The domestic domain: the new international policy arena

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By the end of the 1980s, globalization" had become the term for accelerating interdependence. This third wave of international linkage, after the expansion of trade and the internationalization of financial markets, is dominated by flows of investment and technology and by increased international corporate and research networking. The primary agent of globalization is the transnational corporation. The primary driving force is the revolution in information and communication technologies. Like each phase of tightening linkage, globalization enhances opportunities for growth but also increases risk and vulnerability. Growth is enhanced by improved efficiency, more rapid production and the adoption of new technology. Risk is heightened because globalization creates growing pressure for convergence of policies, a pressure which touches the sensitive issue of sovereignty. In a globalizing world, competition among transnational corporations in sophisticated products and services (an increasing proportion of world trade) is also competition among systems. A globalizing world has a low tolerance for system divergence-and that is the wellspring of new sources of international friction, system friction. A bilateral United States-Japanese approach to resolving system friction can be destabilizing and, while the European approach to harmonization is desirable, it is unobtainable. The solution lies in mounting_ an international initiative to promote the convergence of policies related to innovation and more balanced access to investment and technology flows. Most of the policies which will be the subject of this new international initiative are in the domestic domain: the new international policy arena.

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As the world is preparing to move into the twenty-first century, the arena for international policy cooperation is moving beyond traditional arenas to domestic policies. The basic reason for that shift lies in changes in the extent and nature of the international linkages among countries which have produced a new type of friction that can be called *system friction.* The struggle over competitiveness in the Triad (Japan, the United States and the European Community), which has generated the policies targeted at so-called strategic industries, is a symptom of this far broader malady of system friction. Those developments are briefly described below and the policy options required to mitigate or contain the new discord are explored.

International linkage

There have been three phases of growing international linkages among countries since the Second World War. The first, the golden age of the 1950s and 1960s, was driven by *trade,* launched by the dismantling of protectionist barriers in successive GATT rounds. Over the decade of the 1970s, three massive commodity and oil shocks initiated the second phase, which was characterized *by financial integration,* via the recycling of the OPEC surplus. The wave of financial integration accelerated in the 1980s, fed by the revolution of deregulation and privatization in the United Kingdom and the United States and the emergence of the Japanese current account surplus.

The world is now at the outset of a third phase called *globalization,* which is led by a surge in foreign direct investment (FDI) [UNCTC, 1991]. After the Second World War, FDI was characterized by *"le defi* in Western Europe. The present upsurge, which began in 1983 and has steadily picked up speed, is very different in both origin and destination. By 1983 the United States had become a net *recipient* of FDI (that is, large outflows were outweighed by still larger inflows). By 1985, Japan became the largest net direct investor (owing to large outflows and negligible inflows), followed by the United Kingdom and the Federal Republic of Germany. Both outward and inward FDI are dominated by the Group of Five-France, Germany, Japan, the United Kingdom and the United States.

Apart from the dynamic Asian economies, the developing countries have been largely excluded from this trend. FDI is much more concentrated than are trade flows: the Group of Five accounts for over 75 per cent of FDI, but just over 40 per cent of world trade. If present investment flows are extrapolated, a conservative estimate suggests that they will grow at twice the rate of trade flows in the 1990s.

The prime *agent* of this third phase is the transnational corporation (TNC). TNCs have a variety of objectives and rarely make decisions on the basis of only one consideration. One important factor driving globalization today, however, is the increase in research-and-development (R&D) costs produced by the race for the technological frontier in leading-edge sectors. That has stimulated not only a wave of international mergers and acquisitions (the major form of FDI), but has also spawned an array of new forms of international networking among TNCs, including R&D/technology alliances. This technology networking has become so prominent as to deserve a new term: *technoglobalism*. It is even more concentrated than investment: over 90 per cent of the technology agreements are made between companies with their home base in the Triad.

So the third phase of international linkage is centred on capital and technology flows. To a considerable degree, it has tended to exclude the non-OECD countries.

While it is convenient to delineate those three phases of international linkages chronologically, it is important to stress that they are not separate and independent of each other, but rather closely interrelated in a complex fashion. Particularly striking, for example, is the relationship between investment and trade. Thus a large and growing proportion of world trade involves intra-enterprise trade. For Japan and the United States, for example, trade related to FDI now accounts for over half of the total trade flows.

