WORLD ECONOMY

TNCs and services — the final frontier

By Frederick F Clairmonte and John H Cavanagh

In two articles Frederick F Clairmonte and John Cavanagh will look at the importance of the service sector in the world economy, and especially the role of TNCs in this sector.
In this issue they examine the origins of the service sector and the causal explanations to the growth of services globally.
The second article will identify and analyse the major service conglomerates.

Frederick F Clairmonte is a staff member of UNCTAD and John Cavanagh is a Fellow of The Institute for Policy Studies in Washington. They are both members of the Editorial Advisory Board of RMR.
The article was first published in Trade and Development, an UNCTAD Review, No 5, 1984. The views expressed in the article are their own and not necessarily those of their institutions.

The setting

In the literature on the world economy, comparatively little attention has been paid to what is, in fact, its largest and most dynamic sector — services, and even less analytical work has been devoted to the role of transnational corporations (TNCs) in this sector.

This enquiry marks the beginning of an overall synthesis of the role of corporate power in the proliferation of the various branches of the service sector.

The *internationalization* of the output of goods and services [1] has its origin in the efflorescence of the world market since the Renaissance. The extent to which any particular commodity is internationalized has fluctuated considerably from time to time in the course of the evolution of the capitalist system. The trade in tea, cane sugar, tobacco, cotton and animal furs expanded from domestic markets in the sixteenth century into international ones by the end of the eighteenth century, the high-water mark in the fortunes of mercantilism. This internationalization was further intensified in the nineteenth century, in the heyday of economic liberalism.

However, the progress from internationalization to transnationalization occurred only at the turn of the present century, when transnational corporations began exporting capital, goods and services in large volume. Transnationalization marks a specific stage in the higher evolution of mature capitalism, in which a given sector's output falls within the controlling ambit of the transnational corporation. By the 1960s, with the ascendancy of conglomeration [2] on a massive scale, the TNC became the principal vehicle of internationalization.

Central currents

Four central elements in the transformational process constitute the foundation of the present enquiry:

- The heterogeneous service sector has eclipsed agriculture and manufacturing as the leader in the global economy, and can be expected to gather momentum over the remaining years of the century.
- Until the last decade, services were the least internationalized of the major sectors and the least penetrated by transnational corporate capital.
- The internationalization of services is being strongly encouraged by two sets of corporate phenomena. The first is what may be designated as the formation of *Transnational Service Conglomerates* (TSCs), which operate in two or more service sectors. The second is the formation of *Transnational Integral Conglomerates* (TICs), which span a large spectrum of both service and industrial sectors, whose highest expression to date are the huge and powerful Japanese conglomerate groupings (e g Mitsubishi, Mitsui, Sumitomo, etc).

An analytical differentiation must be made between giant industrial corporations (e g Bayer and Toyota) and the large service conglomerates (e g Dentsu and Sears). Economies of scale in industry proper can be realized by the production of a large number of standardized units in one location. In contrast, services often do not lend themselves to operations in standardized units. Rather, in the case of services, economies of scale are achieved by organizing individual units (e g Hertz car rental centres) into chains, and managing them from a central office through computerized operations. Effectively, TSCs combine a high degree of centralization in overall administration and finance with a propensity for decentralization by means of their far-flung distribution network operating through franchises.

The spectrum ranging from absolute centralization to absolute decentralization is broad, and a given firm's position on that spectrum is largely determined by the nature of the commodity or service bought and sold and the technology employed. Hence the degree of centralization or decentralization, as the case may be, is not the decisive determinant

"In Roppongi, one of Tokyo's fashionable dining and nightlife areas a two-way computer based area guide/ information system has been planned by Mitsubishi Corporation and installed by Sogo System Service."

of the relative power of corporate capital.

The distinction drawn between service and manufacturing corporations ought not to be construed as implying that these two economic categories are separated by rigid boundaries. Actually, in consequence of the growth of TICs, these once separate categories are tending more and more to be amalgamated under a single corporate roof. The global power which this form of integration confers on the TICs is unprecedented, inasmuch as it facilitates the meshing of initial output with various techniques of sophisticated marketing and promotion of products for sale to the consumer. Under the impetus of these combined forces, internationalization of services is being prodigiously speeded up.

• The fourth key element to be noted is that the internationalization of services is fast permeating all economic sectors and corporate groupings in both capitalist (developed and developing) and centrally planned economies, particularly in reshaping both their labour force and the overall trajectory of these economies.

These momentous changes that are taking place in corporate ownership and control are blurring the once neat boundaries that used to demarcate the familiar categories of the service sector.

