	55491	55474
5. Balance on current account	-21933	-65722	-47171	-40.62	23

e estimate

Source: National Economic and Social Development Board, 1987.

TABLE 9

NUMBER OF TOURIST ARRIVALS
AVERAGE LENGTH OF STAY, REVENUE FROM TOURISM 1977-1986

Year	Number of Tourist Arrivals	% Change	Average Length of Stay (days)	Revenue from Tourism (million baht)
1977	1220672	+11.12	4.51	4607
1978	1453839	+19.10	4.84	8894
1979	1591455	+ 9.47	5.09	11232
1980	1858801	+16.80	4.90	17765
1981	2015615	+ 8.44	4.96	21455
1982	2108429	+10.06	4.79	23879
1983	2191003	- 1.24	4.91	25050
1984	2346709	+ 7.11	5.47	27317
1985	2438270	+ 3.90	5.58	31768
1986	2818092	+15.58	5.93	37312

TABLE 10

NATIONAL TOURIST ARRIVALS TO THAILAND BY NATIONALITY AND MODE OF TRANSPORT
(JANUARY - JUNE 1986)

Country	Total Jan-June 1986	Total Jan-June 1985	% Change 1986/1985	% Share	Air	Land	Sea
Total	1325279	1190997	+11.27	100.00	979757	327429	18093
The Americas	112355	100351	+11.94	8.48	106176	3133	3026
Europe	291912	248827	+19.72	22.03	278723	10332	2857
Africa	6368	5238	+21.57	0.48	6294	55	19
Middle East	47529	56025	-15.16	3.59	47238	267	24
East Asia & Pacific	766297	684811	+11.90	57.82	442759	311531	12007
South Asia	100838	100745	+ 0.09	7.60	98567	2111	160

Source: Immigration Division, Police Department.

TABLE II

INTERNATIONAL TOURIST ARRIVALS BY NATIONALITY

Year / Nationality	1980	1981	1982	1983	1984	1985	1986
Total	1858801	2015615	2218429	2191003	2345709	2438270	1325297
Australia	64174	68015	72089	73295	78334	92813	47219
Canada	17769	20243	22058	25104	26732	31649	18322
China & Taiwan	98394	108409	126480	116211	113136	66843	41121
France	72095	70577	64618	51017	60500	71987	48782
W. Germany	95535	89130	84994	87791	95705	99768	56905
India	66844	83109	85486	108408	120074	128140	57735
Japan	225433	214528	228092	223614	221945	na	na
Korea	19242	23817	29103	26101	27432	221485	124773
Malaysia	402513	446657	588284	576116	592472	554979	319005
Saudi Arabia	15890	25653	30952	32004	37817	41965	24590
Scandinavia	53664	47497	44451	44257	48821	na	na
Singapore	67595	86381	107016	120879	142308	159608	90747
United Kingdom	138808	160015	152916	143299	133209	na	na
USA	115348	119895	130772	140401	155326	171249	87533
Other	363544	405968	410644	385194	454616	754451	313645

Source: Immigration Division, Police Department.

Note: 1986 figures represent number of tourists arriving during the first half of 1986.

TABLE 12

REVENUE FROM TOURISM 1984-1986

		1984	1985	1986
Number of arrivals		2346709	2438270	2818092
Average length of stay (days)		5.47	5.58	5.93
Average expenditure	(baht)	2127	2335	2233
/Person/day	(US$)	90	86	85
	(million US$)	27317	31768	37321
Revenue from tourism	(million US$)	1156	1171	1421

TABLE 13

COMPARISON; REVENUE FROM TOURISM & OTHER MAJOR EXPORTS, 1984-1986
(Unit: million baht)

Rank \ Year	1984		1985		1986	
1	Tourism	27317	Tourism	31768	Tourism	37321
2	Rice	25932	Textile	23578	Textile	31268
3	Textile	19155	Rice	22524	Rice	20315
4	Tapioca	16600	Tapioca	14969	Tapioca	19086
5	Rubber	13004	Rubber	13567	Rubber	15116
6	Maize	10147	Integrated	8248	Integrated	11640
7	Integrated circuits	7352	Maize	7700	Maize	9261
8	Precious stones	6129	Precious stones	6350	Precious stones	8150
9	Tin	5280	Sugar	6247	Sugar	7271
10	Sugar	5222	Tin	5647	Prawns	4391

Source: Revenue from Tourism - Tourism Authority of Thailand.
Revenue from Exports - Bank of Thailand.

Note: p preliminary data

TABLE 14

AVERAGE EXPENDITURES OF TOURISTS

Year	Expenditures (baht)
1964-1969	600
1967-1973	765.19
1974-1976	765.45
1977	836.40
1978	1263.80
1979	1386.51
1980	1950.92
1981	2146.00
1982	2248.11
1983	2328.56
1984	2127.32
1985	2334.92
1986	2233.28

TABLE 15

DISTRIBUTION OF TOURIST EXPENDITURE 1986

Type of Expenditure	Percentage	Million baht
Accommodation	26.63	9939
Food & Drink	16.93	6318
Shopping	27.39	10222
Local Transport & Tour	15.59	5818
Entertainment	10.02	3740
Miscellaneous	3.44	1284
Total	100.00	37321

TABLE 16

NUMBER OF ROOMS OF ACCOMMODATION ESTABLISHMENT IN MAJOR CITIES 1984-1986

Year / City	1984	1985	1986
Bangkok	18906	20968	22576
Pattaya	9720	10504	10764
Chiang Mai	5536	6172	6877
Kanchanaburi	806	1199	1336
Phuket	3446	4072	4754
Hat Yai	4460	4713	5212
Sungai Kolok	1319	1596	1598

TABLE 17

NUMBER OF ROOMS OF ACCOMMODATION ESTABLISHMENTS IN THAILAND
1984 - 1986

Region \ Year	1984	1985	1986
Total	99342	110003	116997
Bangkok	30950	31841	33089
Central region (exclude Bangkok)	7809	9670	10578
Eastern region	15459	18050	18397
Northern region	15167	16228	19083
Southern region	17199	21451	23311
North-eastern region	12758	13123	12539

Source: Tourism Authority of Thailand.

TABLE 18

OCCUPANCY RATE OF FIRST CLASS HOTELS IN BANGKOK
(Per Cent)

	1984	1985	1986
Siam Intercontinental	83	78.8	77.5
Ambassador	62	59.8	76.1
President Meridian	62	74.0	74.5
Tawanna Sheraton	77	72.2	72.2
Oriental	72	67.5	72.0
Royal Orchid Sheraton	43	59.5	68.2
Hilton	65	76.6	67.4
Montien	64	64.6	67.8
Hyatt Central Plaza	33	57.8	66.8
Regent Bangkok	38	70.6	63.4
Dusit Thani	67	65.4	61.1
Erawan	60	50.3	57.4
Shangrila Hotel	-	-	45.9

Source: Million Business Information, 1987.

REFERENCES

Bank of Thailand, Monthly Bulletin and Quarterly Bulletin, various issues.

Somchai Ratanakomut, Study for Tourism Plan During the Sixth National Economic and Social Development Plan, B.E. 2530-2534.

Thailand, Input-Output Table of Thailand for Analytical Use, National Economic and Social Development Board, 1980.

Tourism Authority of Thailand, Annual Statistical Report on Tourism in Thailand 1965-1986.

Wutdhithep Inthapanya and Jumlong Atikul, Economic Impact of Tourism in Thailand, April 1982 (in Thai).

THE SERVICES SECTOR OF THE MALAYSIAN ECONOMY: MACROECONOMIC ISSUES

M. Semudram

INTRODUCTION

The last three decades have witnessed the growth of services as an important economic activity in the industrialized countries where the services sector appears to occupy a more dominant position than the manufacturing. Though the role of services has been regarded as important by economists, it has not been accorded much attention particularly in the area of production and marketing of services within the economy. But now interest has been generated towards the international exchange of services. This is evident since the GATT meeting at Punta del Este, where the United States was anxious to penetrate the markets of developing countries, therefore pushed hard for service industries to be part of the GATT talks for the first time.

International comparison of production of and trade in services becomes extremely difficult given the nature of the accounting systems used at the national and international levels. Apart from different systems, there are a number of shortcomings associated with the services data:

- Lack of statistical disaggregation at the sectoral level.
- Lack of historical data.
- Aggregation of services into merchandise export data, e.g. the export of goods and associated services such as engineering or trading activities are normally lumped together.
- Lack of data on service-related foreign investment, that is, balance of payments data do not differentiate between investment in services and investment in non-service sectors.
- Lack of data on the direction of trade in services.

Objectives

Like most of the developing countries, Malaysia also faces the dilemma of lack of data to facilitate research into the sector. Nevertheless, the objectives of this paper are:

1) To review the size of the sector in the domestic economy and examine its relationships with other sectors;

2) To examine the share of services trade internationally and its pattern of development over the years;

3) To evaluate the role of government policies and their effects on supply and demand for services.

DOMESTIC SERVICE SECTOR

The services sector in terms of share of gross domestic product in 1978 prices for various definitions is summarized in Table 1. Under SNA (United Nations Systems of National Accounts), gross domestic product is divided into nine sectors. In Allocating productive activities into service and non-service categories, two approaches can be adopted.

1) Activities that produce output of intangible nature - this method excludes tangible goods, or activities commonly regarded as service-related, for example construction and publishing.

2) This approach does not emphasize the special character of the services sector, but on non-services sector. Services would therefore consist of all economic activities other than agriculture, forestry, hunting, fishing, mining, quarrying and manufacturing.

Under the narrowest definition, the domestic service sector consists of all private economic activities with intangible output. This makes out to be 30.1 per cent in 1980 and remained roughly the same through the rest of the eighties. For developing countries as a whole, domestic service sector registered about 37.4 per cent of GDP in 1980. If the definition is extended to include utilities, the domestic service sector's contribution to GDP would increase marginally. For Malaysia, the ratio increased to about 32 per cent during the 1980-85 period and reduced marginally to 30.8 per cent in 1986. Utilities in most countries are controlled by the government and these are included in the services sector because they are essential to the production of most goods and services. Although utilities accounted for only 1.7 per cent of GDP in 1986, their inclusion increased the service sectors' share on average by about 20 per cent during the 1980s. When the coverage of the services sector included public administration and defence (in Malaysia's case it is government services which apart from public administration, includes defence, health and education), its contribution to GDP increased significantly to record 32.7 per cent in 1980 and 44.2 per cent in 1985, which is close to the average recorded for the developing countries in 1980 (44.8 per cent).

Several studies excluded construction from the definition of services sector because the final output is tangible. Though it provides service and is small relative to goods components, ideally it should be disaggregated into the service component and the goods component. Inclusion of construction into the definition has increased the service sectors' contribution on average by about 4 to 5 per cent reaching a maximum of 49.5 per cent in 1983.

The analysis of individual categories of services show that the services sector constituted 45 per cent in 1985 in terms of GDP in 1978

prices. Government services were the other category which contributed on the average of about 14 per cent of GDP. The contribution of the banking sector remained around 8 per cent during 1972-1987 (Table 2).

In terms of employment, Table 3 shows that the services sector in 1980 accounted for 37 per cent of total employment and increased steadily to register 44 per cent in 1986. The Government sector's contribution remained around 15 per cent to 16 per cent in the eighties. Components of services sector such as Transport and Communication, and Banking accounted for 5 per cent and 2 per cent respectively in the eighties.

THE SERVICES SECTOR AND THE STRUCTURE OF THE ECONOMY

The study of interactions amongst the sectors of the economy, and the supply of and demand for services can only be effected with the help of an input-output table. At best two sets of tables for 1970 and 1975 are available. Only recently, a 1978 input-output table was released and evaluation of this table is itself a topic for further research.

