# *Chapter 11*

# Comparative advantage and structural change: Toward a complementary policy regime

*by*
Peter A. Petri and Michael G. Plummer[1]

*This chapter outlines a pragmatic framework for the structural policies needed to complement trade liberalization within the context of comparative advantage. Its recommendations are eclectic — ranging from efforts to identify key areas of market failure to policy experiments and the analysis of successful past experiences in developing institutions and infrastructure. The goal is to strengthen an economy's ability to maximise benefits attendant from specialising in comparative advantage industries, while providing support to facilitate structural adjustment and ensure that the benefits from structural change are widely shared. The tools recommended are in turn based on strategies that can be (and often have been) implemented by governments subject to the usual political, informational and capacity constraints.*

An early and enduring insight of economics is that international trade tends to improve an economy's aggregate income. This result follows in large part from the reallocation of factors of production from less to more efficient activities. But the implied structural changes may be far from simple; for example, they could lead to substantial reallocation of income and the temporary unemployment of resources. Importantly from a political economy perspective, workers often need to move within and across sectors, sometimes at considerable cost, and the most vulnerable— e.g. unskilled workers and those with outdated skill sets – may bear a large part of the burden. Trade-induced structural change may facilitate economic renewal and growth, but it often comes with social costs which invites vigorous resistance.

Not only is structural change a consequence of trade, but it may also affect trade. As we have seen throughout this volume, exploiting comparative advantage needs to be at the core of the structural reform process. But comparative advantage is itself a dynamic process; as noted by Irma Adelman (2000):

> *The process leading to the acquisition of dynamic comparative advantages is complex and multifaceted. New comparative advantage is achieved through a large variety of coordinated means whose nature and magnitude change dynamically: investment in specific factors of production (the acquisition of special skills and human capital; and the construction of plants and machinery) and in infrastructure (roads, ports, airports, electricity generation, telecommunication facilities, etc.); the creation of an enabling policy environment which restructures incentive systems; the building of institutions…; and through technology policy. This implies that comparative advantage is man-made, not God-given. Strategic approaches to the development of dynamic comparative advantage requires a dynamically changing, anticipatory, thrust of policy initiatives.*

Governments often play a role in helping an economy realize its potential via specialization in comparative advantage industries. As we argue below and indeed throughout this volume, this is usually best accomplished not by "picking winners," but by policies that improve the quality of factors of production and facilitate adjustment. Indeed, like all things "man-made", government action, particularly targeted trade policies such as those that focus on a specific economic activity or sector, may actually work to the detriment of long-term productivity growth and economic welfare.

Thus, there is an important two-way relationship between trade and structural change. Moreover, this relationship is important for economic, political-economic, and social reasons. In this chapter, we attempt to provide a theoretical and practical framework for developing complementary policies in facilitating trade and structural adjustment. The goal is a forward-looking perspective on policies that promote comparative-advantage-based trade and smooth the structural changes that inevitably accompany trade in a dynamic global economy. This chapter argues that such a policy mix is essential for maximizing the benefits of economic openness in the on-going process of globalisation.

## Comparative advantage and structural change

Trade promotes production efficiency through, *inter alia*, specialization, cheaper and a greater variety of productive inputs and consumer goods, and technology transfer. The openness of markets to competition can provide a powerful incentive for the allocation of resources toward their most productive use. Openness helps economies to compete by not only offering new opportunities for sales (i.e. exports), but also by making available to producers the widest range of inputs at the highest quality and lowest prices (see e.g. Chapter 7). According to the World Bank, in the 1990s per capita real income grew more than three times faster for those developing countries that lowered trade barriers (5.0% per year) than for other developing countries (1.4% per year).[2] And while openness to trade can lead to short-run contractionary effects on employment, it also allows for a faster recovery: An economy that is more open is also more agile and adaptable because it is less constrained by the limits of domestic demand. Singapore, which is among the most open economies in the world, is an excellent case in point. In the first quarter of 2009, the economy contracted by 9%; by the first quarter of 2010, it was expanding by 17%.

As Part I of this volume has argued, comparative advantage continues to be a key driver of international trade. Comparative advantage is being driven by traditional channels (i.e. changing endowments of factors of production) as well as policy-related channels. A major conclusion has been that comparative advantage continues to be an important determinant of international trade (see Chapters 4 and 6). Thus, structural adjustment policies that facilitate adjustment toward an economy's dynamic comparative advantage are also likely to improve its long-run competitive prospects. Policies that work against comparative advantage, however, are likely to lead to opposite results. We focus on this key point in this section.

