

Globalization: What does it mean ? *

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1. Introduction

‘Globalization’ is a word that means different things to different people. To the protestors in Seattle during the WTO negotiations in late 1999 (and currently massing in Washington DC), it apparently means everything that is wrong in the world. Globalization is not a new phenomena - indeed it has been a feature of the world for centuries. There are many arguments in the globalization debate which are not only misunderstood in the popular debate but are completely counterintuitive and inconsistent with a great deal of empirical evidence.

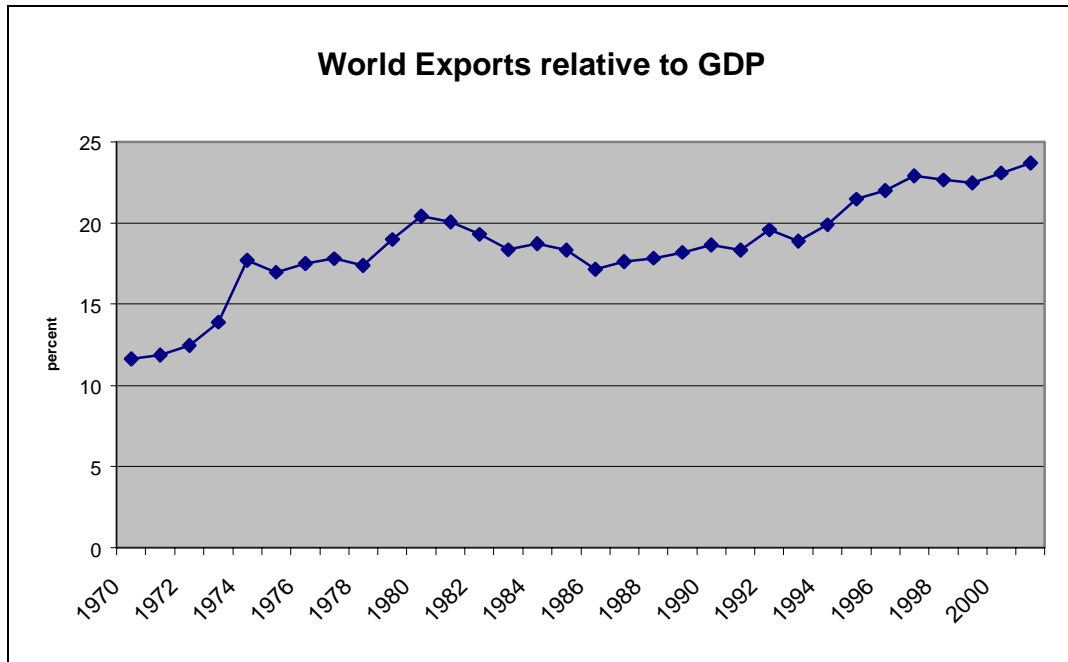
This paper focuses on a number of issues: What is globalization? What is the historical context in which the current debate on globalization is taking place? What does economics have to add to our understanding of globalization – in particular what are the implications for Australia of globalization. In order to provide concrete examples and to show how to think about economic issues in a highly integrated world, this paper draws on some of my recent research on the crisis in Asia, the implications of a collapse in US stock prices and finally the economic impact of the Kyoto Protocol of the UN framework convention on climate change.

Increased globalization does importantly affect the way in which we understand economic interactions between countries and economic adjustments within an economy. Yet we have tools available already which help in understanding global economic adjustments in a highly integrated world. For example a new class of global economic models in which I was involved in developing and which are currently used in a number of countries, were very helpful in understanding and predicting the adjustments following recent events such as NAFTA, German unification, the Asia crisis, the coming adjustment in US equity markets and climate change. What we have learned from these models about how economies interact in a highly integrated world economy, will be the focus of the second part of this paper.

