1 Globalisation and macroeconomic performance

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1.1 Introduction

The term 'globalisation' is generally accepted to refer to the process of steadily increasing interdependence of national economies via trade, production and financial market linkages. While this process has been ongoing for many centuries, few would doubt that it has accelerated and intensified in the last decades. This acceleration is evidenced as much by the strong synchronicity in the rapid transmission of financial crises starting in late 2007, and the subsequent global economic downturn, as by the decade of almost unprecedented growth in international trade and financial market liberalisation that preceded it.

Two key elements stand out as the driving forces behind this increased interdependence. First, the barriers to trade as well as the costs of transporting goods, services – including financial services – and information across the globe have been reduced considerably. This development has been inextricably linked to rapid advances in information and communication technology. Second, there has been a significant expansion in global economic activity linked to the opening up of emerging economies to international trade and production, notably the greater involvement of emerging Asia in world trade, as well as Central and Eastern Europe following the collapse of the Soviet Union. The economic globalisation brought about by these changes has been one of the major trends shaping the world economy over recent years. On the real side, international trade has expanded substantially, with the emerging Asian economies in general – and China in particular – taking a prominent role. Global trade openness – measured as world imports and exports of goods and services as a share of world GDP – has practically doubled over the last two decades, from 33.9 per cent of world GDP in 1986 to 60 per cent of world GDP in 2006. On the financial

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side, international capital flows have increased even more rapidly than trade in goods and services, leading to a remarkable rise in cross-border holdings of assets and liabilities. The share of gross international asset holdings in world GDP – which provides a measure of financial openness – has shown an eightfold increase over the last twenty-five years. This sharp increase in overall economic interconnectedness – in both real and financial terms – is the core of the concept of globalisation adopted throughout this volume. Such openness has precipitated many complex changes with implications for all economic agents including firms and households as well as governments and other policy makers, including central banks.

When considering the impact of globalisation on the production process for firms, Baldwin (2006) has suggested that this can be thought of as having taken place in two steps. First, a decreasing necessity to make goods close to the point of consumption in view of rapidly falling transportation costs – a process which has been ongoing for many decades now – can be termed the 'first unbundling'. More recently, a 'second unbundling' has greatly extended this first unbundling, whereby rapidly falling communication and coordination costs have led to a declining necessity to perform different stages of the production process geographically close to one another. In turn, this has implied an increase in offshoring, first in manufacturing tasks and, more recently, in services and, associated with this, a perceived negative impact on labour demand and the employment situation of households in many advanced economies. In the long run, such adjustments would be expected to benefit both advanced and emerging economies through a more efficient allocation of resources coupled with welfare gains associated with deepening specialisation, higher productivity, lower prices, greater product choice and, ultimately, higher living standards. In the short run, however, this process is likely to embed significant adjustment costs for both firms and households, giving rise to potentially important and contentious effects on the distribution of income. Such forces are likely to be associated with an increase in the risk of protectionist policies which, as witnessed by international economic developments in 2008 and 2009, may tend to be strengthened in a context of economic or cyclical downswing.

In the remainder of this chapter, we provide an introduction to the debate on the macroeconomic and policy consequences of this increased international economic interdependence by highlighting the key questions addressed in the book's subsequent chapters. It is our hope that the chapter will help guide the reader through the volume and identify the main cross-linkages between the different contributions. Although much of the debate on globalisation is ongoing and empirical evidence continues to be gathered, the chapter also serves to summarise the current state of our knowledge on the macroeconomic effects of globalisation as well as its associated policy challenges.

