

ECONOMIC GLOBALIZATION: HOW FAR AND HOW MUCH FURTHER?

by

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Abstract

The concept of globalization has received a great deal of popular attention in recent years. However, the term is often used quite loosely. When defined to mean closer international economic integration the evidence shows that the extent of globalization may easily be exaggerated. This article examines the evidence and assesses the benefits from and costs of globalization. It goes on to discuss how the costs might be mitigated and briefly examines the role of the principal international trade and financial institutions.

Key words: capital flows, finance, financial crises, globalization, trade

JEL Classification: F15, F21, F22, F36

1. Introduction

Popular discussion about the term “economic globalization” has typically been long on rhetoric and loose generalizations and short on specifics. Economists have tended to prefer to use the notion of international economic integration with this covering both trade and finance. Closer integration has been fostered by three factors. First, are the innovations and advances in transportation, information and communications technologies (Baldwin and Martin, 1999). Second, is the shift in perceptions about the appropriate role of the government and a broad global consensus on the need for market-friendly policies as a means of rapid and sustained economic growth. Third, is the push by the various international institutions towards global economic liberalization (i.e., reduced policy barriers to trade and investment) - the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO) in the case of world trade in goods and services, and the International Monetary Fund (IMF) in the case of global finance and capital flows. But while so much has been made of globalization, what does the evidence show about the extent to which international economic integration has actually occurred? Can globalization go too far? And should the global institutions be encouraging further integration? Are there constraints on globalization, and how binding will these be? What does the future hold for globalization? It is these questions that this article seeks to address.

2. Globalization of Production and Trade

Globalization of production and trade involves not merely rising trade to GDP ratios - as the growth of world trade consistently outpaces the growth of global output (Table 1) - but more so, the type and rationale for this increased trade. Specifically, international trade is increasingly characterized by “intra-product specialization”, defined as the international vertical disintegration of production of a good into its sub-component parts and processes, which in turn are distributed across countries on the basis of

comparative advantage¹. In the first serious attempt to quantify intra-product trade, Yeats (1997) has suggested that it accounted for close to 30 percent of world trade in manufactures in the 1990s. Although not dependent on it, such intra-product specialization has been facilitated by the expansion of the global operations of multinational enterprises (MNEs). MNEs were responsible for about one third of world trade in the early 1990s. The intricate division of labor in the electronics and auto industries developed by Japanese MNEs since the mid-1980s, and the consequent intensification of intra-regional trade in East Asia, are good examples of this form of trade².

3. Globalization of Finance and Capital Flows

According to the IMF (1998), *financial globalization* is a complex process involving four key elements: a) an increase in the technical capabilities for engaging in precision finance, i.e., for unbundling, repackaging, pricing, and redistributing financial risks; b) the integration of national markets, investors, bases and borrowers into a global financial market place; c) the blurring of distinctions between financial institutions and the activities and markets in which they are engaged; and d) the emergence of globally oriented banks and international financial conglomerates. The 1990s certainly saw accelerated progress towards the liberalization and integration of global financial markets, a process that began in earnest in the 1980s. Developing economies have, since that time, experienced surges of capital inflows. International lending by institutional investors (i.e., pension funds, mutual funds and hedge funds) led to long-

¹ The term “intra-product specialization” has been christened by Sven Arndt (1996, 1998). He also uses the term “super-specialization” to describe this phenomenon. Other terms sometimes used in the literature to describe this phenomenon include “international product fragmentation” (Jones and Kierzkowski, 1997), “Heckscher-Ohlin (HO) plus production fragmentation” (Knetter and Slaughter, 2000), and “slicing the value chain” (Krugman, 1995)

² For recent statistics detailing the extent of such intra-regional production and trade in component manufacturing parts in East Asia, see Ng and Yeats (1999).

term private inflows reaching almost US\$300 billion in 1997, almost seven times the figure in 1990 (Table 2).

The increase in global foreign currency (forex) transactions has been even more dramatic. Daily global forex trades (i.e., traditional instruments of spots, swaps and forwards) increased from US\$18.3 billion in 1977 to nearly US\$1.5 trillion by 1998 (Table 3)³. To put this growth in perspective (Table 4), note that the trade to forex volume (annualized) ratio has declined sharply from 23.9 percent in 1977 to 1.6 percent in 1995. Meanwhile, the ratio between official reserves and daily foreign currency turnover declined from 16.2 days in 1977 to just 1.1 days by 1995. This suggests that monetary authorities have become less well equipped to defend currencies in the face of speculative attacks – a point we take up later.

