# Foreign Direct Investment in Services: Implications for Developing Countries

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## ABSTRACT

The service sector has emerged as the largest and fastest-growing sector in the global economy in the last two decades, providing more than 60 per cent of global output and, in many countries, an even larger share of employment. The growth in services has also been accompanied by the rising share of services in world transactions. Testimony to the rise in international supply of services is the fact that trade in services has grown as fast as trade in goods in the period 1990-2003, that is 6 per cent per annum. In addition, there has been a marked shift of foreign direct investment (FDI) away from the manufacturing sector towards the service sector worldwide. The share of services in total FDI stock has now increased to around 60 per cent since 2002 as compared with less than half in 1990 and only one quarter in the 1970s.

However, in spite of the growing internationalization of services, there exists very limited literature on the conceptual framework for FDI in services and its implications for the developing countries. The main objective of this paper is to identify some of the conceptual issues and provide a selective review of both theoretical and empirical studies on these issues. Policy implications that emerge for

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developing countries from this literature are discussed and future areas of research are highlighted.

Some of the conceptual issues identified with respect to FDI in service are: the differences between FDI in services and FDI in goods; the relevance of the "theory of FDI" for explaining the important determinants of FDI in services. Some of the distinctive characteristics of services are discussed along with the relevance "FDI theory" as against "trade theory" in explaining why FDI in services occur. Further, some of the theoretical models and empirical studies are reviewed that examine the impact of FDI in services on the developing countries.

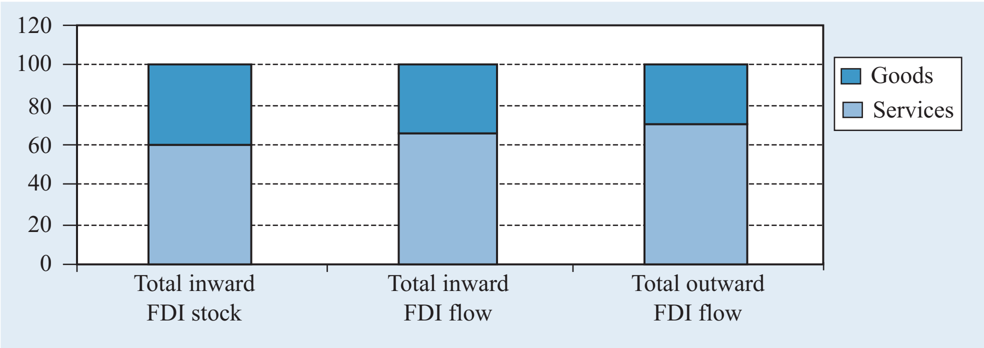
This paper puts forward the case for allowing FDI in services in developing countries. It argues that the obstacles to lowering restrictions on global services can be categorized into two broad categories: first, those indicating a lack of incentives to, or practical difficulties in negotiations, and second, those that represent outright opposition, particularly by developing countries, to any negotiations. An attempt is made to suggest the way forward for the developing countries and highlight future areas of research.

## 1. INTRODUCTION

Foreign direct investment has grown faster than the global output and trade over the last two decades. This has given rise to a number of theoretical and empirical studies that have investigated its determinants and impact on the host economies, particularly in the developing countries. However, much of this literature has focused on FDI in manufacturing and very few studies exist for the service sector. This is an important lacuna in the literature of FDI as FDI is increasingly shifting towards services and the world's inward stock of FDI in services has quadrupled between 1990 and 2002 (UNCTAD, 2004).

In many countries, services now account for a larger share of inbound and outbound FDI stock. In fact, the share of services in the world's total inward FDI stock has risen to 60 per cent in 2002 from 46 per cent in 1996 (see figure). This growth in the share of services has been much higher for the developing countries as compared with the developed countries. The proportion of services in the total FDI stock in the Asian and Pacific region climbed from 43 per cent in 1995 to 50 per cent in 2002. The newly industrialized economies of the region and the member States of the Association of Southeast Asian Nations (ASEAN) have led the way. The share of services in total FDI flows in ASEAN countries, for instance, has expanded from 30 per cent in 2002 to 48 per cent in 2003. Trade in services via the commercial presence (FDI), that is Mode 3 of the

**Share of services in foreign direct investment (percentage): 2002**




*Source:* UNCTAD, *World Investment Report 2004,* United Nations publication, sales No. E.04.II.D.36.