1.2 European perspectives on globalisation's key stylised facts

In Chapter 2 of this volume, Bob Anderton and Paul Hiebert provide an introduction to the key issues associated with the globalisation debate from a European perspective and, in particular, they highlight the main stylised facts that can be identified. Regarding the international dimension to economic activity, they highlight the significant increases in the trade openness of the euro area over the past decade as well as the strong rise in euro area stocks of foreign assets and liabilities as a percentage of GDP. They also note the fall in export market shares for the euro area and other major developed economies over recent years. In addition, the authors analyse the structure of euro area trade specialisation and show euro area exporters to be specialised in medium-tech and higher-productivity sectors. Moreover, they show that, in general, specialisation has not changed much over time – possibly signalling the influence of structural rigidities which impair domestic adjustment in response to the changing international environment. In line with the trade-enhancing effects of the single market and the introduction of the euro, Anderton and Hiebert also highlight the strength of growth in intra-euro area trade over recent decades. However, they note that euro area imports from China and other emerging economies, such as the Central and Eastern European countries (CEECs), are growing even more rapidly – a development which has put significant downward pressure on euro area import prices of manufactured goods over the past ten years.

In their overview of key stylised facts, Anderton and Hiebert also attempt to synthesise what we know about the euro area domestic adjustment in response to this shifting structure of international trade. Whilst recognising that globalisation is not the only factor playing a role (other factors such as technological change, macroeconomic policies and structural reform in product and labour markets may be equally or even more important), they highlight several broad areas of domestic adjustment on which the globalisation debate should focus. First, productivity growth has been weak over the last decade in the euro area, contrary to the boost which would have been expected to accompany increasing globalisation. This weakness in productivity appears to be concentrated to some extent in services. Second, employment gains have mainly been in services while manufacturing has contributed negatively to overall employment growth. More recently, there are some indications that the recent composition of employment growth has been biased toward medium- to high-skilled workers in line with the view that globalisation may have resulted in a relative shift in labour demand away from lower-skilled workers in advanced economies. Third, there has been significant wage moderation over the last decade, with a falling wage share but overall quite limited evidence of widening income disparity in the euro area.

Anderton and Hiebert also highlight the sizeable relative price movements that have been observed during the most recent phase of intensified globalisation. At the same time, there has been little compression of profits – at least on a structural basis – evident in the euro area aggregate statistics. This development runs counter to the view that stronger competition associated with globalisation would result in lower domestic mark-ups. Part of the explanation for this may link to the above-mentioned impact on the labour markets, and wage-setting outcomes in particular, where real wage increases have been overall quite subdued. A final important issue highlighted in this chapter is the flattening of the Phillips-curve relationship that is apparent in the euro area over the last decades. This has happened in conjunction with a more general trend of declining inflation in advanced economies, a phenomenon often attributed to downward pressure on prices due to the stronger competition linked to increased openness. The empirical evidence on the role of globalisation per se in driving these developments is much debated with several contributors to the debate arguing that such benign inflation outcomes derive from other sources such as better policy – in particular monetary policy – or, more simply, good luck. The evidence on the role of globalisation in driving down inflation is discussed further in Section 1.4 below, while in Section 1.5 the implications for monetary policy are considered – in particular the extent to which such developments may be associated with a weakening of a central bank's ability to control its primary objective, i.e. the domestic rate of inflation in its economy.

1.3 Globalisation of production and new trade paradigms

Given the dramatically shifting economic landscape described in Section 1.2, it is not surprising that much recent theoretical research has focused on trying to assess both the transition (short-run) and long-run (steady state) implications of greater openness and stronger trade liberalisation. The key issue at the heart of such analysis is to identify what determines a firm's ability to compete – and survive – in increasingly competitive world markets where technological change permits the type of unbundling or 'delocalisation' of the production processes highlighted by Baldwin (2006). Much of the most insightful theoretical work in this area integrates elements of the new trade theory of Helpman and Krugman (1985), which emphasises the role of imperfect competition and industrial structure, with the work of Melitz (2003), which emphasises the importance of firm heterogeneity.

