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What Are the Implications for Global Value Chains When the Market Shifts from the North to the South?

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Abstract

Rapid growth in many low-income economies was fuelled by the insertion of producers into global value chains feeding into high-income northern markets. This paper charts the evolution of financial and economic crisis in the global economy and argues that the likely outcome will be sustained growth in the two very large Asian Driver economies of China and India and stagnation in

the historically dominant northern economies. Given the nature of demand in low-income southern economies, it is likely to be reflected in sustained demand for commodities, with other southern economy producers in global value chains being forced into lower levels of value added. Standards are likely to be of considerably reduced significance in value chains feeding into China and India.

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What Are the Implications for Global Value Chains When the Market Shifts from the North to the South?

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1. INTRODUCTION

The first decade of the twenty-first century arguably marks a significant structural shift in the global economy. Since the early 19th century, the historic dominance of China and India as contributors to global output was increasingly undermined by the rapid deepening of industrialization, initially in England, then spreading to Western and Northern Europe, North America, Japan and the South East Asian newly industrializing economies. The latter phase of this dominance of the global economy by predominantly “northern” economies was marked by deepening globalization with an increasing number of producers in low-income economies participating in global value chains involving the increasing fragmentation of production and specialization of tasks. This latter period was also characterized by the accelerated growth of the financial sector.

From the mid 1980s this historical trajectory of northern dominance began to wane, driven by two sets of inter-related developments. The first was the very rapid growth of productive capabilities in the two large Asian Driver economies, China and India (www.asianDrivers.open.ac.uk). The second was the growth of structural weaknesses in many of the key previously dominant northern economies which resulted in a major financial meltdown in 2008, with an accompanying fall in global (especially in the northern economies) output. If these two trends are sustained, this will have a major impact on the locale of production and consumption in the global economy in the 21st century. But what impact will this potential change in global growth trajectories have on low-income producers participating in global value chains?

This paper addresses two sets of issues. The first concerns the nature of the structural imbalances in the global economy which leads us to believe that there will be a decisive shift in the dominance of production and consumption from Europe, North America and Japan to China and India in the coming decades (Section 3). Working on this presumption, Section 4 addresses the distinctive nature of consumption in the Asian Driver economies, and considers the likely impact this will have for southern producers who participate in global value chains which feed into southern, as opposed to northern, final markets. Before undertaking these two sets of analysis, Section 2 problematizes the importance of focusing on demand in the evolution of global value chains. Section 5 concludes by reviewing the main implications of these potential shifts for low-income countries’ participation in global value chains.

2. BUYERS, MARKETS AND GLOBAL VALUE CHAINS

Until the late 1950s, economic growth was largely explained by the quantum of available labor, land and the investment, and growth was assumed to occur at the extensive margin. High savings-investment rates were at the center of the Harrod-Domar family of growth models which informed development policy in the immediate post-war period. However, the “discovery” by Solow in the 1950s that an increase in the volume of productive inputs accounted for only around 87.5 percent of economic growth in the US increasingly shifted the focus of attention in growth models from the extensive to the intensive margin (Solow, 1957). The improvement in the quality of productive inputs has thus risen to center stage.

Both the emphasis on the extensive and intensive margins reflects a preoccupation in growth theory and development policy with factors determining the augmentation of supply. However, in recent years, we have become increasingly aware of the role which demand plays in economic growth, and its derived impact on the growth of supply capabilities.

A key demand-related factor affecting economic growth is the size and rate of market growth. Rapidly expanding and large markets both spur productivity growth by allowing for scale economies in production (Verdoorns Law) and send a signal to producers that they can have confidence in investing for the future. It leads to a virtuous circle of growth and innovation, and is particularly influential in the context of very large domestic markets, or when producers sell into global markets.

But, it is not just the *volume* and rate of demand growth which affects productivity and capabilities. The *nature* of demand also has a significant impact on capabilities, and the returns to alternative patterns of production. Around the late 1960s, there was an important transition in final markets in the northern economies (Piore and Sabel, 1984). Once post World War Two reconstruction had been achieved and basic needs of most consumers had been met, consumers became increasingly discerning about the products they consumed. They demanded higher levels of quality, much greater product differentiation and faster rates of product innovation. In the context of this change in the pattern of demand, the ideal archetype in production organization moved from mass production to mass customization (Pine, 1993), in which producers developed the capabilities to meet different critical success factors (CSFs) in proliferating and dynamic market segments. Variety and flexibility – with little trade-off in costs – became the name of the game in competitive production.

A direct consequence of this search for low-cost flexibility was a transition in production organization, from “just-in-case” mass-production to “just-in-time” lean production (Kaplinsky, 1994; Womack and Jones, 1996). A series of related changes in quality-procedures (with “zero-defects” becoming an essential building block of just-in-time production) and reduced batch-size, coupled with the drive by firms to concentrate on their core competences meant that lead firms were required to take responsibility for the systemic efficiency of their increasingly global value chains (GVCs) (Gereffi, 1994). One important component of the tool-box which this entailed was the development of standards in production, often usefully summarized as QCD. The Q stood for standards over quality (increasingly measured in parts per million), the C for cost (annual reductions in price paid to suppliers) and D for delivery (more frequent deliveries in smaller batches).

Most of these standards were firm-specific. But in some cases industry-specific standards were also developed as the outcome of collaboration between private sector firms searching for competitive advantage. Increasingly, too, standards were introduced to foster the capabilities of suppliers to meet the new requirements of lean production, notably the cross-sector ISO9000 quality procedures, and subsequently ISO14000 environmental standards. The development and extension of these process standards began in the Japanese auto industry in the 1960s and then gradually spread to the global electronics sector and then more widely and rapidly to many sectors in subsequent decades. By the end of the twentieth century, these private sector standards had become an integral component in most GVCs feeding production into

global markets, particularly for intermediate and final consumption goods characterized by variety.

A further development of standards reflected a different process, one in which the key Drivers were final consumers and the state concerned with consumer welfare, rather than private sector firms searching for competitive advantage. In some cases, standards were set by governments to promote product safety, particularly in the food sector. But, increasingly, consumers' organizations became concerned with the processes involved in producing products to meet their needs, requiring fair returns to producers (FairTrade) and organic certification.

Figure 1 summarizes the growing complexity of these standards, covering both product and process, and involving various types of codification including both private and public sectors.