General Agreement on Trade in Services (GATS) is now almost 50 per cent of total trade in services.[1]

The rapidly growing internationalization of services and the lack of corresponding literature has led to much doubt in the minds of policymakers in developing countries vis-à-vis allowing FDI in services. This in turn has led to limited commitments under Mode 3 in the GATS negotiations. To date, little progress has been made under this mode of trade by the developing countries. In this context, the main objective of this paper is to identify and examine some of the conceptual issues with respect to FDI in services and provide a selective review of both theoretical and empirical studies on these issues. Policy implications that emerge for developing countries from this literature are then discussed and future areas of research are highlighted.

Some of the conceptual issues identified under FDI in services are as follows:

(a) How is FDI in services different from FDI in goods?

(b) How relevant is the "theory of FDI" for explaining FDI in services?

(c) What are the most important determinants of FDI in services?

(d) What are the implications of FDI in services for developing countries?

The paper is structured as follows: section 2 highlights the differences in FDI in services and FDI in goods; section 3 discusses the relevance of the theory of FDI for services; section 4 reviews the literature on determinants of FDI in services; section 5

[1] See World Bank, *Global Monitoring Report 2005,* 2005.

examines the impact of FDI in services on developing countries; lastly, section 6 discuses the policy implications and future areas of research.

## 2. FDI IN SERVICES VIS-À-VIS FDI IN GOODS

The foremost issue that arises with respect to FDI in services is how is it different from FDI in goods? To answer this question we need to know how services are different from goods and what the implication of these differences is on the emergence of FDI.

There exists an inconclusive debate on the definition of services, which began with the classical economists who characterized services as products of labour that perish the moment the labour is performed, giving services an air of intangibility and transitoriness. Both of these apparent characteristics have loomed in the background ever since, and caused great confusion when the neo-classical economists, forced for reasons of the internal consistency of their theories, were faced with the issue of how to interpret services.

The earliest attempt to explain how services are different from goods was made by Hill (1977, p. 336) who argues that "goods and services belong to different logical categories." He focuses on the fact that producers cannot accumulate a stock or inventory of services, stressing that services must be consumed as they are produced, unlike goods that can be produced and then stored. This makes it essential for the user and the provider of the service to interact.

However, subsequent to this conceptualization, there have been many studies that have noted the restrictiveness of Hill's definition. Melvin (1989) points out that Hill's definition simply relates to contact services and that there exists a range of services that do permit a separation of the location of production and consumption in space as well as time, so that service trade may take place either at the factor or at the product level.

Bhagwati (1984) argues that services can be divided into two categories; first, those that necessarily require the physical proximity of the user and the provider; and second, those that do not essentially require this though it may be useful. Services that require essential physical proximity have been further categorized into three groups:

(a) Mobile provider and immobile user, for example shifting labour to the construction site in other country;

(b) Mobile user and immobile provider, for example hospital services;

(c) Mobile user and mobile provider, for example lectures, haircuts, etc.

However, Bhagwati further argues that services for which physical proximity is not essential, that is long distance services, are on the rise due to technological progress. Services such as banking and insurance fall under this category. However, unlike in the case of goods where factor mobility and trade are distinct phenomena, in the case of services the distinction vanishes as factor mobility and trade in services are two integral aspects of a service transaction.

Such characteristics have implications for how trade and investment can occur. Their intangibility and non-storability implies that in order to become tradable, services have to be applied to, or embodied in, objects or information flow or persons. Thus, for trade and investment to occur, the means of transporting services often have to be able or permitted to cross national frontiers. Thus FDI in services is more complex conceptually than FDI in goods.

Unlike goods, services have different avenues of trade. For example international transaction in services can occur through: (a) cross-border or separated trade analogous to trade in goods; (b) transactions that require the movement of the producer to the location of the demander (demander-located services); and (c) transactions that imply the movement of the consumer to the location of the provider (provider-located services). These typologies help in assessing the role played by technology on the tradability of services. Trade may or may not be technically feasible, depending on the type of service.