A substantial body of experience with "export promotion" (EP) and "import substitution industrialisation" (ISI) approaches to trade policy provides contrasting examples.[3] The EP approach refers to a vector of trade- and trade-related policies that ensures that the incentives to export balance with incentives to produce for import-substitution. This can be accomplished either via an open trade regime or one that compensates for any import protection by offering incentives for export. The Singapore and Hong Kong, China experiences are consistent with the former; those of Japan and South Korea would be consistent with the latter. It should be noted, however, that with tighter rules on export-related subsidies and incentives beginning in the 1980s, the only option for an EP regime tends to be in the area of openness. In any event, the key point of EP is to create a neutral trade regime and let the economy find its own comparative advantages and facilitate structural change in the direction of efficiency. The ISI approach takes exactly the opposite track; it emphasises that developing economies need to embrace protectionism in order to break off from the dominance of "core" (developed) economies and diversify production to embrace a broad range of goods, rather than be "locked in" to the production of a few, natural-resource-based goods. Hence, EP and ISI differ in that one embraces comparative advantage whereas the other rejects it.

Economic results strongly support the EP model. Many OECD countries have long embraced EP, and developing economies, particularly in Asia, that have moved from ISI to EP have done far better than those that have retained ISI. These economies were not "locked into" the production of a few primary good products but rather industrialised beginning with the exports of labour-intensive manufactured products before working their way up to the production of more sophisticated, skill-intensive goods. Indeed, while

almost all economies — developed and developing — continue to protect parts of their economies, this tends to be due to political reasons rather than confidence in some alternative model of development. The G-20 declarations, made by key developed and developing countries, clearly recognise the need for trade policies based on EP.

Embracing comparative advantage does not mean rejecting the role of policy. On the contrary, policy makers can often reduce the costs of adjustment and increase its speed by supporting efficient structural change. Japan is an excellent case in point. The government had a key role to play in the Japanese economy in the 1950s and 1960s, but its most successful policies related to what we have called in this volume "complementary policies," such as investments in gender-neutral education, training, and infrastructure (World Bank, 1993). When Japan was a labour-abundant country in these early years, it exported labour-intensive goods. As capital accumulated and its economic structure changed, so did its export mix. The approach proved to be extremely effective in ensuring full employment of factors and economic efficiency. The earlier experience of Brazil might offer an opposite example. In the 1960s and 1970s, it embraced enthusiastically ISI and did have a number of strong growth years. But ultimately the inefficiencies created by its ISI model proved counterproductive. By attempting to contradict comparative advantage by protecting capital-intensive sectors (e.g. automobiles) in this labour abundant country, it essentially favoured capital over labour and manufactures over agriculture, and the result was inefficiency, an unemployment problem, one of the worse income distributions of any large country, and a severe poverty problem. With its economic reforms in the 1980s and 1990s, Brazil too adopted an EP approach, with significant success.

Policy is especially important in the context of market failures encountered in the process of development. These may range widely from underdeveloped financial systems to lack of infrastructure and the absence of coordinated decisions in activities that depend on each other to be viable. Lin (2010) demonstrates that development theory has progressed through multiple rounds of revision in the last half century. The earliest "structuralist" theories argued that following comparative advantage might in fact lead to stagnation. It assumed that that market failures were so pervasive in the early stages of industrialization that only "big bang" approaches to stepping up the rate of investment (through international aid or borrowing) and to solving coordination problems (through planning) could lead to an economic takeoff. State intervention at all levels of the economy, therefore, was deemed necessary. This approach ultimately led to unsuccessful ISI strategies. In turn, the next round of analysis refocused attention on comparative advantage and the need to avoid rent-seeking and unproductive investments. But its prescriptions for rapid, wide-ranging liberalization also produced disappointing results in many cases. A third wave of analysis then highlighted the importance of enabling market institutions that were required to make economies operate efficiently. But this approach led to a frustrating conclusion — namely that to achieve successful outcomes, governments needed to engineer fundamental changes in many aspects of the economic environment, including in their financial and legal systems. In short, this would lead us to the conclusion that approaches to economic development need to be comprehensive.