Further, another manifestation of growing international linkages has been the changing nature of trade itself: an increasing proportion of trade among industrialized countries is in technologically sophisticated manufactured products produced by large firms operating in imperfectly competitive markets. In the 20 years be-

tween 1966 and 1986, high-technology goods climbed from 14 per cent to 22 per cent of world manufacturing exports. And, finally, over the same period, powerful new players have entered the global arena, most importantly Japan.

Indeed, it has been the concern over the Japanese growth model and the role played by targeting so-called strategic sectors and technologies that have made competitiveness such a high-profile issue in the Triad. Early in the 1980s, the conflict with Japan centred on asymmetry of import access to the Japanese market. While that is still an issue, the targeting debate has widened to a concern about policies allegedly designed to create competitive advantage. While the debate about Japanese targeting is by no means settled, the most important new development during the 1980s has been the "policy spillover" involving various kinds of support for strategic sectors in the other two Triad-members. In addition to those new forms of government intervention, changes have also taken place in the discipline of economics-the climate of ideas-which have undermined the liberal orthodoxy concerning the role of markets versus Governments, in both trade and industrial policy, for leading-edge, high-technology industries.'

Thus, in sum, changes in a transformed and far more interdependent international economy have spawned the new international friction manifested in the struggle over leading-edge sectors and technologies, but reflecting also a much more pervasive phenomenon of system friction. The reason is that the battle for market share in leading-edge sectors involves not only competition among TNCs, but rivalry among the different market systems which influence the ability of an enterprise to compete.

System friction

Economists have long ignored cultural, historical or institutional differences as factors of significance in market analysis. While interest in international economics has greatly increased, international forecasting models, for example, are based on the assumption that

For an account of policy developments and of the new international trade theory in this context, see Ostry (1990), chapter 3.

there is only one market model and thus the different "country blocks" all have identical structural properties.

More recently, however, some economists have urged that a better understanding of institutional (including regulatory) differences among countries may be significant, though it may be difficult to incorporate them into theoretical or econometric modelling. One reason for that changing view in the early 1980s was the markedly different reaction, within OECD, to the second OPEC oil shock [Ostry and Koromzay, 1982]. A more important reason for the interest in different system properties, however, was the debate over competitiveness and the challenge of Japan, which stimulated a vast outpouring of analysis of the Japanese paradigm of successful innovation.[2] Indeed, in the analysis of the innovation process more generally, the importance of institutional factors has been ¡ncreasingly highlighted [Dosi, 1988].[3]

It is clearly beyond the scope of the present article to describe in any detail the burgeoning literature on institutional differences within the Triad. A highly stylized depiction would distinguish three dominant models:

- The United States paradigm of *a#uralist market economy* with its aggressive financial markets is strongly consumer- and short-term oriented. Its strength is dynamism and flexibility. Its dominant ethos is private-sector competition and minimal government. But producer interest groups generate an ad hoc, "implicit" industrial policy response.
- The Continental European models are variants of the *social market economy* and involve more extensive government interaction with the "social partners". "Social market" implies a recognition of market imperfections and a governmental responsibility to rectify them as well as to provide public goods. An elastic definition of "public goods" may sometimes blur the line between the role of the market and the role of the State.

[2] See Ostry (1990), chapter 3, for a select bibliography.

[3] Many of the papers prepared for the OECD Conference on Technology and Economic Policy (TEP) focus on cultural, historical and institutional factors.

- The Japanese *corporatist market economy is* unique in its long view, in its producer orientation, in its strategic use of cooperation and competition and blending of macro and micro policies, in the close and continuing interface of the State with business and in its remarkable capacity to adapt to external shock.

In that context, it is useful to distinguish two aspects of those systems: the cultural and historical roots that influence behaviour, tastes and institutions on the one hand, and government policies (which, of course, are also affected by the cultural legacy) on the other. The reason for this distinction is that the appropriate domain for international policy cooperation is government policy, *not* tastes, preferences or behaviour, which should be accepted as "given", although, of course, not immutable.

