Introduction

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Globalisation has implied a sharp abatement of barriers to economic exchanges between countries. In the immediate aftermath of World War II the process mainly involved advanced economies, but more recently it has increasingly included less advanced and transition economies, which by now are substantially integrated into the world economy. Global integration has also been accompanied by a sharp increase in regional trade agreements (RTAs), which constitute a logical means by which neighbouring countries may take up the challenges and opportunities implied by globalisation. The European Union is a prime example of regionalism. Today there exist more than 300 regional trade arrangements in the world, including free trade agreements (FTAs), customs unions and common markets. But how are globalisation and regionalism interconnected? Do they tend to complement each other as part of the same phenomenon or is there a tension between them? And, if the complementarity prevails, how do globalisation and regionalism affect the international transmission of shocks at a time of major structural changes? The main objective of this book is to address these issues, both theoretically and empirically.

Chapter 1 (International linkages in the context of global and regional integration, by Stephane Dees, Filippo di Mauro and Warwick J. McKibbin) gives an overview of our understanding of globalisation and regionalism and creates a unified and coherent overall perspective in which to situate all the various aspects covered by the different chapters. The first part of the chapter provides stylised facts regarding the globalisation process, the various regional integration experiences and the internationalisation of production processes. In the second part, various global models are used to evaluate how global and regional factors have changed

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across countries in the last few decades. Then, as globalisation and regionalism have made domestic economies more sensitive to global and regional developments, numerous adjustments have become necessary in the functioning of these economies, especially in terms of the allocation of resources and income. The final part of chapter 1 focuses on the impact that globalisation and regionalism have on labour and capital allocation, including income distribution and economic welfare.

Chapters 2, 3 and 4 focus on the impact of globalisation and regionalism on trade integration, product fragmentation, production relocation and firm performance.

The collapse of communism in central and eastern Europe, together with China's reform process towards a more market-based economy since the early 1990s, have been major factors fostering globalisation and triggering a significant reorientation of international trade flows. Using a gravity model, chapter 2 (Trade integration of the central and eastern European countries and China: has it reached potential?, by Matthieu Bussière and Bernd Schnatz) sheds light on the overall degree of trade intensity of a large number of countries as well as the depth of bilateral trade linkages with major economies. In particular, it assesses the trade integration of the central and eastern European countries (CEEC) and China into world markets. Overall, the gravity model indicates that the industrialised countries still tend to display above-average external trade intensity, while among emerging market economies it is mainly south-east Asian countries that exhibit high trade intensity. China – given its size and location – is also found to be rather well integrated into the world economy, while many of the CEEC are far less integrated.

The main new feature of the current upturn in globalisation is the associated changes in production processes, which have been greatly internationalised. Chapter 3 (Patterns and determinants of production fragmentation in world manufacturing trade, by Prema-chandra Athukorala and Nobuaki Yamashita) examines the implications of international production fragmentation for analysing global and regional trade patterns. It is found that, while 'fragmentation trade' has generally grown more rapidly than total world manufacturing trade, some disparity across regions is worth pointing out. In particular, the degree of dependence of east Asia on this new form of international specialisation is proportionately larger compared to North America and Europe. International production fragmentation has certainly played a pivotal role in continuing dynamism of the east Asian economies and their increasing intra-regional economic interdependence. There is, however, no evidence to suggest that international production fragmentation has contributed to lessening the region's dependence on the global economy. On the contrary, growth dynamism based on vertical specialisation depends inescapably on extra-regional trade in finished articles, and this dependence has in fact increased over the years. Overall, these results suggest that trade in components and trade in finally assembled goods have a very different nature and must be treated separately.

Increased outsourcing also provides a boost to the productivity of firms that outsource abroad some parts of their production process. Chapter 4 (Going global: trade, internationalisation of production and domestic performance of euro area firms, by Ingo Geishecker, Holger Görg and Daria Taglioni) investigates productivity differences between multinationals, exporters and purely domestic firms using firm-level data from the whole euro area. It analyses the extent to which euro area companies have internationalised their production in the period 1996–2004 and also discusses whether the internationalisation of the euro area economy has coincided with improved productivity and area-wide competitiveness, domestically as well as internationally. The chapter focuses on globalisation-induced firm selection effects (i.e. the exit of the least productive firms from the market) and share shifting effects (towards the most efficient firms). The linkages both to composition changes within industries and to changes in euro area aggregate economic performance are also studied. The chapter aims to highlight persistent patterns linking a firm's performance (particularly relating to its productivity) and its level of international engagement (non-exporter, exporter, foreign investor). It shows that firms that establish affiliates abroad are larger, more profitable and more productive than firms that do not. Moreover, there are performance premia (in size, profits and productivity) for multinationals with a large number of affiliates abroad relative to those with a small number.

