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## Towards regional entities in Asia-Pacific: the catalytic role of Japanese foreign investment in service industries

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**TOWARDS REGIONAL ENTITIES IN ASIA-PACIFIC:  
The Catalytic Role of Japanese Foreign  
Investment in Service Industries**

by

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## I. Introduction

The Asian Pacific Rim hosts a number of countries with an over-proportionate growth record during the last two decades. Economic growth was accompanied by a sizeable trade surplus with the rest of the world mainly due to a changing export composition towards semi-manufactures and manufactures. Parallel to sectoral change in foreign trade, regional trade and investment patterns also underwent shifts towards an increasing share of trade and capital transactions channelled among the countries rather than with the rest of the world [Campbell, 1986; Akrasanee and Chirathivat, 1989; Hirata and Nohara, 1989; Tsao Yuan, 1986; Lee (Tsao) Yuan, 1988; Langhammer, 1989].

Viewed from an institutional perspective, such trends towards stronger economic links between national markets in Asia-Pacific, however, still seem insufficient to label this geographical area as an entity comprising economically integrated economies. To qualify Asia-Pacific as a regional entity would ultimately require loss of autonomy in national economic policy-making and subordination under a supranational body or under a leading economy. By the end of the eighties, Asia-Pacific has been still far from meeting such conditions. Institutionalised regional arrangements which would discipline national economic policies do not yet exist for the majority of the countries. Except for the trade arrangement between the two OECD member countries, Australia and New Zealand, which is limited in country coverage and scope, there is no free trade agreement such as between the US and Canada not to speak of integration deepening towards a common market as in Europe. The only preferential agreement in the non-OECD part of this area, the

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ASEAN PTA, has up to now failed to satisfy far-reaching expectations. OECD-type of looser consultation arrangements are still in the making [Rieger, 1989].

Yet, the marginal nature of regional integration in Asia-Pacific does not exclude that the countries begin forming a region in an economic rather than institutional meaning as a side result of structural economic change, income growth and outward orientation. The latter parameter seems of particular importance. Outward orientation is not only instrumental to acquiring technical know how but also promotes "imports" of market knowledge and other commercial skills. Such imports are essential elements in cutting costs of economic transactions. Such costs and their change over time are critical parameters to determine the borderline between domestic and international trade as well as for trade within and between regional economic entities. More specifically, it is assumed that the relevant criterion for detecting regional patterns in the shift from domestic to international trade is a disproportionate decline of inter-country transaction costs. For a number of reasons, costs associated with trade and capital flows are cut faster among some countries than among others, and it is this different speed which promotes the emergence of regional entities or clusters.

Chapter II discusses why a special facet of transaction costs, that is costs of information and marketing, should be regarded as particularly relevant. A proxy is proposed which could indicate both the decline of transaction costs in the Asian Pacific and - along the declining trend - the regional pattern of decline.

Chapter III applies the proxy to the empirical evidence for the period 1976-1988 while Chapter IV asks for the determinants of declining transaction costs in a regional cluster. Chapter V concludes on the results.

## II. Foreign Direct Investments in Services as a Yardstick for Declining Transaction Costs

Transaction costs either arise from

- bridging the distance between producers and consumers (transportation and communication costs),
- policy-induced barriers such as tariffs, non-tariff barriers (NTBs) and restrictions imposed upon capital transactions,
- costs of covering commercial risks, and finally,
- acquiring information and marketing skills which are necessary to spread sales beyond national borders.

Without evaluating the relative weight of each of the cost elements, one can say that all of them provide incentives to remove or to evade them. Among strategies to lower transaction costs, activities of multinational enterprises (MNEs) are looked upon as the most important private response. This response covers different aspects, as for instance influence taken on governments, pricing policies by subsidiaries and parent companies to circumvent restrictions, as well as control over firm-specific assets such as information, knowledge and other embodied skills.