Figure 1: Drivers of Standards Over Process and Product

	<i>By Firms</i>	<i>By Governments</i>	<i>By Civil Society</i>
<i>Product</i>	Quality standards such as permitted parts per million defects	Food hygiene standards Lead content in toys	Organic products
<i>Process</i>	Quality control procedures – such as ISO9000 Frequency of on-time delivery	Hygiene standards – such as Hazard Analysis and Critical Control Point conformance (HACCP) Traceability of pesticide content	Sustainability standards – such as FSC (Forest Stewardship Council) (timber) Child labor standards

How have the producers inserted in GVCs been informed about the growing prevalence and the nature of these evolving standards? Where the supply function has been internalized within a diversified firm, it has been the firm which has driven the standards through its subsidiaries. And to the extent that the large firm has focused on the systemic efficiency of its value chain (as, for example, in the Japanese auto industry during the 1980s, Cusumano, 1985), it has driven standards to its suppliers through supply chain management procedures, usually informing suppliers of the standards they are required to achieve, and in some cases also assisting them to achieve these standards (Bessant, Kaplinsky and Lamming, 2003). But in a growing number of GVCs, suppliers have often been left to make their own way in identifying the core relevant standards, and in establishing the procedures required to meet these standards. It is in these sectors that global buyers have come to play an important role. By defining the role played by individual parties in the chain, the buyers can also block the upgrading paths of producers.

If we relate these functions performed by global buyers to the challenge of capability-building, the story becomes a little more complicated. In order to understand these complexities we need to decompose what we mean by the “upgrading” implicit in the concept of “capabilities”. Arising out of the GVC approach is an augmentation of the understanding in the innovation literature which has historically been predominantly focused on process-upgrading, with an ancillary focus on product-upgrading. The

GVC framework, recognizing the centrality of dynamic rents to the global fragmentation and relocation of economic activity (Kaplinsky, 2005) distinguishes four types of upgrading activity (Humphrey and Schmitz, 2001). The first two are familiar to the innovation literature – upgrading of process and product. The third is central to the GVC approach, referring to the upgrading of function. That is, firms may change their positioning in the chain, perhaps moving from physical transformation to design or marketing. Often, as in Figure 2, there is a hierarchy in this process of upgrading as firms move from assembly, to manufacturing-transformation, to design and to branding (or often a combination of these functions). In mature chains, when firms have developed capabilities, they may also upgrade by moving to a new chain.

Figure 2: Is There a Hierarchy of Upgrading?

	Process Upgrading	Product Upgrading	Functional Upgrading	Chain Upgrading
Trajectory				
Examples	Original equipment assembly (OEA) ↓ Original equipment manufacture OEM	Original design manufacture	Original brand manufacture	Moving chains – e.g. from black and white TV tubes to computer monitors
Degree of disembodied activities	Disembodied content of value added increases progressively 			

Source: Kaplinsky and Morris, 2001.

The reason why these categories of upgrading are important is that the buyers, who have a key role to play in informing suppliers of market requirements, have their own interests to protect and will generally limit the upgrading path of their suppliers. Buyers naturally are focused on protecting their own rents in the chain and will therefore “guide” and often limit through contractual conditions, the upgrading path of suppliers. The nature of these constraints on upgrading will depend on the particular competences of the buyers. For example, in the global furniture value chain large global buyers such as IKEA will allow, and indeed foster, process upgrading by their suppliers which reduces cost. But, at the same time, they will zealously guard the design and branding functions and keep these functions off-limits to suppliers (Kaplinsky, Morris and Readman, 2002). The more variety and brand-conscious markets are, the more likely that lead chain buyers will strive to maintain their control over design and branding.

Of course, the understanding of capability-growth must reflect both supply and demand factors. But it also will reflect the interaction between these two sets of

factors. For example, responding to a series of analyses on the growth of supply capabilities in the newly-industrializing-economies, Feenstra and Hamilton point to the role played by the US retail sector in the evolving east Asian “export miracle”. They show how the growing concentration of buying power in the US during the 1960s led to intense competition to find low-cost high-volume sources of supply (Feenstra and Hamilton, 2005). This led Walmart and other large retail chains to actively foster the growth of supply capabilities in Hong Kong, Korea, Singapore and Taiwan during the 1970s and 1980s, a process extended to Chinese and other global suppliers in the 1980s and 1990s. This dovied-in with the simultaneous investment in the supply of capabilities by governments and producers in these NIEs (Wade, 1990; Amsden, 1989).

In summary, therefore, although economic growth is ultimately a story of augmented supply capabilities, there has been growing recognition of the key role which final markets play in inducing this growth in supply capabilities. Market size and market growth are one part of this story. But another part involves the nature of final markets, and the role which this plays in guiding the direction of capability growth amongst suppliers. Intermediation into final markets, and therefore the nature of buying power in global markets, is a further factor affecting economic growth, particularly in economies in which external trade plays a key role.

3. ECONOMIC CRISIS AND THE SOUTHERN DRIVERS OF DEMAND GROWTH

The recession following the financial crisis of autumn 2008 sparked the largest fall in output in the north since WW2, with an associated decline in output and exports in many low-income economies, including the stellar-growth economies in east and south Asia. Between the onset of the crisis and the first quarter of 2009, global output fell by 2.4 percent, and that in the OECD fell by four percent (Holland et al, 2009). The unknown issue (at the point of writing, December 2009), is how this crisis will unfold and whether and how it will be resolved.

Essentially two major schools of analysis and policy response dominate the public debate on the evolution and resolution of the crisis. (Krugman amusingly refers to these schools in the US context as comprising of “saltwater” economists on the east and west coasts, and the “freshwater“ economists in Chicago and other interior universities - Krugman, 2009). On the one hand, the “saltwater” Keynesians who have dominated policy responses argue that a necessary transitory mechanism is government financing to sustain demand growth and prevent a downward spiral of confidence and economic activity. On the other hand, the “freshwater” mainstream economists are suspicious of big government, and fearful that deficit-financing will induce inflation, and argue for a very rapid rebalancing of government budgets.

What is missing from this polarized debate is a structural analysis of the crisis, and it is this which we need to understand in order to assess the likely role played by China and other large southern economies in the coming decade and beyond. Before presenting this structural analysis, it is helpful to think through a number of possible outcomes to the current financial and economic crisis. The first outcome is the “V scenario” – a rapid downturn followed by a fairly rapid upturn. At the time of writing

in late 2009, growth is beginning to revive in the US and parts of Europe, as well as in China and elsewhere in Asia, and this is the positive (or rather, the “least negative” hoped-for outcome). The “U scenario” (sometimes described as the “bath scenario” when the upturn is delayed) suggests a similar outcome, but with a more protracted dip. Less comfortable is the W scenario – a double dip growth path, but with a subsequent revival to past growth trajectories. This is an outcome considered more realistic by some, such as the CEO of the Hong Kong and Shanghai Bank. The most pessimistic outcome to the financial crisis is that it will follow the same path as that experienced by Japan after its financial bubble burst in the early 1990s, that is, a sharp downturn followed by a protracted period of stagnation. This is the “L scenario”. Somewhere between the L and the W scenarios is “square root scenario” ($\sqrt{\quad}$), that is a sharp downturn, followed by a small rise (consistent with the revival of activity in late 2009), followed by a period of protracted stagnation. A recent study supports this likely outcome – “we expect growth to resume by the end of [2009] in most countries, [but] the level of output in the OECD will remain permanently lower” (Holland et al, 2009: 9).