4. First Versus Second Waves of Globalization

Is globalization a new phenomenon? In fact, the world economy is no more, and, in some ways, is actually less integrated than it was back in 1913 when cross-border transactions costs had been significantly reduced by the advent of the railroad, steam ships and the telegraph in the 19th century and by the automobile and aeroplane in the early 20th century. However, while technological progress continued unabated, the “triple whammy” of World War I (1914 to 1918), the Great Depression (1929 to mid 1930) and World War II (1939 to 1945) effectively halted the trend towards economic globalization. An index of the intensity of globalization over the last century would reveal a U-shape, with a lengthy trough covering the period between 1914 and 1950-60. This being said, there are some important differences in the characteristics of historical and

³ Three points ought to be noted. First, to obtain forex volumes, we need to multiply the daily turnover by 250 (trading days). Second, the growth would have been slower if measured in some other major currency (such as the Deutsche mark or Japanese yen), given the depreciation of the US\$ between 1989 and 1995. Third, there are a number of other issues relating to inter-temporal comparisons of the survey which have been discussed elsewhere (BIS, 1996 and Felix, 1996).

contemporary globalization - the “first” and “second” waves of globalization (Baldwin and Martin, 1999 and Bordo et al., 1999).

In the case of the globalization of production and trade, the pre World War I wave largely involved *extensive growth*, a general increase in the tradability of goods and services. Contemporary globalization, on the other hand, reflects in large part *intensive growth*, i.e., intra-product specialization (at least in the case of manufactured goods). There has also been greater involvement of developing countries in world trade in the more recent wave of globalization.

With regard to financial integration and international capital flows, while privately traded bonds (for infrastructural and transport projects such as railroads) predominated before World War I, the capital flows in the 1990s and beyond have been dominated by equity investments, securitized funds and other short term capital flows (Obstfeld, 1997 and Taylor, 1998). Further, while present day *net* flows may not have reached the peaks attained pre-World War I, *gross* cross-border capital flows are far greater today than ever before.

Finally, unskilled labor is far less mobile across national boundaries now than it used to be (Rodrik, 1997). Thus, John Maynard Keynes is quoted as saying that an inhabitant of London in 1913 “could secure...cheap and comfortable means of transit to any country or climate without passport or other formality.”⁴ While liberalizing capital and trade flows, most industrialized countries have failed to relax – and, in some cases, have even tightened - restrictions on unskilled foreign workers, using them as a buffer to cushion domestic labor shortages. The immigration policies of the newly industrialized economies in East Asia have been characterized by the so-called “3-S” strategy of *skilled, short term* and *sectorally targeted* migration (Freeman and Mo, 1996).

⁴ Referenced in Rodrik (1997).

5. Globalization: Far from Complete

Just how far has the second wave of globalization progressed? *Intra*-country trade between regions still far exceeds *inter*-country trade, even where much smaller physical distances exist between two countries than between two regions in the same country. An oft cited example is the fact that trade between states in the US is on average twenty times more than trade between a Canadian province and a US state (McCallum, 1995). Similarly, Wei (1996) finds that during the period 1982 to 1994 a typical OECD country was on average about two and a half times more likely to buy goods and services from itself than from a trading partner, after controlling for factors such as geographical distance and relative size. Although this “home bias” in trade is tending to decline gradually, with tests of absolute and relative price differentials across countries suggesting growing real sector integration (Knetter and Slaughter, 2000), the process remains far from complete.

Similarly, while the mobility of capital has increased greatly, the degree of financial market integration remains in doubt. Although tests of capital mobility, such as direct comparisons of *on* and *off* shore nominal interest rate differentials of assets of the same type, seem to reveal significant integration, domestic savings and investment correlations remain extremely high (implying that domestic investment is constrained by available national savings). Portfolio choices by US and other industrial resident investors continue to show a significant bias towards domestic assets as opposed to an internationally diversified portfolio⁵. While savings-investment correlations have been on a declining trend over the last 30 years, it is premature to argue that anything close to full financial integration has been attained.

6. What are the Benefits of Globalization?

⁵ In the international finance literature, the former (i.e., high domestic savings-investment correlation) is referred to as the Feldstein-Horioka puzzle. The latter (i.e., lack of international portfolio diversification) is called the “home bias” effect in finance. These issues are elaborated upon in Bayoumi (1997).