Basically, all foreign direct investments contribute to declining costs of transactions, irrespective of whether they are launched in the commodity, manufacturing and service sector. This is why some parts of the literature evaluate income from foreign direct investment as remuneration of firm-specific assets for lowering costs of transactions, and thus as an internationally traded service to be added to non-factor services [see Rugman 1987 and the literature cited there].

However, there are two reasons for assuming that foreign direct investments (FDI) in services play a more important role in lower-

ing information costs than investments in manufacturing, for instance.

First, it is evident that linking consumers and producers is the main purpose and not a side result of FDI in service industries. Thus, a unit of investment funds channelled into the service sector is likely to cut transaction costs related to information and knowledge more than a unit invested in the primary and secondary sector.

Secondly, in most cases the acquisition of services will become accessible not only to affiliated but also to non-affiliated parties. This may happen at the end of the product cycle or of the pay-off period when the asset has been depreciated. International trading houses may even sell information and commercial services from the very beginning to any party which is prepared to pay the market price. There will be demonstration and complementarity effects from FDI in services in the sense that other private investors including the media and/or the host country governments will offer information services as well once a pioneer foreign investor starts to operate. Observation of mistakes made by the pioneer will give rise to learning effects accruing to non-affiliated parties. But even if MNEs should try to internalise benefits from superior information by deliberately restricting the access, prospects for positive externalities do exist. Generally spoken, increasing storability and standardisation of many services through computer networks make it difficult to prevent in-house knowledge and expertise from dissipating beyond subsidiaries not to speak of illegal transmission as software piracy. Embodied knowledge can be externalised too if employees expect higher remuneration outside than inside the companies.

To conclude, non-affiliated parties may enjoy declining costs of knowledge and information in the medium run if such intangible assets become vagabonding. Transaction costs are therefore expected to decline not only inside but also outside multinationals. Therefore, volume and changes in foreign investments in service

industries may serve as an appropriate indicator to what extent transaction costs between home and host countries are lowered over time.

Yet, using such investments as a yardstick for detecting differences in intra- and extra-regional transaction costs poses a serious problem. What is usually unknown, is the flow of investments between host countries and - specifically, in the context of Asian Pacific - between Asian countries [Yuan, 1986]. Thus, there is no straightforward approach towards measuring the decline in transaction costs between these countries in terms of investment flows in services. However, there are three major arguments which suggest that home-host country flows are acceptable substitutes for inter-host country flows.

First, it is likely that flows of information between two subsidiaries are channelled through the parent company as the relevant intermediary. Such information may encourage vertical specialisation between subsidiaries, may give rise to tacit agreements not to compete in same markets, or simply initiate two-way flows of market-specific data on each of the host countries. What matters is that such flows are assumed to lower transaction costs more if investors are present in both countries rather than concentrating on one host. In this view, an overproportionate decline of transaction costs requires two-way "balanced" flows of information, and thus the dividing line between countries which are on the way of forming a regional entity and other countries is the similarity or non-similarity of trends in attracting foreign investors in service industries.

The similarity of trends is also the main thrust of the second argument focusing on the supply side. Here, we see degrees of attractiveness of host countries to foreign capital under the "revealed home country preference" view. The regional distribution of investments reflects a specific preference pattern, and we argue that indifference towards specific host countries, that is similar or identical trends in foreign investment, indicates that



the foreign investor evaluates alternative host countries as (imperfect) substitutes and thus as part of a regional entity. As a result, one may hypothesise that the more investors are indifferent and the more they see host countries as regionally coherent parts, the more it is likely that the trends in investment in the individual host countries will be similar rather than diverging. One should note that by concentrating on investments in services, some immobile factors of production such as the endowment with natural resources which usually are important determinants of investment decisions and could explain diverging trends are excluded as criteria to invest.