As many studies have shown, both cultural legacy and government policy affect the competitiveness of the firm. Fundamental to competitiveness is *innovation:* the search, development and adoption of new products and processes. Innovation stems from the interaction between capabilities *within* the firm and industry and its *external* environment, aj,, omnibus term which comprises government policy (R&D, education, macro policy, trade policy, investment policy, competition policy, capital market regulation etc.) and behavioural phenomena, such as the tastes and attitudes of consumers, workers, entrepreneurs etc .[4]

One of the more important insights that is emerging from studies of the innovation process is that some national systems are more consonant (system friendly) with particular technological paradigms than others. An example is the United States leadership, which dates from the end of the nineteenth century and is based on the Fordist paradigm of mass production [Nelson, 1990]; Japan is more system friendly to the more flexible manufacturing paradigm of electronics-based technology [Freeman, 1987, pp. 55-90]. But systems can adapt and, indeed, the process of market competition is one major transmission mechanism of adaptation. Moreover, expanded international linkages (especially through FDI) and the revolution in transport, information and communication technologies also create

[4] See Dosi (1988), for a literature survey and bibliography.

pressures for adaptation and a momentum to convergence that goes well beyond the organization and behaviour of the firm.

There are many who would argue that competition among firms and a gradual process of system convergence are both necessary and sufficient to sustain the health of the world economy as long as Governments refrain from self-defeating protectionist or interventionist policies. But, as pointed out above, the competitiveness of the firm depends not only on its *own* competitive strength, but also on the *interaction* of its capabilities with the capabilities of the external environment in which it operates. Smart firms may have the potential to build superb mousetraps, but not to determine the key policy and institutional aspects of their external environments [Dosi, 1988, p. 1,121; Roobeek, 1990].

So competition among firms is also competition among systems; the slow "natural" process of convergence will produce serious discord-system friction-along the way. A globalizing world has a low tolerance for system divergence. Continuing instability and growing pressure for new forms of managed trade are the likely outcomes. But a new approach to mitigating system friction is, in fact, to undertake an international policy process to promote the convergence of those government policies which are most relevant to the process of innovation. Most of those policies are domestic: *the new international arena is within the borders of the nation-state.*

If a process of international policy cooperation is undertaken to promote convergence, it is important to ask: convergence to what? What is the regulatory model to be promoted? As suggested above, there is no single paradigm "out there". Of course, the overall objective must be to promote convergence towards policies that are compatible with market-oriented outcomes. But, as the following discussion will illustrate, in some policy areas no clear-cut guidelines emerge. In such cases, the regulatory standards themselves will be an output of the process of harmonization.

It is instructive to note that two processes of convergence are now in fact underway in the international economy. The most *advanced-locational competition-is* that emerging in Europe, catalysed by "Europe 1992". The choice laid out in the 1985 White Paper to base market completion on "mutual recognition" and the

free flow of mobile factors of production launched a process which has been described by one analyst as follows [Giersch, 1988, p. 5]:

> "competition between different regulatory systems . . . which is free competition among different locations . . . for internationally mobile resources, such as capital and entrepreneurship and also labour with a high content of human capital".

The implicit answer to the question "convergence to what?", given by locational competition, would be *that* regulatory system that best reflects the preferences of the mobile resources, especially capital and entrepreneurship. So locational competition is a market-like process by which convergence emerges *expost*, a result of the invisible hand, so to speak. But even in the case of European locational competition, there will be the need for the visible hand of the Commission in instances of significant divergence of key regulatory instruments, such as competition policy, capital market regulation, social policy and taxation. This process of *ex ante* convergence is likely to prove contentious and difficult-although ultimately successful-because of the enhanced power of Brussels and the considerable political momentum generated by Europe 1992 and the events in Central and Eastern Europe.

The European locational competition process of convergence is attractive because it involves limited supranational intervention, thus minimizing political difficulties as well as the high risk of policy error in a period of rapid change and heightened uncertainty. But it could not be duplicated at a global-or even an OECD-level at the present time, not only because the basic conditions of mutual recognition and the free flow of factors do not exist there, but also, and more importantly, because the divergences in regulation are wider (as between Japan, for example, and the United States) and there is not yet the strong political will at the international level to yield sovereignty or share power that now exists in Europe.