The potential *gross* benefits from globalization are well established. In terms of the *globalization of production and trade* they include: a) static gains due to better resource allocation in line with comparative advantage; b) cost savings due to scale economies and enhanced product variety; c) dynamic gains from technology transfer; d) cost reductions from learning-by-doing; and e) reduced unproductive rent-seeking activity associated with reduced trade restraints. In terms of *globalization of finance and capital flows*, they include⁶: a) static resource allocation gains through international specialization in the production of financial services; b) static financial gains through appropriate portfolio diversification internationally; c) dynamic or x-efficiency gains through the introduction of competition in the financial sector; d) gains from intertemporal trade through access to global financial markets; e) the absence of rent-seeking and other costs of capital restraints; and f) the imposition of market discipline on policy-makers by ensuring that profligate policies, such as unsustainable external and fiscal imbalances and debt accumulation, trigger capital outflows and balance of payments/currency crises⁷.

7. Are There Costs with Globalization?

7.1 Globalization and Financial Crises

Most apparent, perhaps, is the fact that closer financial integration has been associated with several episodes of severe financial turbulence in global currency markets. Indeed, since 1992, currency crises seem to have become the norm rather

⁶ For elaborations of these benefits, see Mathieson and Rojas-Suarez (1993).

⁷ Of course, the problem arises when an economy suffers from such crises even when the macroeconomic imbalances are not necessarily unsustainable. There is a class of models which allows for multiple equilibria and show how currency runs may be “self-fulfilling”. The focus of these models is on the existence of a tradeoff faced by policymakers between the benefits of retaining a pegged exchange rate, on the one hand, and the costs of doing so, on the other. This set of models stresses that while speculative attacks are not inevitable (based on underlying bad fundamentals), neither are they arbitrary or random (i.e., unanchored by fundamentals). Rather, there must exist some weaknesses in the economic fundamentals of the country for an attack to occur, as the credibility of the fixed exchange rate regime is less than perfect (Obstfeld, 1996).

than the exception. Specifically, in 1992-93, Europe was faced with the very real possibility of a complete collapse of the European Exchange Rate Mechanism (ERM). The Italian lira and British pound withdrew from the ERM, three other currencies (viz., the Spanish peseta, Irish pound and Danish krona) were devalued, and there was a substantial widening of the bands within which the currencies could fluctuate. In 1994-95, there was the Mexican currency crisis, which saw a steep devaluation of the peso and Mexico on the brink of default. There were also spillover effects on Argentina and Brazil (so-called "Tequila effect"). Between July 1997 and mid-1998, the world experienced the effects of the East Asian crisis, which started somewhat innocuously with a run on the Thai baht, but spread swiftly to a number of other regional currencies, most notably the Indonesian rupiah, Malaysian ringgit, Philippine peso and Korean won (so-called "Tom-Yam effect"). Other large emerging economies such as Russia and Brazil also experienced periods of significant market weakness and required the assistance of the IMF. The Russian ruble was devalued in August 1998, while the Brazilian real's peg was eventually broken in January 1999. A number of other smaller emerging economies such as Turkey and Ecuador also experienced currency crises in the 1990s. The World Bank (2000, p.47) has stressed that

such financial crises have underlined how...financial integration, exposes developing countries to external shocks. These shocks often reduce the gains in poverty reduction from openness and increase poverty significantly in the short to medium term. This fact underscores the importance of addressing the issue of volatility in order to maximise the positive effects of growth on poverty reduction

With this in mind, a completely *laissez faire* attitude towards international capital movements may be misplaced. The lessons drawn from the East Asian, ERM and Tequila crises seem to provide justification for at least considering the imposition of some form of restraints on international capital flows. At the risk of over-generalization, the first best rationale for such levies (on a *permanent* basis) is based on the existence of capital market distortions. These include the existence of multiple equilibria in foreign

exchange markets and the herd behaviour of financial market participants. The second best rationale (for *temporary* controls) includes the possibility of over-borrowing as a consequence of incomplete or inappropriately sequenced financial sector reforms, including inadequate prudential regulations (Dooley, 2000 and McKinnon and Pill, 1999).

Getting the most from international financial integration involves a balancing act. Financial deregulation and capital account convertibility need to be appropriately timed and sequenced if the full benefits are to be attained from financial globalization⁸. Uppermost on the list of preconditions for an open capital account is the putting in place of adequate supervisory and prudential regulations and the revoking of any implicit or explicit sovereign guarantees for external debt accumulation. Where there is adequate supervision and regulation, there may remain a need for specific controls on capital inflows, such as the deposit requirement imposed by Chile, or at least on the accumulation of unhedged external debt liabilities (Bird and Rajan, 2000b). More generally, the success of a liberal financial regime is directly dependent on having in place the necessary institutional prerequisites and internationally consistent standards in accounting, auditing, banking, bankruptcy law, corporate governance, and investor-protection (Eichengreen, 1999b).