As can be observed from Table 4, 76.5 per cent of the total services produced in the country are consumed as final demand domestically, whilst only 23.4 per cent is channeled into other sectors as intermediate service inputs. Only 0.1 per cent of all services produced by the economy is exported. The manufacturing sector consumed 43 per cent of domestic intermediate service inputs with the services sector taking up 40.5 per cent of the total service inputs. Table 5 shows that 51.9 per cent of inputs into the service sectors were derived from the sector itself in 1975, while the manufacturing sector appeared to produce 37.5 per cent of inputs required by the services sector.

Analysis of selected services and their sectoral destinations is carried out with the help of Table 6. It is shown that 71 per cent of hotels and restaurant services produced within the economy were purchased domestically by private final consumers, whilst the rest were sold to other sectors in 1970. With respect to transport and storage however, 54 per cent were consumed by private buyers, 30 per cent purchased by other sectors and 12 per cent by the export sector. Private consumers purchased 45.6 per cent of wholesale and retail trade, with 12.2 per cent going to the foreigners.

Further analysis of distribution and production amongst sectors need to be analyzed in the context of the 1978 input-output table.

CURRENT STATUS OF TRADE IN SERVICES

Trade in services has been officially placed on the agenda for multilateral trade negotiations (MTN) in Uruguay. Apart from the existing committee on goods, a committee on services has been established to look into various aspects of trade in services. The establishment of this committee has been the result of United States's initiative and reflects the process of 'deindustrialization', giving way to the

establishment of 'service economies' in most of the industrialized countries.

The US suggests augmentation of the existing GATT rules to include those covering trade in services, particularly linking concessions in goods trade to new codes to liberalise international trade in services to be achieved through the new MTN rounds. Reciprocity requirements were suggested which threaten multilateralism and these suggestions were strongly objected to by Brazil and India on behalf of the developing countries. These countries view the liberalisation of trade in service as a threat to the development of their own indigneous service industry and at the same time their participation in the emerging new service industries such as data processing and communication. The position of the developing countries varied from the hardline position of Brazil and India to the more accommodative stance of Singapore and Hong Kong. Newly industrialised countries see trade liberalisation as an opportunity to take advantage of new developments in new service industries such as data processing and communications, and their possible impact on manufactured exports.

On the question of trade in services, Malaysia adopted a common stand along with the rest of ASEAN whether to follow US and the rest of OECD countries in rejecting the hardline position on service trade liberalisation as part of the new MTN round. This decision is based partly on cooperation among ASEAN countries and more importantly on the importance that Malaysia attaches to trade issues of market access for our processed commodities and manufactured exports. Given the present position of services account of the balance of payments, where large deficits are being experienced, Malaysia is concerned with the promotion of its own services industry so as to reduce the deficit. This view suggests the possible introduction of import substitution and protection to develop the domestic services sector which thus place Malaysia in an awkward position in the areas of trade policy discussions. The following is a brief review of the present position of services account of the balance of payments which need to be addressed before any decisions regarding policies for development are considered.

DEFINITION AND DATA

An understanding of the issues before us would require a clear and more precise understanding of the terminology and statistics associated with trade in services. The definition given to trade in services ranges so far from the relatively narrower definition in terms of balance on services in the balance of payments (embracing both factor and non-factor services) to the broader definition preferred by Shelp (1981), that is those activities whose outputs are principally intangible or non-storable. Moreover, problems in the definition of services is not only semantic but also one of measurement. UNCTAD (1983: 6-8) maintained that services transaction could occur in one of five ways:

1) services which are not traded internationally but merely provided and consumed by residents;

2) services provided only to nationals within national boundaries;

3) services provided by resident firms and individuals to non residents abroad;

4) services provided through contractual agreements (licensing, franchise, management contracts etc.); and lastly

5) services provided through overseas affiliates of a parent company or both through the affiliate and by direct export.

The absence of conceptual agreement on its definition curbs the development of theory, so essential for the formulation of national policy and for the negotiation of codes regulating or liberalising service transactions in the world economy. In the absence of such a theory (see, for instance, Shelp, 1981; Sapir and Lutz, 1981; Bhagwati, 1984; Hindly and Smith, 1985 and Sampson and Shape, 1985), one has to resort to listing and classification of services based upon the issues to be addressed. Usually a distinction is made between factor and non-factor services (NFS). The former includes income from labour working abroad, capital invested abroad (in the form of interest, dividends and profits) and income from property located abroad, while the latter covers travel (tourism), transport and other services. Sampson and Shape (1985: 172-73) identified four types of service transactions:

1) those that do not involve any movement of factors of production or of the service-user (e.g. consulting services, life assurance business and design services effected through correspondence and produced in the exporter country);

2) those involving movements of factors of production but not of the service-user, e.g. the services of guest workers or of imported foreign capital;

3) those concerning movement of the service-user but not the supplier, e.g. securing foreign medical treatment, foreign education and tourism; and finally

4) those involving movement of both the supplier and the service user.

The advantage of such a categorization is that services in category (1) are isolated from the other categories. Standard international trade theory which assumes factor immobility is applicable to those services referred to under category (1). The rest are trading alternatives with different implications for national and international policies as well as for multilateral trade negotiations.

In this paper, we shall focus on the issues of trade in non-factor services namely accounting, advertising, banking, business, professional and technical services, communication, construction and engineering, health, information, insurance, legal services, motion pictures, tourism and transport. The trade figures for non-factor services are disaggregated into transport services (encompassing transport of goods and services by air, sea, road and rail as well as port services and insurance on transport); travel services that include hostel and restaurant services; and other private services comprising financial

services (banking services, brokerage, etc.), as well as professional and technical services (accounting, advertising, construction and engineering, consulting and management, and data processing etc.)(see Sapir, 1985).

The world trade in services for 1980 was estimated at US$350 billion. This accounted for about 17 per cent of total trade in goods and services (Sapir, 1985: 30). Its breakdown is presented in Table 7 below. In order to show the basic dimensions of Malaysia's trade in services, some comparative figures are presented in Table 8 for the years 1975, 1980 and 1985. The statistics particularly from 1980, clearly project the notable fact that there has been constant erosion of Malaysia's merchandise trade surpluses by the services deficit. Also for the first time in 1985, net factor services surpassed non-factor services in the services account.

Since 1974, Malaysia's net trade in non-factor services has been in deficit which places Malaysia among the highest service trade deficit countries in the world, alongside South Korea and Yugoslavia (Table 9). The current account for Malaysia in 1985 is reproduced in Table 10, which shows that the respective shares of the transport, travel and the private services categories are more or less evenly spread. Table 11 projects the growth pattern between 1975 and 1985 for the various categories of services trade. Growth rates in the export and import of non-factor services for Malaysia are respectively shown in Table 12 and 13. Their growth pattern bear close consistency with the overall economic activity and the growth of the economy.

RESTRICTIVE MEASURES ON TRADE AND INVESTMENT IN SERVICES

Despite the long-protracted deficit in the services account largely attributed to investment income outflows including debt service payments and substantial freight and insurance payments, Malaysia's attitude towards trade and investment in services remain liberal. This is to maintain consistency with the Government's policy of creating more conducive climate for greater private sector participation in reviving the economy. Table A provides a summary of the policy liberalisation measures taken.

Exchange Control

Exchange control falls under the purview of the Central Bank. The present exchange controls applied is liberal, with uniform application to transactions with all countries except South Africa and Israel. Since April 1983, commercial banks were vested with the power to approve payments abroad. Where payments exceed an equivalent of M$10,000, approval is required from the authorities. Residents are permitted to borrow freely from abroad so long as the sums do not exceed M$100,000. Special permission must be sought from the Controller of Foreign Exchange for any sum exceeding that amount. With respect to companies controlled by non-residents, they are allowed to borrow an amount not exceeding M$500,000 locally.

Travel Restrictions

Travel tax is levied as a percentage on the travel ticket. Restriction is neither imposed upon the amount of foreign exchange made available for foreign travelling or from export of currency notes by travellers.

Restrictions on Other Private Services

The other private services item includes labour income earned by non-residents, property income (royalties and license remittances) and other services (banking and insurance, contract and professional charges, etc.). In the case of the banking industry, a corporation is allowed a maximum equity stake of 20 per cent, while only 10 per cent for an individual including family-owned companies. Commercial banks are discouraged from financing investments overseas that do not contribute to the long-term benefits of the economy but instead should channel such funds towards the expansion of domestic productive capacity. Loans in foreign currency by banks in Malaysia must be for business and productive purposes in Malaysia including payment for the import of goods and services, payment of interest and loans from non-resident or payment for the purchase from non-residents of immovable properties in Malaysia or stocks and shares, subject to

1) approval of the Foreign Investment Committee;

2) amount borrowed does not exceed the equivalent of M$25 million and

3) repayment of principal will not be made from funds raised in ringgit from residents.

The approval of the Foreign Exchange Controller (Governor of Bank Negara) must be sought for all other foreign currency loans. In the insurance industry, it is ruled that insurance of Malaysian property be effected locally. Owners of such property are also compelled to declare information pertaining to insurance agreements. Consistent with the NEP, the insurance industry is undergoing some Malaysianisation programme, targeted to meet the 1990 deadline.

In the area of foreign expertise, foreign comapnies are allowed to maintain expatriates where there is a shortage of such local manpower. Only a limited number of key expatriate posts are allowed depending upon the merits of each case. A withholding tax of 15 per cent is levied on payments made to foreign suppliers of technology and this has to be borne by the foreign recipient. Exemption under Double Taxation Agreement has to be made to the Ministry of Finance. In case of disputes relating to technology transfer agreements including licence rights, patents and trademarks, arbitration must be conducted in Malaysia in accordance with Malaysian laws. On intellectual property such as copyrights of computer software, there is a new enactment that affords protection of copyright, as an adjunct to the 1969 Copyright Act.

Direct Foreign Investment

The services industry is also subject to foreign ownership restriction and nationality requirements of personnel employment. Only

foreign firms engaged in export-oriented activities, or with the introduction of high technology, are allowed majority equity participation. An export oriented-project is defined as one which exports 80 per cent or more of its production. However investments of more than US$5 million could be directly referred to the Minister of Trade and Industry if the final decision on the officially recommended equity ratio proves unacceptable to the investor. By virtue of the NEP (New Economic Policy) guidelines, foreign investors are allowed up to a maximum of 30 per cent equity participation in the Malaysian corporate sector, but with the present flexibility, the ratio may vary on a case-by-case basis.

The issue of investment regulations and trade-related performance requirements on investments flows has been raised at relevant GATT meetings at Punte del Este where the United States argued that some of the elements of the industrial policies of many countries in the world tend to restrict the international flow of investments, which effectively distort production and trade patterns as well as prevent effective utilisation of capital and other resources. Here we try to trace the effects of investment uncertainties of regulations on foreign investments. This is relevant from the service industry (banking, consultancy and insurance) point of view because DFI (direct foreign investment) not only generates the production of goods but also services. Various incentives were introduced since 1957, to attract foreign investors. These measures generated an increase of net foreign capital inflow from $180 million in 1961 to $287 million in 1970 and $2033 million in 1981. The latter half of 70's experienced the most rapid growth. However the rate of growth of inflow of foreign capital began to slide beginning 1983 and finally registered an inflow of $1.4 billion in 1986 from a peak of $3.2 billion in 1982. Its relative importance to the total foreign investment flows declined significantly from 91.8 per cent in 1980 to 38.4 per cent in 1986 (Table 14).