Towards a redefinition of services

The distinction between services and the vast range of material products harks back to the physiocrats' *tableau économique,* Adam Smith and Karl Marx. The first serious attempt to define services as a distinct activity, however, was made by Professor Colin Clark in his pioneering study.[3] Essentially, he subdivided the economic universe into three categories: primary (mainly agriculture and fishing), secondary (mining and manufacturing), and a residual tertiary or services sector including commerce, transport, communications, finance, insurance, real estate, government[4] and professional[5] services. This third category can be further broken down into "producer services" for intermediate demand and "consumer services" for final consumption.

Not merely is the substance of services heterogeneous, but views on its definitional boundaries are even more diverse. In Professor Stigler's words: "there exists no authoritative consensus on either the boundaries or the classification of the service industries."[6] Professor Simon Kuznets, for example, modified his definition between 1958 and 1966 by including transportation, communications and public utilities in services in his early work and eliminating them in his later work.[7]

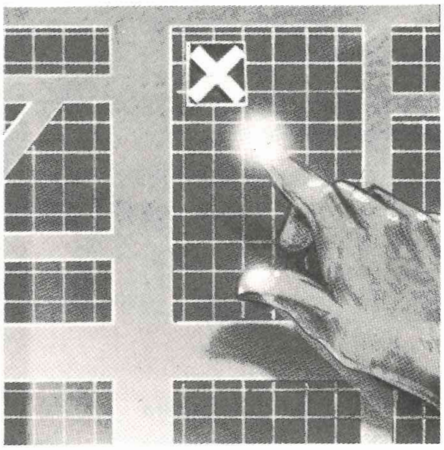
More recently, with the onset of the microprocessor revolution and the opening up of entirely new and prev-

Pointing the finger towards Washington

”The polite term for what's happening in steel, iron ore and the US minerals sector in general is called "rationalization". It should more properly be called "irrationalization", because the continuing decline of such vital sectors makes no economic or strategic sense. (. . .)

The bureaucratic brainstorm now sweeping Washington that suggests it is a role of government to promote a service economy over an industrial economy, while completely ignoring the fact that most service industries create little if any new national wealth, which is so essential to economic growth.”

Robert Anderson,
Chairman of M A Hanna Co,
quoted in Metal Bulletin 1985-07-02.



Are service jobs good jobs?

”How, then, to account for the impression that the shift to a service economy is undermining America's ability to generate wealth? In the 1970s the composition of employment underwent great and rapid change. Before then, the postwar growth in service jobs had chiefly come at the expense of agriculture — where average wages are far below either services or manufacturing. But beginning about 15 years ago, job growth in manufacturing slowed markedly. During the recession years from 1979 to 1982, manufacturing went into a free fall.

If service jobs didn't provide plenty of Americans with the good life, US living standards would have fallen long ago. Service-producing industries claimed more than half of all jobs over 30 years ago; today the figure is about 70 % of the more than 107 million workers in the US.

(. . .)

Services have been the engine, chassis, and body of the great American job machine, providing nearly 95 % of the 25 million net new jobs created since 1969.

Richard I Kirkland in
Fortune International, 1985-06-10.

iously unexplored frontiers beyond manufacturing, classification has become more intractable. Japan's Ministry of Finance, for example, has now revised its industrial classification formula to take into account new tertiary industries, particularly those associated with software, information, business services, culture and sports.

There is little point in entering into these methodological disputes. The various definitions or classifications proposed are analytically limited in that they embrace only formal economic aggregates, while ignoring corporate structures that, in the last analysis, are the providers and determinants of services. What matters for the purpose of the present study is that the largest corporations now transcend the sectoral categories of primary, secondary and tertiary. In their production, finance and marketing operations the frontiers of another time, and soon of another age, will have become meaningless. Despite these definitional problems, it is nevertheless possible to demarcate the boundaries of services in common-sense terms. Schematically, services can be said to comprise the range of activities beyond the confines of agriculture, mining and manufacturing. This would comprise the broad categories of government services (civilian and military), personal consumption services, and business support services.

Growth of services globally

Already by the turn of the century, a large proportion (20 per cent on the average) of the labour force in developed countries was absorbed by services. By the end of the Second World War, the United States became the world's first so-called service economy, with less than half of the labour force engaged in the output of food and manufactured goods.

The 1960s witnessed a vast expansion of services. In the case of five major economic groupings (Table 1), the share of services in GDP and the labour force grew in all of them during the last two decades, albeit at unequal rates. No social class or country remains untouched by the growth of services at the expense of manufacturing and agriculture.