7.2 Globalization and Worker Insecurity

Globalization of real economic activities may have had an adverse impact on income distribution, and in particular on the job security and general living standards of low-skilled, immobile labor. The asymmetric effects of financial integration and crises on society's less privileged have been alluded to above and emphasized by the World Bank (2000). In addition, Rodrik (1997) has argued that increased trade and investment

⁸ In other words, the issue is not *whether* to undertake capital account deregulation, but rather *when* and *how* to go about doing so. For highly readable and balanced discussions of the economic rationale and costs of capital restraints and potential benefits of the Chilean-type controls, see Eichengreen (1998, 1999a) and Frankel (1999).

opportunities for employers world-wide is leading to an increase in the (derived) demand elasticities for immobile factors such as land and unskilled labor as employers (MNEs) are able to move across borders fairly freely, with the result that workers are more easily substitutable for one another⁹. In addition, Bhagwati (1997) has noted that globalization has given rise to the phenomenon of “kaleidoscope” or “knife-edge” comparative advantage, whereby small changes in costs can lead to shifting comparative advantage and concomitant gyrations in the attractiveness of a country as a production base.

7.3 Globalization, Public Finances and Income Distribution

Not unconnected with the above, globalization may lead to preferential tax treatment for mobile factors relative to immobile ones. The relatively high supply elasticity of mobile factors implies that the burden of taxes levied on these factors may ultimately fall primarily on the immobile ones. Indeed, at the extreme, complete factor mobility may imply that taxes fall solely on the immobile ones, as mobile factors relocate overseas unless there is corresponding compensation (through subsidies, or a fall in other costs)¹⁰.

Moreover, the increasingly intensive use of e-commerce will require major adjustments in the traditional means of allocating revenue among jurisdictions and in the current national systems of tax administration. It would be difficult to apply the permanent establishment and source-based taxation methods to businesses involved in e-commerce. Furthermore, e-commerce transactions could result in the disappearance of traditional audit trails (through the creation of electronic books), in the greater accessibility of tax havens and offshore banking facilities and in the weakening or

⁹ However, this analysis has been strongly challenged on theoretical grounds by Panagariya (1999).

¹⁰ For details, see Asher and Rajan (1999), Hufbauer (2000), Schultze and Ursprung (1999) and Tanzi (2000).

elimination of convenient points of taxation in the production–distribution process due to disintermediation. Business-to-business e-commerce transactions could facilitate the use and simultaneously reduce the detectability of transfer pricing by MNEs. As noted by Owens (1997, p.1849):

(t)he communications revolution presents no new problems, no fundamentally or categorically different dimensions, for transfer pricing. It just presents all the old problems more quickly¹¹.

Table 5, borrowed from Hufbauer (2000), succinctly summarises the effects of globalization on the mobility of various tax base items. The general conclusion is that, given the need to maintain a certain amount of public spending, particularly in open economies¹², globalization may lead to reduced progressivity (increased inequity) of tax structures. Thus, taxes levied directly on relatively immobile factors would be welfare-enhancing in the sense of having the same incidence as taxes on the mobile factors, without necessarily leading to the flight of the latter in an attempt to *evade/avoid* the burden of the tax. Given the increased mobility of various components of the tax base, this in turn implies intensified dependence on a narrow part of the tax base consisting of immobile factors such as the less educated workforce and the rural sector.

7.4 Globalization and the Environment

An increasingly global perspective has led to a heightened awareness of international environmental issues. There are at least two that are of particular importance here.

¹¹ There is some evidence that Internet sales are highly sensitive to local taxation (Goolsbee, 1998). Also see Hufbauer (2000) for a recent discussion of the fiscal implications of e-commerce.

¹² It is interesting to note in this regard that Rodrik (1998) finds that open economies tend to have larger government sectors, suggesting to him that government consumption plays a risk-reducing role in economies exposed to external risks.

The first relates to transnational environmental problems, where pollution created in one country crosses national boundaries and negatively affects other countries. The bush fires in Indonesia in 1997, which led to a region-wide haze, are an example. Acid rain, and the depletion of the ozone layer by CFC and greenhouse gas emissions, which contribute to climatic change, provide additional examples. While such externalities are not uniquely connected to the globalization of economic activity, they may require a global policy response.

