

# RIS DISCUSSION PAPERS

**Performance Requirements as Tools of  
Development Policy: Lessons from  
Experiences of Developed and Developing  
Countries for the WTO Agenda on  
Trade and Investment**

Nagesh Kumar

RIS-DP 52# /2003



**Research and Information System  
for the Non-Aligned and  
Other Developing Countries**

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June 2003

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# **Performance Requirements as Tools of Development Policy: Lessons from Experiences of Developed and Developing Countries for the WTO Agenda on Trade and Investment**

## **1. Introduction**

There is currently a lot of discussion on the relevance of performance requirements as tools of host government's development policy in the context of the ongoing debate on the emerging WTO regime on investment (UNCTAD 2001, WTO/UNCTAD 2001). It is argued that performance requirements as tools of policy may help in maximizing the benefits of foreign direct investment (FDI) inflows for developing host countries. However, the critics contend that performance requirements are inefficient and distort the patterns of trade and investment.

Generally FDI flows are expected to facilitate industrialization and development of host countries by enabling them to tap the resources of multinational enterprises (MNEs) such as production technology, organizational and managerial skills, marketing know-how, and even marketing networks. Host countries also expect to benefit from knowledge spillovers and other favourable externalities from FDI. However, there is considerable variation in the 'quality' of FDI inflows and not all of them benefit their host countries equally (Kumar 2002). The recent empirical studies have shown that knowledge spillovers may not take place especially in developing countries and domestic enterprises may actually be affected adversely (Haddad and Harrison, 1993, Kokko et al. 1996, Aitken and Harrison 1999, De Mello 1999, Xu 2000). Recent empirical literature has also presented evidence that by crowding-out domestic investment, FDI in some cases, may thus be immiserizing (Fry 1992, Agosin and Mayer 2000, Kumar and Pradhan 2002, Carkovic and Levin 2002). There could also be possibilities of divergence between MNE interests and the host country's developmental objectives arising from their strategy to pursue the objective of global profit maximization. In order to maximize the global profits, interests of certain affiliates may be compromised and sourcing decisions may not be taken on the basis of efficiency considerations alone. There is also evidence on widespread manipulation of transfer prices in intra-firm trade.

Given the possibility of conflict of interests, performance requirements have been employed by the host governments, among other policy instruments, (such as trade policy, screening mechanisms and incentives etc.) to maximize their contribution of FDI to the process of their development. These objectives include deepening of domestic industrial base, generation of employment and local linkages, development of export capability and improvement of balance of payments, development of local technological capability through transfer and diffusion of technology, among others.

Besides helping in industrial development and managing the balance of payments objectives, it has been argued that TRIMs have been employed by host countries to deal with the restrictive business practices pursued by MNCs (Puri and Brussick 1989). For instance, MNCs may engage themselves in importing more to provide markets to related companies or may indulge in manipulation of transfer prices of imports from related sources to transfer profits. LCRs or foreign exchange neutrality could moderate the effect of such RBPs.

Many governments –in developed as well as developing countries alike- have extensively imposed performance regulations on FDI at the time of entry to pattern their operations in consonance with the country's development objectives (see Guisinger et al 1985; UNCTC 1991, UNCTAD 2001). Commonly employed performance requirements include local content requirements (LCRs) in different forms, export performance requirements (EPRs) in different forms, indirect export performance requirements in the form of trade balancing or dividend balancing , or foreign exchange neutrality requirements, requirement to establish a joint venture with domestic participation or for minimum level of domestic equity participation, employment performance requirements, requirement to transfer technology, production processes or other proprietary knowledge, and research and development requirements (see UNCTAD 2001, for a more complete list).

In this context, this paper reviews the experiences of developed and developing countries to draw implications for the current debate on the relevance of performance requirements (PRs). Section 2 summarizes the evidence on use of PRs in developed countries. Section 3 reviews theoretical, cross-country and case evidence on effectiveness of PRs in meeting their stated policy objectives in developing countries. Section 4 examines the evidence on effect of PRs on magnitude of FDI inflows. Section 5 concludes the paper with some policy remarks.