A third argument pro similarity of investment trends as characteristics of a beginning regional entity in the view of investors emerges from the theory of multinationals [Dunning, 1981; Rugman, 1981; Casson, 1982]. The theory argues that foreign investors internalise market imperfections, for instance, NTBs such as norms and standards. By establishing own standards through their subsidiaries, they create entities of host countries in which their in-house standards apply worldwide. In the medium run, however, such standards may expand nationwide outside the company if they promise external economies. For instance, Japanese technical standards imitated and adjusted by local investors in many Asian countries are a case in point, and so are their training standards for human capital formation. Common standards introduced by foreign investors may help to lower transaction costs between the host countries regardless of whether it is the subsidiary itself or a non-affiliated party which trades internationally. To enjoy benefits of common standards, however, it is necessary that the intermediary, the foreign parent company, operates in all countries.

There is an implicit assumption underlying each of the three arguments. As firm-specific information is not available but total home country investments in specific service sectors only, the implicit assumption is that home country companies have access to each others services. This, of course, is unlikely. What can be put forward to justify nevertheless the use of aggregate figures,

are two arguments, which refer to Japanese investments. First, Japanese investors in general seem to prefer "package" or cooperative strategies more than other home countries, that is grouping various companies under a consortium umbrella which offers the whole range of services covering financing, information, insurance, advertising, marketing, and after-sales service. Necessarily, such a package approach makes firm-specific knowledge more easily accessible to non-related companies than non-cooperative procedures. In this context, it seems important to note that unlike US or European investors, Japanese manufacturers have exhibited preferences for joint ventures with local partners in Asian host countries - frequently wholesalers and distributors - in order to integrate the local partner's market expertise into their sales affiliates [Hiemenz, Langhammer et al. 1987, pp. 32-36]. Secondly, notwithstanding cooperative strategies, it is likely that the presence of Japanese investors will help Japanese "follow the leader" or "follow up" companies more to gain access to market-specific information than investors from other home countries. Again, this argument has to be seen as a relative advantage only.

Altogether, the three arguments support the hypothesis that the similarity of trends in foreign investments in service industries of Asian host countries can be used to assess as a proxy of the decline of intra-versus inter-regional transaction costs.

To put this hypothesis into a perspective, it is acknowledged that in a one-dimensional approach restrictive *ceteris paribus* assumptions play an important rule. Transaction costs other than information-based ones such as distance-related factors or policy-induced impediments are disregarded. Yet, they are believed to lose in importance if MNEs operate worldwide, for instance through the establishment of in-house transportation networks or through diffusion of protectionist threats. The latter aspect has been recognised as especially relevant under the argument of *quid pro quo* investments [Bhagwati, 1986; 1989: 35]. The argument says that foreign investors contribute to lower demand for protection by co-opting host country firms not to push for protection against foreign competition. By doing this, investors would externalise a

"standard" of open markets and this would be instrumental to lower transaction costs between countries which are able to attract foreign risk capital. It is difficult to assess whether this argument holds for the situation of developing countries in which joint ventures with local firms are less relevant than in OECD countries. Yet, within the service sector *quid pro quo* investments are most likely to be relevant in banking and insurance which has become an important target sector for foreign investments in Asia Pacific.

### III. The Empirical Test

The criterion used to define regional entities in terms of foreign investor's revealed preferences is the similarity of changes of Japanese approved FDI in three service industries during three periods (fiscal years 1977-80, 1981-84, 1985-88) in fourteen Asian host countries. Besides the three NICs (South Korea, Hong Kong and Taiwan) and the five ASEAN countries (Indonesia, Malaysia, Philippines, Singapore, and Thailand), the sample covers two South Asian countries (India, Burma), the P.R. China as well as three countries from Oceania (Australia, New Zealand and Papua New Guinea). It is expected that such a broad sample allows to draw a more distinct borderline between regional entities than a sample confined to ASEAN and the NICs.

As far as the criterion is concerned, it would have been preferable to cover foreign investments from various home countries. Yet, such information is not available, and as Japan seems to be the leading investor in services in this region, there is not a serious loss of information due to limiting the analysis to Japanese investments.