Therefore technological and regulatory considerations that determine the relative costs associated with alternative ways of providing services become more important for services vis-à-vis goods. For example, the "right to establish" becomes an important policy issue for services as restrictions on factor inflows will be sufficient to hinge on service transactions without the need for restrictive border measures on trade. This also raises an important question relating to labour mobility and immigration that has led to the notion of the "right of presence" or "right of market access" as softer versions of the "right to establish".

Thus, the basic characteristics of services that differentiate them from goods are non-transferability and non-storability. The other associated characteristics of services that need to be noted are that services are heterogeneous and flexible in production and imperfect competition is highly relevant for services. This implies that consumer preferences for variety can be easily met; also, because of simultaneity in production and absorption, services can be regarded as heterogeneous products. FDI in services may therefore occur owing to different reasons than FDI in goods, and require separate interpretation.

## 3. HOW RELEVANT IS "THEORY OF FDI" FOR FDI IN SERVICES?

As with FDI in goods, FDI in services occur to exploit a profit potential that cannot be captured in one's own country. However, as FDI in services is one of the modes through which services are traded, studies differ with respect to the framework used for FDI in services. To explain why FDI occurs, some studies have applied "FDI theories" that are applicable for goods (for example Chanda, 2000; Schroath and Korth, 1989), while others have applied "trade theories" (for example Markusen, et al., 1996).

Of the various theories put forward to explain FDI, Dunning's eclectic paradigm of international production (Dunning, 1989) has been used by many studies to explain FDI in services. The theory combines the traditional theory of factor endowments with the theory of economic organization. According to this theory, the extent, pattern and growth of value added activities by transnational corporations depend on their competitive advantages relative to local firms.

Dunning has identified the ownership, locational and internationalization advantages of services transnational corporations. Further, Rugman and Verbeke (1992) propose that a firm can successfully undertake direct investment abroad if it possesses some asset advantages, which may be location bound or non-location bound.[2] For service corporations, such advantages consist of inter alia, property rights to management, marketing and product innovation, exclusive or favoured access to input and product markets, access to technology and information, economies of joint supply in production, marketing.

Alternatively, studies that apply trade theory to FDI in services argue that the theory of FDI follows in many respects the theory of international trade, except that it also has to explain why FDI rather than trade is used in order to capture the potential profit. Attempts have been made to endogenize multinational firms into general equilibrium trade models. Firm-level characteristics combine with country-level characteristics and trade costs to determine what types of firms exist in equilibrium. As in trade, there are two distinct patterns of FDI. The first is the "vertical" or inter-industry pattern, often found in FDI from developed to developing countries, exploiting industry-wide comparative advantages. The second pattern is "horizontal" or intra-industry, where usually relatively specific advantages within given industries between developed countries are exchanged. As in trade, most FDI is of the latter type.

2 Non-location bound firm specific advantages are defined as those advantages that can be exploited globally and lead to benefits of scale, scope or exploitation of national differences. These advantages can be transferred abroad at low marginal costs and used effectively in foreign locations while location-bound advantages are those advantages which cannot be easily transferred and require significant adaptation in order to be used in another location.

Thus, the two theories of FDI in services differ with regard to their explanation as to why FDI rather than trade occurs and what kind of FDI occurs. Both theories have their merits. While the theory of FDI that is used to explain FDI in goods is easier to estimate empirically, the theory of trade when applied to FDI is able to explain the nature of FDI that takes place and also why FDI takes place rather than trade.

However, there are certain characteristics of FDI in services that merit exclusive attention, which are not covered in either of the two theories as follows:

(a) In manufacturing, the segmentation of the production process can take place as a result of which FDI can establish a value chain of production by splitting the labour-intensive part and the less labour-intensive part of the production process in different countries. However, because of the low tradability in services, such segmentation in services is difficult to undertake. How does FDI in services then transnationalize?

(b) Services affiliates have a lower propensity to engage in intra-firm trade than manufacturing affiliates, again because of the problem with respect to splitting up, but at the same time they are more skill- and capital-intensive (precisely for the same reason) than manufacturing affiliates. What are the implications of this on the direction of FDI in services?

Apart from the above characteristics, regulations play a much more important role with respect to FDI and trade in services as compared with FDI and trade in goods. This merits an exclusive exposition to FDI in services.