Contemporary research — which might be viewed as the fourth generation of development economics — is aimed at finding more pragmatic and, perhaps, limited solutions. After all, many countries, including a long list of Asian economies, have achieved rapid growth without solving all institutional challenges; what lessons can be drawn from their experience? Hausmann and Rodrik (2005) proposed a "diagnostic approach" that attempts to identify the most binding constraint(s) on development and

focus limited policy resources on relieving those. Duflo (2006) with a group of scholars at MIT go a step further, and attempt to subject policy recommendations to experimental assessment. Finally, Lin and Monga (2011) propose a microeconomic approach, featuring the "identification and facilitation" of industries similar to those that have proved successful in countries at roughly twice an economy's current income level. Of course, such an approach is controversial and loaded with potential problems, particularly given the rapidly-changing global economy that suggests the present may be a poor indication of the future. Moreover, it might entail "picking winners" with its associated problems. In any event, the common theme of this recent work is that to be useful, theory needs to produce relatively simple and tailored approaches to policy, which in turn can be put to scientific testing over time.

The framework that emerges from these efforts is pragmatic in intent and highlights both the importance of comparative advantage and the structural policies that are required to complement trade liberalization in the development process. Its recommendations are eclectic, ranging from efforts to identify key areas of market failure to policy experiments and "peer learning" of successful past experiences in developing institutions and infrastructure. The goal of this work is to strengthen an economy's ability to benefit from comparative advantage. The tools it recommends are in turn based on strategies that can be (and often have been) implemented by governments subject to the usual political, informational and capacity constraints.

## Complementary trade and structural policies

The policy recommendations that emerge from this approach are two-fold. On one hand, it argues for wide-ranging liberalization of international trade and investment flows to take advantage of the economy's comparative advantage. On the other hand, the approach suggests policies to facilitate adjustment in labour and capital markets in order to enable resources to move smoothly to new areas of economic activity. It also suggests investments in public infrastructure — physical and institutional — that can support the shift into new areas of economic activity consistent with an economy's evolving factor endowments and factor prices.

The trade liberalization part of this policy mix creates larger markets for competitive firms and new opportunities for investment. It raises incomes in the long run through its impact on an economy's overall productivity. Importantly its benefits derive from trade generally — that is, from both exports and imports — by improving the allocation of productive factors and expanding the consumption opportunities available to households (see, for example, Chapter 7).

Unfortunately, many observers associate the need to create jobs in the short run with trade policies that are more restrictive rather than more liberal. It is indeed possible to create domestic jobs in one country by erecting barriers to imports in industries with competitive domestic firms. However, in contrast to liberalization, such policies eliminate jobs abroad, invite foreign retaliation, and ultimately reduce productivity and real incomes at home. The ISI paradigm mentioned above collapsed in large part due to a failure to recognise these fundamental problems.

As argued in OECD *et al*. (2010), appropriately designed trade liberalisation policies can create jobs domestically in the short run without eliminating jobs in foreign countries, as well as generate income gains in the long run. An important caveat is that such liberalisation needs to be timed and structured in ways that prevent excessive disruption

to an economy in the adjustment process. For example, sudden, comprehensive trade liberalisation in a small country could lead to a sharp increase in imports, leading to a contraction of import-competing sectors. It may take time and investment to employ the resources released by these sectors in others in which the economy has comparative advantage. Thus, excessively rapid reform could lead an economy to perform under capacity for a considerable period of time, with the duration depending on the flexibility of the economy. Stiglitz (2002) emphasises the need to create a "comfort zone," in which policy makers can be reasonably certain that the destruction of jobs due to trade liberalisation is less than the creation of new employment. Thus, the timing of reform needs to be appropriate and accompanying policies facilitating structural adjustment need to be in place.

When in the economic cycle should reforms be implemented? Stiglitz's approach would suggest that it should be done when the economy is reasonably close to full employment—then the gradual processes of job creation in the economy will absorb any temporary job dislocations from trade reform. But if the economy is not "broke", can the political system be mobilized to "fix it"? And if the economy is broke (i.e. in recession), a unilateral trade liberalization program may not meet the requirements of Stiglitz's comfort zone.