It is important, however, to avoid treating the global economy as a homogeneous entity and recognize the possibility – we believe likelihood – of diverse regional outcomes. The structural analysis which follows contrasts the likely outcome in the northern economies (Section 3.1) with that in two key southern economies, the Asian Driver economies of China and India (Section 3.2).

3.1. Structural Crisis in the North

High rates of global economic growth during the 1990s and the first decade of the new century were essentially fuelled by high rates of consumption in key northern economies, particularly in the large economies of the US, the UK and Spain, as well as in some smaller economies such as Ireland, Greece and Iceland. In each of these cases, this consumption boom was made possible through a series of financial bubbles, particularly in housing which allowed consumers to draw on the “wealth” arising from inflating house prices. This resulted in two sets of related phenomena – falling rates of household and personal savings (in some cases falling into dis-savings) and a rise in balance of payments deficits. These deficits in external payments were filled by large payments’ surpluses in key exporting economies, particularly China, Japan and Germany, made possible by restrained personal consumption arising from high rates of personal (and in recent years, corporate) savings and/or low rates of consumption.

Table 1: Country Current Account Balance (Percent of Country GDP)

	Brazil	India	China	Germany	Japan	Spain	UK	USA
1985	-0.1	-1.8	-3.7	2.5	3.8	1.6	0.7	-3.0
1990	-0.8	-2.2	3.4	2.8	1.5	-3.5	-3.9	-1.4
2000	-3.8	-1.0	1.7	-1.7	2.6	-4.0	-2.7	-4.3
2005	1.6	-1.0	7.2	5.1	3.6	-7.4	-2.6	-5.9
2008	-1.7	-1.0	11.0	6.7	3.2	-9.6	-2.8	-4.7

Source: Calculated from OECD Database, accessed November 2009.

Table 1 shows the extent of external payments deficits and surpluses in key large trading economies. The two most notable cases are the largest deficit economy, the US (its payments deficit hovered around five percent of GDP) and China (whose payments surplus in 2008 was 11 percent of GDP). Also notable is the case of Spain (deficit of almost 10 percent of GDP in 2008) and the UK (a deficit almost three percent of GDP). Some of the other smaller OECD economies showed even greater trade deficits, notably Greece (15 percent of GDP) and Iceland (40 percent of GDP in 2008). A significant feature of this performance was the growth in these structural imbalances during the 2000s.

**Table 2: Savings and Household Consumption Expenditure
(Percent of Country GDP)**

	Gross Domestic Savings	Household Final consumption expenditure	Savings to Consumption Ratio
Brazil			
1990	21	59	0.36
2000	16	64	0.26
2008	19	61	0.31
China			
1990	40	46	0.86
2000	38	47	0.80
2008	49	37	1.34
India			
1990	23	66	0.35
2000	23	64	0.36
2008	33	56	0.59
Germany			
1990	23	58	0.40
2000	22	59	0.38
2007	25	57	0.45
Japan			
1990	34	53	0.65
2000	27	56	0.48
2006	25	57	0.44
Spain			
1990	23	60	0.38
2000	23	60	0.39
2007	25	57	0.44
United Kingdom			
1990	18	62	0.29
2000	16	65	0.25
2007	15	63	0.24
United States			
1990	16	67	0.24
2000	17	69	0.24
2006	14	70	0.20

Source: Compiled from World Development Indicators accessed November 2009.

Table 2 shows the disparities in savings and consumption rates which underpinned these structural trade imbalances. The striking characteristics of this data are, first, the relatively low rates of final household consumption expenditure in China and, second,

the high rate of private consumption (especially compared to low rate of savings) in three key bubble economies, Spain, the UK and the US. Concomitant with these imbalances has been the growth of foreign exchange reserves in the two leading surplus economies (China and Japan), which together accounted for nearly half of total global foreign exchange reserves (Table 3).

Table 3: Foreign Exchange Reserves (US\$ Millions) 2009

	Country	(\$ Millions)	% of World Total
	World (sum of all countries)	7,520,566	
2009	China (including Hong Kong)	2,292,300	30%
2009	Japan	1,044,327	14%
2008	Eurozone (EU member states which have adopted the EURO, incl. ECB)	569,213	8%
2008	India	313,354	4%
2009	Brazil	223,713	3%
2008	Germany	150,377	2%
2008	United Kingdom	99,956	1%
2008	United States	67,000	1%

Source: The SWF Institute, accessed November 2009 (www.swfinstitute.org).

The imbalances in trade – feeding off the financial bubble – represents a core structural feature which is unsustainable in the medium and long term, particularly for very large global economies such as the US and China. To be resolved they require either (or a combination of) a reduction in consumption in the surplus economies, or a rise in consumption in the deficit economies, resulting in a fall in net exports in surplus economies and a rise in net exports in the deficit countries. These changes may work their way through the system through changes in exchange rates, personal consumption expenditure and government expenditure, and may or may not involve price deflation or inflation. The precise mechanisms involved in the resolution of the imbalances are less important for our discussion than the level of output and output growth in which the structural rebalancing will be achieved.

Some changes are already occurring. Thus household savings rates are beginning to rise, with consumption falling and trade deficits narrowing in key deficit economies. At the same time, payments surpluses have been falling in some economies, including China (Table 4).

Table 4: Changes in Trade and Savings for Major Economies (2008-2009)

	Current Account Balance (Percent of GDP)		Gross National Savings (Percent of GDP)		Trade (% Change in \$ value June 2008/09 YOY)	
	2008	2009 ¹	2008	2009 ¹	Imports	Exports
Germany	6.4	2.9	26	20	33	34
Japan	3.2	1.9	27	23	26	24
United Kingdom	-1.7	-2.0	15	12	31	31
United States	-4.9	-2.6	13	11	24	-0.29

Source: Calculated from IMF World Economic Outlook and DOTS Database, accessed November 2009.

¹ Estimated by the IMF WEO.

However, the outcome of falling consumption in most northern economies has been a sharp rise in unemployment almost everywhere, with aggregate employment in the OECD falling by 2.2m between the 2nd quarters of 2008 and 2009 (Holland, et al, 2009), and unemployment growing to exceed 10 percent of the labor force in the US in late 2009. It has also led to a sharp fall in exports in major surplus economies (Table 4). In June 2009 Germany's exports had declined by 34 percent and Japan's by 24 percent compared to the same period in the previous year. China, too, saw a fall in employment after global trade fell significantly in the first year after the financial melt-down (13 percent fall in exports between June 08/09).