## **2. Evidence on the Use of Performance Requirements by Developed Countries**

Developed countries of today have extensively employed PRs in their process of development especially when they were net importers of capital. For instance, Chang (2002, 2003) documents how USA had all kinds of performance requirements on foreign investors when it was a capital-importing country in the nineteenth century. The federal government had restrictions on foreigners' ownership in agricultural land, mining, and logging. It discriminated foreign firms in banking and insurance, while prohibiting foreign investment in coastal shipping, reserved the directorships of national banks for American citizens, deprived the foreign shareholders of voting rights in the case of federally-chartered banks, and prohibited the employment of foreign workers by foreign firms. Chang (op.cit.) also shows that major European countries that were originally capital exporting such as the UK, France and Germany turned to adopting formal and informal measures to protect domestic enterprises from growing American companies after the Second World War. These included foreign exchange controls and regulations against foreign investment in sensitive sectors, promotion of state-owned enterprises, restrictions on take-overs, performance requirements (or undertakings) and voluntary restrictions on MNEs.

More evidence on the use of PRs by developed countries in the post-World War II period is available. Countries like Australia, Canada, France, Japan, among others have made extensive use of PRs (Safarian 2002, WTO/UNCTAD 2001). Australia (and New Zealand) imposed 50 per cent domestic ownership requirements in natural resource projects, and also employed offsets policy under which larger government contracts required new domestic activity of 30 per cent of their import content. Canada enacted a Foreign Investment Review Act (FIRA) in the early 1970s under which an extensive set of PRs (called undertakings) were imposed to ensure 'significant benefit' is reaped by Canada from the operations of FDI. Norway and Sweden also imposed PRs for natural resource concessions. France has imposed an extensive set of PRs on foreign investors depending upon the nationality of the investor, economic growth effects including employment, regional balance and promotion of local R&D; competition to French enterprises, and on balance of payments etc. Japan also imposed PRs at the time of approvals depending upon contribution to technology development, exports or import substitution, competition to Japanese industry, 50 per cent foreign ownership and required the president of the joint venture to be a Japanese. In the United

States, CFIUS under the Exon-Florio Amendment, has rejected some proposed takeovers and also at times imposed what amounts to PRs (Safarian 2002).

Among the specific types of performance requirements, local content requirements have been employed by most of the developed countries and developing countries at one time or other (see Sercovich 1998; Low and Subramanian 1996; and WTO/UNCTAD 2001, for illustrations). In particular, governments have employed LCRs in auto industry to promote backward integration and localization of production of value added. Many of the developed countries have imposed LCRs in auto industry until recently. For instance, Italy has imposed 75 per cent local content on Mitsubishi Pajero, US has imposed 75 per cent rule on Toyota Camry and UK 90 per cent on Nissan Primera (Sercovich 1998). Australia imposed 85 per cent local content rule on motor vehicles until 1989 (Pursell 1999).

The form of these PRs employed by developed countries in the 1990s was, however, changed in favour of trade policy measures that achieve objectives similar to those of PRs but are consistent with the provisions of TRIMs. These include rules of origin, screw-driver regulations, voluntary export restraints (VERs) and anti-dumping (Belderboss 1997, Moran 1998, Safarian 2002). The US government had employed VERs against Japanese exports of cars in 1981. Subsequently EU has imposed VERs on Japanese exports of consumer electronics. The European Union countries have also extensively used the screw-driver regulations which are in effect like local content regulations to deepen the local commitment of Japanese corporations in consumer goods industries in the past. EU countries have also used anti-dumping measures to regulate imports of cars and other products from Japan and South-east Asia, and the US has aggressively used similar measures in attempting to achieve reciprocity (i.e. 'substantially equivalent competitive opportunities') in trade and investment with Japan and other countries (Safarian 2002). In the US provisions of the Buy American Act have also been used as local content requirements. For instance, in order to qualify as domestic product to claim a 25 per cent price preference under the Buy American Act, a Hungarian manufacturer of buses had to buy US made engines, transmissions, axels and tyres (Krugman and Obstfeld 2000:205).