Even if unilateral trade liberalisation by a country were to affect its employment negatively in the short run – which is not necessarily the case – it will be always possible to design coordinated policies in several countries that generate positive results for all, from an economic perspective. The interesting implication is that while countries have incentives to liberalise independently under favourable economic conditions – that is, when they are within their comfort zones due to high employment levels – they may need to coordinate liberalisation policies when they face unemployment. However, unemployment may make each country reluctant to liberalize exactly when liberalization (and especially the avoidance of protectionism) is most urgently needed for reducing unemployment everywhere. Trade cooperation, a central goal of the WTO framework, is an especially high priority in periods of crisis such as those under the global recession of 2008-2009.

Regardless of when and how trade liberalization is implemented, complementary structural measures that facilitate adjustment can make it more effective and less costly. These policies could include a wide variety of possibilities, such as labour market policies that provide pecuniary benefits to compensate for job loss stemming from trade, educational and other training programs to integrate workers into expanding sectors, information exchanges that facilitate the matching of job seekers with job opening, and so on. They could include policies that provide support for trade finance, especially for smaller companies that tend to be most impacted by financial constraints in periods of change. In addition to having a strong equity and efficiency component to them, such complementary policies may help to ensure the social sustainability of reforms.

In times of unemployment, the jobs created by liberalization will be amplified by income multipliers. The multipliers associated with liberalisation are likely to be much larger than those associated with government spending, because demand created by liberalisation represents a permanent increase in welfare; it does not create public debt and hence does not induce precautionary saving.[4] The multipliers will be especially large if several major economies adopt concerted liberalization policies together. Moreover, in contrast to conventional fiscal stimulus measures, the benefits associated with employment generated by liberalization do not fade away as an economy returns to full

employment. At that point, of course the employment-generating effects of liberalization become less relevant. But the benefits of liberalization do not disappear; rather, they show up in the more usual form of raising the productivity of the world economy and thus rising real incomes.

## Trade liberalization strategies

The broad case for liberalisation holds regardless of whether other countries also liberalise. Still, a group of economies can be better off by liberalising together, that is, via concerted unilateral liberalisation. Liberalisation enhances the efficiency and competitiveness of an economy by creating an environment in which it exploits its comparative advantage. But the degree of protection in other economies also matters. For example, if a country has inherent comparative advantage in agricultural products, the market access provided by other countries for its agricultural exports will affect the degree to which it can specialise and improve its terms of trade, and thus benefit from its liberalisation program. Comparative advantage is dictated by international relative prices; therefore, the protective structure in foreign countries is relevant to the potential for exploiting comparative advantage.

Thus, countries have a strong incentive to cooperate in reducing barriers to economic interchange at many levels, including multilateral and regional/bilateral levels, as well as in concerted fashion. Below, we consider several alternative approaches to further liberalisation, that is, multilateral cooperation; regional co-operation; and means to pursue concerted liberalisation.

### *Multilateral co-operation*

From an efficiency viewpoint, multilateral liberalisation on a most-favoured-nation (MFN) basis tends to yield the best outcome from a global perspective and from the perspective of individual economies.[5] Yet this can be difficult to achieve. The Doha Development Agenda (DDA) negotiations began in November 2001 and, as of the time of our writing a decade later, a successful agreement has not yet been forthcoming. Negotiators will not be able to reach the comprehensive "single-undertaking" that they had set out to achieve in the near term, but there has been talk of alternative deliverables (e.g. on trade facilitation, tariff-free/quota-free access to WTO member markets for least-developed economies) or "early harvests" by the end of 2011. These, too, are proving elusive.

Such a modest (if any) "success" is disappointing after so many years of negotiation, particularly since the DDA began essentially when regional trading agreements (RTAs), which we define for simplicity to include bilateral and plurilateral accords, began to flourish. At the same time little has happened at the multilateral level, the number of RTAs, including both goods and services, notified to the WTO has ballooned to 489 (as of 15 May 2011[6]). Now, *ceteris paribus*, MFN-based agreements are superior from an efficiency point of view because they do not give preferences across countries, whereas RTAs do (as discussed below). On the other hand, RTAs tend to be more symmetric in terms of coverage and level of protection (Plummer, 2007); according to Article XXIV of the WTO, for example, coverage should be essentially all goods and the level of protection should be at zero. GATT/WTO rounds in the past have yielded a great deal of asymmetry in terms of level of protection and are less comprehensive, at least in the case of the more modern RTAs. In theory, discrimination across goods and services in an

unbalanced, weak "Doha-Lite" accord could generate more deleterious economic effects than discrimination across countries.