The second issue is more directly related to globalization. If polluters are not made to pay for their actions within the jurisdiction in which the pollution originates, firms are given an additional incentive to choose locations where environmental standards are low. Low environmental standards could be used as an implicit subsidy for attracting direct investment (“eco-dumping”). Faced with possible capital and job losses to “pollution havens”, and unable to force them to raise standards, the high standard countries may then feel compelled to reduce their own environmental standards. This in turn may lead to a “race to the bottom” of national environmental standards, and deterioration in the global environment. By and large, empirical studies have as yet failed to confirm the existence of such a race (Chang and Rajan, 2001)¹³.

8. Constraints on Globalization: The Political Economy Dimension

Public protests at the times of WTO, IMF and World Bank meetings and industrial country summits suggest that the road towards further globalization may be rocky. If those who perceive themselves as “losers” from the process continue to become better organized, more articulate and more powerful, gainers may find it increasingly difficult to make significant advances. Moreover, economic globalization

¹³ For instance, see the collection of papers in Bhagwati and Hudec (eds.) (1996). An argument has been made that relatively more stringent environmental regulations are costless and may in fact be beneficial to firms operating in a regulated environment by spurring innovation (Porter and van der Linde, 1995). However, there is just as little empirical support for this hypothesis as there is for the “pollution haven” hypothesis.

will be constrained if there is not accompanying political and legal globalization. It is the desire to retain national distinction and differentiation, in the form of laws, languages, taxation, institutions, etc., that has imposed limits on globalization in the past. For as long as this desire remains strong, further globalization will be constrained. There is a trade-off here, which Rodrik (2000c) refers to as the “political trilemma of the world economy”. The benefits from economic globalization can only be achieved if there is a willingness to cede some degree of national political control. If countries opt to retain political and legal independence, it makes it impossible to become fully integrated economically.

It is not coincidental that the first wave of globalization came to an end in the inter-war years, as those who perceived themselves as losers from the gold standard international monetary system – a system under which governments agreed to refrain from neutralizing the effects of their balances of payments position on the domestic money supply – made it politically impossible for governments to continue to reject the option of national economic sovereignty. In the 1930s it was organized labor that believed that it lost from the unemployment costs of the gold standard mechanism. As things turned out, of course, the world economy as a whole lost out from substituting beggar-my-neighbor trade and currency policies for globalization and from the construction of protectionist barriers to which this gave rise.

It is unlikely that organized labor will bring the current wave of globalization to an end. Its power has diminished, the interests of skilled and unskilled labor will differ, with skilled labor often taking advantage of fuller international economic integration, and even the interests of the unskilled workers will depend on where they happen to live. It is also doubtful whether any equivalently strong group of ‘losers’ exists at present to reverse the recent trend towards globalization. However, subject to the limits associated with any desire to retain a degree of national independence, the continuation of the

trend will depend on whether gainers can compensate losers and whether the problems associated with globalization can be overcome.

International organizations will have a key role in co-coordinating solutions. These solutions will involve seeking to reduce the fragility of private capital markets and their susceptibility to crisis, sharing the benefits (and costs) from globalization more widely, compensating disadvantaged groups, and ensuring that such groups feel that their views are fully and properly represented within the multinational organizations.

8. Proposed Solutions to Mitigate the Costs of Globalization

Efforts at comprehensive and rigorous analysis of the policy innovations needed to cope with globalization are at an early stage. While there have been a number of specific and ad hoc proposals to minimise the adverse impacts of globalization (particularly with regard to the many cross-country externalities and spillovers), an interesting trend is in the number of suggestions favoring the creation of new and specialized supra-national institutions. For instance, the United Nations-Economic and Social Commission for Asia and the Pacific (UN-ESCAP) has suggested the need for a World Financial Organization to deal with banking and financial sector issues, including transparency and data availability and dissemination. Prominent financial gurus, Henry Kaufman and George Soros, have suggested the creation of an international supervisory structure or international credit insurance corporation. John Eatwell and Lance Taylor recommend establishing a World Financial Authority; Jeffrey Garten has proposed an international central bank; while others such as Michele Fratianni and John Pattison have argued for an expansion of the mandate of the Bank of International Settlements (BIS). Jeffrey Sachs and others have called for an international bankruptcy court or similar to be set up. Stanley Fischer, Charles Calomiris and others have stressed the need for an international lender of last resort. Vito Tanzi has repeatedly proposed the establishment of a World Tax Organization. Daniel Esty has advocated the

creation of a Global Environmental Organization to deal with the international dimensions of environmental pollution. Others have supported the creation of a new labor organization or giving the existing International Labour Organisation (ILO) more teeth to deal with international labor issues (such as labor standards, including child labor)¹⁴. The list could easily be extended.