Table 1 displays the development of Japanese investments in Asia Pacific and South Asia in three selected industries, that is commerce, banking and insurance, and service. The sector coverage is selective in the sense that only the most important sub-sectors in the tertiary sector were chosen as those related to interna-

tional transactions. By the end of fiscal year 1988 (end March 1989), about 77 per cent of total Japanese accumulated investments in the tertiary sector of twelve sample countries were in these three industries. Only in two countries (Australia: real estate, and P.R. China: other services) Japanese investments played an overproportionate role in one of the three remaining service industries (including transportation).

Table 1 - Japanese Foreign Direct Investment in Commerce, Banking, Insurance and Service in South-, Southeast- and East Asia, FY 1976-1988, in Mill. US-\$<sup>a</sup>

	Accumulated investment FY 1951-76	Increment FY 1977-80	Increment FY 1981-84	Increment FY 1985-88	Accumulated investment FY 1951-88
S. Korea	186.4	123.6	195.0	892.7	1397.7
Hong Kong	254.2	369.9	1137.5	2427.2	4188.8
Taiwan	0.3	4.3	13.5	124.9	143.0
China	0	1.7	121.5	338.2	461.4
Indonesia	102.2	22.0	67.3	104.2	295.7
Malaysia	12.6	14.6	54.4	141.4	223.0
Philippines	25.5	6.8	29.2	46.5	108.0
Singapore	20.4	78.4	188.8	673.2	960.8
Thailand	31.3	32.1	75.6	133.4	272.4
Papua NG	1.0	2.9	3.8	0.7	8.4
Australia	120.9	212.5	293.1	1908.0	2534.5
New Zealand	2.8	2.9	18.7	110.8	135.2
Burma	0.1	0	5.6	1.0	6.7
India	0.6	0.3	0.3	0.6	1.8
<sup>a</sup> Approved investment on fiscal year basis (1 April-30 March).					

Source: Japan Ministry of Finance.

With respect to the development of Japanese investments in services as laid down in Table 1, the outstanding result is the extraordinarily rapid expansion (see also Komiya, 1988: 264seq.). Investments rose by about 25 per cent annually during the period 1976-88 and thus almost twice as fast as investments in mining and manufacturing in the sample countries (13 per cent). Attractive investment sites were not only the traditional service centres Hong Kong and Singapore but increasingly Australia, South Korea and - since 1985 - China. A first evidence of disproportionate regional patterns of growth of investment is provided by the strikingly slow growth of Japanese investments in South Asia, particularly India, as well as by the different intertemporal distribution of investment growth in Korea and Hong Kong compared to Taiwan as the latecoming host country.

Following the characteristics of a regional entity as discussed above, we expect the ratio between changes in investments in host country  $i$  and host country  $j$  not to be significantly different from unity inside a regional entity while deviating from unity if member and non-member countries are compared.

Changes are defined as absolute changes measured as a percentage of the initial stock in order to suppress a base effect which would arise if average annual growth rates were used. The ratios are calculated for each pair of host countries and for each of the periods separately. They are tested against the null hypothesis that the deviation of the sample mean from unity is due to chance. Thus, the acceptance of the null hypothesis would mean that the sample could be regarded as a regional entity.

Results made with the  $t$ -test are presented in Table 2. They indicate that the increase of Japanese FDI in service industries of individual host countries was most similar in the ASEAN group. For this cluster the null hypothesis cannot be rejected. Following our definition, two-way information costs seem to have been lowered more between the five ASEAN countries than in the remaining sample so that revealed preferences of Japanese investors would suggest that ASEAN countries are relatively homogeneous. The ques-

tion where this entity has its border is addressed by stepwise including the three East Asian NICs. Here it is Taiwan with a distinctly different pattern of receiving Japanese FDI which is separated from ASEAN in two of three periods. On the other hand, Hong Kong and Korea show such similarities with ASEAN in the FDI pattern that they could be added to this grouping. If all three NICs enter the ASEAN sample, this new cluster exhibits a more diffuse picture. For the first two periods of the late seventies and early eighties we cannot reject the hypothesis that the eight countries form regional entity according to our criterion. It was only during the third period after 1985 that a significant divergence in changes of FDI flows to the ASEAN host countries on one hand and to the NICs on the other hand could be observed.