Compared to total domestic investment, the share of the net foreign capital inflow has somewhat declined from 15 per cent in 1970-75 to 13.2 per cent in 1976-80 and finally to 11.2 per cent in 1980-85, and is expected to decline further. Similar pattern was also observed for the share of direct foreign investment in total domestic investment.

Table 15 shows the rate of growth of domestic foreign investment and rate of growth of real GDP since 1970.

Between 1970-74, there was significant increase in domestic foreign investment and this period also coincided with the introduction of NEP. It would appear that the initial stages of NEP did not deter foreign investment. In fact the highest growth came in 1974. The Industrial Coordination Act of 1975 put an abrupt stop to the flow of capital due to uncertainties surrounding the guidelines. However the momentum of foreign investment regained the lost ground during 1976 to 1982. Though the economy experienced recession beginning 1985, DFI began to fall since 1983, partly due to uncertainties about the future of NEP which was expected to expire in 1990.

AREAS FOR FURTHER RESEARCH

There are many areas in the services sector which need to be researched in greater detail.

1. A reliable macro data base needs to be established.

2. a) A timely release of the 1978 input-output table provides the opportunity for research in estimating labour productivity of various sectors. This would enable one to explain the differences in relative shares of the services sector in both output and employment.

   b) The technical coefficients of 1978 input-output table would enable us to estimate interlinkages (forward and backward) of the services sector to the rest of the economy. Income elasticities for various sectors can be obtained from the household survey data and these estimates would enable us to evaluate income elasticity with respect to output and employment of the sector.

   c) The government has taken various steps to promote tourism, and direct foreign investment. An analysis of the effects of these policies on output of the service sector needs to be evaluated. Evaluation of New Economic Policy guidelines and direct foreign investment (investment in services industry and goods industries) would indicate whether any choice is indicated between service and goods producing industries.

3. Some econometric estimates of the various categories of external trade services as in Appendix 1 could provide depth in analysis of services trade.

4. If employment figures could be disaggregated between men and women, the data and estimates of productivity would throw some light on Fuch's conclusion that the growth of a service economy is an important factor explaining the increase in female labour force participation.

TABLE A

SUMMARY OF LIBERALISATION OF RESTRICTIVE MEASURES IN MALAYSIA, 1985

Date	Direction	Measures
24.1.85	Liberalisation	Regulations changed to allow for Singaporean companies to retain up to 70 per cent shares in companies in Malaysia even after 1990 irrespective of whether the investment was export oriented.
2.2.85	Liberalisation	Approval procedure expedited for foreign investment.
12.4.85	Liberalisation	Limit on foreign investment participation relaxed.
25.10.85	Liberalisation	Interest payments to non-residents by commercial banks exempted from withholding tax.

Source: IMF, Annual Report 1986, Exchange Arrangements and Exchange Restrictions.

TABLE 1

MALAYSIA: DOMESTIC SERVICE SECTOR AS A SHARE OF GDP UNDER ALTERNATIVE DEFINITIONS 1979-86

Definition of Services	1979	1980	1981	1982	1983	1984	1985	1986
1) Narrow definition[a]	29.10	30.13	31.02	30.58	30.82	30.54	30.34	29.06
2) Extended to include utilities	30.51	32.49	32.47	32.01	32.31	32.08	32.00	30.79
3) Extended to include[b]	41.07	42.70	44.30	43.90	44.12	43.89	44.18	43.27
4) Extended to include[c]	45.32	47.40	49.30	49.10	49.50	49.10	48.90	47.60

a Excluding agriculture, mining, manufacturing, construction, utilities and administration.

b Utilities and public administration and defence.

c Utilities, public administration and defence and construction.

Source: Economic Report, Treasury, various issues.

TABLE 2

SERVICE SECTORS IN TERMS OF TOTAL GROSS DOMESTIC PRODUCT

Sector	Transport and Communication		Banking, Insurance Real Estates and Commerce		Producers of Government Services		Other Services		Total Service Sectors	
Year	$ million	% of GDP	$ million	% of GDP	$ million	% of GDP	$ million	% of GDP	$ million	% of GDP
1972	986	4.07	2154	8.90	2759	11.40	3333	13.77	9232	38.15
1973	1133	4.19	2329	8.62	2922	10.81	3677	13.60	10061	37.22
1974	1297	4.43	2476	8.46	3319	11.34	3972	13.57	11064	37.79
1975	1467	4.97	2607	8.83	3562	12.07	4029	13.65	11665	39.53
1976	1579	4.80	2757	8.37	3900	11.84	4365	13.26	12601	38.27
1977	1767	4.98	2975	8.39	4374	12.33	4706	13.26	13822	38.96
1978	1866	4.92	3176	8.38	4634	12.20	5055	13.34	14730	38.86
1979	2107	5.09	3434	8.29	4959	11.97	5617	13.56	16117	38.90
1980	2542	5.71	3687	8.28	5203	11.69	6404	14.39	17836	40.07
1981	2847	5.98	3953	8.30	6338	13.31	6759	14.20	19897	41.80
1982	2984	5.92	4231	8.39	6748	13.38	7245	14.37	21208	42.05
1983	3138	5.86	4570	8.53	7126	13.30	7776	14.51	22610	42.20
1984	3464	5.60	4892	8.47	7707	13.35	8356	14.47	24419	42.29
1985	3630	6.35	5093	8.91	7905	13.83	8211	14.37	24839	43.46
1986	3757	6.54	5042	8.78	8161	14.21	7914	13.78	24874	43.31
1987	3907	6.74	5042	8.69	8249	14.22	7861	13.56	25059	43.21

TABLE 3

NUMBER EMPLOYED BY SERVICE SECTORS, MALAYSIA

Sector	Transport and Communication		Banking, Insurance Real Estates and Commerce		Producers of Government Services		Other Services		Total Service Sectors		
	1000	% of Total Employment	1000	% of Total Employment	1000	% of Total Employment	1000	% of Total Employment	1000	% of Total Employment	Employment
1970	133	3.98			398	11.92					3340
1971	141	4.07			420	12.11					3467
1972	150	4.17			443	12.31					3599
1973	160	4.28			467	12.50					3735
1974	170	4.38			493	12.72					3877
1975	181	4.50			520	12.94					4020
1976	170	3.83			577	13.19					4376
1977	172	3.84			582	13.00					4476
1978	172	3.79			636	14.00					4542
1979	179	3.81			622	13.23					4700
1980	210	4.35	78	1.63	689	14.31	824	17.10	1801	37.38	4817
1981	227	4.50	85	1.68	757	15.05					5031
1982	234	4.53	90	1.73	807	15.62					5165
1983	240	4.55	95	1.80	837	15.88					5271
1984	254	4.71	98	1.82	868	16.09					5394
1985	265	4.84	102	1.86	859	15.72	1022	18.69	2248	41.11	5469
1986	269	4.85	105	1.89	877	15.78	1168	21.04	2419	43.55	5554
1987	271	4.79	108	1.91	895	15.81	1225	21.63	2499	44.15	5662

TABLE 4

DISTRIBUTION OF INTERMEDIATE SERVICE INPUTS INTO VARIOUS SECTORS OF THE ECONOMY, MALAYSIA 1975

Sector	%
Agriculture, livestock, forestry and fishery	5.9
Mining and quarrying	1.6
Manufacturing	43.1
Electricity, gas and water	0.8
Construction	8.1
Services	40.5
Total domestic intermediate service inputs	100.0
Domestic intermediate service inputs as % of total service output	23.4
Service exports as % of total service output	0.1
Services in domestic final demand[a] as % of total service output	76.5

a Includes government and private consumption, gross domestic fixed capital formation and increase in stocks.

Source: 1975 Input-Output Table for Peninsular Malaysia, Institute of Developing Economies, Tokyo, March 1982.

TABLE 5

INPUTS DERIVED FROM OTHER SECTORS FOR THE PRODUCTION OF SERVICES, MALAYSIA 1975

Sector	%
Agriculture, livestock, forestry and fishery	3.6
Mining and quarrying	-
Manufacturing	37.6
Electricity, gas and water	3.8
Construction	3.2
Services	51.9
Total intermediate inputs into the service sector	100.0

Source: 1975 Input-Output Table for Peninsular Malaysia, Institute of Developing Economies, Tokyo, March 1982.

TABLE 6

Sector of Destination / Sector	Govt. Final Consumption Expenditure ($M)	Private Final Consumption Expenmditure ($M)	Gross Fixed Capital Formation ($)	Exports of Goods and Services ($M)	Inputed Bank Service Charge ($M)	Other Sector ($M)	Total
1. Wholesale and retail trade	-	711.6	164.8	190.3	-	489.7	1556.4
		(45.7)	(10.6)	(12.2)		(31.5)	(100.0)
2. Hotels and Restaurants	-	248.3	-	-	-	100.5	348.8
		(71.2)				(28.8)	(100.0)
3. Transport and Storage	-	330.3	5.8	72.9	-	202.0	611.0
		(54.1)	(0.9)	(11.9)		(30.1)	(100.0)
4. Communication[a]	-	42.6	-	-	-	85.5	128.1
		(33.3)				(66.7)	(100.0)
5. Financial Institutions	-	2.9	-	4.9	105.4	18.9	132.1
		(2.2)		(3.7)	(79.8)	(14.3)	(100.0)
6. Insurance	-	33.2	-	4.9	-	46.4	84.5
		(39.3)		(5.8)		(54.9)	(100.0)
7. Real Estates and Ownership of Dwellings	-	677.5	-	-	-	75.1	752.6
		(90.0)				(10.0)	(100.0)
8. Business Services	-	7.6	17.2	11.5	-	119.2	155.5
		(4.9)	(11.1)	(7.4)		(76.7)	(100.0)
9. Government Economic Services	193.6	5.0	-	-	-	22.2	220.8
	(87.7)	(2.3)				(10.1)	(100.0)
10. Educational Facilities Services	-	15.2	-	-	-	-	15.2
		(100.0)					(100.0)
11. Medical, Health and Vetinerary Services	-	44.2	-	-	-	6.9	51.1
		(86.4)				(13.6)	(100.0)
12. Recreational and Cultural Services	-	126.8	-	0.3	-	3.9	131.9
				(0.4)		(2.9)	(100.0)
13. Public administration and Defence	885.3	0.1	-	-	-	10.6	896.7
						(1.2)	(100.0)
14. Government Community	663.1	47.5	-	-	-	7.5	718.1
	(92.3)	(6.6)				(1.1)	(100.0)
15. Domestic Services of Households	-	64.1	-	-	-	-	64.1
		(100.0)					(100.0)

TABLE 7

WORLD CURRENT ACCOUNT (CREDIT OR DEBIT) IN 1980
(billions US dollars)

Merchandise	1750		
Services	351		
Transport		162	
Freight			70
Passenger Services			39
Transport Insurance			14
Port Services			39
Travel		98	
Other Private Services		91	
Income	264		
Investment Income		231	
Direct Investment Income			51
Other Investment Income			180
Labour Income		7	
Property Income		26	
Other Official Services and Income	45		
Unrequited Transfers	91		
Total Current Account	2,501		

Source: Sapir, A., 'North-South Issues in Trade in Services', The World Economy, Volume 8 No. 1, 1985, p. 29.

TABLE 8

MERCHANDISE BALANCE, NON-FACTOR SERVICE BALANCE, AND CURRENT BALANCE FOR MALAYSIA, 1975-1985
(millions of SDRs)

	1975	1980	1985
Merchandise Balance	210	1849	3521
Service Balance			
Non-Factor Services (Debit)	716	2354	3994
Non-Factor Services (Credit)	375	944	2039
Non-Factor Services (Net	-341	-1410	-1955
Income	-249	-642	-2248
Unrequited Transfers	-27	-16	-30
Current Balance	-407	-219	-712

Source: International Monetary Fund, Balance-of-payments Yearbook, 1986.