Even currently the industrialized countries especially the EU and NAFTA member countries, taking advantage of RTA exceptions that are available under Section XXIV of GATT, are effectively using the Rules of Origin to increase domestic value addition. Rules of origin

determine the extent of domestic content a product must have to qualify as an internal product in a preferential trading agreement. Hence, they have the same effect as the local content requirements. By now considerable evidence is available on the use of rules of origin by EU and NAFTA countries to increase the extent of localization of production by MNEs supplying to them (see Box 1 for illustrations).

Therefore, low incidence of PRs in developed countries in the recent period is deceptive as they extensively employ measures that achieve similar objectives as the PRs that are currently inconsistent with the obligations of TRIMs. Developed countries have extensively employed policies such as PRs throughout their period of development in one form or the other. On the contrary, developing countries have only recently started to use these policy tools for fostering their industrialization and development. Developed countries have strived to take away these valuable policy tools away from developing countries under the TRIMs Agreement. An attempt is being made developed countries to expand the scope of WTO rules beyond what is covered under TRIMs to further restrict the policy space for developing countries.



**Box 1**  
**Rules of Origins Imposed by NAFTA and EU to Increase Local Content:**  
**Select Case Studies**

**NAFTA Rules of Origin**

The objective of the US effort in NAFTA through rules of origin has been to prevent "screwdriver" assembly operations from being set up within the region that could utilize low-cost inputs from outside. NAFTA rules of origin require that a substantial portion of inputs originate within the region for automobiles, electronic products (printers, copiers, television tubes), textiles, telecommunications, machine tools, forklift trucks, fabricated metals, household appliances, furniture, and tobacco products. For example:

- ◆ Telecommunications: NAFTA rule requires that 9 of every 10 printed circuit board assemblies, the essential component of office switching equipment, be packaged within the NAFTA countries. In response, AT&T shifted some production from Asia to Mexico, and Fujitsu and Ericsson brought new investments to Mexico as well.
- ◆ Color Televisions: NAFTA requires that television tubes be produced within the region to qualify for preferential status. Prior to NAFTA, there was no North American manufacturer of television tubes; in the first two years after NAFTA's passage, five factories took shape within the NAFTA region, with investments from Hitachi, Mitsubishi, Zenith, Sony, and Samsung.
- ◆ Computers: US negotiators proposed a rule that would have required two of the three key components (the motherboard, flat panel display, and hard disc drive) to be North American in origin. With forceful opposition from IBM and other companies that wanted to maintain their more flexible international sourcing patterns, the negotiators settled on a final rule requiring at least the motherboard to be North American.
- ◆ Office Equipment: NAFTA tightened origin rules for printers, photocopiers, and fax machines, requiring more components to be manufactured locally. For printers and photocopiers, all major subassemblies have to be produced in North America (equivalent to an 80-percent domestic-content requirement). Apparently this rule was instrumental in motivating Canon to construct a plant costing more than \$100 million in Virginia, rather than somewhere in Asia where the production costs would be lower.
- ◆ Automobiles: The domestic content rule was raised from 50 percent in the United States-Canada Free Trade Agreement to 62.5 percent in NAFTA. It required Japanese and European firms to replace imports from their home countries.

**EU Rules of Origin**

The European Union has adopted high domestic-content rules of origin in automobiles and other industries such as photocopiers, as well, and has also entertained proposals for even tighter

requirements for printed circuit boards and telecom switching equipment. The European Union also established product-specific rules that require printed circuit board assembly within Europe. It has negotiated association agreements in Central and Eastern Europe that require 60 percent domestic content for products to qualify for entry into the European Union. Select examples are as follows:

- ◆ Semiconductors: In 1989, the European Union abruptly changed the rule of origin to require that wafer fabrication for semiconductor be done within Europe to avoid 14 percent semiconductor tariff. Whereas US companies performed most of their diffusion operations in the United States prior to the decision, 7 of the largest 10 US producers built fabrication facilities in Europe following the rule change. Citing the need to comply within the new rule of origin, for example, Intel invested \$400 million in Ireland for wafer fabrication and semiconductor assembly. Even though wafer fabrication was not cost-competitive in Europe, compared to Asia or the United States, 22 new fabrication facilities were set up in Europe within two years of the change in the rule of origin.
- ◆ Automobiles: The United Kingdom and France proposed an 80 percent local content rule for the Nissan Bluebird to qualify as an EC product. In the end, they backed down in the face of Italian and German opposition and decided to rely on quantitative restrictions to protect against Japanese imports. The 60 percent domestic content in the automotive sector has forced the General Motors engine plant in Hungary to use high cost German steel as an input, preventing utilization of locally available cheaper Steel.
- ◆ Textiles and Apparel: The near 100 percent domestic-content requirement in textiles and apparel has forced the German partner in the Brinkmann-Prochnik joint venture in Poland to load a truck with cotton fabrics, thread, buttons, and even labels in Germany; transport it to Lodz for stitching into trench coats; and re-import it for sale in the European Union-rather than allow the Polish partner to source from cheaper supplies locally.