Turning to how globalisation and regionalism affect the functioning of domestic economies, chapters 5 and 6 look at the cases of the euro area and the United States, respectively.

Chapter 5 (Globalisation and the trade channel in the euro area, by Robert Anderton and Filippo di Mauro) details how interaction between foreign shocks impacts on euro area domestic demand, underlining in particular the role of regional (intra-euro area trade) versus global forces. Since the late 1990s the strong performance of the global economy has appeared to find little correspondence in terms of euro area activity, casting doubts on the strength of the trade channel in the euro area – a puzzle, given the very open nature of the euro area, at least as far as its constituent economies are concerned. The chapter shows that the ultimate impact of a positive foreign demand shock on the euro area depends on the extent to which the shock translates into trade internal to the region or external. In this context, structural changes related to the globalisation of production processes, most notably the higher import content of exports, are found to play an important role in explaining the above puzzle, including reshaping the trade impacts of exchange rate movements.

Finally, chapter 6 (Gauging the labour market effects of international trade openness: an application to the US manufacturing sector, by Paul Hiebert and Isabel Vansteenkiste) seeks to quantify the extent to which the labour market has been affected by increasing trade openness. The chapter assesses the disproportionate weakness in US manufacturing employment following the 2002 recovery using input-output matrices and, alternatively, a sectoral vector auto-regressive (VAR) analysis. Based on the above two methodologies, some conclusions can be drawn regarding the impact of trade on employment and wages in the manufacturing sector. First, while a secular increase in the estimated net outflows of US manufacturing sector employment in response to trade has been apparent for the last two decades, such outflows appear to have intensified in recent years. At the same time, the employment response following an increase in trade openness remains muted. Second, a geographical breakdown reveals that China is becoming increasingly important; this seems to occur to a large extent at the expense of other Asian countries, however. Third, a sectoral breakdown reveals that the impact in the United States has been highest in low-skilled manufacturing sectors. Finally, real wages appear to respond negatively to increased trade openness.

Overall, the book underlines the relationships between globalisation and regionalism and assesses the extent to which increased global and regional integration has changed the functioning of the world economy. Globalisation and regionalism have fostered international trade and contributed to important changes in production processes, which have become internationalised to a great extent. As a result, the international transmission of shocks and the sensitivity of economies to their international environment have changed dramatically. At the same time, such changes have implied numerous adjustments in the functioning of the economies in reaction to the increasing importance of global and regional factors. Overall, the large efficiency gains associated with increased global and regional integration tend to more than compensate for the short-term costs resulting from such adjustments.

1 International linkages in the context of global and regional integration

Stephane Dees, Filippo di Mauro and Warwick J. McKibbin[1]

1 Introduction

Fewer barriers to international transactions and rapidly spreading information technology lie at the root of the accelerating integration of markets worldwide. Although not a new phenomenon, 'globalisation' has become a popular term since the 1990s to describe the increasingly integrated and interdependent world economy, which has led to higher trade, production and services outsourcing, as well as the migration of highly skilled professionals (Hummels, 2007). As these developments have unfolded, economic integration at a regional level has also strengthened, as a result of tighter institutional arrangements as well as substantial pressure from market forces.

Every single country in the world is now a member of regional trade agreements and at least one regional bloc. More than one-third of world trade takes place within such arrangements. All regional agreements have the objective of reducing barriers to trade between member countries and therefore, implicitly, of discriminating against trade with non-member countries. At their simplest level, RTAs aim at reducing or removing altogether tariffs on trade flows between member countries, with some also eliminating non-tariff barriers and liberalising investment flows. At their deepest level, RTAs have the objective of achieving economic union, implying the creation of common institutions (Schiff and Winters, 2003).

Are globalisation and regionalism part of the same phenomenon, which leads to closer economic relationships between countries? Does globalisation tend to increase regional integration, and how? How has increasing economic integration, both at the regional and the global level, affected the functioning of the global economy? What are the consequences of

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globalisation and regionalism for world trade, for production processes and for domestic economies? What kind of economic adjustments do these phenomena imply in terms of factor mobility and relative costs? These are the overarching questions this book attempts to tackle.

This chapter gives a first overview of studies available on the two phenomena and tries to provide some initial answers to the above questions. It has the further aim of creating an overall perspective on the subject in order to situate the more specific aspects studied in subsequent chapters. Section 2 shows how globalisation and regional integration have been proceeding hand in hand in recent years. Section 3 examines how global factors impact on the functioning of domestic economies and how they interact with regional linkages. It also shows how increasing global and regional integration have changed the international transmission of shocks between countries. Finally, section 4 attempts to assess how greater global and regional integration has modified the international allocation of resources.