TABLE 9

NET TRADE POSITION IN TRADED NONFACTOR SERVICES BY THE MAJOR DEVELOPED AND DEVELOPING COUNTRY EXPORTERS OF NONFACTOR SERVICEDS, 1974 AND 1981
(in millions of SRDs)

	1974	1981
Austria	65.00	924.00
Belgium/Luxembourg	592.00	1460.00
Denmark	368.00	663.00
France	1172.00	3785.00
Italy	-347.00	-332.00
Netherlands	1613.00	493.00
Switzerland	895.00	1989.00
United Kingdom	2254.00	6583.00
United States	0.89	0.95
Egypt	150.0	-476.0
Greece	126.0	607.0
Kenya	4.1	16.5
Korea (Republic of)	-258.0	-1294.0
Malaysia	-259.0	-1315.0
Malta	-2.6	-12.5
Singapore	1043.0	3896.0
Spain	2222.0	12884.0
Tunisia	-6.0	81.0
Yugoslavia	105.0	-1358.0

Source: International Monetary Fund, Balance-of-Payments Yearbook, 1982.

TABLE 10

MALAYSIA CURRENT ACCOUNT (CREDIT OR DEBIT) IN 1985
(in Million of SDRs)

Merchandise	3521		
Services	-1965		
Transport		-697	
Shipment			-687
Passenger Services			70
Other Transportation			- 80
Travel		-552	
Other Private Services		-716	
Income	-1628		
Direct Investment Income		-1479	
Other Investment Income		-149	
Other Official Services and Income	-610		
Unrequited Transfers	-30		
Total Current Account	-712		

Source: International Monetary Fund, Balance of Payments Yearbook 1986.

TABLE 11

MALAYSIA: TRADE IN SERVICES IN 1975 AND 1985
ACCORDING TO SELECTED DEFINITIONS
(In millions of SDRs and percentage of merchandise trade)

	1975		1985	
	Credit	Debit	Credit	Debit
Shipment	24	237	388	1075
Passenger services	35	36	221	151
Other private	69	212	513	1229
Narrow Definition	128	485	1122	2455
(%)	4.1	16.7	7.5	21.6
Travel	118	154	594	1146
Port Services	77	42	225	305
Private Non-Factor Services	323	681	1941	3906
(%)	10.4	23.5	13.0	34.3
Official	52	35	98	88
Non-Factor Services	375	716	2039	3994
(%)	12.1	24.7	13.7	35.1
Direct Investment Income	16	297	24	1503
Other Investment Income	109	77	553	1322
Total Services	500	1090	2616	6819
(%)	16.1	37.6	17.5	59.9
For Reference:				
Private Transfers	48	75	69	98
Merchandise Trade	3106	2896	14909	11388
(%)	100	100	100	100

Source: International Monetary Funds Balance of Payments Yearbook 1986.

TABLE 12

MALAYSIA: EXPORTS OF NON-FACTOR SERVICES
(Average Annual Growth Rates)

	1975-1980	1981-1985	1975-1985
1. Shipment	45.0	20.3	32.1
2. Passenger Services	21.3	19.2	20.2
3. Other Transportation	20.3	3.0	11.3
4. Travel	15.6	19.5	17.5
5. Other Government Services	5.5	7.6	6.5
6. Other Private Services	22.7	21.7	22.2
Total	20.3	25.9	23.0

Source: International Monetary Fund, Balance-of-Payments Yearbooks, 1982 and 1986.

TABLE 13

MALAYSIA: IMPORTS OF NON-FACTOR SERVICES
(Average Annual Growth Rates)

	1975-1980	1981-1985	1975-1985
1. Shipment	27.0	6.5	16.3
2. Passenger Services	25.0	6.5	15.4
3. Other Transportation	36.1	9.2	21.9
4. Travel	29.3	15.6	22.2
5. Other Government Services	14.9	4.7	9.7
6. Other Private Services	24.7	14.0	19.2
Total	26.9	11.2	18.8

Source: International Monetary Fund, Balance-of-Payments Yearbooks, 1982-1986.

TABLE 14

MALAYSIA: NET LONG TERM CAPITAL FLOW
1975-1985
(M$ million)

Year	Official Flow	%	Corporate Investment	%	Total
1975	854	(50.5)	837	(49.5)	1691
1976	650	(40.1)	969	(59.9)	1619
1977	570	(36.6)	999	(63.7)	1569
1978	429	(27.0)	1158	(73.0)	1587
1979	800	(38.9)	1255	(61.1)	2055
1980	180	(8.1)	2033	(91.8)	2213
1981	3017	(50.9)	2914	(49.1)	5931
1982	5169	(61.3)	3263	(38.7)	8432
1983	6284	(68.2)	2926	(31.8)	9210
1984	4691	(71.5)	1869	(28.5)	6560
1985	2504	(59.5)	1701	(40.5)	4205
1986	2261	(61.6)	1410	(38.4)	3671

Source: Economic Report - various issues.
Annual Report - Bank Negara.

TABLE 15

RATE OF GROWTH OF FOREIGN INVESTMENT AND REAL GDP
1971 - 1986

Year	Growth of Domestic Foreign Investment	Growth of Real GDP
1971	+ 6.6	
1972	+ 4.6	
1973	+ 31.3	
1974	+219.5	
1975	- 37.5	
1976	+ 15.5	
1977	+ 3.0	
1978	+ 15.9	
1979	+ 8.4	+9.3
1980	+ 62.0	+7.4
1981	+ 43.3	+6.9
1982	+ 12.0	+5.9
1983	- 10.3	+6.3
1984	- 26.9	+7.8
1985	- 12.5	-1.0
1986	- 17.1	+1.0

APPENDIX 1

Econometric Models On Trade in Non-Factor Services

In order to make a systematic analysis of the determinants of the trade in non-factor services (NFS), an econometric model of the imports and exports of the various components of NFS has been constructed.

This study uses time-series data and the period covered is from 1974 to 1985. These time series models serve as a rough guideline in the understanding of the determinants of trade in non-factor services.

Shipment

The shipment items covers freight services and small amounts for merchandise insurance. It is postulated that the receipts from (or payments for) shipment depend very much on merchandise exports (or merchandise imports) and also the size of the merchandise fleet registered in the country. Hence, the following hypotheses are tested:-

$$SMC = SMC\ (Ex, Fleet) \qquad (1)$$
$$SMD = SMD\ (Im, Fleet) \qquad (2)$$

where:

SMC = Shipment, credit
SMD = Shipment, debit

Ex = exports of commodities
Im = imports of commodities
Fleet = total Malaysian fleet registered in the country (gross registered tonnage)

Passenger Services

It is postulated that Malaysia's receipts from passenger services depend upon the flow of passengers to it. Likewise, the country's payments for passenger services are related to the flow of Malaysians going abroad. Hence, the relationship between the variables can be stated as below:-

$$PSC = PSC\ (TRC) \qquad (3)$$
$$PSD = PSD\ (TRD) \qquad (4)$$

where

PSC = Passenger services, credit
PSD = Passenger services, debit
TRC = travel, credit
TRD = travel, debit

In the above functional relationship, the receipts from (payments for) travel is used as a proxy for the flow of incoming foreign (outgoing national passengers.

Port Services

The country's total trade in commodities, ie. exports plus imports, and the size of the maritime fleet are considered to be the main determinants of the receipts from (payments for) port services. Hence, the following hypotheses are formed:-

$$PSC = PSC\ (Ex + Im,\ Fleet) \quad (5)$$
$$PSD = PSD\ (Ex + Im,\ Fleet) \quad (6)$$

where

PSC = port services, credit
PSD = port services, debit
Ex = exports of commodities
Im = imports of commodities
Fleet = total Malaysian fleet registered in the country

Travel

It has been postulated that a country's per capita income payments for travel services depend upon its per capita income. Hence, the following functional relationships are tested:-

$$TRC/POP = TRC/POP\ (GNP/POP) \quad (7)$$
$$TRD/POP = TRD/POP\ (GNP/POP) \quad (8)$$

where

TRC = travel, credit
TRD = travel, debit
POP = population
GNP = gross national product
TRC/POP = per capita receipts for travel services
GNP/POP = per capita income

Other Private Services

The term of 'other private services' covers labour income, property income, non-merchandise insurance, communication fees, motion-picture film rentals, agents' fees, and management fees. It is postulated that a country's receipts from other private services depend upon its per capita GNP, reflecting the fact that with higher per capita GNP, the countries tend to produce proportionately more tradable services. Therefore, the following hypotheses are tested:

$$OPSC = OPSC\ (GNP/POP) \quad (9)$$
$$OPSD = OPSD\ (GNP/POP \quad (10)$$

where

OPSC = other private services, credit
OPSD = other private services, debit
GNP/POP = per capita income

Other Government Services

Other Government services cover the receipts and expenditure on inter-official, military, embassy and consular, which are not determined by economic factors. Hence, this item is considered to be exponeous.

(END)

REFERENCES

Balassa, B., 'Comments', in W. R. Cline (ed), Trade Policy in the 1980's, Washington, D.C., Institute of International Economics, 1983, p. 711-722.

Bhagwati, J.N., 'Splintering and Disembodiment of Services and Developing Nations', The World Economy, Volume 7 No. 2, June 1984, p. 133-143.

Sampson, G.P. and Snape, R.H., 'Identifying the Issues in Trade in Services', The World Economy, Volume 8 No. 1, 1985, p. 171-181.

Sapir, A., 'North-South Issues in Trade in Services', The World Economy, Volume 8 No. 1, 1985, p. 27-42.

Sapir, A. and Lutz, E., Trade in Non-Factor Services: Past Trends and Current Issues, World Bank Staff Working Paper No. 410, Washington, D.C., August 1980.

_____ and _____, Trade in Services: Economic Determinants and Development-related Issues, World Bank Staff Working Paper No. 480, Washington, D.C., August 1981.

Shelp, R.K., Beyond Industrialization, New York, Praeger, 1981.

United Nations Conference on Trade and Development, Protectionism and Structural Adjustment: Production and Trade in Services, Policies and Their Underlying Factors Bearing Upon International Service Transactions, Geneva, TD/B/941, 1983.

Sieh Lee Mei Ling, 'Services in The Malaysian Economy', Occasional Paper on Malaysian Socio-Economic Affairs, No. 9, Faculty of Economics and Administration, University of Malaya, January 1985.

Inman, Robert P. (ed), Managing the Service Economy - Prospects and Problems, Cambridge University Press 1985.

SERVICES IN MALAYSIA: MICROECONOMIC ISSUES FOR RESEARCH

Sieh Lee Mei Ling

INTRODUCTION

The role of services in the Malaysian economy has been relatively unresearched despite recognition of its increasing importance for economic development. In 1986, the services sector constituted 43% of GDP and 44% of employment as compared to 37% of GDP and 25% of employment in 1960. Notwithstanding definitional issues which will be discussed shortly, such structural economic changes lead one to question the relationship between development of service activities and economic expansion. Is the growth of the services sector dependent on economic growth thus the conventional treatment of services as residual or tertiary, or would the reverse be true, that is, increased services activities lead to economic growth? There are suggestions that the latter may be real although concrete evidence is still being collected to substantiate the relation. If so proven, to what extent and in what manner would other sectors in the economy, which are interlinked, grow when service activities increase? These are issues macro economists are and should be grappling with. Nevertheless, economists agree unanimously that a positive correlation exists between GDP and the services sector (Baer & Samuelson 1981). Clearly the contribution of services towards economic growth if indeed services are found to lead economic growth, depends primarily on the output or productivity of service industries that make up the sector. For Malaysia, except for brief and broad generalities (Sieh 1984, 1985), systematic data, comprehensive information and detail understanding of many aspects of the major service producing industries are far from adequate for improving and developing service industries by service producers and by government agencies. This paper attempts to review what is presently known of the key service industries in Malaysia and to highlight microeconomic issues where future research is needed for purposes of economic development.