*Source*: Kumar 2001 on the basis of Moran, 1998; Belderboss, 1997, and other sources.

### **3. Effectiveness of PRs in Meeting Developmental Objectives: Lessons from Developing Country Experiences**

#### ***3.1 Policy Objectives and Arguments Against***

Local content requirements (LCRs) are employed by host governments to deepen the commitment of foreign investors with the host economies and maximize their contribution to income and employment generation and hence transfer of technology and other externalities. It has been argued that under conditions of perfect competition, LCRs reduce host country welfare in case the price of local inputs are higher than the world prices. Therefore, an increased use of domestic inputs imposes a tax on the foreign producers necessitating the

need for protection (Moran 1998, WTO/UNCTAD 2001). However, this contention is not valid as the assumption of perfect competition hardly prevails in a real life situation. Price competitiveness of local supplies may not be the only reason for MNC not sourcing the intermediates in the domestic markets. In many cases, local components required by a MNC may be of specifications and designs that are proprietary or patented. Hence, they would not be available in the host country unless the MNC licenses their manufacture to some local vendor and passes on the designs and drawings. There may be other considerations for not licensing local production of components, e.g. to utilize production capacities created elsewhere in the world more fully. Studies have shown that MNE affiliates in developing countries tend to buy bulk of their inputs from their parents or other associated suppliers and hence generate few domestic linkages (UNCTAD, TDR 2002, Lipsey 1998, Manifold 1997). Local content regulations play a useful role in prompting the MNC to consider licensing the local manufacture of such components which it may not do otherwise because of such considerations. LCRs, therefore, may force MNCs to identify nascent local capabilities and provide them with the know-how and technology.

Similarly export performance requirements (EPRs) are imposed by host governments to prompt foreign investors to integrate the affiliates in the host countries in their global/regional production networks and also bring other favourable externalities of export-oriented production. It has been argued that if a firm is able to export competitively, it would do so on its own to maximize its profits. Hence, requiring it to export beyond what is commercially viable will be a loss making activity (WTO/UNCTAD 2001). Again, this observation is based on the assumption of perfect competition which hardly prevails. As argued earlier MNEs maximize global profit maximization and not maximization of each individual affiliates. They practice market segmentation and product mandating strategies to maximize their global profits. They are known to impose export restrictions on their subsidiaries (see Kumar 2001, for evidence). Full exploitation of a host country's potential as an internationally competitive location for export-oriented production may also be prevented by information asymmetry.

### ***3.2 Evidence from Theoretical Studies***

A number of theoretical studies have shown LCRs to have favourable developmental effects and be welfare improving for host countries. For instance, Davidson et al (1985) show within a duopolistic model that local content and export requirements can increase the host country's

welfare and employment at the cost of source country and world welfare. McCulloh (1990) argues that in the presence of tariffs LCRs may actually improve host country welfare. Balasubramanyam (1991) argues that the dynamic benefits resulting from LCRs such as the development of local supplier capabilities far outweigh the short-run welfare losses that they may impose. Richardson (1993) shows using a General Equilibrium model that an effective LCR will induce foreign firms to increase their own domestic production of the component input and will induce capital flows thus furthering the process of industrialization of host country. Lahiri and Ono (1998) develop a partial equilibrium model of an oligopolistic industry and show that LCRs imposed on foreign firms raise employment in host countries. Yu and Chao (1998) have shown (using earlier work of Chao and Yu 1993) that LCRs may be put to good use to improve allocative efficiency and enhance host country welfare. Rodrik (1987) argues that in the presence of oligopolistic behaviour and tariff distortions EPRs can benefit host countries by reducing payments to foreign owners, reducing output in excess supply and by shifting profits to locally owned firms. Greenaway (1992) also comes to similar conclusion.