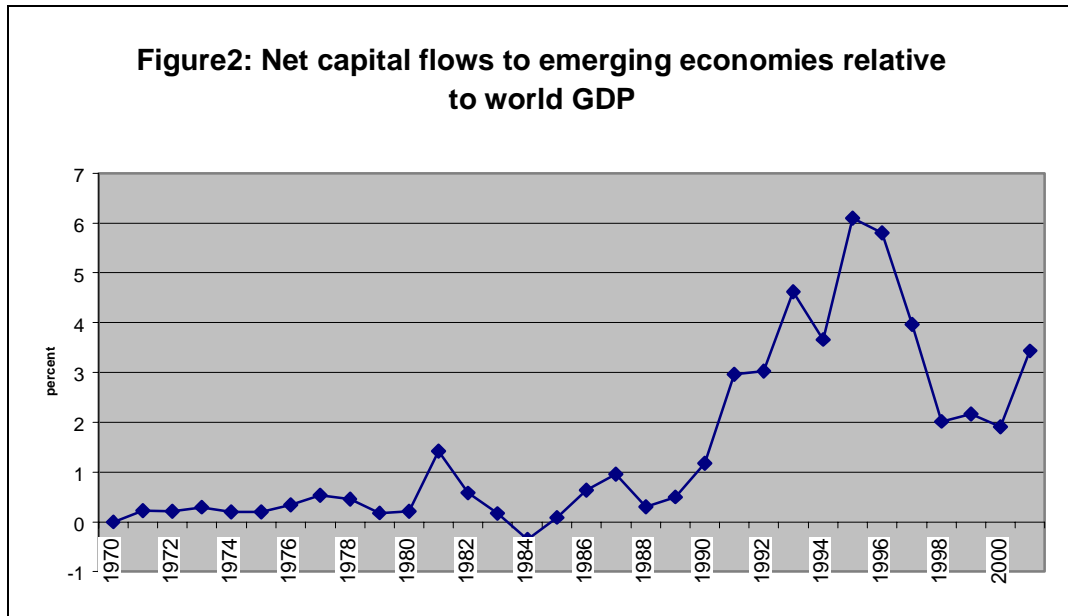
2. What is Globalization?

Globalization in the context of this paper can be defined as ‘increasing interdependence of economic, social and political activities across national boundaries’. This is one of many possible definitions but is close to what is generally meant by globalization. The recent experience of world trade relative to production is summarized in figure 1. The persistent rise in trade as a share of the world production is clear. Total capital flows data in gross terms is difficult to measure. Figure 2 contains the ratio of net capital flows to emerging economies relative to world GDP. The overall growth in capital flowing between economies is

enormous. The growth in capital flows to emerging countries is also dramatic.



Source: IMF "Selected World Aggregates" in World Economic Outlook Database April 2000



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The increasing interdependence of economies is generally found across all broad groups of countries. Data from the World Bank, shown in Table 1, shows that the growth rate of exports for low, middle and high income countries have persistently outstripped the growth rate of income (measured by Gross national product –GNP) across these categories of countries.

Table 1: Average annual growth rate of GNP and Exports 1965-98

	GNP	Exports
World	3.2%	5.7%
Low Income Economies	5.9%	7.0%
Middle Income Economies	3.7%	6.1%
High Income Economies	3.0%	5.7%

Source: World Development Indicators 2000 Table 1.4; World Bank

Thus the recent experience is of accelerated integration of capital markets across national borders, a trend rise in trade between most countries independent of income levels, and a rise in the amount of world production that is traded. However this is not a new phenomena. Globalization has been occurring for many centuries although in long cycles rather than as a persistent trend. Between the late 19th century and world war I, there was a period of rapid globalization which coincided with a period of rapid economic growth and gradual convergence of incomes throughout much of the world. Globalization then went into reverse as countries began a process of de-linking in which incomes diverged and high tariff walls and restriction on flows of goods, capital and people heralded the Great Depression.

After the destruction of two World Wars and a Great Depression, world leaders began the reconstruction of shattered economies in the late 1940s, understanding the great costs of economic and political isolationism. They began the process of creating a more integrated world through the construction of international institutions such as the IMF and World Bank. This was followed by a move to break down the tariff walls that had been built over previous decades. The General Agreement of Tariffs and Trade (the GATT) was first negotiated in 1947. Under GATT a series of trade rounds through the 1960s and into the

1990s successfully lowered barriers on manufactured goods. In 1995 the GATT was replaced by the World Trade Organization with much stronger institutional power to administer trade agreements.

The period of the 1950s and 1960s has been called a period of shallow integration. But since the 1970s there has been much deeper integration of national economies. This integration has been propelled through technological change and the communications revolution in which distances have been reduced - in particular there has been a dramatic increase in the speed by which capital can flow between economies. Indeed it has been the development of global financial markets which has had the most important effect on our understanding of how economies interact. Robert Mundell foresaw this in the early 1960s and was recently awarded the Nobel Prize in Economics for his research on this issue. The insights of Mundell underlie much of the modeling research discussed below.