The evidence suggests that it would be fallacious to assume that services as a whole are more labour-intensive than manufacturing or agriculture, for the relative labour intensity of services varies greatly from one country or grouping to another. It is no less relevant to note that just as the boundaries between sectors are vanishing, so the conventional distinction between labour-intensive and capital-intensive industries is losing much of its former meaning, owing to

Table 1

Services: share of GDP and labour force

Economic grouping	Services as percentage of GDP 1960	Services as percentage of GDP 1981	Services as percentage of labour force 1960	Services as percentage of labour force 1980
Industrial market economies	54	61	44	56
of which:				
United States	58	63	57	66
Japan	42	53	37	49
High income oil exporters[a]	—	23	25	35
of which:				
Saudi Arabia	—	20	19	25
Lybian Arab Jamahiriya	—	29	30	53
Middle income economies[b]	46	48	23	34
of which:				
Indonesia	25	34	17	30
Brazil	49	53	33	46
Low income economies[c]	27	29	14	15
of which:				
China	20	20	—	12
India	30	37	15	18
Eastern Europe[d]	17	22[e]	28	39
of which:				
USSR	17	22[e]	29	41
Poland	17	21[e]	23	30

Sources:
Compiled from data in World Bank, *World Development Report, 1982* and *ibid* 1983. Oxford University Press, New York 1982 and 1983.

[a] Per capita GNP over 5 760 USD.

[b] Per capita GNP of 401—5 760 USD.

[c] Per capita GNP of 400 USD and less.

[d] Poland, Bulgaria, Hungary, USSR, Czechoslovakia and German Democratic Republic.

[e] 1980.

the changing form and content of technology.

Labour force: changing configurations

An examination of the shifting structure of the labour force in two advanced industrialized countries of different sizes brings out clearly the sectoral specificities. In both the United States and Switzerland (see Tables 2 and 3), the service sector as a whole experienced rapid but unequal growth over the past decades, with banking and insurance the pacesetters. Services made gains at the expense of employment in both agriculture and manufacturing in both countries.[8]

The causal explanations

There can be no such thing as a single causal explanation for the growth of services. The multiplicity of the factors contributing to the upsurge is as diverse as the various service sectors themselves, although the predominant ones can be singled out.

A major factor has been the role of the state. Among the most dynamic elements in the post-war economies of most developed market economies (DMEs) have been welfare programmes (notably in health) and the military complex, whose outlays have given rise to a myriad of service jobs. Another has been the changing structure of global manufacturing in consequence of the internationalization of output of TNCs. Since 1970, veritable global factories have been established in the automobile, consumer electronics and textile/apparel industries. This has only been made possible by gigantic leaps in applied sciences, conspicuously in the information services, transport and communications.[9]

The growth and proliferation of services is organically related to such globalization, for global manufacturing requires the dovetailing of such diverse services as information and telecommunications; shipping and other forms of transport to link the diverse production units; as well as a promotional technology coupled to wholesale and retail networks serving the consumer. The process necessitates the employment of large numbers of white-collar workers, ranging from relatively low paid office workers to teams of highly paid corporate lawyers. The onset of the computerized microelectronic era has not only tightened the co-ordination of a numerically vast number of services, but has also reinforced the historical relationship between services and manufacturing.

Table 2

United States: structure of the labour force

	1972		1982		
	Thousands	Per cent	Thousands	Per cent	1972=100
Primary					
Agriculture	3 484	4.5	3 401	3.7	97.6
Secondary					
Manufacturing	19 151	24.8	18 849	20.3	98.4
Mining	628	0.8	1 122	1.2	178.7
Construction	3 889	5.0	3 912	4.2	100.6
Tertiary					
Transp and public utilities	4 541	5.9	5 057	5.4	111.4
Wholesale and retail trade	15 949	20.7	20 547	22.0	128.9
Finance, insurance and real estate	3 908	5.1	5 350	5.8	136.9
Other services	12 276	15.9	19 000	20.4	154.8
Government	13 333	17.3	15 784	17.0	118.4
Total	77 159	100.0	93 022	100.0	120.6
Total labour force[a]	82 153		99 528		

Sources:
Computed from data in *Economic Report of the President,* US Government Printing Office, Washington DC, February 1983.

[a] Including the self-employed.

Influence of urbanization

Historically, services have been concentrated in urban areas, a state of affairs which is likely to continue in the future. The causal relationship between the growth of cities and services is a complex one shaped by several elements, including agriculture's inability to absorb rural population increases, the mounting capital intensity of manufacturing and the sheer imperative of survival. Moreover, cities, as the centres of transnational corporate networks and state bureaucracies, have generated a constant flow of new service jobs.

The cities' share of the world's population has grown rapidly in the last three decades, and the share is projected to continue to increase and to account for over half of the world's population by the turn of the century (Table 4). The implication is that global services will likewise continue to grow, both in relative and in absolute terms.