This decrease in output in the north, and increase in unemployment - both arising out of falling personal consumption - have been met by a massive "saltwater Keynesian" injection of funds through bank-bailouts and quantitative easing in most of the deficit economies, fuelling a "freshwater" response warning of the dangers of inflation. Although not historically unprecedented, government debt as a share of GDP has risen sharply in almost all economies as actual (and projected) fiscal deficits have grown (Table 5). Without this growth in government expenditure, there is little doubt that the already almost unprecedentedly large fall in output and rise in unemployment would have been substantially greater. As a result, there has been some revival in economic activity, with both the US and the EU (but not the UK) moving out of recession (in the sense that output stopped falling) in the final quarter of 2009 and a revival of China's exports. Virtually no observer doubts the reflationary consequences of government deficit-financing – the debate is on the sustainability and long-term consequence of this deficit spending program and the extent of the economic revival.

Table 5: General Government Fiscal Balance (Percent of GDP)

Country	Germany	Japan	Spain	United Kingdom	United States
1980	-3	-5	-2	-3	-3
1990	-2	2	-4	-2	-4
2000	1	-8	-1	1	2
2005	-3	-5	1	-3	-3
2008	0	-6	-4	-5	-6
2009	-4	-10	-12	-12	-12
2010	-5	-10	-12	-13	-10
2011	-4	-8		-11	-8
2012	-2	-8		-9	-6
2013	-1	-8		-8	-7
2014	0	-8		-7	-7

Source: IMF World Economic Outlook Database, accessed November 2009. Shaded areas are estimates.

We are thus faced with two clear trends in major northern economies. First, personal consumption has fallen back and is unlikely to rise in the near-to-mid-term as households rebuild their savings and cut personal debt. Second, continued government dis-saving has limited the fall in aggregate consumption and output, but it is unsustainable in the medium and long term, both for fiscal reasons and because of sustained trade deficits. So, the issue is in what other ways can the structural deficits in key northern economies be resolved if the past growth trajectory is to be sustained, that is if any of the V, U or W scenarios are to be achieved. One possibility is for

there to be a rapid growth in consumption and imports in China, Japan, Germany and other economies in trade surplus. Here the portents are not positive. Scarred by its history of inflation during the 1920s, Germany has made it clear that it wishes to minimize deficit financing. It has also explicitly committed itself to remaining an economy with a substantial trade surplus. Japan, despite efforts to reflate consumption in the past, also does not suggest itself as an economy capable of pulling-in significant imports from the deficit economies, and allowing them to benefit from rapid export-led growth. As a recent IMF Report concluded, “the scope for advanced economies such as Germany and Japan to contribute to rebalancing is limited, given their need to build savings to prepare for population ageing” (IMF, World Economic Outlook, 2009:33). So China, and to a lesser extent India, hold the hopes of sustaining the V, U or W scenarios.

The problem is that there is little realistic sign that China-led reflation will draw in the imports to allow the major deficit economies to resume past levels of consumption growth whilst at the same time rebalancing their external payments accounts. It is true that the Chinese government has embarked on a major spending program. But, much of this has focused on infrastructure and on public services where, in 2009, government spending expanded rapidly in health (38 percent), education (24 percent), and social safety (22 percent) this year (Source: World Bank China Quarterly Update March 2009). These infrastructural expenditures do have derived import requirements but, as we will see below, these are unlikely to have a direct first-round impact on the exports of the US and the EU.

Of course there are indirect trade multipliers operating in both these forms of domestically-oriented expenditure in China, but they are likely to be small in nature, at least insofar as they affect the demand for goods and services exported by high-income northern economies¹. Moreover, employment-growth in China has been key in sustaining political stability in the face of rising inequality, and insofar as China’s labor-intensive exports decline, the emphasis will necessarily be placed on promoting domestic production to meet rising consumer demand. In addition, despite China’s rapid economic growth and large size, it remains a small player in international trade. In 2008, total Chinese demand was equivalent to less than one-quarter of total consumption in the US and the EU. All of these factors also apply to India, but since its global footprint is smaller than that of China, its capacity to stimulate exports from the northern economies is even more limited.

From this we conclude that beyond the short-term unsustainable deficit financing by governments in the large deficit economies, in reality the rebalancing by these economies will occur through a reduction in consumption, and hence in imports. We should not see this as an historical aberration. Rather, it was the post 1990s boom in consumption in the large deficit economies which was aberrant, arising from a series of financial bubbles and leading to growing consumption in the (high-income) deficit economies being subsidized by high savings in some (low-income) surplus economies (notably China and India). We can also anticipate that this fall in northern

¹ There will, of course be a positive second round general equilibrium impact on high-income country exports to those countries whose exports to meet China’s infrastructure investments are expanding. But these indirect impacts are likely to be delayed and, moreover, increasingly low-income countries imports are being sourced from China and India rather than the EU and the US.

consumption will persist for some time, perhaps even as long as the 18 year post-bubble recession which the Japanese economy has experienced since 1991. Thus, the real issue is whether these northern economies will experience an L or a $\sqrt{\quad}$ scenario, that is, whether output grows, but below pre-crisis levels before it stabilizes and stagnates.

3.2. Sustained Consumption in the South

China's recent growth, at least since the beginning of the 1980s, has been stellar, averaging more than nine percent p.a. over the period. India, too, has experienced very rapid and sustained growth, albeit only from the early 1990s. It is tempting to see these growth trajectories as exceptional, an "economic miracle". Yet neither of these two country's growth experiences is unique. If we chart the evolution of their growth paths – both in relation to output and exports – since the onset of their growth-inflection, and compare these with the similar experiences of Japan (after 1960) and Korea (after 1963), it is evident that other economies have experienced similar economic "miracles" in the past (Kaplinsky and Messner, 2008). What is significant about the China-India experience is the size of these economies. Together, Japan and Korea never exceeded five percent of the global population. In 2008 China alone accounted for 20 percent of the global population and together with India, for almost 37 percent of the global total. (It is partly for this reason that they are increasingly referred to as the "Asian Drivers" – www.asianDrivers.open.ac.uk).