In sum, it is easy to make a strong economic case for an ambitious, comprehensive DDA, but political realities have prevented such an accord in the form of a single-undertaking from happening, at least for the time being. Selected agreements, perhaps led by the G-20, could advance the multilateral liberalization agenda by urging the conclusion of large sectoral agreements, either as part of the DDA package, or independently. Relatively early agreement may be achievable, for example, in Environmental Goods and Services (EGS), either in the WTO or in a plurilateral forum such as APEC. (The Information Technology Agreement was first agreed in APEC and then forwarded to action in the WTO.) Care has to be taken, however, to make sure that such sectoral accords will not create distortions inherent in partial approaches to trade liberalisation (e.g. by exacerbating "effective" rates of protection). And, of course, these agreements have also proven to be politically difficult to implement.[7]

### *RTAs*

There are many factors behind the regionalism trend globally, and an extensive review is beyond the scope of this chapter, particularly since each agreement may have a different set of reasons. One important motivation for RTAs is that multilateral efforts appear to be producing little progress on updating the framework of international trade relations to requirements of the changing global business environment—including, for example, the dramatic rise of emerging economies and of services trade. RTAs may be able to produce the "deep integration" that the WTO has yet to be able to deliver. In order to facilitate the construction of production networks and profit from the process of fragmented trade, it is critical to remove as many obstacles to trade and investment as possible, and RTAs between two (or a small group) of like-minded countries is easier to achieve than in the context of the WTO. While a successful DDA would reduce the potential negative effects of regionalism (at the margin), it would not stem the growth in the RTA movement, especially in Asia, where international production networks require a "deeper"[8] integration agenda than could ever be expected to emerge out of the WTO in the medium- (or even long-) term. The economic-development strategy of Asia is predicated on outward-orientation, and the deep integration measures associated with RTAs appear to be a more effective means of advancing globalization at present.

Some countries pursue RTAs in order to avoid discrimination against their products in important markets. As noted by Jacob Viner (1951), the discriminatory nature of RTAs leads to the potential for partner countries to have an advantage over non-partner countries in terms of market access. This could lead to "trade diversion", which not only hurts non-partner countries but also is costly to the "home" country, which ends up sourcing its imports from a higher-cost country. At the turn of this century, essentially all developed countries were embracing discriminatory trading arrangement with potential trade- and investment- diverting implications for excluded countries. Europe had been implementing deeper regional initiative between its member-states and former colonies for about a half century; however, the "deepening" of integration had increased substantially in the 1990s. The United States had few preferential trading arrangements before 2000 but then bilateral RTAs became an important part of its commercial policy in subsequent years and continues to be a major force today. This consideration becomes more important as globalization continues apace (and multilateral cooperation continues to be stalled).

While some economists support RTAs due to their generally positive trade and investment effects, the second-best nature of RTAs has led others to question their economic effects, especially with respect to the potential diversion effects of rules of origin. The debate over the pros and cons of RTAs is not likely to be resolved soon. However, most economists do agree that RTAs should be as consistent with non-discrimination and "best trade practices" – as expressed for example in Article XXIV of GATT – as far as possible.[9] RTAs are generally strongly supported by the private sector, and that offers some assurance that they reduce the costs of doing business and barriers to international trade.

### *Concerted liberalisation*

Still another approach — often described as "concerted liberalization" or "open regionalism" — combines the non-discriminatory aspects of the WTO with the regional approach of RTAs. In this case, a group of countries agrees to remove barriers to trade and investment jointly on a non-discriminatory basis. The "Bogor Vision" of APEC, which was to create an open market for trade and investment by 2010 (2020 for developing countries), was based on this approach. The problem with such an approach is not so much in the economics as in the politics. For example, if APEC countries remove their barriers to trade on an MFN basis, the group is large enough to generate significant gains for all participating economies. In theory, this should be enough to induce them to adopt the concerted liberalization policy. But the policy would also produce benefits for non-member countries without their having to contribute. This will be difficult to sell to politicians in member countries, who would like all potential beneficiaries to "pay" for their benefits. Not surprisingly, the Bogor Vision has been difficult to implement, and even APEC has endorsed a "Free-Trade area of the Asia-Pacific," which is generally envisioned as an RTA.