To the foregoing contributory factors can be added the entry of giant corporations into the services sector with their techno-financial capabilities. What this implies is that the prospective growth of the sector and of its attendant branches will be greater upon the entry of such services giants as Sears, Dentsu and Mitsubishi than could ever have been visualized in earlier periods when firms were atomized.

The foregoing description and analysis have concentrated on the growth of what is merely one segment of the service economy — namely officially recorded flows. The picture would be incomplete, however, without some reference to the subterranean economy.

The subterranean economy[10]

The Clarkian/Kuznetsian framework is flawed in that it covers exclusively officially recorded flows. Ever since the industrial revolution, a segment of all national economies has comprised an unrecorded element which, in recent times, has been variously designated as the black market, the underground economy, the submerged economy, the subterranean economy, the informal sector, the unrecorded economy, and like terms. These marginal activities include:

- Prostitution, drug trafficking, larceny, theft and white collar crime;
- Illicit currency transactions;
- Illicit unrecorded work;[11]
- Tax evasion.

Since the onset of the global economic depression in the mid-1970s and the slowdown of the legal economy, these activities have proliferated the world over.

Just as a multiplicity of interrelated factors accounted for the growth of officially recorded services, so there are several elements which go far to explain the growth of the subterranean economy. The first is the large number of government fiscal and other regulations, restrictions and prohibitions. The avoidance of these enactments can be very lucrative. The temptation to flout the law has become almost irresistible, and the prospect of illicit gain, tax-free, has attracted many shady operators, the Mafia being a prime example.

Another cause of the spread of the underground economy has been the impact of the world-wide depression since the mid-1970s. The consequent layoffs and redundancies have raised the officially acknowledged unemployment level in the OECD countries to around 35 million. Driven out of the legitimate economy, many workers have no other recourse than to find some job in the underground economy, invariably with sub-minimum wages and no pension or welfare payments. Likewise, the protectionist barriers that have been raised because of the depression have made

Table 3

Switzerland: structure of the labour force

	1972		1982		
	Thousands	**Per cent**	**Thousands**	**Per cent**	**1972 = 100**
Primary	255	8.0	214	7.0	83.9
Agriculture	222	7.0	180	5.9	81.1
Secondary	1 438	45.1	1 174	38.7	81.6
Food, beverages and tobacco	123	3.9	111	3.6	89.7
Textiles and apparel	138	4.3	86	2.8	62.6
Chemicals, mineral oils	74	2.3	70	2.3	94.5
Metals	196	6.2	169	5.6	85.9
Watchmaking	88	2.7	55	1.8	62.8
Machinery and equipment	279	8.7	252	8.3	90.5
Construction	270	8.5	195	6.4	72.2
Tertiary	1 496	46.9	1 646	54.3	110.0
Retail trade	274	8.6	289	9.5	105.7
Banking, insurance	100	3.2	141	4.6	141.7
Hotel and restaurant business	170	5.3	177	5.8	104.1
Public entities, teaching	206	6.5	230	2.6	111.7
Public health	115	3.6	169	5.6	146.7
Total labour force	3 189	100.0	3 033	100.0	95.1

Source:
Swiss Federal Office for Statistics, quoted in Union Bank of Switzerland, *Business Facts and Figures,* June 1983, p 11.

Table 4

The upsurge of urbanization by major regions of the world

	1950		1980		2000 (projected)	
	Total population (millions)	**Urban pop as percentage of total**	**Total population (millions)**	**Urban pop as percentage of total**	**Total population (millions)**	**Urban pop as percentage of total**
World	2 526	28.9	4 432	41.1	6 119	51.2
United States	152	64.2	223	77.0	264	83.4
Western Europe	392	55.4	484	70.5	512	78.4
of which:						
Germany, Fed Rep of	50	72.3	61	84.7	59	89.3
United Kingdom	51	84.2	56	90.8	55	93.7
France	42	56.2	54	77.9	56	85.4
Latin America	164	40.8	364	65.4	566	75.7
of which:						
Brazil	53	34.5	122	67.0	187	79.2
Mexico	27	42.7	70	66.7	116	77.4
Argentina	17	65.3	27	82.4	33	87.9
USSR	180	39.3	265	63.2	310	74.1
Asia	1 389	—	2 579	—	3 550	—
East Asia	673	16.8	1 175	32.7	1 475	45.3
South Asia	716	16.2	1 404	24.8	2 075	37.1
of which:						
China	557	11.1	995	25.7	1 257	39.1
India	368	17.3	684	22.2	961	33.9
Indonesia	80	12.4	148	20.2	199	32.3
Philippines	21	27.1	49	36.2	77	49.0
Africa	220	14.8	470	28.8	853	42.4
of which:						
Nigeria	33	10.5	77	20.4	150	33.4
South Africa	14	42.2	29	49.6	51	60.3
Egypt	20	31.9	42	45.4	64	57.4
Zaire	14	19.1	28	39.5	50	56.3

Sources:
Compiled from data in United Nations Demographic Indicators of Countries (New York, 1982). United Nations Department of International Economic and Social Affairs, Selected Demographic Indicators by country 1950—2000. *Demographic Estimates and Projections as Assessed in 1978* (CST/ESA/SER.R/98) and *ibid, Estimates and Projections of Urban, Rural and City Populations 1950—2025: The 1980 Assessment* (ST/ESA/SER.R/45).