### ***3.3 Evidence from Cross-Country Studies***

An attempt was made by the present author in a study conducted at the UNU Institute for New Technologies (UNU/INTECH) to empirically examine the effectiveness of performance requirements such as LCRs and EPRs in meeting their objectives (see Kumar 1998, 2000 and 2002, for more details). The analysis was conducted with the help of an exclusive data set covering overseas operations of US and Japanese corporations in a sample of 74 countries in 7 branches of manufacturing over 1982 to 1994 period. The effectiveness of LCRs was evaluated in terms of proportion of domestic value-added generation in sales of foreign affiliates. Effectiveness of EPRs was evaluated in terms of the extent of export-orientation of sales of foreign affiliates. Furthermore, it was possible to split the direction of export-orientation –whether to the home country or to a third country. Simulating the patterns observed with the dataset for the 74 sample countries in the framework of an extended model of location of production, the study found LCRs to be favouring the extent of localization of MNE affiliates' production in the host countries. Therefore, the study argued that LCRs could be an important means of deepening the commitment of MNEs entering an economy and for generating local value added, and hence, on employment and the related spillovers of knowledge. Similarly, the study found export performance requirements to be effective in

increasing the export-orientation of MNE affiliates to third countries (Kumar 1998, 2000, 2002).

Another recent empirical study has corroborated that LCRs were effective in raising local content of affiliates of Japanese electronics MNEs in 24 countries (Belderboss et al 2001).

Therefore, the cross-country evidence available now shows that performance requirements could be useful tools of development policy. A further understanding of the manner in which PRs could serve the development policy objectives can be had from the case-study evidence that now is available from several countries as summarized below.

### ***3.4. Case Study Evidence***

The available evidence suggests that a number of countries have been able to build internationally competitive industrial capabilities using PRs. For instance, Brazil, Mexico and Thailand have built internationally competitive auto industry by enforcing LCRs and export performance requirements on foreign auto MNEs (Moran 1998: 53-62). Taiwan has also emerged as a major supplier of auto parts in the world following similar policies (Gee 1997). Furthermore, it has been argued that export performance requirements have prompted MNEs to establish world scale plants incorporating best practice technology and have generated significant knowledge spillovers for local firms of the type reported by Aitken et al (1997) (Moran 1998). Further case studies are summarized below.

#### PRs and Development of Thailand as the Southeast Asia's Auto Hub

Thailand has extensively used different performance requirements in automotive industry. To encourage domestic production, the government resorted to the policy of selective high tariff and import bans during the 1960s. However, the recurrence of weak domestic demand and continued deterioration in the trade balance because of importation of auto parts forced government to impose minimum local content requirement on automotive assembly and continually pushed it upward from 25 percent in 1969 to 50 percent in 1977 to 54 percent in 1983 (See Damri 2000, and Nopon 1999). Imposition of LCRs in 1970s and early 1980s did create domestic production capacities but exports by foreign auto producers remained 'practically nil' blaming 'inferior quality' of Thai component producers. However, domestic component enterprises that had emerged thanks to LCRs launched themselves in international markets by obtaining OEM status with external buyers (Moran 1998:60). To prod the

Japanese auto companies to incorporate their Thai affiliates in their global production networks, the government employed export performance requirements since 1985. The foreign enterprises primarily selling their output in domestic market had to have at least 51 domestic ownership. However, those exporting more than 50 per cent of their output could have foreign majority ownership (until 2000). That prompted the Japanese auto makers to think of integrating Thailand in their global production networks. The development of internationally competitive auto parts industry in the country also attracted global auto majors such as GM, Daimler-Chrysler and Ford to announce plans to set up auto plants in the country. Thailand has emerged as Southeast Asia's main auto hub with a production capacity of one million vehicles. It exported 1,70,000 vehicles in 2001 that makes it third largest exporter of automotives in Asia after Japan and Korea. Automotive exports earned Baht 154 billion and auto components, an additional Baht 60 billion in 2001. Honda and Toyota have added second shift with Honda announcing sourcing of Honda City for Japanese market from Thailand and Toyota making Thailand a global production base for pick-up trucks (*Financial Times*, 6 December 2002).