Three key relevant features stand out with regard to the recent growth experience of these two Asian Driver economies. The first is that their growth rates have been significantly greater than those of the key northern economies. If these past trajectories are sustained, then it is estimated that China will be the second largest economy by 2016 and India the third largest by 2035 (Goldman Sachs 2001). Of course, if past growth relativities are not sustained in the future (for example, if as suggested in Section 3.1 above the northern economies experience a protracted period of stagnation), then China and India's relative size will grow in a shorter time span than these projections of past performance suggest. Second, both China and India are in substantial trade surplus. They do not need to reduce or hold back consumption in the same way as do the large northern economies. And, third, by virtue of their large size, they have the capacity to grow and realize scale economies by expanding their very large domestic markets. An illustration of the size of these Asian Driver markets is provided by a recent analysis of the locus of consumption by the global consuming class ("the Middle Class"), defined as those consumers with annual incomes of between \$10 and \$100 per day in 2009 (in 2005 PPP \$) (Kharas, 2009). Projecting forward to 2030 on the basis of growth rates in the past two decades, the center of gravity of global consumption shifts decisively (Table 6). The share of Europe and the US falls from 64 percent in 2009 to 30 percent in 2030, whilst that of the south in general and Asia in particular, rises. The share of Asia and the Pacific in the global consuming class is projected to increase from 23 percent in 2009 to 59 percent in 2030. Bear in mind, though, that these projections are based on past growth relativities. If northern economies do stagnate and the Asian Drivers and the surrounding regional economy continues to grow (albeit at a reduced rate), the shift of global consumption power to Asia, and to low-income economies in Asia, will be accentuated.

**Table 6: Spending by the Global Middle (Percent of Global GDP in \$PPP)
(2009 to 2030)**

	2009	2030
N. America	26	10
Europe	38	20
C. and S. America	7	6
Asia Pacific	23	59
SSA	1	1
M. East, N. Africa	4	4

Source: Selected from Table 3, Kharas (2009).

Nothing guarantees sustained growth in the Asian Driver economies. The fall in consumption in the northern deficit economies may be so large that it undermines export-oriented growth in China and India, with a potential combination of negative multiplier effects on economic activity and political disruption as unemployment grows. It may also be that environmental externalities grow so substantially, exacerbated by changing and unpredictable climate, that output growth is not sustainable. And it may be that global political instability spills over into the Asia-Pacific region, with a harmful impact on economic growth. So, as in the case of the analysis of likely growth paths in the northern economies (Section 3.1), there are clear uncertainties in projecting forward, particularly in the context of a disruptive global financial crisis. Nevertheless it is our judgment that just as growth is likely to be reduced or to stagnate in the northern economies in the future, so growth in Asia in general, and in China and India in particular, is likely to be sustained. If nothing else, the relativities in growth paths between these two worlds in the past two decades is likely to be sustained, and even to increase. If this is the case, then it is important to understand the nature of demand in these two large southern Drivers of growth, an issue which we now consider.

4. PATTERNS OF DEMAND IN SOUTHERN DRIVERS OF GROWTH

Despite differences in country size and endowments, there are well-established paths of development through which most economies pass (Kuznets, 1966; Chenery and Syrquin, 1975). Low-income economies tend to be agrarian, with the primary sector dominating GDP. As incomes rise and manufacturing expands, the industrial sector takes over as the major Driver of GDP growth. Continued income growth leads to higher demand for services, and at higher income levels it becomes the dominant contributor to GDP. These structural shifts represent a well established pattern, observed in a large number of countries over time. What interests us in this analysis is that in the context of China (and India) becoming the major Driver(s) of global demand in the coming decades, what implications the structural shifts in these Asian Driver economies have for low-income country exporters in general, and for low-income country exporters of commodities in particular? Here there are two major issues – the structure and the nature of import demand – and in both cases we will consider them in relation to the evolution of the Chinese economy.

4.1. The Structure of Import Demand

There are three major consequences of changing economic structures which affect the product composition of imports. First, at low per capita incomes, the income elasticity of demand for agricultural products in general (and food in particular) is relatively high. As incomes rise, the relative income elasticity of demand for manufactures grows, and as incomes increase further, the demand for services becomes increasingly important in final demand. Second, with the changing sector distribution of GDP, there is a shift in labor and employment across sectors. As the industrial sector expands, labor and employment migrate from agriculture in the rural areas to the manufacturing sector in the cities. Third, as economic output becomes more diversified, specialization and interchange grows. Together with the growth of urbanization, this requires heavy investments in infrastructure.

These three trends result in a growing demand for commodities. “Soft commodities” feed agricultural inputs into food, and provide intermediate inputs (such as cotton and timber) into manufacturing. The demand for “hard commodities” (such as minerals and metals) and energy grows as a consequence of investments in infrastructure and the expansion of the manufacturing sector.

China’s (and India’s) growth-paths reflect each of these trends. Significantly, it reflects the experience of an economy at an early stage in the evolution of this growth-path. We can illustrate this by focusing on some of the key parameters of China’s recent growth trajectory (see, also, Farooki, 2009). China’s economy has shown a rapid transition from agriculture to industry. The share of agriculture in GDP fell from 27 percent in 1990 to 11.3 percent in 2008. In the same period, the share of industry increased from 42 percent to 49 percent of GDP. This was accompanied by large scale rural-urban migration. In 2007, 45 percent of the population (594m) lived in urban centers. By 2015 the urban population is projected to rise to 684m, and to 890m in 2030. This growth in urban population between 2007 and 2030 will exceed the total combined population of the US and Europe.

This process of urbanization is reflected in the growth in demand for infrastructure in general and new infrastructure and housing in particular. It is one of the reasons leading observers to conclude that infrastructure-intensity is highest at the early stages of industrialization and at relatively low levels of per capita income (Canning, 1999; Auty, 2008). New projects tend to be much more commodity intensive as compared to expansion and reconstruction investments (World Bank, 2009). As Table 7 shows, the share of new projects in urban fixed investments in China increased from less than a third to almost a half between 1995 and 2007.

Table 7: Percent Share of Total Investment in Fixed Assets in Urban Areas by Type of Construction in China (1995-2007)

Year	New Construction	Expansion	Reconstruction	Maintenance and Equipment
1995	30	29	12	29
2000	32	24	15	29
2007	44	17	12	27

Source: Chinese Statistical Yearbook 2008.

Second, the growth of China's manufacturing sector has also made intensive use of commodities, particularly hard commodities and energy. To a considerable extent this is reflected in the metals and minerals-intensity of China's rapidly-growing manufactured exports which comprised the bulk of exports between 1990 and 2006 (Figure 3).