Note:
Calculated on the basis of medium variant of population growth.

smuggling a profitable (if unlawful) occupation.

The internationalization of services

Of the three major sectors of the world economy, the service sector may be said to be the least internationalized, a contention that must be evaluated in a global setting. In the decade of the 1970s, the overall share of world GDP exported jumped from 16 to 27 per cent (see Figure 1 and Table 5). This rise reflected the entry of large quantities of output of manufacturing, mining, and agriculture into the world market through the marketing and promotional networks of TNCs.[12] The decade also witnessed lesser but significant strides in the internationalization of services, with service exports jumping from 7 per cent to 11 per cent of the service sector's GDP; exports of agricultural products rose from 32 per cent to 45 per cent, and those of the mining and manufacturing industries from 30 per cent to 55 per cent of the GDP of the sectors in question.

The internationalization of different sectors and sub-sectors followed differentiated patterns, as United States data suggests. Of 14 leading United States service sectors, foreign revenues as a share of total revenues ranged from less than 1 per cent in the case of health services to over a third in the case of maritime transportation.[13]

As one turns from the generalized world picture to look at the particular importance of services in the exports of selected countries, one perceives some very suggestive trends (Tables 6—7).

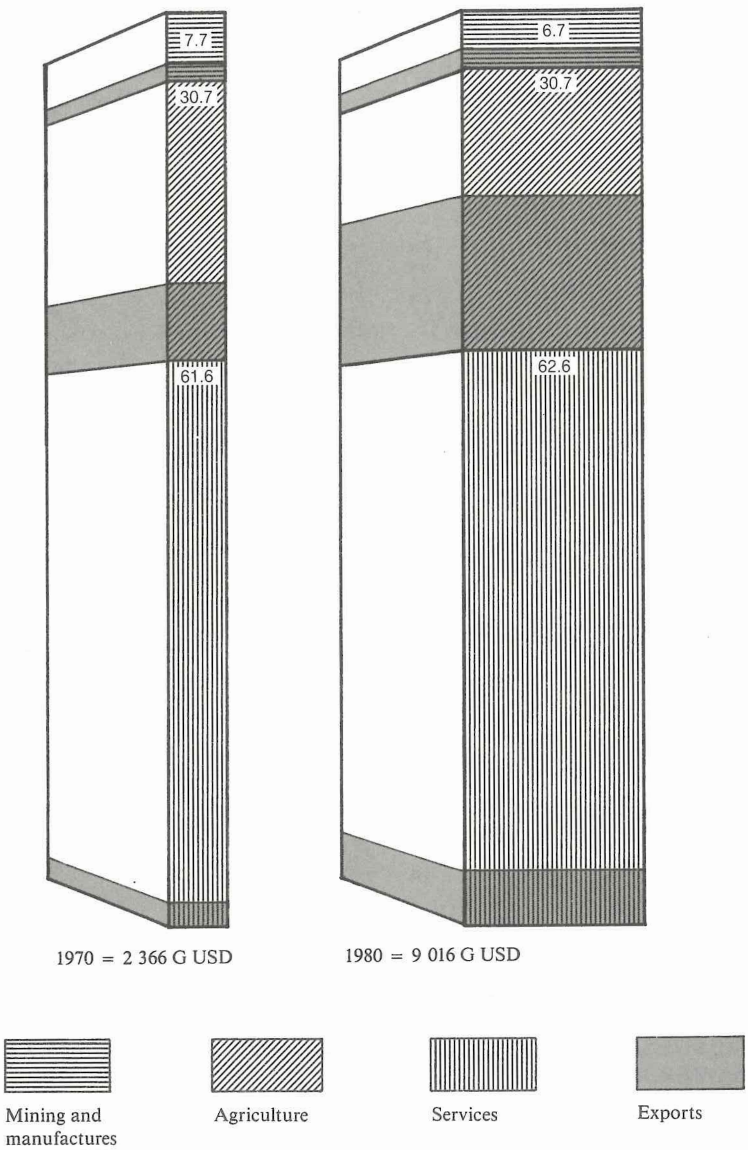
• Out of an estimated recorded total of 585 G USD of service exports (1981), over half was accounted for by the top five developed market economies, with the United States alone accounting for one fifth.