## 4. WHAT ARE THE DETERMINANTS OF FDI IN SERVICES?

As discussed earlier, though a vast literature is available on the determinants of FDI in goods, very few empirical studies exist on the determinants of FDI in services. Among them are UNCTC (1993), Fukao and Ito (2000), Buch (2000), Chanda (2000) and Raff and Ruhr (2001), but most of these studies are chiefly undertaken for some of the prominent producer services, for example banking and insurance. The determinants of FDI in services that are identified in the literature can be categorized as follows:

### *(a) Market size*

Market size is found to be the most important determinant of inward FDI in goods by most of the studies. A number of studies have tried to estimate the impact of the host country market size on the inflow of FDI in services and have arrived at mixed results. It is found to be a significant determinant for transnational banks, international advertising agencies and transnational insurance firms (UNCTC, 1980; UNCTC, 1992; and Schroath and Korth, 1989).

However, UNCTC (1993) conducted an analysis of the impact of market size on developed country FDI in services, that is FDI in services from the United States of America, Canada, Japan, Europe and "other developed countries", and for developing regions FDI in services, that is Latin America, Africa and Asia, for two periods, 1976-1980 and 1980-1986, to developed countries and developing countries. The results show that market size is not an important determinant for all kinds of FDI in services. It can be derived that although market size is an important determinant for FDI in services, its importance is lower than for FDI in goods.

### *(b) Home country business presence/local customer base*

Studies have found that home business presence is one of the most important determinants for FDI in services as this increases the number of informed customers in the host country, who are aware of the services and therefore are more likely to create demand for these services. That is, producer service firms locate where they find a large customer base. They therefore follow FDI by downstream firms from the same home country and only later become more responsive to local demand since they find it initially difficult to attract local customers.

This has also been found by a number of case studies of individual service industries. FDI stock (lagged by one period) has generally been used as an indicator of home business presence in the host countries. Empirical studies in international banking and advertising (UNCTC, 1993) have observed this follow-the-client motive. Raff and Ruhr (2001) also find this to be true for FDI in producer services.

### *(c) Host government policies/openness*

Similar to FDI in goods, the "rule of law" is the major barrier to FDI in services. Categorical refusal to permit FDI in selected services still exists in many countries. However, post GATS, many countries, mainly developing countries, are now changing their policies and allowing FDI into selected service sectors although restrictions on the extent of foreign ownership still exist. According to studies by UNCTC (1988), one of the most important determinants of the location of FDI in services are government policies and regulations. Some of the studies (UNCTC, 1992) have constructed an openness index on the subjective evaluation of degrees of government controls and impediments, for example controls of entry, establishment and ownership of FDI, and estimated the impact of the index on inward FDI in the service industry and find that it has a significant impact on inward FDI in services.

### *(d) Cultural distance*

The various host countries have different cultures, tastes and needs, thus FDI in services needs to be adapted to the tastes of local customers. In this respect, cultural distance is also found to be an important determinant of FDI in services (Hofstede, 1980; UNCTC, 1993).

### (e) Competitive advantages

The competitive advantages of service firms have been elaborated in terms of ownership, location and internalization advantages by Dunning (1989). As international competition in services grow, competitive advantages become increasingly important determinant of FDI in services. However, competitive advantages in services are difficult to measure and also transfer, especially if they are culturally and institutionally embedded. A country's competitive advantage in a particular sector is revealed by either higher exports from that sector or outbound FDI from that sector. Since the service sector is characterized by location boundedness and a varying degree of tradability, outbound FDI in services has been used by studies to an estimate the impact of competitive advantage (Sauvant, 1986). UNCTC (1993) estimates an international competitiveness index (ICI) that combines Balassa's (1997) revealed comparative advantage and the intra-industry FDI.

It is found that FDI in services is positively affected by the international competitiveness of the home country's service industry. However, when the impact of ICI is estimated for different services, it is found that it is not a significant determinant in the case of trade-related services and business services. It has some effect on finance-related services.

### (f) Tradability of services

The fact that services are largely intangible and non-storable implies that the international transaction in services can occur mainly by inward FDI or by an indigenous firm producing under a licensing arrangement with a foreign transnational corporation. However, the tradability of services has improved considerably with the advances made by information technologies (Sauvant, 1986 and 1990). This has led to an emergence of network-based trade. Thus, the location boundedness of FDI has reduced. The higher the tradability of services is, the lower will be the chances of providing services through the FDI route. UNCTC (1993) measures the tradability of services by the ratio of export sales over total foreign sales in a service industry and finds that it has a negative impact on FDI in services.