The other very different process of policy convergence recently launched is the bilateral United States-Japan "structural impediments initiative" (SII), which covers a vast range of subjects-macro- and micro-policies, as well as corporate culture and consumer tastes-and is tied to demonstrable results in the bilateral trade balance. On the micro-policy front, a major issue is the divergence in competition policy between Japan and the United States. But so

many other items (both regulatory and cultural) were included in the United States list of over 200 specific suggestions that it has elicited a perception from a number of quarters that the Japanese are different and, therefore, special rules are required only for them. Behind that lies a quite unacceptable view of convergence of "everything"[5] (to the American model?). Moreover, another serious danger in SII is that it is unlikely to produce the desired changes in the bilateral trade balance (which is influenced by many factors unrelated to the negotiations) and thus risks inflaming congressional animosity and increasing the pressure for managed trade arrangements. Finally, a process of convergence that is bilateral and non-transparent is hardly the most desirable or effective way of dealing with a fundamental systemic issue.

If the European approach is desirable but unattainable and the bilateral approach likely risky and potentially destabilizing, the only feasible alternative for initiating a process of harmonization is to place the issue in a multilateral forum, which has a representation of not merely the main players (namely OECD members), but also of developing countries, which inevitably will be affected by any such harmonization. The establishment of a policy regime without their participation will leave a large scope for friction and discord . One option would be to set up, at OECD (along the lines of the ongoing "dialogue with the dynamic Asian economies"), a special working group, which would include OECD countries and selected non-member countries. Another suggestion could be UNCTC, which has the secretariat expertise and the mandate to cover the broad range of policies relevant to the exercise.

Promotion convergence: a post-Uruguay programme

The idea behind the promotion of convergence is an extension of the multilateral rules-based system, originally designed for international trade, to include domestic rules, which significantly affect enterprise performance (competitiveness) and market access not only for goods and services, but also for investment and technology flows. Since the new international arena has now expanded to

[5] See Bhagwati [1989, pp. 45-46], who argues that "if everything becomes a question of fair trade, the only outcome will be to remove altogether the possibility of ever agreeing to a rule-oriented trading system".

domestic concerns, it would be fairer-and would be seen as fairer-if TNCs were to compete under the same set of domestic rules in different countries. Similarly, persistent marked asymmetry of access for investment and technology will generate serious friction because broad overall reciprocity is fundamental to sustaining political support for the multilateral system.

There are at least three questions that would have to be confronted if a "post-Uruguay programme" were to be launched:

- What policies will be selected?
- How is convergence to be achieved?
- Will convergence lead to overall reciprocity?

Some answers to these questions are set forth below. But it should be recognized that what is being proposed is not only a major new thrust in international policy cooperation, but also an incursion into contentious analytic territory-broadly the determinants of innovation and thus of competitiveness-where there is considerable disagreement among economists and policy analysts. Thus the "answers" should be regarded as proposals for discussion.

What policies?

The major criterion for policy selection is impact on the innovation process, because, for advanced countries, innovation is the primary determinant of competitiveness at the level of the firm and of rising productivity at the national level. But in the case of some policies of undeniable importance in that context (education and training are the best examples), the international friction stems more from access or reciprocity issues than from divergence *per se* (see below). In others, for example, fiscal policy, while the impact on innovation via savings, investment and the cost of capital is considerable, there are other forums, specifically Bretton-Woods institutions and the Group of Seven, where a policy coordination process is already underway. Finally, the Uruguay Round agenda includes a number of key items central to the innovation process, such as intellectual property, anti-dumping regulations and industrial and agricultural product standards. A successful outcome will lead to the reduction if not the elimination of policy divergence.

Taking all of this into account, it is proposed that an *initial list* of policies for multilateral coordination should include competition policy, R&D policies, foreign-direct-investment policy and financial market regulation as it affects corporate governance.

In the case of *competition policy*, several high-profile issues are already on the international agenda and provide a useful starting point. As mentioned above, a number of these were prominent in SII (vertical arrangements in the Japanese *keiretsu*, different enforcement procedures in the two countries etc.). The differing treatment of research and production joint arrangements in the United States, as compared with both Japan and the European Community, has also generated a lively debate in the United States, with a number of experts in the innovation field arguing in favour of antitrust reforms that go beyond the 1984 National Cooperative Research Act and others warning of the danger of cartel-like behaviour [Jorde and Teece, 1990; Brodley, 1990; Shapiro and Willig, 1990].[6] Thus, it would be useful to begin with an analysis of differences in both vertical and horizontal arrangements (including enforcement) among the Triad members and an assessment of the impact of those differences on performance.