Sutton (2007), for example, has analysed how differences in productivity and quality – the two dimensions of firm 'capability' – affect the survival of firms in different phases of the globalisation process. Distinguishing between the impact effects of trade liberalisation in advanced countries (the 'North') and the emerging countries ('South'), he argues in favour of a three-stage adjustment process. First, globalisation leads to a shake-out of low-capability firms in the North ('impact' phase), with a compression in the distribution of capability across firms. Wage and capability differentials across countries subsequently create strong profit incentives for firms in low-wage countries to build up capabilities as well as for capability transfers from North to South ('catch-up' phase). Subsequently, a third phase takes place, whereby the general increase in access to foreign markets will provide a further shake-out in the market.

In another relevant study, Ottaviano, Taglioni and di Mauro (2009) study the effects of trade liberalisation from a European perspective. Drawing on the work of Melitz and Ottaviano (2008), they propose a general equilibrium model to analyse the issue in a context where a country's aggregate competitiveness is driven by both country fundamentals – in particular market accessibility – and the effective positioning of domestic enterprises in the overall productivity distribution of firms operating in a given industry. The model shows that the change in the set of firms that trade and invest abroad together with the changing sets of goods traded and destinations served is a source of important gains from trade liberalisation in terms of productivity and efficiency that more aggregate analyses will tend to overlook. With the reallocation of resources primarily taking place within sectors, the least productive firms are likely to terminate production, with their market share to be reallocated to more productive foreign and domestic firms, thus raising aggregate industry-level productivity and competition. Furthermore, a country whose share of exporting firms increases over time will experience a rise in aggregate productivity as well as in aggregate competitiveness in international markets.

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More Information

A key feature of the most recent phase of globalisation has been the role of technology in exposing traditionally non-traded sectors to strong international competition. In Chapter 3 of this volume, Jim Markusen studies some of the adjustment implications of trade and foreign direct investment for the business services sector. This topic has been getting increasing attention, reflecting the concern among high-income countries about the loss of medium- to high-skilled, white-collar jobs as a result of offshoring of key service activities. Markusen argues that for business services there is a need for a different approach than that used for trade in goods, since other characteristics, apart from skill requirements, seem to be of greater importance for services activities that can be considered as 'offshorable'. Such service-specific characteristics include, for example, the degree of codifiability and routinisation of certain tasks and the lack of a need for face-to-face interaction among the parties involved. Furthermore, the nature of trade barriers may be different, with barriers often being the fixed costs of establishing foreign commercial presence, e.g. as a result of legal and taxation regulations, rather than border barriers and trade costs.

To address the issues specific to the service sector, Markusen proposes a two-country model that is able to capture some of these features. He allows for two different types of fragmentation. Firstly, services production (the input) is modelled as being geographically fragmented and separated from goods production (the output). Secondly, services themselves are modelled as being fragmented into an upstream headquarters activity (e.g. R&D or management) and a downstream production activity. Although the model is not calibrated with real data, numerical simulations under different trade liberalisation scenarios point to significant potential welfare gains. For example, trade and investment in services tends to benefit relatively small economies that are abundant in skilled labour. Markusen identifies several sources of these gains. Firstly, offshoring allows service firms to source from abroad the downstream part of service production that is costly at home. This improves their competitiveness in both markets. Second, access to foreign service providers through trade or investment increases the range of services available to domestic manufacturing producers and this has a positive impact on overall productivity. Finally, access to foreign markets allows domestic service providers to spread their fixed costs over a larger output. Markusen's analysis also highlights the potential redistributive impacts of trade in services via its impact on the real wage of both skilled and unskilled workers. One important finding is that, for plausible parameter settings, the real wage of both skilled and unskilled workers may increase, reflecting the idea that the real productivity gains across the economy accrue to both sets of workers, i.e. a 'lift all' impact. This result echoes the overall limited evidence of changes in the income distribution highlighted in Section 1.2 above.