Beyond the NICs and ASEAN, heterogeneity in FDI patterns prevails regardless of whether China, the three South Pacific countries or Burma and India are regarded. There is no country from these groups which - according to our criterion - would join ASEAN and the NICs as members of a regional entity.

China which did not open its economy until the beginning of the second period lagged behind other Asian host countries in investment inflows but later on succeeded to attract sizeable service investments. This process was not yet finished by 1984 but began to normalise afterwards. Yet, until 1988 the normalisation of the inflow pattern was not yet fully in line with the pattern emerging in the NICs and ASEAN. Still, China remained a case *sui generis* on the preference scale of Japanese investors, not to compare with ASEAN and the NICs, and thus not yet part of the entity.

Finally, introducing the South Pacific as well as South Asian countries means an additional divergence from a balanced two-way decline of transaction costs. For these two largest samples, the null hypothesis was clearly rejected as a different investment behaviour can be observed vis-à-vis the various sub-units during all periods. In particular, this holds for India and Burma. Both

Table 2 - Average Ratios of Changes<sup>a</sup> in Japanese FDI in Service Industries of Asian Pacific Countries  
- Tests of Similarity -

Sample	1977-80/76			1981-84/80			1985-88/84		
	mean	standard deviation	n	mean	standard deviation	n	mean	standard deviation	n
ASEAN	1.11	1.50	10	0.94	0.64	10	1.02	0.79	10
ASEAN, Hong Kong	1.76	2.20	15	1.21	0.86	15	1.16	0.82	15
ASEAN, Korea	1.20	1.45	15	0.83	0.60	15	1.30	0.95	15
ASEAN, Taiwan	9.78*	18.61	15	1.55	1.35	15	3.07*	3.72	15
ASEAN, NICs	6.05	13.80	28	1.29	1.68	28	2.29*	2.88	28
ASEAN, NICs, China	-	-	-	10.37*	26.31	36	2.28*	2.59	36
ASEAN, NICs, China, ANZ Papua New Guinea	-	-	-	8.74*	23.26	66	4.81*	11.38	66
TOTAL SAMPLE	4.04*	9.74	67	11.74*	36.9	91	5.69*	10.77	91

a

$$R = \frac{1}{n} \sum_{i=1}^n \frac{I_i / I_1}{I_j / I_j}$$

$I_i$  and  $I_j$  are Japanese approved FDI in commerce, banking, insurance, and services in Asian countries  $i$  and  $j$ , respectively in fiscal years 1977-80, 1981-84 and 1985-88, and  $I_1$  and  $I_j$  are accumulated approved FDI in the same industries and countries by end fiscal year 1976, 1980, and 1984. Countries which did not receive investments prior to 1976 (e.g. China), or between 1977-80 (Burma) were excluded from the sample.

\*The deviation from unity is statistically significant at the five per cent level (two-tail t-test). The null hypothesis (mean = 1) is rejected.

Source: See Table 1.

countries widely failed to attract Japanese investments in general and services in particular. As a result, information gaps between Asia Pacific and South Asian markets do not seem to have been bridged by Japanese intermediaries. There are numerous explanations for this separation between South Asian countries and their Eastern neighbours. To mention some of them, there is, for instance, unduly low weight given to outward orientation in South Asia, inadequate efficiency in the use of available investment because of dominating public enterprises, entry bans for foreigners in specific service industries, and considerable red tape [see for a discussion of economic relations between South Asia and the Asia-Pacific region Lall, 1989]. As far as South Pacific countries are concerned, they reveal distinctly different inter-temporal patterns in attracting Japanese investments. Apart from Papua New Guinea which probably was covered by investments from the Australian base, New Zealand only recently began to host Japanese investors while Australia was a traditional investment target already in the early seventies and continued to play this role. Obviously, Australia is a regional service centre in the South Pacific used by Japanese investors as a springboard to the smaller neighbouring countries. This South Pacific region, however, does not appear to be as strongly related to the ASEAN sphere as it is the case among the ASEAN countries themselves.