3. Some General Issues

One of the biggest perceived threats of globalization is the popular belief that the uniqueness of small countries will disappear and they will become clones of the larger, more dominant countries (i.e. the United States). This is frequently used to argue that there will be a race to the bottom in a range of policies and eventual moral, social and economic decay. There is a great puzzle in this argument for anyone trained in economics. To understand why this is a puzzle, it is helpful to ask what drives globalization or the process of increasing interdependence of countries. The key question is why do people and countries trade with each other? One of the core ideas in economics is that people trade with each other because of differences not because of similarities – the idea of ‘comparative advantage’. Why would you buy apples from another farmer if you already grow apples? It must be because either of a quality difference or a cost of production difference. In which case, if you already grow apples and you prefer someone else’s apples you should use the resources you currently use to grow apples and grow something else in which you are relatively better at (or that is relatively cheaper – which are two sides of the same coin). You can then trade this alternative commodity (or the underlying resources) and earn income which can be used to buy the preferred apples. Exporting is only undertaken to generate income for importing. This is a fundamental point that is clearly forgotten when people advocate tariff walls against imports. Thus what drives greater integration is not similarities but differences. The process of globalization, through the exploitation of comparative advantage, actually makes these

differences even larger not smaller. What does tend to converge is incomes and the total amount of consumption possibilities. Divergence of the range of economic activities is what you would expect across countries in the process of globalization. Thus Australia can maintain many of her unique characteristics and should expect these to be accentuated in a globalizing world. This helps to explain the surge in tourism to Australia in recent decades. If countries became identical, the globalization process would halt – why trade with someone who has nothing different to offer you?

Indeed the bigger concern in a globalizing world is not that all countries will become identical, but that open access to the world economy will make the artificial nature of the nation state outdated and individual regions will be able to take advantage of differences to survive economically outside their traditional national borders. Thus you would expect a breakdown of the old nation state. This is exactly what has been happening in many parts of the world from the former Soviet Union to Canada to Indonesia.

Thus as a general rule, it is hard to understand the logic behind the convergence argument against globalization. However it may be true that some things which no one wants to buy or some practices that raise our costs will tend to be driven out in a globalizing economy and these may have value to someone. Or it may be that things we care about as Australians are not priced properly because of either market or government failure and thus distortions and their costs are magnified. For example, the arguments about the environmental damage of globalization is not some much about globalization but about lack of property rights over the environment or distortions in the pricing of environmental services. On balance the evidence seems to favor the view that globalization has raised incomes which increases the value of environmental goods and the capacity to pay for environmental goods. Thus there are many areas in which the environment today is better than it was in past decades, and where its not, people have a greater capacity and willingness to pay to clean it up. To see how important income levels are or the importance of property rights and pricing resources appropriately, one only has to compare the environment in the former Soviet Union to that in Australia. Or compare the environment in isolationist regimes such as North Korea or Iraq with that in economies that have been in the vanguard of the globalization process.

This is not to deny that there are costs of globalization, especially when markets or government policies are distorting. Indeed globalization will likely accentuate the costs of these distortions. There are also important adjustment costs over time in a globalizing economy which need to be addressed by governments as part of broader social objectives.

Globalization has important implications for: the nature of governance; institutional design; the nature of economic interactions; and the degree of policy autonomy. Globalization affects the way economic policies work but doesn't necessarily make them ineffective. Globalization does not diminish the role of government although it changes that role. It certainly does not require centralization of institutional structures across countries but requires clear rules of coordination across decision making units. In the process of globalization, there has been a tendency for centralized international institutions to be designed to regulate global activities. This is particularly true for trade and environmental issues - the Kyoto Protocol is a classic example which I will discuss below. The correct response to globalization by national governments is greater coordination not centralization.