### (g) Global oligopolistic reaction

Oligopolistic reactions occur when firms are mutually interdependent. FDI in manufacturing have been found to follow both their domestic and international competitors in setting up their units in the host countries as a defensive strategy. Terpstra and Yu (1988) test this for FDI in the advertising industry in the United States and find that such an oligopolist strategy does explain FDI in this service industry. This implies that FDI in services also needs to compete on the basis of a global strategy.

### (h) Firm size

International expansion is one of the major growth strategies of the firm. Larger firms are more likely to become transnational than smaller firms. As in the manufacturing of goods, firm size also has been found to be a significant factor in the international behaviour of several service industries such as banking and advertising.

With respect to the determinants of FDI in services, we observe that the determinants that are found to be significant for FDI in goods are also found to be significant for FDI in services. However, the importance of the determinants differs. Some of the most important determinants for FDI in services are government regulations and policies, cultural distance and the tradability of services. For FDI in goods, the most important determinants are market size, barriers to trade and cost differentials in production.

The above analysis of the determinants of FDI in services further strengthens the need for a separate theory for FDI in services that would be able to incorporate the distinct characteristics of services and also explain the cross-country pattern of FDI in services.

## 5. IMPACT OF FDI IN SERVICES ON DEVELOPING COUNTRIES

Much confusion exists in the minds of policymakers with respect to the impact of opening the service sector to foreign direct investment. We briefly review some of the theoretical models and empirical studies that examine the impact of FDI in services on the host economies and discuss the arguments for and against the opening up of the service sector.

The literature that estimates the impact of trade liberalization in services on developing countries dates back to Goldsmith (1969), who emphasized the role of financial services in allowing financial investments to flow to their most productive uses, and hence in generating a growth in output. He drew a "rough parallelism" between the growth performance and the level of financial development. Much of the latter work pointed in a similar direction, namely that the openness and degree of development of the service sector is associated with stronger growth performance.

Some of the theoretical models based on this typically treat services as goods and producer services are modeled as an intermediate goods (Dee and Hanslow, 2000). These studies show that trade liberalization in services will increase global income and welfare. In country-level studies, Banga and Goldar (2004) empirically estimated the impact of trade liberalization and the development of the service sector in the 1990s on the use of services in the Indian industry. They observe that trade liberalization has positively affected the growth of service sector, which has further contributed to industrial output and productivity growth.

However, models typically do not explicitly represent the different modes of supply in GATS, although more recent models capture FDI flows and labour mobility restrictions. Winters (2002) explicitly captures the effects of Mode 4 of GATS restrictions on service flows. Mode 3 of GATS is also captured by some of the models. The results of these models show that liberalization involving a commercial presence can be an important factor in service trade liberalization.

Another set of models quantify the impact of trade liberalization in services on global and individual country output growth. Most of these models involve numerical simulation exercises using general equilibrium models based on conventional models of trade liberalization in goods. Barriers to trade in these models are taken as equivalent to tax or tariff. The size of initial barriers, how they change under liberalization, elasticities and the size of service trade flows, as well as relative country size and market structure, then determine results as in the goods model.

Using one such set of models, the CGE models, Mattoo et al. (2001) show that growth rates increase by 1.5 percentage points for economies that liberalize their telecom and financial services. Dee and Hanslow (2000) show that there are large gains from service liberalization in the Uruguay Round for certain developing countries, for example 14.6 per cent of GDP gain for China, and globally more than half of the total gains from the liberalization of both goods and services accrue due to service liberalization. However, Verikios and Zhang (2000) show losses to Malaysia from telecom liberalization and losses to Indonesia from financial service liberalization. Brown et al. (2003) show global gains from Doha Round liberalization of US$ 413 billion per year from service liberalization but suggest that developed countries obtain the largest absolute gains.

Thus, the literature that analytically purports and quantifies the impact of the liberalization of trade in services on growth is ambiguous. There are many conflicting and contradictory results, which lead to several problems that are encountered in formulating policies. From the existing literature it cannot be concluded whether trade liberalization in services has benefited or adversely affected developing countries.