In merger law, which is of increasing importance because of the large increase in transnational mergers and acquisitions (including newer modes, such as strategic alliances), there does not appear to be any difference in *substantive* law; the language is remarkably similar in most jurisdictions. The divergence-and conflict-arises in *application*, since the general prohibition against mergers which will (or are likely to) substantially lessen competition leaves ample scope for discretion on the part of the authorities. The situation is even more complicated in the United States, where all 50 States can exercise jurisdiction independently from the federal Government. For corporations planning transnational mergers, the degree of uncertainty created by differences in enforcement of merger law is a major impediment to rational decision-making.

In the area of R&D, a number of policy issues need probing. One of the most obvious is government subsidies, including sectorally tar-

[6] Sce also Ostry (1990), chapter 3, for a discussion of NCRA as a response to the Japanese innovation paradigm.

geted tax incentives. The presence of large externalities (that is, benefits that spread beyond the firm to other firms or industries) has long provided a rationale for government intervention in basic research, where private firms have little incentive to invest because the benefits cannot be fully captured (appropriated) in profits. (Another rationale is that pure science is a public good.) But the new debate about subsidies centres not on basic research, but on the middle ground between basic research and proprietary technology (so-called generic research), usually involving cooperative arrangements between firms organized and partly funded by Governments (thus raising, in addition to the subsidy question, the competition-policy issue mentioned above).

The difficulty of defining this "middle ground" requires a good deal of analysis and discussion before proceeding to new international disciplines. As experts in innovation have emphasized, this is because there is no clear-cut boundary between basic research, generic technology and commercial application (the "linear" model of innovation), but rather a complex nexus of interaction and feedback (the "simultaneous" or network model of innovation) [Jorde and Teece, 1990, pp. 76-78; Ziman, 1990]. The extent and nature of government intervention which affects this more realistic model of innovation goes well beyond subsidies. Indeed, subsidies may be the least important factor, as the Japanese innovation paradigm with its unique "blend of cooperation, competition, and shared information and objectives" [Ostry, 1990, p. 64] amply demonstrates. So progress on the subsidies front, while certainly important and desirable, should be seen as only one part of a much broader issue, which is the impact of government policies on the innovation process.

Finally, there is the thorny question of membership in government-sponsored R&D consortia. There has already been a dispute over the membership of foreign subsidiaries in the European consortium Jessi and the American Sematech [Ostry, 1990, pp. 66-75]. The basic reason for the exclusion (seldom spelled out) rests on the concept of strategic industries or technologies. There is no settled definition of that concept and indeed the word "strategic" has multiple meanings and its use is more confusing than enlightening. One definition of a strategic sector would be one for which an exploitable advantage for a foreign firm or another country could have serious,

widespread and long-term consequences. The risks would be especially high if the foreign supplier were a monopoly or a cartel, and high sunk costs reduced the credible threat of entry [Flamm, 1990]. In such industries, the major means of appropriating returns to product innovation comes from "first mover" advantage, that is, getting there first and building up continuing and cumulative product improvement (as in semiconductors, computers, telecommunication, airframes and aircraft engines) [Levin, Klevorick, Nelson and Winter, 1990]. Thus, the question of how to define "strategic" and other questions (for example, what is a "foreign" firm or, indeed, is there a need for a supranational competition authority?) will have to be confronted before disciplines or codes of behaviour on government-sponsored consortia can be agreed.

In the *FDIpolicy* sphere, the Uruguay Round of GATT is dealing with a limited aspect of that issue in the trade-related investment measures (TRIMs) negotiations. Essentially, what is at issue is some form of discipline on trade-distorting measures, such as performance requirements of one kind or another. With the benefit of hindsight it is now clear that the push for TRIMs by the United States reflected the world of the 1970s and early 1980s, when there was widespread hostility in the developing countries to TNCs. The world of the 1990s will likely be dominated by a competitive bidding for investment as the countries of Central and Eastern Europe and the developing countries seek to supplement their shortage of domestic savings and technology.

Within the OECD area, the main problem is less likely to be overt investment inducements (tax holidays, subsidies etc.) than direct and indirect measures to influence the content or quality of investment, such as local content regulation or rules of origin .[7] Another FDI issue, already evident in the United States, relates to the ownership of strategic assets (in a national security rather than a commercial sense). A large number of bills that would constrain FDI is currently pending in the Congress of the United States.