• As regards the balance of services trade, some countries record enormous surpluses (United States and United Kingdom)[14] and others very large deficits (Japan, Federal Republic of Germany and Saudi Arabia).

• In general, DMEs are running surpluses on service accounts, while the developing economies are accumulating mounting deficits. Earlier forecasts by Prof Leontief[15] suggested that developing economies would have service deficits of the order of 30 G USD by the year 2000. As a study by the UNCTAD secretariat reveals, however, this figure has already been easily exceeded: the net deficit of the developing countries' trade in services climbed from 14 G USD to 80 G

Figure 1

Structure of the world economy GDP and exports 1970—1980
(Percentages, excluding socialist countries)



Sources:
Table 5.

Table 5

The internationalization of the world economy
(excluding Socialist countries)

	1970 World GDP (G USD)	1970 World exports (G USD)	1970 Exports as percentage of GDP	1980 World GDP (G USD)	1980 World exports (G USD)	1980 Exports as percentage of GDP
Agriculture	181.9	57.8	31.8	602.8	273.2	45.3
Mining and manufactures	726.7	217.5	29.9	2 769.5	1 522.1	55.0
Services	1 457.6	99.9	6.9	5 644.0	610.4	10.8
Total	**2 366.2**	**375.2**	**15.9**	**9 016.3**	**2 405.7**	**26.7**

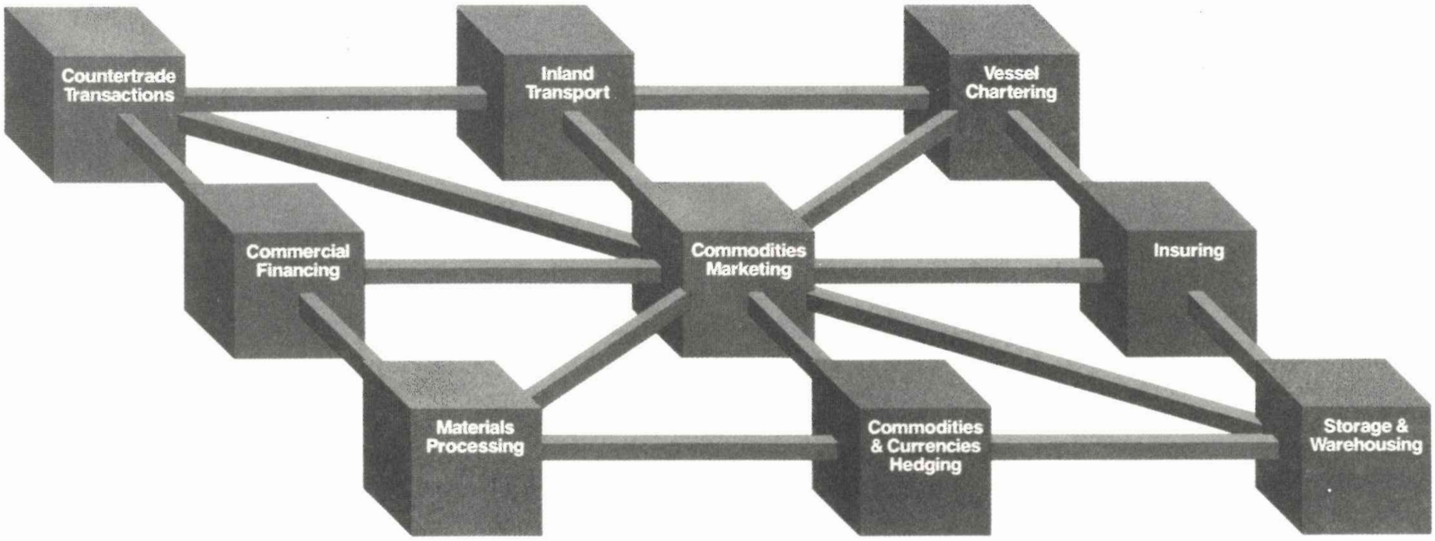
Sources:
Calculated from data in UNCTAD, *Handbook of International Trade and Development Statistics, 1983* (United Nations publication, Sales No E/F.83.II.D.2) and from tapes of the United Nations Department of International Economic and Social Affairs.