## Structural change strategies

The second dimension of a welfare-increasing policy mix consists of structural policies that enhance an economy's ability to exploit comparative advantage. These policies, along with trade liberalisation, may create new opportunities for profit and generate additional demand and investment, and hence jobs (in the context of less-than-full employment economy). Broadly, they fall into two categories: (a) policies that facilitate shifting resources from old to new areas of comparative advantage, and (b) policies that raise productivity or improve factors of production in areas favoured by comparative advantage. The first group might include policies to improve labour market flexibility, while the second group could, for example, include creating a strong regulatory or research infrastructure to support bio-technology industries. Factor market reforms often facilitate both policy categories.

### *Improving labour markets*

A critical group of structural policies affects the functioning of labour markets themselves because they generate benefits independently of other policies, and because they help to maximize the impact of all trade liberalisation strategies. People have to know about the jobs created by reform, suggesting the need for efficient and easy-to-access information channels; they have to be in the right place at the right time; and they must have the skills and incentives to fill newly opened positions.

The labour market reforms that achieve these objectives will differ widely across countries, given their diverse labour market structures, but international and regional cooperation can highlight their importance and ensure that international institutions stand ready to support national initiatives. The likely modalities of support will include analysis, capacity-building and, in the case of developing countries, development lending.

Smoothly functioning, well-developed labour markets involve at least three challenges. The first regards market flexibility. In mature economies, the relevant reforms would embrace policies that are pro-job creation by reducing the cost of labour to firms by, for example, reducing payroll taxes, easing bureaucratic impediments to employment creation, and creating unemployment benefits that allow labour markets to respond to wage signals. In developing economies, the appropriate reforms would involve safeguarding the bargaining positions of individual workers and improving working conditions (OECD, 2010b).

A second challenge is to assure smooth labour mobility across sectors and regions. Some advanced economies need to ease regulatory and financial constraints on mobility (OECD, 2010b) and improve the portability of job-related benefit such as pensions or health insurance. Some developing countries, in turn, need to eliminate or simplify legal regulations on regional and international migration. In both cases, there may be a need for long-term efforts to reduce language and cultural barriers among geographical regions.

A third challenge is to match the supply of skills with demand. This is true even in countries with generally high educational standards. Periods of reform, rapid technological change, and large transformations of the global economy can dramatically change the distribution of jobs and their skill requirements, and it is challenging for any economy to keep pace with the changing profile of human capital need. Thus, steady efforts to offer retraining and technological upgrading are needed even for people with considerable formal education.

### *Improving capital markets*

The capabilities of capital markets vary greatly across countries, but many face common challenges associated with the internal logic of finance. The core imperfection of capital markets is the asymmetry of information between borrowers and lenders. Most sophisticated financial systems have developed institutions to address this challenge – ranging from relationship-based systems to specialized financial information providers. In developing countries, however, the range of financial markets and institutions is much more limited, and often credit fails to reach important classes of borrowers.

Even in sophisticated economies, some types of firms – typically those in new, small-scale, innovative sectors – find it difficult to obtain capital, particularly in times of financial stress. This limits the flow of resources across sectors and regions, especially in times of rapid change such as trade liberalization or exchange rate adjustment. Countries often provided subsidized capital to exporting firms in the past, especially in managing such periods of change, but WTO disciplines now prohibit such interventions. The challenge today is to monitor financial access, especially in periods of stress or change, to ensure that information-sharing and insurance mechanisms exist, and to provide firms with technical assistance in navigating these complicated markets. Moreover, the need to ensure adequate trade finance, particularly for developing economies, in times of stress has become a priority for multilateral and regional development banks in the wake of the 2008-2009 crisis.

### *Infrastructure*

Lin (2010) argues that appropriate infrastructure development is essential for exploiting comparative advantage at certain stages of development. For example, good access to electric power, ports and roads is essential for building large-scale, efficient metal-working and construction industries. In Korea, ports developed in part for the military efforts associated with the Korean War played an important role in laying the foundations of a leading shipbuilding industry. There are important unmet needs for physical infrastructure in virtually all developing economies and some developed ones, as analyzed, for example, in Hallaert *et al*. (2011).[10] At the same time, institutional infrastructure is essential for advanced, knowledge-based industries. Education, good communications systems and intellectual property protection are key elements of the infrastructure required for success in telecommunications services and business process outsourcing.