2 Relationship between globalisation and regionalism

2.1 The conceptual framework

In the last couple of decades regional trade – as measured by the trade among participants in a regional trade agreement – has grown more rapidly than global trade. Even in more mature trade groups, intra-regional trade has tended to increase since the 1970s. In America, in particular, the share of intra-regional trade has grown by some 50 per cent since the 1970s. In Europe the increase has been more modest, from 61 per cent to 67 per cent, reflecting the fact that the level of integration was already high (table 1.1). In Asia, the share of trade within regional groups (ASEAN, BA, GCC) has also grown but remains well below the share of trade taking place with the rest of the region.

The relationship between regionalism and globalisation tends to be depicted in the literature in two extreme ways: either as open regionalism aimed at integrating participating economies in the global market, or as a way to resist global market forces. In other words, regionalism emerges either as an outcome of, or as a response to, globalisation, depending on whether the relationship is accommodating or antagonistic (Nesadurai, 2002). The former – open regionalism – is, however, the dominant model in the literature.

There is no clear consensus regarding the impact of regional integration on globalisation. On the one hand, Bhagwati and Panagariya (1996) conclude that regionalism diverts trade by creating preferential treatment

Table 1.1 *Share of intra-regional/group trade as a percentage of total trade by region (1970–2004)*

Region	Trade group	Type of trade	Average 1970s	Average 1980s	Average 1990s	2000–4
Europe	EU 25	Within group	60.8	61.1	65.6	67.0
		With rest of region	10.4	9.6	6.9	6.7
	EU 15		*59.9*	*60.9*	*62.2*	*61.4*
	Eurozone		*51.9*	*50.4*	*51.7*	*50.5*
America	FTAA	Within group	46.2	46.6	53.0	60.3
		With rest of region	1.3	0.7	0.4	0.5
	Mercosur	Within group	9.0	7.7	18.5	14.5
		With rest of region	26.1	30.7	28.7	34.3
	NAFTA	Within group	36.8	39.4	47.0	55.9
		With rest of region	8.7	6.9	6.3	5.5
Africa	SADC	Within group	2.6	1.6	8.5	9.0
		With rest of region	0.6	0.5	1.9	3.1
	UEMOA	Within group	8.6	10.1	11.2	13.1
		With rest of region	6.0	6.9	13.5	15.9
Asia	ASEAN	Within group	18.2	18.4	22.1	22.4
		With rest of region	38.7	40.5	35.1	37.7
	BA	Within group	2.2	1.8	5.8	9.4
		With rest of region	36.5	46.1	46.8	41.0
	GCC	Within group	3.2	6.1	6.8	5.1
		With rest of region	33.2	46.2	54.4	59.1
Inter-regional	APEC	Within group	58.1	64.6	70.5	72.8

Note: FTAA = Free Trade Area of the Americas; Mercosur = Southern Common Market; NAFTA = North American Free Trade Agreement; SADC = Southern African Development Community; UEMOA = West African Economic and Monetary Union, ASEAN = Association of South-East Asian Nations; BA = Bangkok Agreement; GCC = Gulf Cooperation Council; and APEC = Asia-Pacific Economic Cooperation.

Source: United Nations Conference on Trade and Development (UNCTAD).

for the members of a RTA vis-à-vis non-members and argue that countries might lose interest in the multilateral system when they engage actively in regional initiatives. On the other hand, the proponents of regionalism (such as Bergsten, 1997) argue that RTAs enhance rather than reduce the prospects for global trade liberalisation as trade creation generally exceeds trade diversion. Such a stance promotes a view of regionalism as combining the benefits of regional integration without jeopardising the strengths of multilateralism.

One aspect that all agree on, however, is that globalisation and regionalism are not mutually exclusive and cannot be seen in isolation from each other. Indeed, globalisation may imply stronger links at the regional level. Moreover, trading blocs encourage trade within specific regions, possibly creating positive externalities in the rest of the world that might take the form of trade creation. Empirically, Lee and Shin (2006) find that, if an RTA involves geographically proximate countries (measured either by distance or by sharing a common border), trade increases significantly between them. At the same time, geographical proximity also contributes to increasing trade between members and non-members. In particular, they find that the east Asian RTAs are likely to create more trade between members without diverting trade from non-members.

2.2 *The role of vicinity*

As pointed out by Leamer (2006), 'trade in products is a neighbourhood experience', as trade flows decline dramatically with the distance despite the relative fall in transportation and communication costs. More than 20 per cent of world trade by value occurs between countries that share a land border. This level has remained nearly constant over recent decades, although it varies significantly between continents. For Africa, the Middle East and Asia between 1 and 5 per cent of trade by value is with neighbouring countries, but the figure is between 10 and 20 per cent for Latin American trade and between 25 and 35 per cent for European and North American trade (Hummels, 2007).