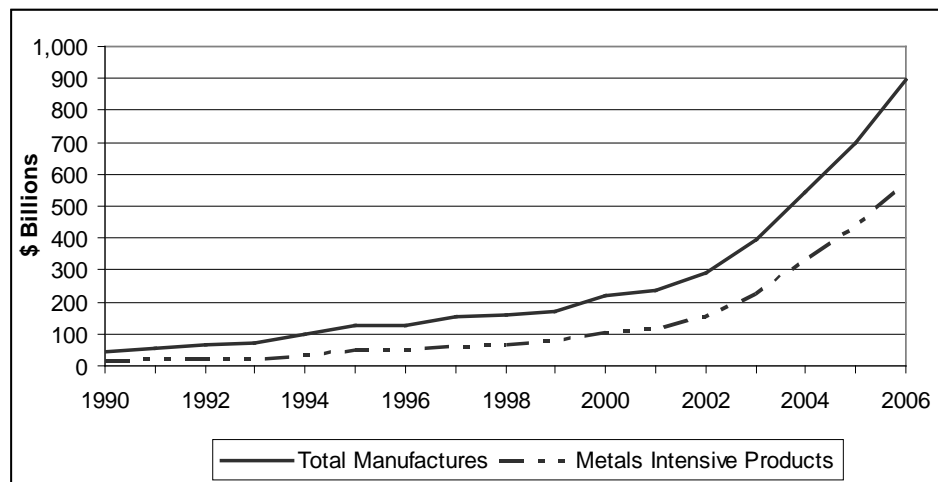
As a result of these combined factors, the elasticity of demand for energy and metals grew rapidly between the 1990s and the 2000s, and for key resource inputs such as coal, pig iron, crude steel and rolled steel, comfortably exceed a value of one (Table 8). That is, for example, every 1 percent increase in GDP saw a more than 2 percent increase in the demand for rolled steel.

Table 8: Elasticity of Energy Consumption and Metal Production in China (1991-2005)

Period	Coal	Crude Oil	Pig Iron	Crude Steel	Rolled Steel
1991-1995	0.441	0.569	0.900	0.614	0.958
2001-2005	1.105	0.832	2.222	2.340	2.545

Source: Selected from Zhang and Zheng (2008).

Figure 3: China's Metal and Minerals Intensive Exports in Total Manufactures Exports (1990-2006)



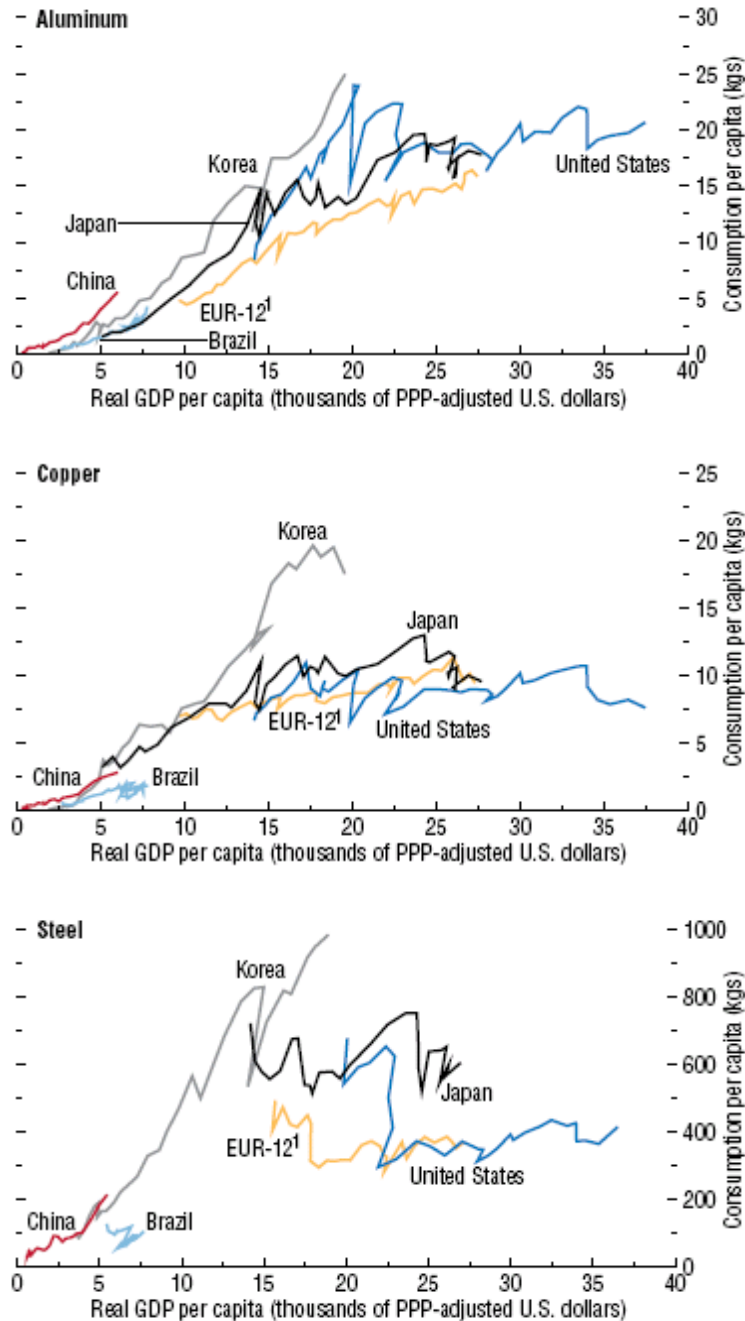
Source: Farooki (2009), from COMTRADE data accessed via WITS in November 2008. The listing of metals-intensive sectors is available in Farooki (2009; Annex 1).

With regard to agricultural inputs, a key component of demand at low per capita incomes is that for food products. Studies of urban consumers in China show that the income elasticity of demand for food falls from almost unity (0.96) at household incomes around Yuan2,500 (\$375) p.a., to 0.4 for household incomes of Yuan7,500 (\$1,125) and to 0.33 for household incomes of Yuan10,000 (\$1,500).² Thus, even though incomes are growing (and the income elasticity of demand for food is falling), there is considerable scope for sustained demand for food, particularly as in 2007, around 75 percent of Chinese households had an annual income of less than

² Adapted from Gale and Huang (2007)

Yuan38,000 (\$5,500) (Figure 5 below). Moreover, as incomes grow, the demand for meat expands, and this makes intensive use of grain (approximately four kilos of grain are required to produce one kilo of meat, Conceicao and Mendoza, 2009). Thus food-availability is likely to be of considerable importance in the future in China, not least because whilst it has 20 percent of global population China possesses seven percent of global arable land.

Figure 4: Per Capita Consumption of Base Metals



Source: IMF World Economic Outlook, September 2006.

What these data show is that China's growth path is particularly commodity-intensive. There is nothing exceptional in this resource intensive growth path. It closely reflects China's per capita income, which in 2008 was \$5,510 compared to \$43,000 for the

USA (PPP\$). But two factors are worthy of notice. First, as Figure 4 shows, there is some way to go in per capita income levels before the resource intensity of growth declines. Based on the historic resource intensity of demand for aluminum, copper and steel in Korea, Japan, the EU-12 and the US, it seems unlikely that China's (and India's) demand for minerals and metals will decline in the foreseeable future, despite rapid economic growth and rising per capita incomes.