1.4 Pass-through and the role of the exchange rate

Another key issue concerning the macroeconomic adjustment associated with more intense international competition is whether it has affected the degree of exchange-rate pass-through to prices. The extent of the exchange-rate pass-through into import prices is clearly important for policy makers as it crucially affects, among other things, trade balance dynamics and the impact of exchange-rate fluctuations on domestic prices. In Chapter 4 of this volume, Christopher Gust, Sylvain Leduc and Robert Vigfusson take this issue up from the perspective of the US economy. They aim at explaining how closer trade integration with low-cost countries may have affected how import prices respond to exchange-rate movements. Key elements in their model are adjustment to the extensive margin, whereby foreign firms decide whether to export to the USA or not, and variable mark-ups in imperfectly competitive markets.

In their chapter, the authors document an increasing disconnect between the US exchange rate and the prices of imported finished goods in the last two decades, as the elasticity of the latter to the former seems to have fallen significantly. In other words, a 10.0 per cent depreciation in the US dollar is reflected in a much smaller increase in import prices compared to the 1980s. The paper then shows that this fall in the elasticity could be explained by greater trade liberalisation reflecting lower tariff and transportation costs and the lower costs of foreign exporters (associated with the emergence of low-cost economies). Their analysis is based on a general equilibrium model which features a variable demand elasticity and endogenous exporter entry and exit decisions. Entry of new exporters tends to erode price mark-ups and leads to greater co-movement of the exchange rate with import prices. This is consistent with the view that trade integration induces more competition and that this reflected in lower mark-ups for domestic producers. However, since the demand elasticity is declining in its own price, low-cost exporters will take advantage of favourable marginal costs and choose a higher and more variable mark-up. This effect dominates the effect of entry, decoupling import prices from exchange rates.

Related to the discussion on possible changes in exchange-rate pass-through, in Chapter 5 Michael Kumhof, Doug Laxton and Kanda

Naknoi take a fresh look at the issue of the weight to be attributed to the exchange rate in the optimal design of monetary policy. In their chapter, the authors argue that various factors may play a key role in determining whether the exchange rate should enter monetary policy rules, namely the endogenous determination of the range of goods that a country exports and imports, together with real rigidities in both exporting and importing. The authors develop a two-region DSGE model that integrates the theory of comparative advantage or endogenous tradability into a monetary model with nominal and real rigidities. The model highlights the role of trade frictions at the core of the latest advances in trade theory – for example, the fixed costs of becoming an exporter and also the 'iceberg' trading cost which implies that a certain fraction of traded goods is lost during the shipping process. The main result is that the real exchange rate belongs in an optimal simple monetary rule when these features are taken into account. The endogeneity of the trade pattern amplifies the real effects of the exchange rate in the short run so that not reacting to exchange-rate fluctuations leads to a sub-optimal stance of monetary policy and a significant undershooting of inflation from the target.

In the final chapter of this volume, John Taylor also stresses the need for macroeconomic researchers to possibly rethink current monetary policy rules to take into account the implications of globalisation.[1] He points out that the evidence of reduced exchange-rate pass-through could indicate the need for central banks to pay more attention to exchange-rate developments. While recognising that the answers from research on this question remain mixed, a stronger role for the exchange rate – as suggested by Michael Kumhof and his co-authors – could also argue in favour of more international policy coordination. Taylor also argues in favour of a heightened importance for exchange-rate 'diplomacy'. He cites the G7 dialogue with China aimed at an appreciation of China's exchange rate as a recent success of such diplomacy and argues that such strategies must necessarily be multilateral and involve all the interested parties. The concept of exchange-rate diplomacy also raises the 'assignment' problem of deciding whether the finance ministry or the central bank should be ultimately in charge of the currency. Despite the fact that a case in favour of the latter could be made given the close link between the exchange rate and the interest rate, Taylor argues that the close interrelationship between exchange rate policy and other non-monetary policies (e.g. trade or fiscal policy) argues in favour of assigning exchange-rate policy to finance ministries.

[1] See also Taylor (2007).