A series of questions will be posed and not as many answers can be found. The first section focusses on conceptual issues that arise when defining and measuring service activities. Section two is concerned with supply and demand relationships within service production systems and between those systems and others involving suppliers, buyers, competitors and regulatory agencies in the wider environment. The third section summarises possible directions for future work which may contribute towards the development of services production and consumption in the economy.

DEFINING AND MEASURING SERVICES

Concepts of Intangible Output

What are we referring to when we examine services and what constitutes the key service producing industries of Malaysia? Although economists have great difficulties in agreeing to a common definition, it is universally accepted that services are essentially intangible output. They may bring about changes in persons or the goods they possess. They may be embodied in goods, such as songs sold along with the tapes which record them. Services provide time, place and form utility through effecting a change in or for the recipient of the service (Riddle 1985). The American Marketing Association (1960) has defined services as 'activities, benefits, and satisfactions which are offered for sale or are provided in connection with the sale of goods'. Hill (1977) defined services as '... a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as the result of the activity of some other economic unit, with the prior agreement of the former person or economic unit'.

Characteristics and Classifications

To clarify the concept of services, let us consider characteristics commonly found in activities or processes that produce intangible output. References have been made to the perishability of services as they cannot be inventoried, the place inflexibility hence immobility of services, the interactive roles of service providers and recipients, the simultaneity of production and consumption and the degree of labour and skill intensities (Herman and Holst 1984, Lovelock 1984). Yet others have proposed classification schemes for services based on type of production (Fisher-Clarke 1935, 1940, Fuchs 1968, Sabolo 1975); type of consumption (Singer 1971); type of function (Foote and Hatt 1953, Katouzian 1970, Browning and Singelmann 1975); type of relationship with other economic activities (Riddle 1985); and type of relationship with the global economy (Sampson and Snape 1985).

Services may cover all intangible output produced in the economy including public administration, defense, utilities and construction. Informal, illegal and non-monetised service activities may also be included. In practice, few researchers adopt such a wide definition.[1] For the purpose of this paper on Malaysia where research in formal service activities has hardly begun and where data and knowledge are badly needed for policy formulation, it may be appropriate to focus on formal services first. Informal, non-monetised activities should be excluded for the time being despite their importance in the economy. Construction would also require separate study in view of its magnitude in a developing economy context.

The overall importance of the services sector in terms of its share of GDP and employment have been provided in Muthi Semudram's paper in this volume.[2] It is sufficient to add that services grew more rapidly than GDP between 1969 and 1982. They made up the second fastest growing sector after manufacturing. However, in the last five years when the

Malaysian economy was undergoing severe recession, the sector expanded slowest with only 1.1% of growth a year on average whilst GDP experienced only 2.1% average growth per annum (Table 1).

Key Service Industries

To identify the key service subsectors and industries, several criteria have been suggested: their share of GDP and employment, their contribution to other industries, their existing or potential role for export or import substitution, their importance for linking the domestic economy to the world economy, and other criteria specifically of interest to the country such as issues of foreign versus national participation and racial distribution in service activities. Table 2 attempts to meet the above criteria subject to data availability. Evidently, 'other services' rank first for four of the five indicators considered. They are defined to include distributive trades both wholesale and retail, hotels and restaurants, cinemas, shipping services, consultancy services, private professional services such as lawyers, doctors, etc. Together they account for nearly 14% of GDP or slightly over 31% of all services produced in 1986; 21% of national employment or 48% of those engaged in the supply of services in 1986; 47% of the services consumed as domestic final demand by both the private and public sectors in 1970; 61% of the services demanded by other sectors in 1970; and 71% of the services exported in 1970. One is tempted to enquire about the composition of industries grouped under 'other services' such as domestic trade or commerce versus personal or consumer services versus business or producer services; the organisational and operational details of particular leading industries, and issues that will be discussed in later sections of this paper.

Although government services and utilities rank 2.75 on average, public administration services deserve separate analysis because of their institutional nature, such as the need to achieve national or social objectives, their preoccupation with non-economic operational targets and the complexity of evaluating their performance. If government and public utility services are discounted, transportation, storage and communication activities make up the second important service subsector. Their mean ranking across the five indicators yield a score of 2.8 or 19% average contribution. Financial, insurance and real estate services rank 3 or 15% average contribution.

But for meaningful micro level analysis of service producers and consumers for policy formulation, disaggregated data for specific service industries are necessary. Data gaps can be identified by considering what we need and what we already have. Statistics are required for understanding some of the issues to be highlighted later in this paper.

Statistics Available

Statistical information that are known to be available are listed in Exhibit 1. An examination of the actual data contained in the various reports shows that it is incorrect to say that information on specific service industries is completely absent. It is possible to estimate the number of establishments, their size either by employment or by revenue i.e. business volume, their fixed assets, workforce composition, ownership structure, location and other basic measures for selected

industries from data published by the Department of Statistics and other government agencies.

However, a closer examination of the reports reveals several difficulties. First, surveys and censuses of specific industries lack continuity as they are available only intermittently. Secondly, even for those conducted regularly, inconsistency of definitions and changing coverage pose severe problems for analysis over time. For instance, the data for wholesale and retail trade sometimes referred to Peninsular Malaysia or to East Malaysia or to both, and at other times covered only urban areas or only selected locations. Thirdly, the scope and kind of variables included for the same series of survey vary from one year to another. Fourthly, statistics are usually grouped in a manner that hampers computation of relevant ratios such as productivity and factor intensities. Fifthly, government surveys and censuses require long gestation periods prior to publication, which hinder initiation of corrective policies. Lastly, besides weaknesses arising from lack of comprehensive coverage, insufficient details and unsystematic recording, most of the surveys suffer from absence of theoretical direction, which implies that application for future research is limited to what the reports contain and the form data appear in the publications. The need for fresh, purpose-oriented data collection at the subsector or industry level is real and cannot be overemphasized.

ISSUES OF SUPPLY AND DEMAND

Perhaps the most important starting point in a study of the services sector and its major components is to have a fairly comprehensive and detailed profile of those key industries themselves and how they relate to other economic units in the environment. This calls for an understanding of supply and demand conditions.

Profile of Key Service Industries

Little is known about producers of services in Malaysia as most of the statistics however imperfect, lie unanalysed. Pertinent characteristics of the industries in terms of major institutions, structure of business organisation, kind of services provided, size of firms, pattern of employment, and so forth have not been fully documented except for isolated pieces of work, for example on retail (Sieh 1974, Toh 1985). For each service industry, it is important to determine the number of suppliers competing in the market, the nature and basis of competition, market structure and market concentration. The extent of service-output differentiation amongst suppliers, the magnitude of service supply capacity in one or several related establishments and degree of capacity utilisation should be studied. Market entry conditions should also be examined. Major trends and changes in the industry affecting structural relations should be of interest.

Supply Conditions

At the firm level, important structural issues of supply conditions that should be researched include aspects of service output, of inputs to effect production of those services, and of the relation between output and input, that is production and productivity. They are related to managerial issues of finance, operation, marketing and personnel within the service producing systems. Such issues centre around the choice of strategy under different conditions in order to remain competitive.

Output of Services

The question of kind of services produced should go beyond affixing a label when drawing up profiles of activities such as insurance, education, communication, etc but should delve into the nature of services output. Service output may result from tangible actions performed to people's bodies e.g. health care, restaurant, passenger transport; or tangible actions on goods or physical possessions e.g. air freight, equipment repair, lawnmowing. Services may also be produced by intangible actions to people's minds e.g. education, information services, theatres; or intangible actions carried out on intangible assets e.g. banking, legal services, accounting. The relation with customers when supplying and delivering services await investigation. For instance, simple maintenance interactive service encounters have to be distinguished from complicated task interactive ones e.g. retail banking versus counselling (Mills 1986). The degree of customisation and judgement in service-production and in service delivery should be examined. The methods of delivery themselves which may include interfacing with contact personnel (sales clerk), with machines (ATM) or by the customer himself (self service retail) form another facet of service-production that is changing rapidly with technology and they deserve detail study. Service delivery methods may also be classified by whether they are single site or multi-site establishments (e.g. theatre versus fast food chain); by customers going to those establishments or service organisation coming to customers (e.g. barbershop versus mail delivery); and by arm's length transaction or not (e.g. electronic communication versus medical surgery).

Input Requirements

In understanding production and supply of service output, one cannot ignore the type and composition of inputs. A subject of great importance for future work concerns the degree of capital, labour, skill and technology intensities in the supply of key services. It is suspected that the choice of production system is market driven. In other words, to match up to demand conditions or to remain competitive a service provider has to ensure consistency of service output quality by manipulating or monitoring the composition of inputs. But virtually nothing is known of the type of capital equipment and personnel employed as service inputs apart from survey data mentioned before. For instance, information on the degree of automation or computerisation of physical facilities used in service production-delivery systems in a particular industry would be more telling than a mere dollar value of fixed assets in an accounting sense. Similarly, information on the skill level of service workers, the type of training required and their relevant

experience, would be as important for policy makers as figures on their number, sex, wages and status of employment.

Besides capital and human inputs, other goods and services are necessary for the production of services. What are they and how important are they as input components? Are they purchased from sources outside the service production organisation or are they produced internally? If they are acquired from other suppliers, are the sellers local firms, joint ventures or subsidiaries of MNCs or from outside the country? What are the interlinkages with suppliers of goods and services? Such service inputs would include financial services to operate the production system, marketing services to sell the service outputs and other business services such as information, consultancy, management, research, legal, accounting and so forth. Goods would include highly specialised equipment e.g. for medical use, administrative machines (e.g. computers) and supplies.

Production and Productivity of Suppliers

The management system of service producing organisations that bring together all inputs and convert them into service output would require study. The relation between output and input of service production systems remains unclear in the literature although some have provided tentative results to show that labour productivity in services grew less than in goods production (Kendrick 1985). Is this true in Malaysia such that employment in services is increasing faster than the sector's share of GDP? Riddle suggests that a developing country situation may be different.

To understand production and productivity of services at a micro level for future development strategies, one has to understand the hows and whys of service production systems. Mills (1985) explains service production as a kind of information input-output system as shown in Exhibit 2. Langeard and company (1981) portrays service production systems as organisations that comprise a 'visible' portion and an 'invisible' portion as in Exhibit 3. Both the models prompt us to question our comprehension of operations in Malaysian service industries, their methods and practices of transforming inputs into outputs, their problems and difficulties. How important are the 'invisible' components to the service producers in different service industries? How do service producers plan, implement, coordinate and control operational processes in both the 'visible' and 'invisible' parts of their organisation?

Are Malaysian service providers guided by customers' expectations in organising their strategies and practices? For instance, methods of self service outlets may not be fully applicable even when proven successful in similar industries elsewhere. Why? To what extent are consumers willing and able to participate in service production? In what kind of processes? Are machine based transactions a boon or a bane? Studies in other economies and cultures have suggested that age, education and income may cause different propensity for self service. Are they true for Malaysia? Would inclination towards self service or otherwise affect choice of service production technology, hence capital intensity and investment requirements?

The effect of other customers in the service purchase environment is another aspect worth exploring. How and why are Malaysian service buyers sensitive to the presence of other customers? Are 'face issues' important in determining patronage and manner services are delivered, hence affecting supply methods (Wong 1986)?