Second, both China and India (as we have seen) are very large economies. Thus, in analyzing their impact on global trade we have to suspend the small country assumption that no single economy's trade pattern will shift the structure of global trade or the prices at which products are traded. As Table 9 shows, China accounts for a rapidly-growing share of global consumption of key base metals and meat, and this has led some commentators (including ourselves – Kaplinsky, 2006 and 2009; Farooki, 2009) to conclude that at the least this helped explain the boom in commodity prices between 2001 and 2008, and perhaps may also play a historically-significant role in promoting a structural shift in the global commodities-manufactures terms of trade in favor of commodities

Table 9: China's Share of Global Consumption of Base Metals and Meat

	1990	2000	2007
Base Metals (% Share of World Demand)¹			
Aluminum	5	13	33
Zinc	8	15	31
Lead	7	10	31
Iron Ore	4	16	48
Copper	7	12	26
Food Products (% Share of World Consumption)²			
Poultry	9	18	17
Pork	35	47	46
Beef	2	10	12
Soybeans			40

Source:1 Macquarie Commodities Research (2008).

2 Conceicao and Mendoza (2008).

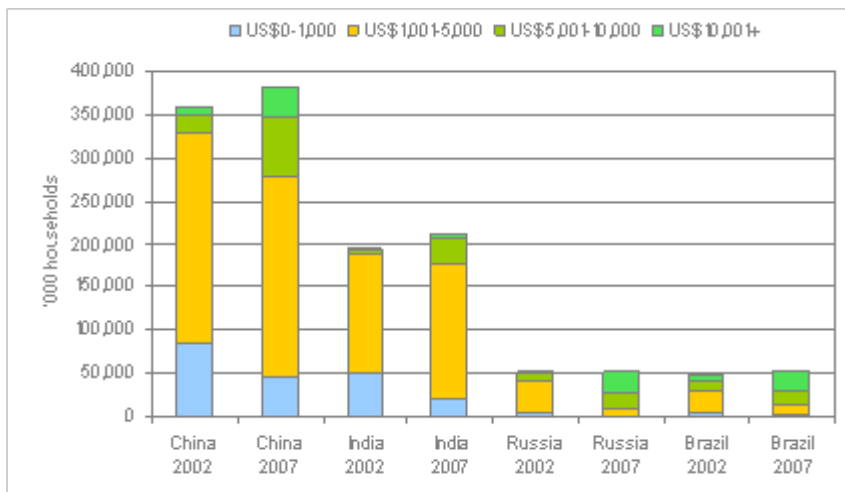
4.2. The Nature of Import Demand

Thus, we have observed that Chinese growth has led to a sharp rise in its share of global demand for commodities and perhaps also for a structural upward shift in the relative global price of commodities. But there is more that we can observe about China's demand for commodities which is of relevance to global commodity value chains feeding into the Chinese economy. The key relevant factors are the demand-preferences of low-income consumers, the consequent relative insignificance of standards in value chains, and the preference for the importation of relatively unprocessed products.

4.2.1. The Demand Preferences of Low-Income Consumers

The median income of individual consumers in the US in 2007 was \$26,625³. The figure representing the poverty threshold in the UK (defined as 60 percent of average (median) annual incomes in 2007) was \$35,432⁴. There is no gainsaying the existence of poverty in all of the high-income economies, particularly when poverty is defined as a relative income⁵. There are undoubtedly also cases of significant absolute poverty in the north, for example, fuel poverty amongst the aged. However, whatever the degrees of inequality and deprivation are in the north, the incomes involved are in almost all cases way beyond those earned in low-income economies such as China. Figure 5 shows the dispersion of incomes in the BRIC economies (Brazil, Russia, India and China) in 2007. From this it is evident that more than 270m households in China and more than 170m households in India had total annual incomes of less than \$5,000. By contrast, the median household income in 2007 was \$50,233 in the US and \$49,800 in the UK.

Figure 5: Households According to Disposable Income Bracket in China, India, Brazil and Russia '000 households (2002/2007)



Source: Euromonitor International from national statistics, cited in Media Eghbal (2008).

In many cases, these households lived above the minimum \$1 per day MDG threshold, particularly in China. But the point of significance is that most of these households in all of these BRIC economies were cash consumers, that is, they bought in a range of products, consumer, intermediate and capital goods. For these consumers, price is an overwhelming consideration in consumption. That is not to say that they do not care about quality and variety (the two key Drivers of consumer demand in northern economies in recent decades – see Section 2 above), but that these preferences play a minor role in their consumption choices. Product differentiation (variety and quality) gives way to product “commodification” (standardization in order to achieve low prices). To the best of our knowledge, this assertion is not evidenceable although the idea that low-income markets provide scope for profitable

³ Source: US Census Bureau

⁴ Source: The Median Income before tax in 2007 was £ 17,700 (HM Revenue and Customs)

⁵ As Wilkinson and Pickett (2009) show, most indicators of welfare are more affected by relative than by absolute poverty levels. However, in this discussion we are not focusing on the welfare implications of income levels, but on their translation into the demand characteristics of consumption, so it is absolute income levels which draw out attention.

production through the sale of low-value items is now widely acknowledged under the banner of the “fortune at the bottom of the pyramid” (Prahalad, 2005).

4.2.2. Imported-Inputs Are Not Standards-Intensive

Following on from the preferences of low-income consumers, there will be derived implications for the role which standards play in value chains. In Section 2 (see Figure 1) we distinguished between process and product. We observed that there was a growing tendency for the standards intensity in value chains to grow, reflecting a combination of factors – firm specific concerns with standards (such as Q-C-D) to meet consumer needs for product diversity and product quality, government-standards to protect consumers, and civil-society-induced standards reflecting growing concerns with the ethics of production systems and their environmental impact. In the context of the dominance of (very) low consumer incomes in countries such as China and India, each of these Drivers of standards is likely to be of very diminished significance (Figure 6). In general, firms are less concerned with product variety, so that the imperatives to achieve flexibility through just-in-time production (and hence Q-C-D standards) are weak. Governments may either have poorly developed safety standards, or fail to implement them effectively. Recent cases in both China (baby milk) and India (pesticide in soft drinks) provide striking evidence of this⁶. Finally, the NGOs which have driven public opinion on issues such as FairTrade, labor standards and the environment are muted in low-income countries and are likely to have little significance with regard to the incorporation of ethical and environmental standards in value chains. Indeed, particularly in China, NGOs often have a tenuous identity.