Gravity models have been widely used to describe bilateral trade in goods. Chapter 2, by Bussière and Schnatz, shows that the collapse of communism in central and eastern Europe, together with China's progress towards a more market-based economy since the early 1990s, have also been major factors fostering globalisation and triggering a significant reorientation of international trade flows. Bussière and Schnatz's use of a gravity model indicates that the industrialised countries still tend to display above-average trade integration (or trade openness) and that, among emerging market economies, it is mainly south-east Asian countries that show a high degree of integration. While China is also found to be rather well integrated into the world economy, many central and eastern European countries are far less integrated, the exceptions being the Czech Republic, Hungary and Poland. The CEEC results suggest that their trade integration with major euro area countries, particularly Germany, Italy and Austria, is already rather well advanced, however, in line with the regionalism forces at play within Europe. There is still significant scope for stronger trade links, nonetheless, particularly with more distant countries such as Japan and the United States, as well as emerging markets in Asia and Latin America.

2.3 *The impact of production delocalisation*

As pointed out by Ethier (2005), the main new feature of the present increase in globalisation is the associated changes in production processes, which have been internationalised to a great extent. While previous globalisation waves involved the exchange of goods, the current wave features what Grossman and Rossi-Hansberg (2006) call the 'trade in tasks' (also called 'outsourcing', 'offshoring' or 'production fragmentation').

The outsourcing of production has actually resulted in the rapid growth of trade in parts and components ('fragments' or 'middle products') at a rate exceeding that of the trade in final goods, due also to the more frequent multiple border crossings of unfinished products. Audet (1996), Campa and Goldberg (1997), Hummels, Rapoport and Yi (1998) and Yeats (2001) have used trade in intermediate inputs or in parts and components to measure outsourcing. Based on these various pieces of evidence, Grossman and Helpman (2005) conclude that the outsourcing of intermediate goods and business services is one of the most rapidly growing components of international trade.

In chapter 3, Athukorala and Yamashita show that the degree of dependence on the trade in parts and components is proportionately larger in east Asia than it is in North America and Europe. In particular, the rapid integration of China into the regional production networks and the related increase in production fragmentation in the region have boosted the dynamism of the east Asian economies. Kaminski and Ng (2005) also provide strong empirical support to the increasing integration of central European countries into global (and mostly EU-based) production and distribution networks.

Grossman and Rossi-Hansberg (2006) have identified a productivity effect that results from increased outsourcing (or 'task trade'). A decline in the cost of task trade acts like a boost to the productivity of the factor whose tasks become easier to outsource abroad. Chapter 4, by Geisheker, Görg and Taglioni, investigates productivity differences between multinationals, exporters and purely domestic firms using firm-level data from the whole euro area. They show that firms that establish affiliates abroad are larger, more profitable and more productive than firms that do not.

Moreover, there are performance premia (in terms of size, profits and productivity) for multinationals with a larger number of affiliates abroad.

3 Globalisation, regionalism and the international transmission of shocks

The forces of globalisation and regionalism are likely to change the way that disturbances are transmitted within an economy and throughout the various regions and the world economy. To quantify such impacts across major economic areas we present here a number of model results, referring first to global and then to regional factors.

3.1 The role of global factors in domestic economies

It is often argued that global and regional integration has led in recent decades to a greater degree of business cycle synchronisation between the main economies. Analysis of the contemporaneous correlations between domestic variables and the corresponding foreign variables may potentially shed light on the degree of synchronisation across economies. The foreign variables used in such an exercise are those included in the GVAR model,[2] a VAR-based model of the global economy. Table 1.2 shows the average correlation for selected countries between quarterly changes in gross domestic product (GDP), inflation and selected asset prices (equity prices, the exchange rate and interest rates) and those in the respective foreign variables over the period from the first quarter of 1979 to the fourth quarter of 2005. The correlation between domestic and foreign variables is fairly high for both output (between 0.4 and 0.5) and inflation (between 0.4 and 0.7). The correlation for output is lower for Japan, which is explained by some persistent weakness in the Japanese economy during this period. The correlations for output and inflation are also low for China, as the Chinese economy was much less open during the 1980s and the beginning of the 1990s. The fact that the euro area has the highest correlation for output growth confirms the evidence for a somewhat greater sensitivity to changes in conditions in the international environment of economic activity in the euro area relative to the other advanced

[2] The GVAR (global vector auto-regressive) model consists of a comprehensive framework that considers the responses to various types of global and country shocks through a number of transmission channels, including both trade flows and financial linkages. The GVAR model includes twenty-six economic areas, linked through area-specific vector error-correcting models allowing for simultaneous interrelations between domestic and foreign variables. For a more detailed description of the GVAR model, see Dees *et al.* (2007).