Regardless of their merits, political economy realities make it highly unlikely that any of the above proposals for the creation of new institutions or radical restructuring of existing ones have much chance of being implemented. Policy-makers may, however, pay more attention to modest (pragmatic) proposals to deal with specific aspects of globalization. Examples include Jagdish Bhagwati's proposal for international cooperation in enabling source-countries to tax emigrating professional manpower; the wider use of Chilean-type deposit requirements; the creation of regional monetary facilities to fulfill the lender of last resort role at the regional level (Bird and Rajan, 2000a); reforms to the IMF and World Bank to increase and make more effective the assistance they provide to developing countries; and a stronger commitment to liberalized trade in agricultural goods which would increase the confidence of developing countries in the WTO.

9. Summary and Concluding Observations

The term "globalization" has been the buzz-word of the 1980s and more so the 1990s. However, discussion of this topic has often been unobjective and unscientific. Many of its most ardent advocates have trumpeted the virtues of globalization, branding those who voice concerns about its possible ill-effects as protectionist or ill-informed; while environmentalists, trade unionists and politicians of socialist leanings have emphasized the high costs imposed by globalization, even demanding its reversal. An

¹⁴ See Asher and Rajan (1999) and Rogoff (1999) for various sources.

objective reading of the literature and available evidence suggests that the extent of globalization can easily be exaggerated.

While the benefits are, on balance, potentially significant, there may be a downside to globalization. There may be losers both relatively and absolutely and these concerns need to be addressed if a sufficiently broad consensus in favour of further globalization is to be retained. The danger of a 'globalization backlash' cannot be discounted out of hand.

The problems to which globalization gives rise are likely to be best handled by international policy orchestrated by existing (although slightly modified) international organizations. This will imply that national governments will have to cede some power to such organizations. The continued unwillingness to abandon national sovereignty will itself limit globalization and will preclude anything close to full international economic integration.

Bibliography

Anderson, K. (2000). "Globalization, WTO and Development Strategies for Poorer Countries", in S. Yusuf, S. Evenett and W. Wu (eds.), *Local Dynamics in an Era of Globalization*, London and New York: Oxford University Press.

Arndt, S. (1996). "Globalization and the Gains from Trade", in K. Jaeger and K-J. Koch (eds.), *Trade, Growth, and Economic Policy in Open Economies*, Germany: Springer Verlag.

Arndt, S. (1998). "Super-Specialization and the Gains from Trade", *Contemporary Economic Policy*, 56, pp.480-5.

Asher, M. and R. Rajan (1999). "Globalization and its Impact of the Design of Tax Structures", *CIES Discussion Paper No.99/23*, Centre for International Economic Studies, University of Adelaide, October.

Baldwin, R. and P. Martin (1999). "Two Waves of Globalization: Superficial Similarities, Fundamental Differences", in H. Siebert (ed.), *Globalization and Labour*, Tübingen: Mohr Siebeck.

Bank of International Settlements (BIS) (1996). *Central Bank Survey of Foreign Exchange and Derivatives Market Activity*, May.

Bayoumi, T. (1997). *Financial Integration and Real Activity*, Manchester: Manchester University Press.

Bhagwati, J. (1997). "The Global Age: From a Sceptical South to a Fearful North", *World Economy*, 20, pp.259-83.

Bhagwati, J. and R. Hudec (eds.) (1996). *Fair Trade and Harmonization: Prerequisites for Free Trade? Volume 1 Economic Analysis*, Cambridge, MA: MIT Press.

Bird, G. and R. Rajan (2000a). "Is There a Case for an Asian Monetary Fund?", *World Economics*, 1, pp. 135-143.

Bird, G. and R. Rajan (2000b). "Restraining International Capital Flows: What does it Mean?", *Global Economic Quarterly*, forthcoming.

Bordo, M., B. Eichengreen and D. Irwin (1999). "Is Globalization Today Really Different Than Globalization a Hundred Years Ago?", *Working Paper No.7195*, NBER, June.

Chang, L. and R. Rajan (2000). "Regional Versus Multilateral Solutions to Transboundary Environmental Problems: Insights from the Southeast Asian Haze", *World Economy*, forthcoming.

Dooley, M. (2000). "A Model of Crises in Emerging Markets", *Economic Journal*, 110, pp.256-72.

Eichengreen, B. (1998). "Capital Controls: Capital Idea or Capital Folly?", mimeo, November.