### *Service sector reform*

The share of services in value added and employment is large and rising in most economies, yet productivity levels remain more widely dispersed than in the production of goods. Services tend to be labour-intensive, employment-generating, and until recently, difficult to trade. But liberalisation of services trade is complicated, as policy barriers tend to be "behind-the-border" and, therefore, more difficult to address in bilateral and multilateral forums. Moreover, service industries are often protected by more significant natural barriers than international production sectors, which is why many services categories are even characterised as "non-tradeable." The continued reduction of policy barriers and, where possible, natural barriers represents a major source of potential productivity gains, facilitated by innovations in information technology. International support for service sector reform – through analysis, capacity building and, as appropriate, development lending – is well justified. Such efforts would usefully complement the liberalization of trade and investment in services.

## Conclusions

The framework that emerges from these efforts is pragmatic in intent and highlights the structural policies that are required to complement trade liberalization in the development process within the context of comparative advantage. Its recommendations are eclectic – ranging from efforts to identify key areas of market failure to policy experiments to ideas on how to frame the broad context within which trade takes place. The goal of this work is to strengthen an economy's ability to maximise benefits attendant from specialising in comparative advantage industries, while providing support to facilitate structural adjustment and ensure that the benefits from structural change are widely shared. The tools it recommends are in turn based on strategies that can be (and often have been) implemented by governments subject to the usual political, informational and capacity constraints.

We have noted that there is a strong economic incentive for countries to engage in economic reform on a concerted basis, for both economic and political reasons. The first-best solution is likely to be a successful conclusion to an ambitious, deep DDA package, complemented by outward-oriented RTAs based on best practices and other forms of concerted liberalisation. Should the former prove to be impossible to achieve in the short-medium term, then a focus on the latter forms of co-operation would be appropriate.

Included in this vector of concerted initiatives would be the G-20, which has emerged as an institution that is well-placed at the centre of global efforts to promote "strong, balanced, sustainable growth" through structural measures. The task of replacing the current short-term macroeconomic interventions – which will have to be exited – with an effective medium-term structural agenda represents the G-20's greatest challenge in the months ahead. Certainly, trade policy should be an important part of this agenda.

This shift will require the G-20 to address more complex policy options and implementation modalities than were needed for handling short-term macroeconomic issues. It will also require new partnerships between the G-20 and international organizations to bridge the gap between global objectives and the varied national policies that are needed to implement a structural agenda. International institutions, such as the OECD, can help the G-20 operationalise its policy objectives, focusing on structural policies linked to their long-standing areas of expertise.

Coordination might take the form of a "scissors" approach, with simultaneous steps by the G-20 and the international organizations to converge on effective collaborative strategies. On one hand, the G-20 might set priorities and principles for implementing structural reform, and on the other, international organizations might propose solutions – together or possibly even in competition with each other – for assessment and alignment with global priorities.

The global economy has changed almost beyond recognition over the past quarter-century; while reading tea leaves holds perils, it would appear that this dynamic transformation will continue. Governments need to be responsive by keeping up with markets and creating a facilitating environment for structural change based on comparative advantage. Hopefully, the above analysis sheds some light on which policies government might embrace to this end, as well as those that should be eschewed.

# *Notes*

1. Peter A. Petri, Dean, International Business School, Brandeis University, United States, and Michael G. Plummer, Head of Development Division, Trade and Agriculture Directorate, OECD. The views expressed are those of the authors alone and are not meant to represent the views of the OECD or any of its members.

2. As cited in OECD, 2010, "Why Open Markets Matter," *www.oecd.org/document/24/0,3746,en_2649_37431_45274200_1_1_1_37431,00.html* .

3. We might identify the policy experiences of Asia with the former and Latin American with this latter. Such attribution is, of course, simplistic: there were many Asian economies that embraced ISI at some point, and many Latin American economies have embraced EP. Still, at key points in their industrialisation/development paths we might argue that Asian chose EP and Latin America ISI.

4. Government expenditures that result in public debt are likely to have offsetting savings effects as households anticipate future tax increases (in technical terms, "Ricardian equivalence"). Thus, the multiplier effects of liberalisation will be larger than those of deficit-financed government expenditures.