Uneven demand flows such as during peak hours or seasons, which have caused capacity management problems may be due to customers' habits, values and beliefs. For instance, demand of leisure and holiday services in Malaysia appear to be correlated with school terms rather than to weather, whilst religious beliefs may affect facilities in service production and transaction settings. How are service supply capacity managed to match demand fluctuations in Malaysia? How important are queuing systems, off peak discount pricing, deployment of part-time service personnel, concentration on core operational activities for regulating supply to meet variable demand?

One major problem of measuring productivity is attributed to fluctuations in the quality of service output. Even if the service provider remains the same, participation of consumers in the production process would vary the quality of the service produced. Nevertheless, economists agree that over time several factors have given rise to increased productivity either in personal services or in business services. They include new management approaches, technological breakthrough, electronic innovations, changing government policies, global structural changes in trade and in economies, and even changing demographic phenomena such as the role of women and of migrants.

Perhaps for Malaysia, we need to identify what are the contributory factors that are giving rise to expansion of existing services, emergence and development of new services and to increased productivity of service supplying systems. An understanding of intra-firm mechanisms and inter-organisational relation with suppliers, buyers, competition and government would become a prerequisite to analysing issues of productivity. How would size of firms in the service industries affect productivity? Are investments of service producers channelled into facilities or skill that would elevate productivity? Are women workers who are employed in large numbers in services engaged in industries of high or low productivity? Are institutional arrangements (span of input control, legal form, centralisation) of service suppliers hampering increased productivity? What about Government policies and production?

Government Policies

The intervention of government policies and regulations would affect the supply of services and mode service operations. In Malaysia, Government may be regarded as supportive rather than protectionistic. The host of tax incentives, financial assistance, infra-structural expenditure and manpower and skill development are to ensure sustained development of the sector by encouraging private sector investors - both local and foreign. However direct public sector participation poses competition. Also many barriers to foreigners trading and investing in services have been identified (Pang 1982, Praet 1982). What are the implications for economic efficiency?

But training provided by Government institutions will have direct employment effects as well as bearing on quality of services produced. Direct investment by the Government in constructing major infrastructural facilities such as ports, highways and airports will also hasten the supply of services in the transportation and travel industries. The granting of tax concessions for the construction of hotels and tourist facilities should boost services supply. However, the impact of such policies is not easy to gauge. One wonders if Government assistance programs in diverse forms are widely known and made use of by service producers and potential investors in the sector. How are these measures tied in with the New Economic Policy of rectifying economic imbalances amongst the races and eradicating poverty? What are the obstacles that prevent service suppliers from enjoying the full benefits of such development schemes? Are they really what is needed to enhance service activities? What changes can be recommended to attain the objective of services growth?

The privatisation policy announced in 1983 seems to affect the services sector more than others. This is not surprising because by definition, public administration is a major component of the sector. The policy aims to reduce the Government's financial burden, reduce the size of the public sector, raise productivity and efficiency, boost economic growth and to meet objectives of the New Economic Policy (Sieh 1984a). It is known that as of October 1987, ten projects have already been privatised whilst another ten have been approved.[3] Further 35 to 40 departments, agencies and services have also identified for privatisation (Business Times).

But the crucial issue is whether such services will see higher productivity, greater efficiency and elevation of effectiveness. Will regulations be revised to encourage the free play of market forces? Will new investment, upgrading of technology and new management strategies be seen after transference to the private sector? Will the Government try to provide a conducive environment by ensuring a certain amount of environmental and economic stability so that such services can grow and raise productivity?

For the services sector as a whole, perhaps a thorough review is needed to streamline various fiscal, financial, personnel, administrative and physical support currently distributed in a variety of programs and legislation for different service industries. An evaluation of their past use and effectiveness should be carried out along with current problems and future development needs of service producing businesses. Priority should be accorded to wider economic issues such as capacity to earn foreign exchange, to provide employment including to women and to contribute to high value-added. But not all such questions can be studied, particularly for services previously supplied by the public sector because of fundamental differences in organisational objectives, record keeping, costing and accounting - which is the main reason why public administration and utility services should be examined separately at the outset. Nevertheless, a systematic review of schemes and regulations affecting outputs, inputs, productivity and other aspects of services supply, such as the role of information, would be timely.

Demand Conditions

Any industry study would be incomplete if demand and market conditions are ignored. From a business point of view, a researcher should begin with assessing existing as well as potential market demand for the generic service-product before establishing volume estimates for specific services to be offered for sale even prior to investing in production facilities.

Several factors in the global environment have given rise to demand for more services and for new ones. They include the rising demand for new business services due to new technologies and computerisation especially in telematics, greater externalisation of services that were previously produced in-house; innovations in the supply of personal and household services, forged by increasing consumer expenditure on 'impersonalised' services; issues of 'splintered' and 'disembodied' services (Bhagwati 1984); changes in government policies such as privatisation, deregulation measures and amendments to investment incentive legislations; social development trends brought about by greater awareness, higher education and income trends; newer management approaches of finance and marketing; economic restructuring forces and their multiplier effects especially in goods production; and heightened internationalisation of consumer preferences that parallels globalisation of corporate businesses. However, how such factors affect demand for services in Malaysia remains to be seen. If they are important how should service industries adjust to the new developments, new trends, new demands and new technology? What should be done at the firm level, industry level and sectoral level in anticipation? How can the government assist in the ever evolving process of transition?

Naturally, policies should be formulated to encourage service industries that help improve productivity in the economy including productivity of goods producing industries. In view of the tendency of critical business (producer) services being internalised by state owned enterprises or by TNCs, there may be a need to suggest state run services for the open market so that small businesses would not be deprived (especially to information and technology). Measures to encourage transfer of service technology from foreign to local firms would also be needed, whilst TNC involvement should be managed carefully by the government.

For the economy as a whole, demand for service exports and imports have been monitored by COMIT (The Council On Malaysian Invisible Trade) since 1981. Initiated by Bank Negara, the central bank, the council coordinates the drive towards greater trade in services as well as advises and recommends measures to the Government on all aspects of services trade. Measures to foster import substitution of Malaysia's payments for invisibles are also suggested especially when surplus from visible or goods trade is no longer sufficient to meet all payments abroad for invisible imports.[4] Studies of tradeable services undertaken by COMIT for Government use include shipping, insurance, travel, investment income and 'other services'.

Size and Characteristics of Demand at the Firm Level

For a particular firm, after defining market boundaries for a specific service, an estimation of market size and the share of it that is attainable are important determinants of the kind of investment that will be made. For capacity decision and choice of technology are dependent on the magnitude of potential demand, the type and characteristics of services demanded, the method of service delivery, the quality of service provided, the price buyers are willing and able to pay and factors that affect potential revenue.

Such information should be as disaggregated as possible, preferably down to particular segments of the market. For instance, services sold to business buyers would differ from those catering to final consumption; those for private buyers would differ from those for public use; those for non-residents (tradeable) would be different for those for residents (non-tradeable). Profile of potential buyers in different segments such as by demographic, socio-economic and psychographic variables would be useful for personal services; whilst business service producers would be interested to know the number of potential buyers from different industries, their likely expenditure on the service, their location, their purchase motives, pattern and timing of their demand, and their expectations of service providers.

Purchase Behaviour

Besides conventional questions on size of purchase, time and frequency of purchase, seasonality or cyclical pattern of demand, buying behaviour for specific services should examine issues related to how customers are reached or made aware of service suppliers, how selection amongst alternative sources of supply are made, who would influence choice and who would make the purchase decision. An important marketing issue would centre on the degree of repeat purchase or 'brand' loyalty. It is believed that the nature of certain services require a continuous relationship between supplier and consumers e.g. medical services, advertising agency services, whilst others may be discrete in nature e.g. restaurant, bus-rides. Amongst the former the relationship may require effort by service suppliers to contact buyers, communicate with them incessantly, co-ordinate activities within the service production system and with the buyer to ensure proper delivery of services, and also to control the relationship through feedback on satisfaction.

Motivation to Buy

At least three sets of motives must be dealt with by a study on the whys of service purchase behaviour. First, why would a buyer obtain certain services from an external supplier rather than produce the services himself or within his own organisation. It is known that many personal services previously performed within the home are now externalised e.g. nursery care, laundry etc. Similarly, many business services that firms are capable of producing themselves are now 'splintered' sourced from other organisations e.g. courier service, research, engineering, maintenance, security, etc. Reasons for externalisation may be economic, social or technical in nature. Secondly, having decided to buy a certain service rather than to produce, what motivates a consumer to buy a specific type of service product e.g.

security services can be performed in alternative ways. Motives may be rational oriented such as economy, consistent quality, reliability, speed, convenience; or they may be emotional in character such as reputation, prestige, positive image, nationalistic sentiments, friendliness of or bias towards the kind of service offered. A comparison amongst substitutes may be carried out. Thirdly, why do buyers patronise a particular service supply establishment as opposed to alternatives with similar service products. Would location, facilitative support peripheral to core service activities e.g. car park, contact personnel, physical setting of establishment and other customers patronising the outlet be important? There are suggestions that tangibles become significant for potential buyers of services who tend to judge intangibles (which are difficult to gauge) by more observable tangible evidence.

It is believed that limited, small-scale studies on some of these demand oriented issues may have been conducted by firms for their own management use. They would have been confidential in nature and for selected points in time. Thorough industry wide demand analysis of such nature has hardly begun in Malaysia's services sector.

ISSUES FOR FUTURE RESEARCH

This section attempts to draw together the numerous and multifarious issues that have been discussed by identifying them under a few heads.

Relation With Economic Growth

1. In terms of economic development, the linkage between economic growth and services sector expansion requires serious study. Currently, some work is being undertaken in the University of Malaya to test the lead-lag relationship between the two using Malaysian data. More vigorous research is necessary before policies to promote services as future growth activities can be made.

Identifying Key Services and Data Problems

2. The task of differentiating important services from lesser ones for indepth empirical study should be an exercise in itself when one considers the problems of definition, classification and measurement of intangible output that are relevant for Malaysia. Data difficulties deserve special attention especially from the standpoint of analytical application. The absence of theoretical guidance when gathering and compiling data should be given some thought. Suggestions for future data work should be proposed.

3. Informal, non-monetised service activities should be examined independently due to their elusive nature. Construction services may require a study by itself due to its role in national development whilst government services and public utilities deserve separate treatment because of their non-economic goals and social objectives.

Factors Affecting Services Supply

4. A descriptive examination of key service producing industries in terms of their supply structure is necessary not only for potential investors but more for the formulation of services promotion policies by the Government. The kind of services offered, characteristics of suppliers, competition and market structure should be examined on the supply side. Effort should be expended in researching into linkages with producers of other goods and services whose output are necessary as inputs for the services being studied, in order that effective incentives be offered to channel investment towards desired economic objectives.

5. On the supply side, the way key service industries operate in Malaysia their productivity and efficiency are virtually unresearched and undocumented. Major management strategies, practices and problems relating to finance, production, personnel, marketing and their competitive ability await study. Both the 'invisible' internal organisational system and the 'visible' service delivery system should be understood. Work on the choice of production technology, that is, capital, technology, labour and skill intensities by service producers have not begun. The role of information, of self-service by customers, and of other customers in the service delivery system are not known. Selected aspects of some managerial issues are being explored at the University of Malaya. But the effort is limited. The matching of service supply capacity to demand fluctuation needs to be known. Such issues are important for understanding relative economic efficiency for purposes of resource allocation through appropriate incentives and regulations by the Government.

6. The role of Government policies and support programs for services have not been assessed. Effectiveness of industry-specific policies ought to be studied in detail. Problems confronting service suppliers, their needs and desired assistance should be investigated for more appropriate policy measures and corrective strategies. General policies such as for investment promotion for manufacturing or implications of the New Economic Policy should also be examined, especially in terms of their consistency with new proposals intended to promote service industries. The question of privatisation warrants a separate study especially when public administration and utilities make up the second largest services subsector.