Table 6

Services: leading exporters, 1981
(G USD)

Country	Transport	Travel	Investment income	Other services	Total	Per cent
Developed market economies						
United States	15.2	12.2	82.3	11.4	121.1	20.8
France	10.7	7.2	23.2	14.5	55.6	9.5
United Kingdom	12.3	6.0	18.4	13.0	49.7	8.5
Germany, Fed Rep of	9.4	6.3	9.2	15.0	39.9	6.8
Belgium/Luxemburg	4.8	1.6	23.1	5.1	34.6	5.9
Developing economies						
Mexico	0.5	6.2	1.3	2.2	10.2	1.8
Singapore	3.0	1.7	0.9	3.4	9.0	1.5
Rep of Korea	2.1	0.4	0.5	3.0	6.0	1.0
Kuwait	0.8	0.5	3.0	0.0	4.3	0.7
Saudi Arabia	1.9	1.6	0.0	0.8	4.3	0.7
Other	73.5	55.4	61.3	59.8	250.0	42.7
World	134.2	99.1	223.2	128.2	584.8	100.0

Source:
Computed from data in: UK, Committee on Invisible Exports, *World Invisible Trade* London, June 1983.



USD between 1967 and 1980, at an average annual rate of 25 per cent.[16] There appears no reason why this unbroken upward climb should not continue.

• It is not fortuitous that the countries with the biggest surpluses in their service trade are precisely the most vociferous proponents of a liberalization of this trade.[17] In the United States, it is the huge earnings from service exports (and to a lesser extent from farm exports) which offset the huge deficit on merchandise account.[18]

• It should be apparent from the colossal deficits of developing countries on their service accounts that a liberalization of the international trade in services would swell their deficits and benefit primarily DMEs. Under a régime of liberalization, developing countries would be committed to boost their services imports whereas they would realize only marginal gains from their almost negligible service exports.

• The significance of the service trade is reflected also in the per capita surplus of certain countries, notably Singapore (1 917 USD in 1981) and Switzerland (1 078 USD) in their international trade in services.

• The share of services in total exports also varies widely, ranging from 3 per cent in Saudi Arabia to 78 per cent in Greece.[19]

• Although recorded service exports as a percentage of goods exports shrank slightly between 1970 and 1980, for the top 15 exporters of services the share edged up from 34 to 37 per cent.

Previous sections sketched the numerical framework in which the growth and prospects of the trade in services can be understood. But such a numerical framework, in itself, can give no indication of the determinants of the future evolution of this trade. This can only be done by taking stock of the rapidly changing institutional power relations in the global service economy.

Notes:

[1] Internationalization refers to the extent to which production of a given sector is exported. This is in contrast to "transnationalization", which refers to the degree to which the

Table 7

Balance of service trade: major surplus and deficit countries, 1981 (G USD)

	Transport	Travel	Investment income	Other services	Total	Per capita surplus or deficit (USD)
Surplus countries						
United States	—0.9	0.7	46.1	7.4	53.2	232
United Kingdom	0.7	—0.6	3.4	8.0	11.6	207
Switzerland	—0.3	1.3	5.1	0.8	6.9	1 078
France	—1.3	1.5	0.8	3.7	4.6	85
Singapore	1.6	1.4	—0.4	2.0	4.6	1 917
Deficit countries						
Japan	—3.2	—3.9	—5.7	—7.4	—20.2	—172
Germany, Fed Rep of	—1.8	—11.4	—2.7	—2.5	—18.5	—300
Saudi Arabia	—5.5	—1.2	—6.8	—3.2	—16.7	—1 796
Brazil	—1.7	—0.2	—10.3	—0.6	—12.8	—106
Canada	—0.1	—0.9	—9.6	—1.5	—12.0	—496

Sources: As for Table 6.

Phibro-Salomon Inc is the largest diversified service company in the US, with sales of 29 billion USD in 1984. Figure shows marketing services of the corporation.

output and marketing of a given sector are controlled by transnational corporations. While the terms "output" and "production" are conventionally used to describe the generation of material products, in this work they are also used to refer to the generation of services.

[2] Conglomerate mergers are those between companies which are neither direct competitors nor in a buyer-seller relationship with one another.

[3] Colin Clark, *The Conditions of Economic Progress,* Macmillan, London, 1940.

[4] Government services span the entire gamut of a country's civil and military administration.

[5] Professional services comprise the technical, legal, commercial, and medical services produced by engineers, lawyers, accountants, physicians, and other professionals.

[6] George Stigler, *Trends in Employment in the Service Industries,* Princeton University Press, New Jersey, 1956, p 47.

[7] Compare his "Quantitative Aspects of the Economic Growth of Nations: Industrial Distribution of Income and Labour Force by States. United States 1919—21 to 1955", *Economic Development and Cultural Change,* July 1958, with his *Modern Economic Growth,* Heinemann, London, 1966.