5. From an individual country point of view, in theory there are three reasons why global free trade may not be best, that is: (1) in the case of a large country, in which the country can use tariffs to affect terms of trade to its advantage (the "optimal tariff" argument); (2) for developing countries, in which financial bottlenecks and "learning by doing" externalities may create the incentive to have in place (temporary) tariffs to protect "infant industries"; and (3) "strategic trade policies," which, in the context of a large developed country in which there is imperfect competition, trade policy can be used to shift profits from foreign to domestic firms. While theoretically possible, in practice these arguments all have problems. For example, countries do not systematically use tariffs merely to manipulate terms of trade to their advantage, which, among many other problems, would invite retaliation; picking what is truly an "infant industry" is very difficult, and removing protective tariffs to allow them to "grow up" tends to be difficult politically; and "strategic trade policy" is difficult to devise even in theory and such an explicit approach to trade would certain lead to retaliation.

6. WTO, *www.wto.org/english/tratop_e/region_e/region_e.htm*, accessed 10 June 2011.

7. For example, the APEC "Early Voluntary Sectoral Liberalisation", proposed in the wake of the successful Information Technology Agreement, ended in failure. Moreover, the "alterative" packages proposed during the spring and summer of 2011 for the WTO Ministerial in December 2011 have not yet borne fruit.

8. Consistent with the literature, by "deeper" here we refer to policies that go beyond traditional tariff barriers to include policies such as various non-tariff barriers, services barriers, customs reforms, and other behind-the-border measures.

9. See, for example, Plummer (2007).

10. This work underscores that infrastructure, in particular electricity, constitutes a key binding constraint on international trade.

# *References*

Adelman, I. (2000), "Fifty Years of Economic Development: What Have We Learned", pp. 20-21, *www.ekh.lu.se/lektionsplaner/ekhb10/adelman.pdf*.

Duflo, E. (2006), "Field Experiments in Development Economics", prepared for the World Congress of the Econometric Society, Department of Economics, January (mimeo), available at *econ-www.mit.edu/files/800.*

Hallaert, J.J., R.H. Cavazos Cepeda, and G. Kang (2011), "Estimating the Constraints to Developing Countries' Trade : A Taxonomy of the Binding Constraints to Trade Expansion of Landlocked Countries, Small and Vulnerable Economies, and Commodity Exporters", mimeo, April, *papers.ssrn.com/sol3/papers.cfm?abstract_id=1798543*

Hausmann, R. and D. Rodrik (2003), "Economic development as self-discovery", *Journal of Development Economics*, Vol 72, pp. 603-33

Lin, J.Y. (2010), "New structural economics: A framework for rethinking development", World Bank, *Policy Research Working Paper 5197*, February.

Lin, J.Y. and C. Monga (2011), "Growth Identification and Facilitation: the Role of the State in the Dynamics of Structural Change", World Bank, *Policy Research Working Paper 5313*, January.

OECD, ILO, World Bank, and WTO (2010), *Seizing the Benefits of Trade for Employment and Growth*, prepared for submission to the G-20 Summit Meeting, Seoul, Korea, 11-12 November, available at *www.oecd.org/dataoecd/61/57/46353240.pdf*.

OECD (2010a), "Why open markets matter," *www.oecd.org/document/24/0,3746,en_2649_37431_45274200_1_1_1_37431,00.html*.

OECD (2010b), "Labour markets and the crisis", *Economics Department Working Paper* No. 756, OECD, Paris.

Plummer, Michael G. (2007), "Best Practices in Regional Trading Agreements: An Application to Asia", *The World Economy*, Vol. 30 (12), pp. 1771-1796.

Stiglitz, J. (2002), *Globalisation and Its Discontents*, Penguin Books, London.

World Bank (1993), *East Asian Miracle: Economic Growth and Public Policy*, World Bank, Washington, D.C.

**From:**

# Globalisation, Comparative Advantage and the Changing Dynamics of Trade

**Access the complete publication at:**
https://doi.org/10.1787/9789264113084-en

**Please cite this chapter as:**

Petri, Peter A. and Michael G. Plummer (2011), "Comparative advantage and structural change: Toward a complementary policy regime", in OECD, *Globalisation, Comparative Advantage and the Changing Dynamics of Trade*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/9789264113084-13-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.

OECD