But the major source of system friction in the investment area relates to asymmetry of access, or overall reciprocity. Indeed, the

See Ostry [1990, pp. 46-52], for a discussion of the European Community anti-dumping and rules-of-origin rules.

United States has announced that it will raise the issue of its "investment imbalance" with Japan in a new round of SII follow-up, citing the 1989 figures of $32.5 billion of Japanese investment in the United States versus $1.64 billion of United States investment in Japan. Within the European Community, the reciprocity question has surfaced in the differences in ease of take-overs (mergers), the chief mechanism of FDI, among different member countries, especially the United Kingdom versus Germany. This relates to the fourth policy issue: *financial market regulation* as it affects corporate governance.

A recent study prepared for the European Commission [Booz-Allen Acquisition Services, 1989] documents the marked differences in take-over activity in the European Community during the 1985-1988 period and examines the reasons for those differences, that is, the obstacles to mergers. Those include a long list of structural differences (especially size and sophistication of equity markets and the role of banks in corporate ownership and control); and a variety of regulatory differences (for example, antitrust, company law, labour law and stock market regulations governing take-overs). Much of this is also relevant to the Japanese system, which, in a number of respects, resembles that of Germany. In particular, in both countries, companies are more heavily owned by banks and other corporations.[8]

While some of those differences can be reduced by regulatory changes (and, indeed, the European Commission will be undertaking to implement a number of these), this study, and numerous others, have emphasized the structural differences between the United Kingdom and United States model, on the one hand, and the German and Japanese model on the other. The differences in composition of ownership, that is, the respective role of share-holders versus banks (also a reflection of the cultural legacy of countries) will be much more resistant to change. This is very important because the composition of ownership has a significant influence on the way corporations are managed, although the popular image of a clear-cut dichotomy between the Anglo-Saxon short-term "financially

[8] On the Japan-United States comparison, see Kester (1986).

driven" versus the German-Japanese long-term "industrial growth" model is too simplistic.

In sum, this complex area of financial markets impacts both on corporate governance (and, therefore, on competitiveness) . . . and on reciprocity of access for FDI. There is clearly some scope for regulatory harmonization, but the structural differences are more deep-seated and will be difficult to change; as a consequence, the reciprocity issue is likely to be a continuing source of friction as it is in goods markets and as it will be in the technology area. Before turning to the reciprocity question, however, the second question needs to be addressed.

The process of harmonization

The objectives of the process of harmonization in a multilateral forum would be to:

- Analyse, for each policy, the differences among countries, perhaps starting with the Triad;
- Assess the main impact of those differences on industrial and trade performance;
- Draw up a mutually agreed set of policy *guidelines, a timetable* for reform, and *a means* of monitoring progress (surveillance).

Those are extremely complex problems and would require skilled staff assistance in providing objective analysis and information. There is good reason to launch the process as quickly as possible. It would be desirable, in the analytic phase, to include business representatives and outside experts. The process of promoting policy convergence itself would require a special intergovernmental committee.

Because the subject matter covers a number of areas, the effective operation of the committee would involve a greater degree of coordination within national capitals than is customary. But greater coordination within national capitals is, of course, desirable in and

[9] For a discussion of the theoretical issues, see Williamson (1988) and Jensen and Meckling (1976).

of itself, however difficult to launch and maintain. In most national capitals and in the general public there is no real understanding that the new international arena is within the border. Separating trade policy from competition policy, R&D, financial market regulation and so forth only made sense when tariffs were the most important obstacle to international linkage.

Finally, it is important to emphasize again that, while policy convergence is a desirable objective to pursue in international cooperation, it will not miraculously dissolve all points of international friction. Different cultural legacies will affect consumer tastes and preferences and corporate behaviour. National infrastructures (especially education and training) are extremely important, as is macropolicy. And, finally, convergence may reduce but will not eliminate marked asymmetry of access in the areas of investment and techology.