Factors Determining Demand and Growth

7. Long run environmental factors that are causing the evolution and emergence of new service activities should be an interesting subject. They should be studied along with important exogenous factors such as social, economic, political and technological that affect the trend of demand for services. Such studies should be geared towards changes in Government strategies or regulations so as to foster the development of 'desirable' new services for economic and social advancement.

8. Characteristics of buyer segments, buying habits, motives and determinants on the demand side should also be studied. Linkages with other economic units who purchase the services for operating their

businesses or for final consumption should not be omitted. The extent services are embodied in manufactures or as well as agricultural produce should be explored. Available data on Malaysia that have not been fully analysed e.g. input-output tables, census data etc., should be exploited bearing in mind their limitations. Fresh, purpose-oriented data generation should be encouraged such as for investigating services that are splintered, disembodied and externalised especially in terms of their effects on productivity, efficiency and economic growth.

Exportable Services : Tourism and Travel

9. In view of the continuous deficit for invisibles in the balance of payments and the potential of tourism and travel exports, special studies on pertinent aspects of the industry must be made. Specific strategies for production and marketing of such services should result from the studies especially along the lines of international competitiveness. Appropriate incentives or measures should also be recommended to enhance domestic as well as international tourist activities.

Role of Women in Services

10. The changing role of women within the home and outside should be analysed in relation to evolution of the services sector. Besides prompting new services by taking up employment outside the home, hence creating new demand, women have also provided inputs for the production of services, either in personal services or in business and professional services. Employment of women in service industries, their training, skill levels, wages and type of industry must be studied.

Performance and Future Direction

11. A crucial issue that must be systematically studied relates to performance of the key service industries. The centrality of efficiency and productivity both in service industries and in goods producing industries that embody those services cannot be denied. Can the increasing rate of service employment in the economy be attributed to lower labour productivity? Or has labour productivity in services been increasing? How can variation in service output quality be taken into account? How are quality standards ensured in practice?

12. The overall effectiveness of the service sector in contributing to economic growth needs to be evaluated from time to time. What are the monitory measures that can be used? How can obstacles to greater efficiency and higher productivity of service industries be overcome for continued growth in the sector?

13. As a fast growing economic sector, what should be envisaged as the Malaysian services sector within the next decade or two? In the face of regional and international competition and changing economic structure what are the service industries that should be assigned priority bearing in mind the pressures of developed economies within the GATT framework on the one hand and the need to earn foreign exchange through invisibles on the other? Within the context of development and national needs, what are the steps that should be taken to nurture desirable service industries crucial for long term viability of the economic system?

Again, our understanding of service activities is far from adequate. The field for research in services is vast. Hopefully some of the insights provided in this paper may lead to future enquiries into the sector.

TABLE 1

AVERAGE ANNUAL GROWTH RATE OF ECONOMIC SECTORS (%)

	1969-1982 (13 years)	1983-1987 (5 years)
GDP	7.7	2.1
Services	8.4	1.1
Manufacturing	9.2	1.3
Agriculture	5.1	3.8

Source: 1960-70 data from National Accounts of West Malaysia.
1980-84 data from Economic Report 1984/85, Ministry of Finance.

1985-87 data from Economic Report 1986/87, Ministry of Finance.

TABLE 2

RELATIVE CONTRIBUTION OF SERVICE SUBSECTORS

Rank / Criteria	1st (%)	2nd (%)	3rd (%)	4th (%)	Total services
1986 GDP at factor cost	Govt. services & utilities	Other services- distributive trade, professionals	Financial, insurance, real estate	Transport storage & communication	
	14.21	13.56	8.79	6.54	43.31
	32.81	31.37	20.27	15.10	100.00
1986 Employment	Other services - distributive trade, professionals	Govt. services & utilities	Transport, storage & communication	Financial, insurance, real estate	
	21.04	15.79	4.85	1.89	43.55
	48.31	36.26	11.14	4.34	100.00
1970 Final private & public consumption/ demand	Other services- distributive trade, professionals	Financial, insurance, real estate	Transport, storage & communication	Govt. services & utilities	
	46.99	34.66	18.11	0.24	100.00
1970 Demand by other sectors	Other services- distributive trade, professionals	Transport, storage & communication	Financial, insurance, real estate	Govt. services & utilities	
	61.18	24.80	12.11	1.91	100.0
1970 Export demand	Other services- distributive trade, professionals	Transport, storage & communication	Financial, insurance, real estate		
	70.94	25.62	3.44	-	100.0

Source: Economic Report 1986/87, Ministry of Finance.
1975 Input-Output Table for Peninsular Malaysia, Institute of Developing Economies Tokyo, March 1982.

EXHIBIT 1

AVAILABLE STATISTICS ON SELECTED SERVICES IN MALAYSIA

Subsector	Statistical Report	Source	Years	Coverage	Variables
Distributive & other services	Census and/or sample survey of Wholesale and Retail Trades in Peninsular Malaysia	Dept. of Statistics	1966 1968 1970 1972 1974 1976 1978 1980	33 types of trade in Peninsular Malaysia or only urban towns	Wholesale establishments, retail establishments, town, number of establishments, kind of business, legal status, output size group, employment, salaries & wages, ownership by nationality, category of workers, salary & wage group For establishments with accounts:- value of fixed assets, purchases and other operating cost, value of stocks, value added.
	Census of Selected Service Trades & listing of catering trades	Dept. of Statistics	1971 1973 1975 1977	Urban towns	
	Visitor Statistics Peninsular Malaysia	Dept. of Statistics	1961 to 1970	Peninsular Malaysia (Air & Sea)	Business pass holders, holiday social pass holders, transit pass, education pass, special pass, age group, intended length of stay, purpose of visit, sex, citizenship, place of embarkation.
			1971 to 1983	Include road & rail	Include type of accommodation, entry point.
	Tourist Statistics in Brief	Tourist Development Corpn.	1979 1983	Foreign & domestic tourists, hotels, travel agencies	For foreign tourist:- Mode of transport, foreign tourist receipts, major market areas, purpose of visit, sex, age group, accommodation, travel arrangement, frequency of visit, length of stay, main destinations within country, per capita expenditure of air travellers, Sabah & Sarawak foreign tourist growth. For domestic tourist:- mode of transport, size of travel group, duration of trip, type of accommodation, main destination, hotel accommodation, month of visit, number of accompanying children, age, sex, ethnic group, income, occupation, residence area, expenditure, growth of Malaysian visitors to Sabah & Sarawak

(contd)

EXHIBIT 1 (contd)

Subsection	Statistical Report	Source	Years	Coverage	Variables
					For hotels: hotel room supply, states breakdown, occupancy rates, seasonality of occupancy, composition of hotel guest, composition of person-nights, length of stay, manpower of hotels. Miscellaneous:- number of trained tourist guides, travel agencies, tour coaches, hire & drive cars, limousine taxis, Singapore visitors from Johor causeway, Pacific destination of Malaysian residents
	Census of Professional and Institutional establishments	Dept. of Statistics	1981 1983	Professions: Accountants Architects I & II Dentists I & II Doctors Engineers Lawyers Surveyors Veterinary Surgeons Institutions: Private schools Private hospitals & maternity homes	Legal status, ownership, revenue size group, total employment size group, fixed asset size group, salaries and wages by category of worker expenditure.
	Census of Selected Service Industries	Dept. of Statistics	1971 & 1972 1973 1979 1981 1983 1984	Real estate agencies Cinemas Tourist & travel agencies Shipping agents Shipping companies Stockbroker & Forex brokers Insurance Housing Development Stevedoring companies Taxi transport Bus transport Road haulage Finance companies	Number of establishments, state, legal status ownership, revenue size group, total employment size group, fixed assets size group, employment, salaries and wage group, overtime, payments in kind, expenditure.

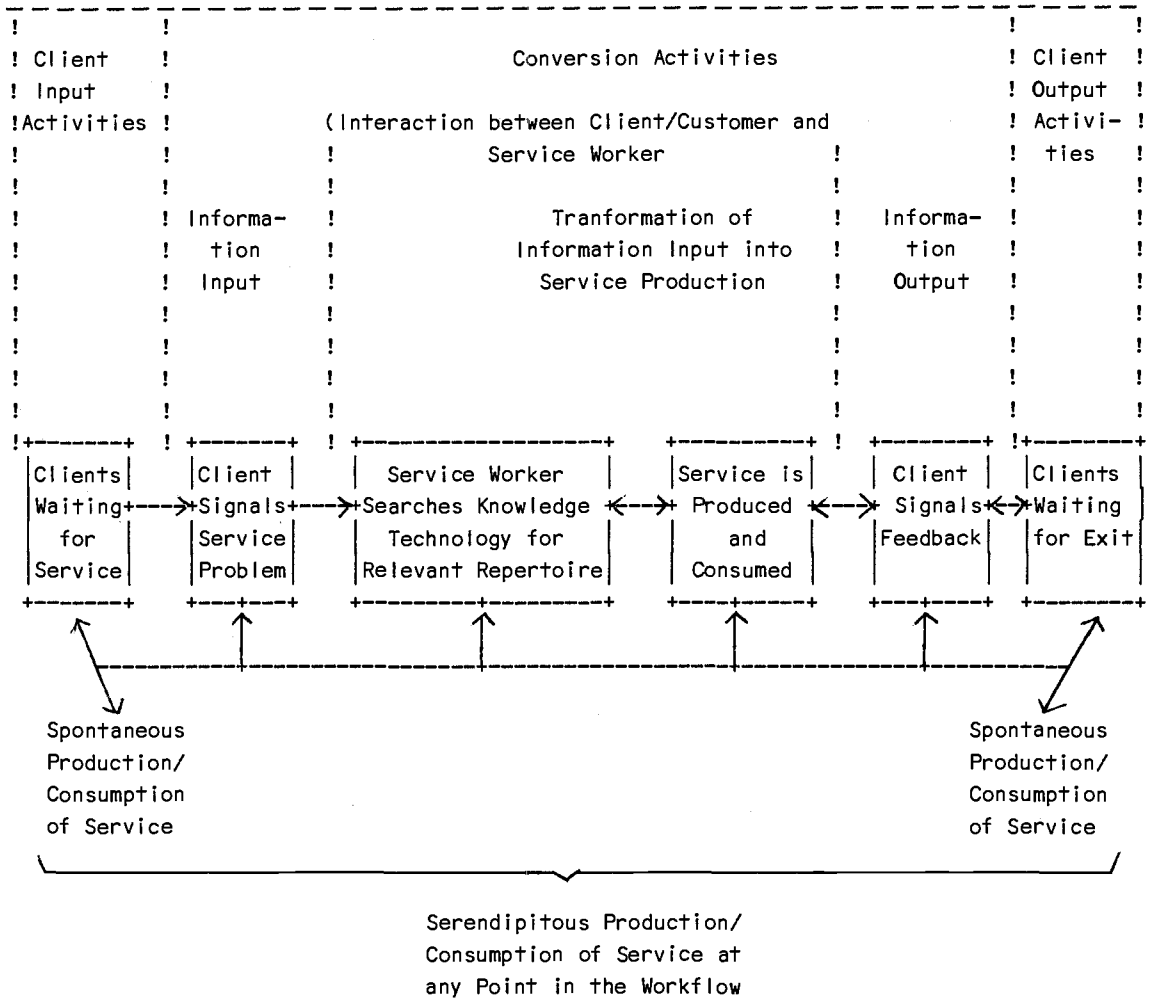
(contd)

EXHIBIT 1 (contd)

Subsection	Statistical Report	Source	Years	Coverage	Variable
Transport services	Yearbook of Transport Statistics	Ministry of Transport	1973 1975 1981	Highway	Average daily traffic, traffic composition mileage of roads, type of vehicles registered, geometric design criteria for new roads in rural areas, lorries by license type, license for minibuses of KL license of taxis, hire cars, limousine taxis, hire & drive cars, new commercial/ passenger cars registered, type of driving license, number of road accidents, diesel and petrol price in KL, number of all types of road transport services, routes & mileage of stage bus and express bus, routes & services of mini buses of KL, taxi and bus fares, road user revenue.
				Railway	Passenger number, revenue, kilometers travelled, freight traffic by commodity, train density, number of locomotives, freight wagons, service vehicles, railway staff, expenditure.
				Shipping	Types & volume of cargo loaded in each port, cargo unloaded, staff, wharves, storage facilities, equipment, MISC composition and tonnage of ships in operation, revenue, expenditure.
				Airports/aviation	Number of passengers embarking/ disembarking, number of aircrafts landing/ takeoffs, cargo & mail handled, passenger traffic between domestic airports, international operators market share of KL International Airport, MAS number of aircrafts, net book value of aircrafts, selected operating statistics, domestic fare for selected city pairs, revenue, expenditure.
	Shipping Statistics	Dept. of Statistics	1973 1974 1975 to 1985	Port Klang and Penang Port	Export and import by conferences/non-conference status for selected commodities, country of export destination, value and quantity of exports, DWT size group, flag by type of ship.