#### IV. Determinants of the Regional Pattern of Japanese Service Investments in Asian Host Countries

The preceding analysis has shown that the regional pattern of Japanese FDI in service industries was characterised more by country-wise selectivity, leads and lags over time than by homogeneity and uniformity. The hypothesis of uniformity in investment expansion had to be rejected for the majority of the countries. This finding supports the assumption that Japanese investors were attracted by country-specific factors and assets (or deterred by country-specific disincentives, respectively). In other words, they were not as indifferent towards individual host countries as one could expect if the countries would have formed a regional



entity. This evidence calls for the identification of explanatory factors such as the different economic performance or different policies of host countries. In the following we concentrate on indicators of economic performance as different policies are not easily accessible to a quantitative approach.

As a test, a cross-country regression analysis has been applied to explain the relative attractiveness of Asian hosts to Japanese investments (that is the ratio described in Table 2) by a number of indicators of economic performance of the host countries, also expressed in terms of country pair ratios. The indicators comprise growth rates of real GDP, of real per capita income, and of real manufacturing exports. In addition, it was assumed that a proxy for outward orientation could have some explicative power in the sense that Japanese investors responded positively to host country policies removing barriers to non-tradition exports. As outward orientation is basically translated into export diversification than into simple export expansion, the ratio between growth of manufactured exports and growth of GDP was taken as a proxy. This ratio is assumed to indicate the revealed political preference for export diversification over inward-oriented policies in the host countries concerned.

As an additional explanatory variable, the purchasing power parity (PPP) between the yen and the host country currency has been introduced. It indicates to what extent host countries lower prices for factors of production denominated in yen and thus by depreciating in real terms encourage the flow of resources from non-tradables to tradables. A rise in the PPP, that is a real depreciation, is expected to attract investments.

In general, however, the results do not offer much insight into the determinants of Japanese investments (Table 3). They suggest instead that differences in the relative economic performance of host countries were either not distinct enough to offer a major explanation for the regional distribution of investments or that other institutional factors, such as barriers to entry, were more relevant.

Table 1 - Determinants of the Relative Attractiveness of Asian Host Countries for Japanese Direct Investments in Service Industries  
- Cross Country Regression Coefficient<sup>a</sup> -

$a_0$	$a_1$	$a_2$	$a_3$	$a_4$	$a_5$	$\bar{R}^2$	n	F
Sample I (ASEAN, NICs, China, Australia, NZ)								
Period 1 (1977-80)								
-1.79 (-0.61)	-1.00 (-0.30)			16.75 (3.18)*		0.19	36	5.19
Period 2 (1981-84)								
15.40 (2.33)*		4.32 (1.58)	-7.71 (-2.08)*	-1.70 (-1.60)		0.10	36	2.36
Period 3 (1985-88)								
2.79 (5.88)*				-0.14 (-1.91)**	-0.17 (-2.46)*	0.13	45	4.16
Sample II (ASEAN, NICs)								
Period 1 (1977-80)								
-1.73 (-0.50)			67.17 (4.39)*	-57.76 (-3.06)*		0.64	21	18.72
Period 2 (1981-84)								
1.75 (4.51)*			-0.39 (-1.36)	-0.11 (-1.72)		0.05	21	1.51
Period 3 (1985-88)								
7.45 (5.23)*			-0.65 (0.44)		-4.54 (-3.40)*	0.33	21	6.02

a = The dependent variable is  $\frac{\Delta I_i / I_i}{\Delta I_j / I_j}$  as specified in Table 2.