Restrictions on world trade and investment in services are central issues in the international policy debate. A case for the restricted liberalization of services is put forward on the following grounds:

(a) Restrictions offer protection from competitive pressure for emergent service industries.

(b) Restrictions are required on the entry to, or scale of, services which could impose external costs, for example in air transport or energy distribution.

(c) It is necessary to prevent foreign participation in “essential” service industries, such as banks and other financial institutions, if independence in monetary and credit policies is to be guaranteed.

(d) Unrestricted competition may be pernicious in services characterized by high fixed costs and fluctuating demand such as transport and communication and these service provisions may cater to only the most lucrative market segments.

(e) Retaliation may also lead to restrictions as a country’s own enterprises are subject to similar restrictions in other countries.

Based on the above arguments non-tariff barriers have been constructed to restrict trade and investment in services. These mainly take the form of export subsidies and taxes, discriminatory procurement policies, selective indirect taxes, restrictive technical and administrative regulations, etc.

## 6. POLICY IMPLICATIONS AND AREAS OF FUTURE RESEARCH

The importance of services is increasing rapidly in the international economic scene in the twenty-first century. Services and high-tech industries are now playing a leading part in the development of the world economy. Accordingly, we find that the share of services in GDP has increased steadily in both developed and developing countries in the last two decades. This growth in services has been supported by two main factors, technological innovation and the increased tradability of services.

The role of transnational corporations in this regard also cannot be denied. FDI is an important channel for capital flows and the transfer of technology. Supported by technology, know-how, information networks and the ability to procure funds, they can be major suppliers of more differentiated and higher-quality services in developing countries, thereby stimulating the efficiency of services. The increased competition associated with the open access to service markets also places pressure on the prices and performance of incumbent firms, reducing input costs for firms that buy the services. Moreover, the increased efficiency of services feeds into the system, leading to improved productivity in other sectors, which in turn creates more demand for services. Thus, a cycle of productivity and efficiency improvements is set in motion. Improved services can therefore play a vital role in leading the economy to a higher trajectory of growth.

However, there exist obstacles to lowering restrictions on FDI in global services. These obstacles fall into two categories: first, those that indicate a lack of incentive to negotiate, or practical difficulties in negotiations and second, those that represent outright opposition, particularly by developing countries, to any negotiations.

The obstacles that fall under the first category largely stem from the complexities of defining and delineating services and estimating the potential economic gains from liberalizing services. Uncertainty about the likely duration of a period of comparatively free trade in services compounds any cost-benefit analysis of liberalization and for nations facing probable costs of concession curtails the relevant benefit payback period.

The measurement problems do not simply impede the demonstration of gains but also hinder the process of monitoring acceptance of, and adherence to, any agreement. The expectation of "free-riding" by non-adherents reduces the estimated benefits for adherents, which compounds the problem of achieving initial agreement. Additional to this is the problem of merging any new proposals with existing agreements.[3] The question that arises is whether further liberalization is best achieved within existing agreements or whether new initiatives and structures are likely to be more successful.

For the most part, opposition to any further liberalization by a number of developing countries, that is those in the second category of opposition, stems from the fact that many developing countries have only reached the peak of their competitiveness in visible, particularly manufactured, goods and wish to see first a greater transparency in the global market for these commodities. Also, these countries are at different stages of their economic development and therefore have different trade aspirations.

The nationalist perspective rather than a global perspective is predominant in determining the extent of the liberalization in services. According to Sapir (1985), the lowering of barriers globally is not a zero-sum game. The probable benefits are likely to outweigh the costs, but it is the differential incidence of benefits and costs that creates obstacles to liberalization. One way to overcome this can be to devise suitable mechanisms for compensating the "losers." However, this too requires efforts at a multilateral level.

Regarding the issue of investment in services, there is a general consensus in the literature regarding the beneficial economic effects of investment in services, particularly producer services such as finance, distribution and research and development. These services raise economic growth and performance. Where such services are in short supply, all enterprises, both manufacturing and non-manufacturing, will be at a disadvantage. Furthermore, such a shortage could encourage, within larger enterprises, the internal sourcing of services. For multilocational enterprises this sourcing could occur outside the host region leading to a loss of economic activity. These services also influence the

[3] Important agreements have been achieved within a number of forums including the Organization for Economic Cooperation and Development, the European Community and the United Nations Conference on Trade and Development.

adaptability of a nation's producers to changing economic conditions and advancing technology.