EXHIBIT 2

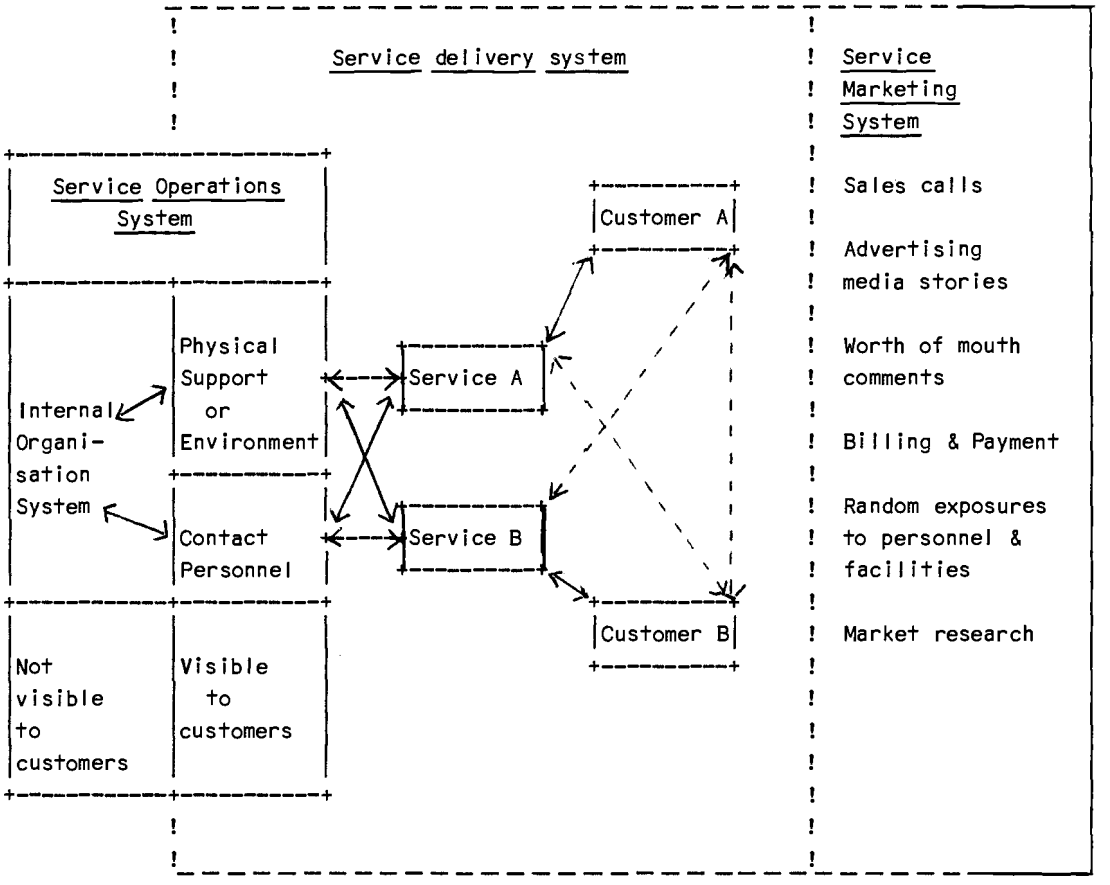
A SYSTEMS MODEL OF THE SERVICE PRODUCTION PROCESS



Source: P. Mills and D. Moberg, "Perspectives on the Technology of Service Operations," Academy of Management Review 7 (1982), pp. 467-478.

EXHIBIT 3

THREE OVERLAPPING SYSTEMS WITHIN A SERVICE BUSINESS



←----→ Direct interactions.

<- -> Indirect interactions

Source: Langeard E., Bateson J.E.G., Lovelock C. and Eiglier P. (1981).

FOOTNOTES

1. The narrowest definition usually excludes government administration and utilities, and construction. The broader definition would include government administration and utilities but exclude construction. Informal, non-monetised services are usually excluded from all three definitions.

2. Basically, SNA classification according to ISIC categories (major division 6 to 9) for commodity or product group is employed. The classification contains inherent weaknesses due to at least two conceptual flaws. First, service activities that took place within agricultural manufacturing or construction operations would have been regarded as agriculture, manufacturing or construction rather than services, hence resulting in underreporting of the services sector. Secondly, many non-monetised services previously performed within households and did not appear in the national accounts would now be accounted for as they are now provided by professionals outside the home, thus leading to overstatement of growth in the services sector when in fact the real change would have been smaller. Nevertheless, national accounts data has to be used for want of a better alternative in the case of Malaysia.

3. They are Airod (aircraft maintenance), North Klang Straits Bypass (marine transportation), Sistem Televisyen Malaysia, tolls at the Jalan Kuching-Kepong Interchange, Sports Toto, Malaysian Airline System (MAS), Port Klang Container Terminal, Malaysian International Shipping Corporation (MISC), Labuan Water Supply and the recreational facilities at Taman Negara. Another ten that have been approved for privatisation include the Light Rail Transport (MetroLink), Sabah-Labuan Electricity Transmission, Malacca Port, security printing. Tourist Development Corporation tourism complex, inspection of motor vehicles, North South Highway, Syarikat Telekom Malaysia, radio advertisements and City Hall's rubbish incineration.

4. In 1984, the visible trade surplus of $6.9 billion ringgit (US$2.9 billion) was only able to cover 65% of the invisible deficit of 10.6 billion ringgit (US$4.5 billion). Source: Bank Negara Malaysia.

REFERENCES

American Marketing Association, Marketing Definitions: A Glossary of Marketing Terms, Committee on Definitions, A.M.A., Chicago, 1960.

Baer, W. and Samuelson, L., 'Toward a Service-oriented Growth Strategy', World Development, Vol. 9, No. 6, 1981.

Bhagwati, J.N., 'Splintering and disembodiment of services and developing nations', World Economy, 7(2), 1984.

Browning, H.C. and Singelmann, J., The emergence of a service society: Demographic and sociological aspects of the sectoral transformation of the labor force in the USA, Springfield, VA: National Technical Information Service, 1975.

Clark, C., The Conditions of Economic Progress, Macmillan, London, 1940.

Fisher, A.G.B., The Clan of Progress and Security, Macmillan, London, 1935.

Foote, N.N., and Hatt, P.K., 'Social Mobility and Economic Advancement', American Economic Review, Vol. 43, 1953.

Hill, T.P., 'On Goods and Services', Review of Income and Wealth, Series 23, 1977.

Inman, R.P., ed., Managing the Service Economy: Prospects and Problems, Cambridge University Press, New York, 1985.

1975 Input-Output Table for Peninsular Malaysia, Institute of Developing Economies, Tokyo, March 1982.

Katouzian, M.A., 'The Development of the Service Sector: A New Approach', Oxford Economic Papers, Vol. 22, 1970.

Kendrick, J.W., 'Measurement of output, and productivity in the service sector' in Inman, R.P., ed., Managing the Service Economy: Prospects and Problems, Cambridge University Press, New York, 1985.

Koh, A.T., 'The Role of the Service Sector in Asean' in Jomo ed., Asean Economies: Crises and Response, Malaysian Economic Association, 1985.

Langeard, E., Bateson, J.E.G., Lovelock, C., and Eiglier, P., Services Marketing: New Insights from Consumers and Managers, Report No. 81-104, Marketing Science Institute, Cambridge, Massachusetts, 1981.

Malaysia, Economic Report 1978/79; 1981/82; 1984/85; 1986/87, Ministry of Finance, Kuala Lumpur.

Mills, P. and Moberg, D., 'Perspectives on the Technology of Service Operations', Academy of Management Review, 7, 1982.

Mills, P.K., Managing Service Industries, Ballinger Publishing Co., Cambridge, Massachusetts, 1986.

Pang, E.F., 'Asean-EEC Trade in Services: An Overview', Institute of Southeast Asian Studies, Singapore, September 1982.

Praet, P., 'EEC and Asean in the International Exchange of Services: A European Perspective', Institute of South-east Asian Studies, Singapore, May 1982.

Riddle, D.I., Service-Led Growth, Praeger, New York, 1986.

Sabolo, Y., The Service Industries, International Labour Office, Geneva, 1975.

Sampson, G.P. and Snape, R.H., 'Identifying the issues in Trade in Services', The World Economy, 8, 1985.

Sieh, L.M.L., Services in the Malaysian Economy, Occasional Papers on Malaysian Socio-Economic Affairs No. 9, Faculty of Economics & Administration, University of Malaya, Kuala Lumpur, January 1985.

_____, The Services Sector in Malaysia, Asean-Australia Working Papers No. 8, Kuala Lumpur and Canberra 1984.

_____, 'Benchmark for Privatisation in Malaysia', Euro Asia Business Review, Vol. 3 No. 1, January 1984a.

_____, The Structure of Retail Trade in West Malaysia, Occasional Papers on Malaysian Socio-Economic Affairs No. 2, Faculty of Economics & Administration, University of Malaya, Dece ber 1974.

_____ and Chee, P. L., 'Cooperation in Trade in Services Between EEC and Asean: An Asean Perspective', paper presented at 3rd Conference on Asean-EEC Economic Relations, Bangkok, 1983.

_____, 'The Wheel of Retailing in Malaysia', Malaysian Business, June 1979, also in Businesscope, Vol. 6, 1979.

Singer, P., Forca de trabalhoe emprego no Brasil: 1920-1969. Caderno Cebrap 3, Sao Paulo, CEBRAP, 1971, (See Riddle, D.I., Service-Led Growth, Praeger, New York, 1986, p. 16).

Toh, K.W. et al, Small Retail Business: An Analysis of Issues and Trends in the Urban Areas of Peninsular Malaysia, A Report submitted to the Kuala Lumpur and Selangor Chinese Chamber of Commerce and Industry, Seres Sdn Bhd., Petaling Jaya, May 1985.

Wong, J., 'The Concept of "Face" in Asian Culture: Its Implications to Marketing', in Tan, C.T., Lazer, W., and Kirpalani, V.H. ed., Emerging International Strategic Frontiers, Proceedings of the American Marketing Association's International Marketing Conference in Singapore, 1986.