#### PRs and Building Competitive Manufacturing Capabilities in Auto Industry in India

Like other developing countries India also employed PRs to build domestic manufacturing capability in the auto industry. The Indian government entered into a joint venture agreement with Suzuki Motor Corporation (SMC) of Japan to set up a manufacturing facility in early 1980s for production of small passenger cars in Gurgaon near Delhi. The Maruti-Suzuki joint venture in which both Government of India and Suzuki were equal partners was imposed a phased manufacturing programme where it was required to increase the local content to 75 per cent within five years. In order to comply with the requirement, Suzuki started a programme of vendor development in India. Indian manufacturers of auto components were assisted by Suzuki to produce components of its designs and specifications. It also set up joint ventures with a number of them which involved transfer of technology. Furthermore, a number of Japanese OEM suppliers of SMC were prompted to licence technology or set up joint ventures with Indian component manufacturers to be able to supply to its Maruti venture. As a result a cluster of auto component manufacturers emerged around Maruti plant in Gurgaon and the proportion of local value addition steadily increased. However exports of cars or components were relatively insignificant. In the 1990s, as a part of the measures taken to deal with the foreign exchange crisis of 1991, government imposed condition of foreign exchange neutrality and dividend balancing on consumer goods industries that included

passenger car manufacturers. These obligations pushed Maruti to obtain a product mandate from its Japanese partner for exporting compact cars to Europe following phasing out of the production of Alto model by it in Japan.

The extensive network of auto component manufacturers created as a result of the phased manufacturing programmes imposed on Maruti has laid down the foundations of internationally competitive auto component industry as follows. The subsequent entrants to the industry in the wake of liberalization of the FDI policy in the 1990s not only found a good base for their indigenization efforts but also to fulfill their export obligations easily as is evident from a case studies of Ford, GM and Daimler-Chrysler (see Kumar and Singh 2002). The export obligations prompted them to consider buying some components from India for export to their operations in other countries. As the Ford's case points out, they were initially hesitant to import components from India fearing poor quality-- apprehensions that were belied. Hence, following a visit in 2000 AD by a Ford team to components suppliers in India, a joint programme was launched with Automotive Component Manufacturers Association (ACMA) for sourcing components from the country for Ford. Ford set up two dedicated ventures in India to handle component sourcing. Ford has also undertaken growing exports of Ikon CKD kits to Mexico and South Africa. Thus while export obligations prompted Ford to discover an important sourcing base of quality components, from the host country point of view, they helped the country's auto component manufacturers develop their linkages with one of the world's largest manufacturers of automobiles that could be of long term interest. Similarly General Motors India (GMI) Ltd. claims to have helped its parent source components from India including a major export order from GM Europe that also helped GMI to meet its export obligation. GMI is also pursuing partnerships with Indian component suppliers for world-wide sourcing of components for GM overseas units from India. Daimler-Chrysler India has developed more than 20 joint ventures for manufacture and export of auto components to the Daimler-Chrysler plants in Germany to fulfil its export-obligation.

The exports of components by these major producers has prompted interest by other auto producers in Indian supply capabilities even though the PRs have been abolished. According to recent reports, about 15 of the top auto majors have already set up international purchasing offices in India. In May 2003 CEOs of 30 Indian auto component producers were invited by Navistar, Caterpillar, Ford and Delphi to visit the US to discuss global outsourcing possibilities. The auto components exports from India fetched US\$ 375 million in 2002/03.

Following the sudden interest of auto majors in sourcing from India, the exports are likely to increase nearly four times to \$ 1.5 billion in the current year.<sup>1</sup>

Therefore, PRs imposed on the auto industry in the form of export obligations and phased manufacturing programmes until recently have been successful in meeting the government policy objectives viz. development of local manufacturing base while preventing heavy drain of foreign exchange on imports. Even though the PRs have been abolished the export and import figures in the car industry in March 2002, for instance, were balanced at around Rs 21 billion. Also most manufacturers had achieved high levels of localization of production. For instance, as of March 2002, Ford had achieved an indigenisation level of 74 per cent, GM had 70 per cent and 64 per cent for Astra and Corsa respectively, Mercedes and Toyota had close 70 per cent and Honda had reached a level of around 78 per cent indigenization, given the development of local base of OEM suppliers<sup>2</sup>. Furthermore, the export obligations helped in overcoming the information asymmetry regarding the host country capabilities and led to a fuller realization of the export potential through MNEs with establishment of vendor-OEM linkages between Indian component producers and global auto majors that would be of long-term value.