- Eichengreen, B. (1999a). "Taming Capital Flows", mimeo, August .
- Eichengreen, B. (1999b). "Strengthening the International Financial Architecture: Where Do We Stand?" mimeo, October.
- BIS (1998). "Preliminary Global Data", *BIS Press Release*, September 1998.
- Felix, D. (1996). "Statistical Appendix", in M. ul Haq, I. Kaul and I. Grunberg (eds.) (1996). *The Tobin Tax: Coping with Financial Viability*, New York: Oxford University Press.
- Frankel, J. (1999). "Proposals Regarding Restrictions on Capital Flows", *African Finance Journal*, 1, pp.1-13.
- Freeman, G. and J. Mo (1996). "Asian NICs as New Countries of Destination", in P. Lloyd and L. Williams (eds.), *International Trade and Migration in the APEC Region*, Melbourne: Oxford University Press, 1996.
- Goolsbee, A. (1998). "A World Without Borders: The Impact of Taxes on Internet Commerce", *Working Paper No.6863*, NBER.
- Grunberg, I. (1998), "Double Jeopardy: Globalization, Liberalization and the Fiscal Squeeze", *World Development*, pp.591-605.
- Hufbauer, G. (2000). "Tax Policy in a Global Economy: Issues Facing Europe and the United States", mimeo, February.
- IMF (1998). *International Capital Markets Developments, Prospects, and Key Policy Issues*, Washington, D.C., September 1998.
- Jones, R. and H. Kierzkowski (1997). "Globalization and the Consequences of International Fragmentation", mimeo, March.
- Knetter, M. and M. Slaughter (2000). "Measuring Product-Market Integration" Magnus Blomström and Linda Goldberg (eds.), *Topics in Empirical International Economics: A Festschrift in Honor of Bob Lipsey*, Chicago: University of Chicago Press, forthcoming.
- Krugman, P. (1995). "Growing World Trade: Causes and Consequences", *Brookings Papers on Economic Activity*, 1, pp. 327-62.
- Mathieson, D. and C. Rojas-Suarez (1993). "Liberalization of the Capital Account", *IMF Occasional Paper No. 10*, IMF.
- McCallum, B. (1995). "National Borders Matter: Canada-U.S. Regional Trade Patterns", *American Economic Review*, 85, pp.615-23.
- McKinnon, R. and H. Pill (1999). "International Overborrowing: A Decomposition of Credit and Currency Risks", *World Development*, 26, pp.1267-82.

Ng, F. and A. Yeats (1999). "Production Sharing in East Asia: Who Does What for Whom, and Why?", *Policy Research Working Paper No.2197*, World Bank, October.

Obstfeld, M. (1996). "Comment (on Currency Crisis)", *NBER Macroeconomic Annual 1996*, pp.393-407.

Obstfeld, M. (1998). "The Global Capital Market: Benefactor or Menace?", *Journal of Economic Perspectives, Working Paper No.6559*, NBER, May.

Otsubo, S. (1996). "Globalization: A New Role for Developing Countries in an Integrating World", *Policy Research Working Paper No.1628*, World Bank, July.

Owens, J. (1997). "The Tax Man Cometh to Cyberspace", *Tax Notes International*, June 2, pp.1833-1852.

Panagariya, A. (1999). "Trade Openness: Consequences for the Elasticity for Labor and Wage Outcomes", mimeo, January.

Porter, M. and van der Linde, C. (1995). "Toward a New Conception of the Environment-Competitiveness Relationship", *Journal of Economic Perspectives*, 9, pp.97-118.

Rajan, R. (2000). "Contagion and the Asian Crisis: Exploring the Case for a Regional Monetary Fund", *CIES Discussion Paper No.00/02*, Centre for International Economic Studies, January.

Rodrik, D. (1997). *Has Globalization Gone Too Far?*, Washington, D.C: Institute for International Economics.

Rodrik, D. (1998). "Why do More Open Economies have Bigger Governments?", *Journal of Political Economy*, October.

Rodrik, D. (2000a). "Institutions for High-Quality Growth: What They Are and How to Acquire Them", *Working Paper No.7540*, NBER, February.

Rodrik, D. (2000b). "Development Strategies for the Next Century", mimeo, February.

Rodrik, D. (2000c). "How Far Will International Economic Integration Go?", *Journal of Economic Perspectives*, 14, 1, pp. 177-186.

Rogoff, K. (1999). "International Institutions for Reducing Global Financial Instability", *Journal of Economic Perspectives*, 13.