4. Modeling a globalizing world.

Working with Professor Peter Wilcoxon from the University of Texas at Austin through the Brookings Institution in Washington for more than a decade, we have been developing a new type of global economic model (see the web site WWW.NOTWRONG.COM) aimed at understanding the way in which shocks are transmitted between economies in a highly integrated world economy. These models are now used by governments, corporations, funds managers and academics in over 14 countries. They are not based on a fundamentally new paradigm about how the world works, but are based on an accumulation of economic knowledge over generations and empirical evidence on economic behaviour. Their key feature is an attempt to model asset markets as well as goods markets and in particular more highly integrated international financial markets. There is still much to be understood about the world, but over the last decade these models have offered useful insights into the way countries interact.

To give an example of how to think about the interaction of countries in a highly integrated world, the next three sections will summarize the insights from recent research using these models to understand: the Asia crisis; the impacts of a possible collapse of the US stock market and finally the impacts of the Kyoto Protocol.

5. The crisis in Asia

In a paper for the World Bank, McKibbin and Martin (1998) showed that the primary cause of the Asia crisis, in the context of replicability with an empirically based economic model, was a fundamental reassessment in the expected growth of productivity and the profitability of investment in the region. This reassessment set off a sequence of events: a sharp fall in asset prices including sharp depreciations of regional currencies, rising risk premia on financial assets which caused further currency weakness, and subsequent impacts on macro variables such as the decline in investment and consumption, and a sharp move to current account surpluses. Their analysis argued that terms of trade shocks were not really a factor (although it was partly an issue in Korea), neither were fixed exchange rates — although these fixed rates did exacerbate the subsequent adjustment process.

Neither does it seem that contagion arose through direct trade or capital account linkages. The reason is that direct contagion effects are both negative (adverse trade shocks) as well as positive (lower interest rates than otherwise) and the net effect is small. This is why countries outside Asia such as Australia and the United States were actually stimulated by the crisis. Contagion was seen to occur indirectly through events in Thailand causing a reappraisal of returns to investments in other countries. In other words, rising risk premia as a secondary effect in Thailand caused risk premia to also rise in other Asian economies that had experienced large capital inflows and where the quality of investments might make them vulnerable to a turnaround.

Overall the modeling results suggested that if the crisis was not of fundamental structural collapse but a change in risk assessment then there would be expected to be a rapid turnaround in the crisis economies in the event of a return in confidence. Secondly it predicted that the effects on countries such as Australia and the United States would be positive overall because the negative trade impacts would be more than offset by the positive effects of lower real interest rates resulting from international financial flows. At the time this was seen as an academic curiosity and even when published in the popular press in Australia (McKibbin (1998a) (1998b)) and the US (McKibbin (1998c)) it was swamped by stories of the coming global recession of 1998 and 1999 and was dismissed by most commentators.

The key to why so many people got the Asia crisis impacts on Australia wrong was precisely the impacts of international capital flows – that part of the process of globalization that is more often ignored. International trade is only one aspect of globalization.

6. A Collapse on Wall St.

Another application that yields surprising results is the possible implications of a US share market collapse. The equity risk premium between equities and bonds has fallen from around 8 per cent in the late 1980s to near zero levels by early April 2000. It is this falling equity risk premium that largely explains the booming share market in the United States. As the share market has boomed in America, the higher wealth of individuals has fuelled consumption spending and reduced the household savings rate.

What if the United States share market — which is likely in a bubble — experiences a sudden sell-off? If equity prices fell suddenly, consumer spending in the United States could be expected to fall and many argue could even lead to a recession. If a recession occurred, import demand could fall significantly. How vulnerable would Australia be to a sudden share market slump in the United States?.

This issue has been explored in a recent paper prepared for the World Bank (see McKibbin and Stoeckel (1999)). Since one of the important causes of the share market boom in the United States has been the reduction in the equity premium, in the simulation in this paper we assumed the premium on equities that normally existed prior to the late 1980s, returns partly back to that level rising by 5% overnight.