#### PRs and Development of Export-oriented Manufacturing in China

The Chinese regulations stipulate that wholly owned foreign enterprises must undertake to export more than 50 per cent of their output. Enterprises producing import substitutes as well as those producing high technology goods may be exempted from export performance requirements. Some times the targets may be in the form of foreign exchange neutrality. Chinese authorities also require that establishment of foreign enterprises should encourage transfer and acquisition of technology from abroad. There are guidelines to facilitate transfer of technology, for instance, regarding management control in joint ventures (Rosen 1997:63-71). As a result of these policies, the proportion of foreign enterprises in manufactured exports has steadily increased over the 1990s to 45 per cent. MNE affiliates account for over 80 per cent of China's high technology exports (UNCTAD 2002).

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<sup>1</sup> See 'Global autobahn beckons desi component cos', and 'Auto parts cos eye 25% of US outsourcing pie' in *The Economic Times*, 9 May 2003.

<sup>2</sup> See 'MoU, export riders for auto cos bear fruit', *Economic Times*, 2 September 2002.



## Domestic Equity Requirements and Technology Transfer and Competitiveness: Korean and Indian Cases

The joint venture requirements or domestic ownership requirements are employed by host governments to achieve several possible objectives such as promotion of absorption of knowledge brought in or development of local entrepreneurship, or enhance the host country's share in the distribution of gains from the productive activity generated by the venture. Indian case studies have shown that domestic equity requirements have promoted formation of joint ventures that in turn have generated favorable externalities in the form of substantial local learning and quick absorption of knowledge brought in by the foreign partners (Kumar and Singh 2002). Some have expressed the view that domestic equity requirements may adversely affect the extent or quality of technology transfer (Moran 2001). However, it has been shown that MNEs may not transfer key technologies even to their wholly owned subsidiaries abroad fearing the risk of dissipation or diffusion through mobility of employees (Kumar and Singh 2002 for a case study). Furthermore, even if the content and quality of technology transfer is superior in the case of a sole venture than in the case of a joint venture, from the host country point of view, the latter may have more desirable externalities in terms of local learning and diffusion of the knowledge transferred. In this context, the experiences of countries like South Korea are illustrative. As is well documented the Korea imported bulk of the technology during the 1960-1980s through licensing contracts, minority foreign ownership and joint ventures and did not allow majority ownership to foreign investors. Yet Korean chaebols such as Samsung, LG, Hyundai, Kia, have emerged internationally competitive suppliers in a large number of industries where they are represented (see Kim 1997 for a number of case studies).

### **4. Do PRs Affect the Magnitude of FDI Inflows?**

It has been argued that imposition of PRs may adversely affect the magnitude of inflows by making the conditions of investment appear restrictive. While it would appear plausible that PRs may affect the quantum of FDI adversely, the evidence is mixed.

A USITC study based on a survey reported that PRs had only a marginal effect on the location of investment (cited in UNCTC 1991). An empirical study found PRs to have a significant negative effect on US investment abroad in 1977 but not in 1982 (Loree and Guisinger 1995). Our own cross-country study of US and Japanese affiliates referred to

earlier found PRs to affect FDI in the case of US but not in the case of Japanese FDI (Kumar 2000, 2002). The finding of Kumar on differential effect of PRs on US and Japanese FDI is corroborated by another study. Hackett and Srinivasan (1998) found for a sample of foreign subsidiaries over the period 1982-88, the imposition of LCRs (and EPRs) had a negative but not statistically significant effect on US investments but had a significant positive effect on Japanese investments. It would appear that Japanese investors do not perceive PRs negatively for the investment climate in a particular country.