The exogenous variables are specified as follows:

- $a_0$  = Constant term
- $a_1$  = Ratio of average annual growth rates of real GDP of countries i and j.
- $a_2$  = Ratio of average annual growth rates of real GNP per capita of countries i and j.
- $a_3$  = Ratio of average annual growth rates of manufacturing exports of countries i and j.
- $a_4$  = Ratio of outward orientation indicators of countries i and j. The indicator is defined as the ratio of growth rates of real manufactured exports and real GDP.
- $a_5$  = Ratio of real exchange rate changes in countries i and j. Changes have been measured on purchasing power parity base vis-à-vis Japan. Nominal rates are deflated by changes in the CPI of the Asian country and Japan respectively. A rise in the real exchange rate means a depreciation.

t-values in brackets. \* and \*\* = statistically significant at the 5 per cent level and 10 per cent level, respectively.

Source: Japan, Ministry of Finance. - Asian Development Bank (ADB), Key Indicators of Developing Member Countries of ADB, 1985 and July 1989. - ADB, Asian Development Outlook, 1989. - IMF, International Financial Statistics, Yearbook 1988 and monthly issue, April 1989. - World Bank, World Development Report 1989. - UNCTAD, Handbook of International Trade and Development Statistics, 1988.

Estimates differ by country coverage (large sample I compared to the ASEAN/NICs sample II) as well as by periods.

For instance, for the large sample outward orientation had a positive effect on investments during the first period but this sign changes if the sample is reduced to the NICs and ASEAN countries during the same period and if the period is changed.

Neither differences in growth performance nor income growth had a significant effect on investment flows. This holds for the impact of manufactured exports as well. Within the smaller sample host countries which were relatively successful in exporting manufactures also attracted investments in the late seventies but later on this effect again vanished. The only relatively stable finding emerged for the effect of real exchange rate changes as we observe an unexpected negative relationship between the exchange rates and the inflow for the two samples after 1985. This would mean that countries which depreciated less against the yen than other countries (understandably, there is no Asian host country appreciating against the yen during this period) were relatively successful more in attracting investment inflows. It was during this period that the spread of real exchange rates became larger in Asia Pacific. Inter alia, this was due to autonomous changes of exchange rate policies in some countries under international pressure in order to dampen exports and to alleviate imports (e.g. in South Korea and Taiwan towards real appreciation against the US dollar). Obviously, it was this group of countries which overproportionately attracted Japanese service investments during the period of stabilising the PPP rate against the strongly appreciating yen. For instance, during 1985 and 1988 countries like Australia, Taiwan and Korea had by far the lowest rates of depreciation against the yen compared to Indonesia, China, Malaysia, the Philippines or Thailand, and at the same time displayed the highest increase of capital inflows in services. This seems to be an interesting result as it supports the view that internal policy changes such as the opening of the domestic service sector to non-residents were more responsible for inflows than changes in the international prices of factors of production.

There is a side result from introducing real exchange rates into the analysis with respect to the identification of regional entities. In regional entities one would expect real exchange rates to converge and not to diverge as markets become more integrated thus fixing the rates to a common external stabilising anchor. Consequently, transaction costs, in terms of hedging against exchange rate fluctuations would decline. This has happened in Europe but not in Asia Pacific. Thus, there is additional evidence in favour of denying Asia Pacific the status of a regional entity.

## V. Summary

This paper offers a new tentative approach towards grouping countries as member or non-members of a regional entity if common supra-national institutions do not yet exist. The criterion chosen was the regional and intertemporal pattern of inflows of FDI in service industries. Such investments are believed to lower important elements of transaction costs, that is costs of information and knowledge. Entities were defined as those clusters of countries in which investments were equally, in relative terms, allocated among the countries so that two-way bilateral transactions could enjoy lower costs of information than transactions with countries which did not attract investments.

The approach was applied to Asian Pacific and South Asian countries and tested with Japanese investment data. The results do not lend such support to regionally identifiable patterns of investments. If at all, the ASEAN group comes close to meet the test. As far as the determinants of investment flows are concerned, discretionary policies such as alleviating the entry to service sectors for non-residents seems to be more relevant as differences in macro-economic performance or prices of foreign exchange. More research seems necessary to separate flows of knowledge and information between affiliates and non-related parties (both foreign and local investors) and in particular to collect reliable data on inter-country flows of capital in Asia Pacific.

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