Reciprocity[10]

The concept of reciprocity underlying GATT is that of a broad balance of benefits in market access for goods. For a variety of historical reasons, even after more than 40 years of negotiations, there still exist today some examples of marked asymmetry of access to markets for goods. This has been a source of considerable political friction, eroding the commitment to a rules-based multilateral system.[11]

As noted before, in the case of FDI, there are significant differences even among countries in OECD in ease of access via mergers (the main vehicle of investment *flows).* In addition, there are large differences in the present *stock* of FDI, with the most marked asymmetry apparent in Japan.[12] There would be little purpose in focusing

[10] For a discussion of the evolution of the concept and of the distinction between the basic commitment to symmetric rights and obligations in the contract and reciprocity as a negotiating modality, see Bhagwati [1988, pp. 35-37].

[11] For a discussion about the reasons for Japan's alleged low import propensity, see Ostry [1990, pp. 9-10], and references cited therein. The issue of reducing or eliminating the "special and differential" treatment for the more advanced developing countries has pervaded a number of negotiating groups in the Uruguay Round.

[12] In 1989, the ratio of Japanese investment abroad to foreign investment in Japan was 23.6, up from 20.6 in 1984. See OECD (1987) and also Terry (1990).

on the stock issue, however, which is largely the result of past policies, including overt investment barriers, now for the most part dismantled. The issue of *flows* relates less to overt barriers than to structural characteristics of financial markets and regulatory differences across a number of different policies. Thus policy harmonization will narrow the asymmetry over time and an ongoing, multilateral surveillance process should help contain the political friction stemming from the basic notion of "unfairness", which is at the heart of the reciprocity debate. This would be facilitated by making the process as transparent as possible through publication of analytical studies and "progress reports" at ministerial meetings, for example.

The question of reciprocity of access in technology is in some respects more complex. A firm secures the information necessary to solve technological problems from many sources. The relevant knowledge base varies according to the particular technology, and a distinction can be made between the degree of "publicness" and universality versus "tacitness" and specificity [Dosi, 1988; Nelson, 1990].[13] Scientific inputs are typically public and so is much generic technology, although to access such inputs requires a sophisticated base in research and development. But public knowledge is itself complementary to the more specific and tacit knowledge generated within the firm. And it is the firm-specific knowledge which results in new products and processes.

The crucial point in those distinctions in that, with the necessary investment in research and development, it is easier to access the *public* than the *tacit* part of the knowledge base. If, as in the case of the United States, the knowledge system is characterized by a much heavier weight of university-based research and technology than that of Europe and Japan, that system is *structurally* more accessible.

But there are also avenues of access to tacit, specific knowledge: hiring employees from innovating firms or buying new high-technology start-up firms are examples. Again, in systems where employee mobility is greater, small start-up firms more prevalent and take-

[13] See references cited in Dosi (1988).

overs easier, there will be a greater *structural* accessibility of the non-public knowledge base.

Thus, as in the case of investment, structural characteristics of different systems will generate asymmetry of access to technology. It will be essential to examine these issues in far greater depth and search for policies either to reduce or to compensate for differential access. Moreover, there is one relevant policy issue that could be tackled more quickly. This concerns the question of membership of foreign subsidiaries in government-sponsored research consortia where specific reciprocity conditions could be spelled out as a first step in dealing with the broader issues raised earlier. The worst way of dealing with the problem of access asymmetry would be to attempt to stem the flow of knowledge across borders.

Conclusions

In the present article, a proposal has been put forward for promoting the convergence of a range of policies selected because of their direct or indirect impact on innovation and competitiveness. The list is suggestive, not exhaustive. Other candidates could include the taxation of TNCs; standards and testing procedures in selected leading-edge sectors; intellectual property norms; and standards and enforcement procedures to further the convergence process launched in GATT. The alternatives to promoting convergence are continuing friction, instability and aggressive bilateralism or an exclusionary form of managed trade.

Finally, such an initiative should be seen as a complement to the efforts of the Uruguay Round to strengthen GATT. If those efforts proved successful, and in particular if a World Trade Organization (WTO) is established, it would be important to ensure that strong informational links are forged between the chosen multilateral forum and the secretariat of WTO. In the early 1980s, much of the analytical work on trade and investment in services, intellectual property, investment and agriculture was carried out by OECD, the World Bank and UNCTC, and proved invaluable in helping launch and facilitate the Uruguay Round negotiations. Perhaps at the end of the new harmonization initiative proposed in this article, one could fore-

see a set of codes developed and then transferred to WTO for broader application. After all, the basic purpose of international policy cooperation is to further global integration by extending and adapting the multilateral rules-based system. ~

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