The effect of PRs on the investment climate is to be viewed in respect to the other advantages the potential host country has. In a country offering large and expanding domestic market and having other advantages, MNEs may want to invest in spite of PRs and other restrictions. Therefore, China has managed to attract huge volume of inflows despite stringent PRs enforced with respect to exports, ownership as well as local content (Rosen 1999). Similarly, Indian auto industry attracted nearly all global auto majors to set up their plants in the country despite many PRs imposed on them during the 1990s (Kumar and Singh 2002). In Malaysia FDI grew by 26 per cent on average per year compared to only 4.8 per cent growth of domestic investment despite PRs (Pao Li and Imm 2002).

Furthermore, even if there is a slight dissuading effect on the magnitude of FDI inflow, the developmental benefits accruing to the PR-imposing host country may greatly outweigh the adverse effects on magnitudes. In the cases where PRs may affect the magnitude of FDI inflows due to poor locational advantages, host governments have generally used a combination of PRs and fiscal incentives to neutralize the potentially adverse effect of PRs on FDI inflows while improving their quality to meet their development policy objectives.

## **5. Concluding Remarks**

To sum up the above discussion, PRs have been employed extensively by developed countries to improve the quality of FDI and to maximize its contribution to the process of their development. The current low incidence of PRs in developed countries is deceptive because they have evolved new forms of policy interventions to achieve the objectives of PRs. They continue to use policy measures such as screw-driver regulations, buy local provisions, anti-dumping and rules of origin that in effect are like PRs. The same developed

countries argue against the use of such policies by developing countries on the efficiency grounds.

The evidence presented from developing countries on the effectiveness of PRs suggests that well conceived PRs with clear objectives and effectively enforced are not only able to meet their objectives but may also bring significant favourable externalities to the host countries. The effectiveness of PRs in meeting their policy objectives depends on the clarity of objectives, the policy capability of the governments, market size, absorptive capacity in terms of skills of the work force and strength of domestic enterprises, and other locational advantages and policies. The available evidence also does not suggest a significant adverse effect of PRs on FDI inflows which are governed more by the overall economic potential of the host countries rather than such policies. In any case the developmental benefits accruing because of impact of PRs on the quality of inflows may outweigh any potential adverse effect on the magnitudes. FDI inflows in developing countries, after all, are the 'means' for achieving development and not the 'ends' in themselves.

The above findings have implications for the ongoing discussion on the relevance of PRs in the context of the Review of TRIMs Agreement and for the debate on the desirability of a possible multilateral framework on investment. It is clear that PRs serve a useful purpose as development policy tools. Hence, they should continue to be available to countries. Given the importance of PRs as instruments of development policy, there is need for invoking Special and Differential Treatment (SDT) of developing and least developed countries in respect of this. In TRIMs Agreement developing countries only got a three year longer transition period for phasing out TRIMs compared to developed countries in the name of SDT. The vast development gap between developed and developing countries cannot be bridged in three years.

Therefore, developing countries should seek exceptions based on low level of industrialization at the TRIMs Review. Article 5(3) of the Agreement could be amended to provide this exception linked to a per capita manufacturing value-added (MVA) threshold. All the countries with MVA per capita below that threshold level should qualify for exemption from the provisions of TRIMs. The Agreement would, in this way, have taken care of the development dimension as well as the graduation.

The Review of TRIMs should also be used to address other asymmetries present in the TRIMs Agreement. One such asymmetry present in the TRIMs Agreement pertains to its failure to curb trade related restrictions imposed by MNEs on their subsidiaries that are as trade distorting as the government imposed restrictions. Given the trade distorting effect of these restrictions, developing countries should seek to discipline the restrictive conditions that MNEs impose on their foreign affiliates in the TRIMs Review.

Yet another asymmetry in the TRIMs Agreement is its failure to discipline the investment incentives given by host governments to attract FDI inflows. The empirical evidence has shown that these incentives tend to distort the investment patterns much in the same way as export subsidies do patterns of trade (see Kumar 2002). Industrialized countries have largely indulged in the incentive wars to attract foreign investments to particular locations and have been offering substantial subsidies to MNEs to attract investments.

Finally and more importantly, developing countries should resist the attempt of developed countries to expand the list of TRIMs that are proscribed under the Agreement.

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