The first thing that happens as a result of a return in the equity risk premium in the United States is that investors take their money out of equities and redistribute it over other assets, both internationally and within the United States. The stock market falls by 20% overnight. The consequence of the reallocation of funds is that real interest rates drop in the United States as people buy government bonds. The real interest rate falls initially and is nearly 3 per cent below baseline by 2005 in the United States. As foreign assets now look relatively more attractive, there is a large capital outflow. This outflow causes a large improvement in the US current account, which improves by 7 per cent expressed as a percentage of GDP during the first year of the adjustment. Reflecting this capital outflow, there is a large improvement in the trade balance and exports rise by over 60 per cent above baseline while imports fall by 40 per cent below baseline in 1999. The US dollar depreciates by 40% relative to the yen (that is, the yen appreciates). With the capital outflow, there is a large initial drop in real investment in the United States, a fall in real consumption and a fall in real GDP. The fall in real GDP is around 0.5 per cent in the first year (relative to what it would have been) and an additional 0.5% per year drop each year for the next few years. This fall is relative to a baseline in which the United States is growing at roughly 3%

per year and therefore real GDP growth does not go negative despite the size of the shock. Part of the reason why GDP doesn't collapse despite the fall in private spending, is the stabilizing effects of lower real interest rates and a weaker US dollar both of which dampen the decline in investment and stimulate net exports.

How does this deterioration in the United States economy impact on Australia? There are two effects operating on Australia (just as there was in the Asia crisis) and it is important to separate them out. One set of effects operate through the capital account and the other set of effects work through the trade account. The outflow of financial capital from the United States has to go somewhere and one of the recipients is Australia. The decline in United States share market leads investors to switch some of their funds into Australia causing a spike in real investment and capital inflow that, in turn, causes the current account to deteriorate. Real interest rates fall as investors previously holding US equities now purchase both international and United States bonds, causing real interest rates to decline in Australia. The increase in real investment and the increase in real consumption leads to a rise in real GDP to 0.5% higher than it otherwise would have been within a year after the initial shock.

There is an important qualification about these results that should be stressed. Recall that the simulation is a rise in the equity risk premium in the United States that leads to a share market collapse in the United States. The implicit assumption is that there are no other changes in the risk premiums of equities versus bond in any other economies around the world. It would be a reasonable argument to mount that a sudden change in the equity risk premium in the US and share market collapse would lead investors around the world to reappraise risks and lead to commensurate changes in all countries, but that would be a different simulation. In practice global share markets would likely fall initially in tandem with the US market but the model results suggest that the non-US (or at least non bubble) share markets would recover quickly, while the US market would reach a new lower level. This is very different to the October 1987 crash in which many markets appeared to be overvalued. In the current situation, the US market appears to be overvalued relative to fundamentals where Australia appears much closer to a reasonable valuation. All this also depends on the expectations of market participants and the reactions of the Reserve Bank and other central banks. There are many scenarios that could be simulated. The results outlined here are the most likely in my opinion but subject to many qualifications.

7. Climate Change Policy

The Kyoto Protocol to the United Nations Framework Convention on Climate Change

(UNFCCC), which was negotiated in Kyoto in December 1997, is yet to be ratified. There are still many unresolved problems with implementing this convention -- not least is the problem that the Kyoto Protocol is fundamentally unsustainable¹. Little progress in implementation of the Kyoto Protocol was achieved at previous meetings in Buenos Aires in 1998 and Bonn in 1999. The next major negotiations will be held in The Hague in November 2000, although there will be intense activity leading up to this meeting, because it will be the last serious chance for countries to implement the Kyoto Protocol. Rhetoric will not achieve the tight targets of the Kyoto Protocol and at some stage either actual policies must be implemented or the Kyoto Protocol must be jettisoned. In a series of papers we have examined the impact of the Kyoto Protocol on the world economy. We find that globalization, and particularly the allocation of global financial capital, has an important role to play in a way that does not show up in standard energy models.

In a recent paper published in the *Energy Journal* (see McKibbin et al (1999)), we present estimates of the potential economic effects of the Kyoto Protocol, using the G-Cubed multi-region, multi-sector model of the world economy.² We examined and compared four potential implementations of the Kyoto Protocol involving varying degrees of international permit trading, focusing particularly on the effects of the policies on output, exchange rates and international flows of goods and capital; and calculating some of the gains from allowing international permit trading.

The theoretical appeal of an international permits program is strongest if participating countries have very different marginal costs of abating carbon emissions – in that situation, the potential gains from trade are largest. Our results show that within the Annex I and globally, abatement costs are indeed quite heterogeneous. The marginal cost of meeting Kyoto targets in the “Rest of the OECD” region is triple that of United States; and large quantities of relatively inexpensive emission reductions are available from the former Soviet Bloc and non-Annex I developing regions. These differences in abatement costs are caused by a range of factors including different carbon intensities of energy use, different substitution possibilities and different baseline projections of future carbon emissions. Because of these differences, international trading offers large potential benefits to parties with relatively high mitigation costs. However although permit trading reduced the indirect economic costs, it also implied potentially large fluctuations in real exchange rates and trade flows which could be very

¹ See McKibbin and Wilcoxon (1997, 1999)

² G-Cubed stands for “Global General Equilibrium Growth Model”.

disruptive to the global economy.