Victor Fuchs illustrated the difficulty of framing a definition when he noted that "a dentist who makes a false tooth and places it in the patient's mouth is certainly delivering a tangible product, but dentistry is invariably classified as a service. It is difficult to make a sharp distinction between the activities of an auto assembly plant and those of an automobile repair shop, but the former is invariably classified in industry and the latter is usually regarded as a service." Victor Fuchs, *The Service Economy,* Columbia University Press, New York, 1968, p 15.

[8] In the United States, the increase in the mining labour force was attributable to the shift to coal after the oil price hikes in 1973 and 1979.

[9] The automobile industry is a vivid illustration: a "global car" is now assembled from parts manufactured in as many as 16 different countries.

[10] Although analysis of the services sector in this study is focused on market economies — developed and developing — a substantial underground economy is said to exist also in the centrally planned economies.

[11] Raffaele de Grazio, *Le travail clandestin: Situation dans les pays industrialisés à économie de marché,* International Labour Office, Geneva, 1983. The author defines subterranean work as *"une activité professionnelle, unique ou secondaire, exercée en marge ou en dehors des obligations légales, réglementaires ou conventionnelles, à titre lucratif et de manière non occasionnelle"* (p 9). According to diverse estimates quoted by the author, the subterranean labour force accounted for the following percentages of the total labour force in the years or periods mentioned: France (1979—1982), 3—6 per cent; Federal Republic of Germany (1981), 8—12; Italy (1979), 10—35; Denmark (1974—75), 11; Sweden (1979), 13—14; Belgium (1979), 15—20; Norway (1981), 40. The percentage contribution of clandestine work to GNP was also estimated for the following countries: Denmark (1974—1975), 6; Sweden (1978), 6—16; Norway (1980), 7—17; Italy (1977), 8; Australia (1978—1979), 10; Federal Republic of Germany (1981), 13; UK (1980), 15; Belgium (1981), 15; and USA (1979), 28.

[12] For an elaboration, see F F Clairmonte and J H Cavanagh, "Transnational Corporations and Global Markets: Changing Power Relations", *Trade and Development, An UNCTAD Review,* No 4, Winter 1982, United Nations publications, Sales No E.83.II.D.1.

[13] Foreign revenues as a percentage of total 1981 revenues varied as follows: financial services, 23; equipment lending and rental, 22; air transportation, 17; motion pictures, 16; computer and data processing, 15; insurance, 9; hotels and motels, 8; consulting and management, 7; construction and engineering, 4; communications, 3; education, 1; and franchising, 1. The overall average for these 14 sectors was 8 per cent, with total foreign revenues exceeding 109 G USD. See US International Trade Commission, *The Relationship of Exports in Selected US Service Industries, to US Merchandise Exports,* USITC Publication 1290, Washington, DC, September 1982.

[14] Since 1794, when foreign trade records were first established, the United Kingdom's service trade has been in surplus every year in peace time. A sizeable segment of this surplus was formerly earned by trade with the colonies, and even now continues to the present, thanks largely to United Kingdom trade with Hong Kong, which contributes materially to the surplus.

[15] Wassily Leontief *et al, The Future of the World Economy: A United Nations Study,* New York, 1977, p 60.

[16] *Trends in World Production and Trade* (TD/B/887/Rev.1), pp 20—21, United Nations publication, Sales No E.82.II.D.13.

[17] The philosophical justification of such liberalization was lucidly formulated by the Liberalization of Trade in Services Committee (LOTIS) of the United Kingdom Committee on Invisible Exports, in the paper "Liberalization of Trade and Services", London, November 1982, p 6. "LOTIS considers that it is logical as well as wise that the UK should support and be seen to support any initiative for the gradual removal of barriers to trade in services. It believes that greater freedom in this area will lead to benefits for the users of services through greater competition and choice. Moreover, such freedom will help to foster a continuing growth of world trade in services which will encourage economic development in all participating countries, instead of leading simply to a transfer of wealth or redistribution of existing benefits." An International Committee on Trade and Services, chaired by ex-President Carter's trade representative, was set up after the November 1982 GATT Ministerial meeting to promote the idea of liberalization. See *Financial Times,* 1983-04-18.

[18] Between 1946 and 1981, the United States merchandise account changed from a net surplus of 6.7 G USD to a net deficit of 27.9 G USD. However, when services transactions were taken into account, the balance changed to 7.8 G USD (1946) and to 11.1 (1981). *Economic Report of the President,* transmitted to the Congress, Washington, DC, February 1983, p 276.

[19] In Greece, this is mainly accounted for by shipping and tourism. It should be noted that these service export totals include only recorded transactions. In the case of Greece and a few other countries, this figure should be much higher if it included shipping revenues of local shipowners who register their ships in tax-haven countries. ■