Keeping the potential advantages of investment in services in mind, there is a need for the developing countries to attract more FDI in services. However, to attract higher FDI in services there is a necessity to clearly distinguish between the barriers to trade in services and the barriers to investment in services. This distinction will ease the task of bringing the type and extent of restrictions within manageable limits. This will help in reducing frictions between developed and developing countries regarding trade using different modes. For example, the developed countries object to lowering the restrictions with respect to the immigration of labour.

Bearing this in mind, in view of the important role that services can play in the development process, it is important for policymakers in developing countries to formulate policies that not only support the growth of the service sector but also stimulate its growth further. To this end, we draw some policy implications from the above review for developing countries to determine what is needed to maximize the contribution that services can make to the development process, as follows:

1. To strengthen the service sector, the importance of FDI as a vehicle to deliver services should not be overlooked. Also, one should realize the considerable potential that exists in transnationalization in the service sector as compared with the industrial sector. One of the reasons that have been put forward in the literature for preferring FDI in services is the fact that transnational corporations in services have little potential for transferring hard technology.[4] However, hard technology may constitute a very important component of manufacturing activity but it has completely different dimensions in the service sector. What is of utmost importance to the service sector is soft technology, the kind that which is embodied in skills, know-how and creations, for example, the kind of knowledge that is required to design an insurance policy.

2. An important implication relates to the movement of technical personnel. The restriction in the movement of technical personnel implies a restriction on the transfer of technology. Therefore, it is not possible to maximize the potential benefits from FDI in services with the restricted movement of technical personnel.

3. One of the target groups for increasing the investment in services comprises the firms currently serving the local markets through some non-equity mode (exporting, licensing, etc.), as there is evidence that direct investment often precedes exports from the source nation. Some familiarity with the local markets through initial servicing by exports reduces the investment risk, which is often significant in the case of services, which need to impose immediate and strict quality control or the attainment of minimal critical mass.

[4] Data for the United States show that transnational corporations in the services sector undertake very little research and development expenditure (see Sauvant, 1986).

4. Though a vast literature has emerged on services, it can still be said that this literature concentrates on only a few aspects of services and there exists a vast scope to explore further the many different aspects of services. In particular, we find that there is an ever-growing literature on trade in services, but studies on the contribution of services to growth and productivity in services are limited. The limited literature available points out that services can substantially increase the productivity and efficiency levels of the industrial sector thereby creating its own demand.

5. There is a need to develop separate theories for trade and investment in services, distinct from the theories that exist for trade and investment in goods. The need for a theory for FDI in services arises for various reasons, as discussed above. Three reasons in particular stand out. First, it is difficult to identify firm-specific advantages in the case of services; second, "non-equity" forms of foreign involvement, for example licensing, management contracting and franchising, are widely used in some services; and third, in the international context the difficulty of splintering services from output becomes more complex. In relation to trade in services, it is important to note that foreign sales by multinational enterprises in the service industry do not constitute trade in services but is considered as production in the service industries. However, multinational enterprises in manufacturing industries can be involved in trade in services. In view of these complexities, more research efforts are required in this direction.

6. A practical question, which can be addressed in an empirical analysis, is whether trade and FDI in services are determined by the same factors as their manufacturing counterparts. More research is also required in estimating the competitive advantages of different countries with respect to the various services and manufacturing goods. An analysis of different countries will shed light on the cross-country pattern of trade and FDI in services. The circular causation between the evolution of FDI in services and FDI in manufacturing needs to be examined further. With services becoming an integral part of the production process, it is FDI in manufacturing that may follow FDI in services.

7. In most services, horizontal FDI is most likely to take place given the difficulty in fragmenting services. In such a situation, there is a strong case of the relationship between FDI and trade being that of "substitutes" rather than "complementary." However, further research is needed in this area to explore the relationship between different kinds of FDI and trade in services.

What remains as the biggest hurdle in future research on trade and investment in services is not the prevalence of barriers but the lack of reliable, timely and easily interpretable data. The data that are more widely available do not currently encompass all forms of trade in services; in particular intra-firm trade in services is not recorded. What is required is trade data on services at a more disaggregated level that is consistent with value added and employment data and is comparable across time.

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