Schultze, G. and H. Ursprung (1999). "Globalization of the Economy and the Nation State", *World Economy*, 22, pp.295-351.

Tanzi, V. (1998), *Taxation in an Integrating World*, Washington, D.C.: The Brookings Institution.

Tanzi, V. (2000). "Globalization and the Future of Social Protection", *Working Paper No.00/12*, IMF January.

Taylor, A. (1997). "Argentina and the World Capital Market: Saving, Investment, and International Capital Mobility in the Twentieth Century", *NBER Working Paper No.6302*, December.

Yeats, A. (1997). "Just How Big is Global Production Sharing?", *Policy Research Working Paper No.1871*, World Bank, January.

Wei, S. (1996). "Intra-National versus International Trade: How Stubborn are Nations in Global Integration?", *Working Paper No.5531*, NBER, April.

World Bank (1999). *Global Development Finance 1999: Analysis and Summary Tables*, New York: Oxford University Press.

World Bank (2000). *Global Economic Prospects and the Developing Countries 2000*, New York: Oxford University Press.

Table 1
World Trade and Output Growth, 1971-96
(Annual average in %)

	1971-85	1986-90	1991-93	1994-96
Trade Growth ^a	3.7	6.1	4.1	8.7
Output Growth	3.2	3.3	1.1	2.9
Trade Elasticity ^b	1.2	1.8	3.7	3.0

Notes: a) refers to merchandise export plus imports

b) trade elasticity = (trade growth/output growth)

Source: Otsubo (1996)

Table 2
Net Long-term Capital Flows to Developing Economies^{a,b}, 1990-97
(US\$ billions)

Type of Flow	1990	1992	1994	1996	1997
Total Private Flows	43.9	98.3	178.1	275.9	299.0
Debt	15.7	38.1	54.4	100.3	105.3
Commercial Bank Loans	3.2	16.3	13.9	43.7	60.1
Bonds	1.2	11.1	36.7	53.5	42.6
Others	11.4	10.7	3.7	3.0	2.6
Foreign Direct Investment (FDI)	24.5	46.1	88.5	126.4	163.4
Portfolio Equity	3.7	14.1	35.2	49.2	30.2
Official Financing	56.9	54.0	45.5	32.2	39.1
Total Capital Flows	100.8	152.3	223.6	308.6	338.1

Notes: a) excludes short-term flows or asset transactions like changes in foreign deposits held by developing country residents

b) developing countries defined as low- and middle-income economies with 1995 per capita incomes less than US\$765 and US\$9385 respectively

Source: World Bank (1999)

Table 3
Daily Global Foreign Currency Turnover, 1977-98
(US\$ billion)

Year	Excluding Derivatives ^a	Including Derivatives ^b
1977	18.3	n.a.
1980	82.5	n.a.
1983	119.0	n.a.
1986	270.0	n.a.
1989	590.0	620.0
1992	820.0	880.0
1995	1190.0	1260.0
1998	1490.0	n.a.

Notes: a) refers to spot, outright forward and swap transactions
b) includes futures and options in addition to those in part (a)
Sources: BIS (1996, 1998) and Felix (1996)

Table 4
Global Official Reserves, Foreign Currency Trading and Trade, 1977-95

Year	Trade ^a (US\$ billion)	Reserves ^b (US\$ billion)	Daily Global Forex Volume (US\$ billion) ^c	Reserves to Trade Ratio (%)	Trade to Forex Ratio (%)	Reserves to Forex Ratio (days)
1977	1094.7	296.6	18.3	27.1	23.9	16.2
1980	1960.0	468.9	82.5	23.9	9.5	5.7
1983	1752.6	496.6	119.0	28.3	5.9	4.2
1986	2074.5	552.6	270.0	26.6	3.1	2.0
1989	3003.2	826.8	590.0	27.5	2.0	1.4
1992	3780.6	1022.5	820.0	27.0	1.8	1.2
1995	5053.0	1330.0	1260.0	26.3	1.6	1.1

Notes: a) simple average of exports and imports
b) includes gold holdings
c) excludes derivatives (see Table 3)

Sources: BIS (1996) and IMF, *International Financial Statistics Yearbook*, various issues

Table 5
Effects of Globalization on the Mobility of Tax Base Items

Tax Base Item	Mobility in 1970	Mobility in 2000	Mobility in 2030
Wages and Salary Income	Low	Low	Moderate
Consumption of goods	Low	Moderate	Moderate
Consumption of services	Low	Low	Moderate
Investment income	Low	Moderate	High
Corporate profits	Low	Moderate	High

Source: Hufbauer (2000)