1.5 Globalisation's effects on product and labour markets

In Chapter 6, Isabell Koske, Nigel Pain and Marte Sollie take up the issue of globalisation's impact on domestic product markets in advanced economies. In particular, they aim to quantify the impact on inflation in OECD economies due to the opening up to trade with emerging low-cost countries. Their analysis is conducted in three main steps. First an accounting framework is used to decompose the change in the domestic demand deflator into an import penetration effect, a relative inflation effect and the change in prices of domestically produced goods. The main finding of this exercise is that the combined impact of lower-cost imports from China and other dynamic Asian economies has reduced domestic US inflation by 0.1 percentage point (pp) per annum in the period 1996–2005 and by 0.3 pp per annum in the euro area in the period 2000–2005.

Such estimates must be considered as clearly partial in nature given that they fail to account for the stimulus to OECD inflation rates linked to increased costs of raw materials and commodities. In a second step, the authors therefore aim to quantify the impact of increased domestic demand in low-cost countries on oil and commodity prices (e.g. of metals and minerals, agricultural raw materials, food and tropical beverages). They conduct a scenario analysis in which the growth rate of non-OECD economies is set equal to the lower growth rate of the OECD economies from 2000 onwards and this reveals a significant upward impact on commodity prices linked to the emergence of these economies. The chapter then quantifies the net effect of commodity plus non-commodity import prices on domestic consumer prices in OECD countries and cites a downward net effect for the euro area that is in the range of 0.0 to 0.25 pp. Lastly, the OECD study estimates the impact of import prices on domestic consumer prices and finds a declining long-run impact since the mid 1990s. The cyclical sensitivity of inflation to domestic economic conditions is also estimated to have declined over the last two decades although the authors do not find any robust significant additional impact from the global output gap in explaining domestic inflation rates.

While the analysis of Koske and co-authors focuses on all advanced economies in the OECD, in Chapter 7 Gabor Pula and Frauke Skudelny focus exclusively on the euro area economy and provide quantification of the impact of increasing import penetration on euro area prices and labour markets. The analysis is conducted using a variety of different methods, thus helping to assess the robustness of the available evidence.

Overall the authors also suggest some downward impact from globalisation on inflation with stronger effects on producer output prices than for prices at the consumer level.

A key area which has thus far received only limited attention is the effects of globalisation on labour markets. In their chapter Pula and Skudelny try to shed light on this aspect by estimating sectoral labour demand equations aimed at quantifying the impact of increased import penetration on employment and wages. For low-skilled sectors, their estimates suggest a direct negative impact of import penetration on employment and also a positive impact on the real wage elasticity of labour demand for low-skilled workers. Such increased sensitivity of labour demand, coupled with overall lower bargaining power of employee organisations, may help explain some of the period of wage moderation that has been observed in the euro area over the last decade. Nonetheless, given that technology and the capital stock are not included in their specification (mainly due to data problems), this evidence must be interpreted with some caution. Moreover, given the complexity of the globalisation effect and the presence of a number of simultaneous shocks (e.g. technology, structural reforms, etc.) the actual magnitude of the impact is subject to wide uncertainty.

1.6 Globalisation, asset prices and monetary policy

In considering the macroeconomic consequences of strengthened international economic integration, including the possibility of an enhanced international transmission of economic shocks, a number of important policy questions arise. As highlighted by the global economic turbulence of 2007–2009, monetary policy makers and financial sector supervisory authorities have in particular been confronted with many challenges.[2]

Regarding monetary policy, as highlighted also in the earlier chapter by Kumhof *et al.*, a fundamental question that arises is whether – and, if so, to what extent – policy makers must adapt their strategies and decision-making processes in a context of greater openness and deeper international economic interdependence. One important aspect on which this debate has focused is whether globalisation may have weakened the ability of independent central banks to control their domestic rate of inflation relative to the past. In Chapter 8 of this volume Philippe

[2] Trichet (2009) discusses a number of key monetary policy issues drawing on the experience of the financial crisis. Papademos (2009) draws some lessons from the crisis for financial supervisory policy.