Our results highlighted the potentially important role of international trade and capital flows in global responses to the Kyoto Protocol, a role not adequately captured in any other modeling system of which we are aware. The results suggest that regions that do not participate in permit trading systems, or that can reduce carbon emissions at relatively low cost, will benefit from significant inflows of international financial capital under any Annex I policy, with or without trading. It appears that the United States is likely to experience capital inflows, exchange rate appreciation and decreased exports. In contrast, the ROECD region, as the highest cost region, will see capital outflows, exchange rate depreciation, increased exports of durables and greater GDP losses. Total flows of capital could accumulate to roughly a half a trillion dollars over the period between 2000 and 2020.³ Global participation in a permit trading system would substantially offset these international impacts. It is clear, however, that in an increasingly interconnected world in which international financial flows play a crucial role, the impact of greenhouse abatement policy cannot be determined without paying attention to the impact of these policies on the return to capital in different economies. Focusing only on domestic effects misses a crucial part of the economy's response to climate change policy. To understand the full adjustment process to international greenhouse abatement policy it is essential to understand the adjustment of international capital flows.

³ Compare these magnitudes to the more than trillion dollar decline just in the U.S. net international investment position in the past fifteen years. See the U.S. Government's *Survey of Current Business* (July 1998).

8. Conclusion

Globalization is likely to be a feature of the 21st century just as it has been a feature of previous centuries. It would be foolish to argue that it is an inevitable process today - it would have seemed an inevitable process at the same stage of the early 20th century. We have seen clearly through two World Wars and the Great Depression that the process of globalization can be derailed, with enormous social and economic costs. The major difference between the beginning of the 21st century and the beginning of the 20th century is that we have developed institutional structures (i.e. the IMF, World Bank, WTO) that help maintain the process of globalization. Yet, after a half century of existence, these institutions are becoming outdated and are under a great deal of pressure to reform and restructure. There are even calls and violent demonstrations to have these institutions abolished. Part of the problem is the degree of centralization of these institutions. A better approach would be to create an institutional structure that fosters cooperation between nation states rather than creating independent bureaucracies. A recent example of where cooperation is better than a centralized approach is the difference between the IMF approach to the Asia crisis versus the G7 coordinated response.

A similar problem can be found in the response to the potential problem of climate change. The main approach to the climate change issue, embodied in the Kyoto Protocol, has been one of centralization, whereas a better approach would be through something like the McKibbin-Wilcoxon Proposal⁴ which is a coordinated system of national low cost responses, recognizing both the uncertainty about climate change and the need to accept national sovereignty in policymaking.

Globalization changes the way countries interact and the way in which economic policies and disturbances are transmitted within an economy and throughout the world economy. This needs to be the focus of a great deal more research, although there is already a great deal that applied economics can help us understand and new global economic models that are providing helpful insights for decisionmakers.

Globalization presents many challenges for a country like Australia but many more opportunities. We have an enormous comparative advantage in mineral, agricultural, environmental and human resources and a stable political system. What is required to make the most of being part of a globalizing world is domestic government policy that focuses on the comparative advantage of governments - to provide and protect a legal system that preserves and

clarifies property rights and redistribute income for meeting social objectives. It is not to produce things that can be better produced by the private sector, not to manage or own corporations that would be better owned directly by private citizens nor to distort incentives through taxes and subsidies unless to offset a clear market failure.

In addition we need to design sensible institutional structures and reform existing structures for the global economy designed to deal with issues of trade, finance and environmental issues in a way that complements globalization rather than potentially disrupting the comparative advantage of countries. Our research, using the new models outlined in this paper, suggests that the Kyoto Protocol is a classic example of a bad institutional design that has the potential to seriously disrupt the global economy in coming years. This is yet another reason why a continuation of recent trends in globalization and achieving the associated income gains are not inevitable.

⁴ See McKibbin and Wilcoxon (1997) and McKibbin and Wilcoxon (2000).

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