Figure 6: How Important Are Standards Likely to Be in Value Chains Feeding into China and India?
(An elaboration of Figure 1 above)

		Firm Driven Standards	Government Driven Standards	Civil Society Driven Standards
<i>Product</i>	<i>High-Income Countries</i>	Quality standards such as permitted parts per million defects	Food hygiene standards; Lead content in toys	Organic products
	<i>China, India</i>	Low emphasis and weak enforcement	Low emphasis and weak enforcement	None, or very weak
<i>Process</i>	<i>High-Income Countries</i>	Quality control procedures – such as ISO9000 Frequency of on-time delivery	Hygiene standards – such as Hazard Analysis and Critical Control Point conformance (HACCP) Traceability of pesticide content	Sustainability standards – such as FSC (Forest Stewardship Council) (timber) Child labor standards
	<i>China, India</i>	Low emphasis and weak enforcement	None, or very weak	Low emphasis and weak enforcement

⁶ http://www.businessweek.com/globalbiz/content/aug2006/gb20060810_826414.htm

4.2.3. The Growth in Imports of Relatively Unprocessed Products

A key objective of economic and industrial policy in most low-income countries is to add value to natural resources: in South Africa, for example, the call is for the “beneficiation” of the country’s extensive mineral and agricultural products. Although there are dangers to this policy agenda (beneficiation, particularly of hard commodities, is often very capital and technology-intensive) there is a natural logic to this in many cases. Many commodities degrade rapidly and/or involve significant weight loss in processing. There are also evidenced cases of economies which have utilized their natural resources to drive forward their industrialization (Wright and Czelusta, 2004). And, particularly in the processing of soft commodities, this is often a labor-intensive process and wage costs in low-income exporting economies are generally a fraction of those in high-income economies. Moreover, commodity processing is often very polluting.

This logic of processing at source (rather than in the importing economy) applies easily – or relatively easily- when low-income economies export commodities to high-income economies. The high-income economies are happy to see the pollution and energy intensive production processes located in low-income countries; their high-technology, skill-intensive, high-wage and safe working environments in their producing sectors are generally more appropriate to the provision of capital and intermediate goods for resource-processing industries rather than for the direct processing of commodities. However, when low-income resource economies trade with low-income importing economies, many of these factors which promote a win-win division of labor do not apply (Figure 7). Low-income economies care less about the polluting nature and energy intensity of processing. Their industrial structures are well-pitched in terms of technological and skill intensity to specialize in processing, and their low labor costs enable them to do so at similar cost-profiles to those operating in low-income exporting economies.

Figure 7: High and Low-Income Commodity Importing Economies – Complementarity and Competition with Low-Income Commodity Exporting Economies

	Highincome importing economy	Low-income importing economy
Pollution and energy intensity	High preference to outsource to exporting economy	Indifferent to location
Complementary or competitive industrial structures	Complementary –focus on technologies with high barriers to entry	Competitive – importers also have low technology industrial structures
Labor costs	High wages militate against labor intensive processing	Low wages facilitate labor-intensive processing
Labor standards	Working conditions are effectively protected by enforce legislation	Weak protective environment of working conditions

In the case of China and its imports of food products, there is an additional factor affecting the degree of processing involved in its imports. We have observed above,

that the ratio of China's population to its arable land suggests that however effective its agricultural sector might become, it seems likely that it will have to draw on agricultural imports as its economy continues to grow, and as food tastes shift increasingly towards meat products. After a brief flirtation with the importation of food products, the experience of global shortages of key food crops in 2007 and the associated rise in political tension, in countries as diverse as Cameroon and Indonesia, has concentrated the minds of Chinese policy makers. In fact, China has pursued a strong self-sufficiency policy in grains since 1995, with the objective of domestic production meeting 95 percent of its domestic demand (Anderson and Peng, 1998). As a consequence, agricultural production shifted towards grains and away from other crops such as cotton, sugar beet and soybeans (Fang and Beghin, 1999). Given the shortage of land, this has increasingly meant that China's agricultural imports have been concentrated in animal feeds (such as soya and palm oil) and products which compete with grains for land-use (such as inputs).

There is another policy-related factor which also affects China's growing importation of agricultural products. In the context of a growing perception of a future energy-crisis, China has (like other countries such as the US and the EU) begun to promote the production of bio-fuels. These need agricultural inputs, but given the primacy being given, for political reasons, to food self-sufficiency, China has increasingly sought to source the inputs for bio-fuels from abroad as bio-fuel crops are generally planted on land used for food crops⁷.

5. SHIFTING MARKETS AND LOW-INCOME COUNTRIES' PARTICIPATION IN GLOBAL VALUE CHAINS

The rapid growth of the East Asian newly industrializing economies in the 1970s and 1980s, and of China, India, Vietnam, Indonesia, Central America and other emerging economies in the 1990s and 2000s was to a significant extent based on the expansion of their exports. Incorporated in global value chains, their exports were either directed to northern economies, or fed intermediate products into other countries' exports to northern economies.

In Section 3 we reflected on the nature of the post 2008 financial and economic crisis and the likely trajectory of the global economy. Even without stagnation and falling growth rates in the north, the growth rates of the past two decades in China and India are likely to lead to an outcome in which, by virtue of their size, they increasingly come to dominate the global economy in the 21st century. However, there are persuasive reasons to believe that key large northern economies (notably the US, the UK and Spain) will reduce imports as they rebalance their global orientation, given their large structural trade and fiscal deficits. This will further accentuate the dominance of China, India and other low-income economies in the growth of global demand in the coming decades.

⁷ Von Braun (2007) estimates if current bio-fuel and investment plans were to carry on, the world price by 2020, for major food crops could rise by 11% for cassava, 26% for maize, 18% for oilseeds, about 12% for sugar and 8% for wheat

We believe that this change in the Drivers of global demand – from northern to southern economies – will, by hypothesis, have four major sets of implications for global value chains in the south arising as a direct consequence of the particular characteristics of demand in China and India. First, low levels of per capita incomes, coupled with rapid urbanization and the growth of exchange as their economies become more diversified, will lead to a sustained growth in their demand for hard and soft commodities, both as a source of food and as inputs into infrastructure. Second, low levels of per capita incomes mean that the nature of demand will be for cheap, undifferentiated goods with low acquisition cost, running against the major trends in demand in northern economies after 1970 which increasingly favored differentiated, high quality positional products. Third, the standards-intensity of global value chains feeding into northern economies has grown significantly and has become much more complex and demanding in recent decades. By contrast, global value chains feeding southern markets are likely to have much less levels of standards, both in relation to products and processes. And, fourth, northern and southern economies are often complementary in terms of economic structures. Northern economies have much high wages costs and are very much more sensitive to the harmful externalities of polluting economic activities than are southern economies, and have increasingly outsourced processing to developing economies. By contrast, low-income producing countries have similar economic structures and industrial trajectories to low-income economy consuming economies, with the prospect of greater competition in the division of labor in global value chains.

Evidence from two southern value chains – cassava in Thailand and timber in Gabon – provides corroboration for this broad argument (Kaplinsky, Terheggen and Tijaja, 2010). In both cases, the market has shifted from the EU to China. In both cases, broadly speaking, this resulted in a reduction in the degree of value added and in the importance of process and product standards. But cassava and timber are relatively undifferentiated products, with low degrees of coordination and governance in their value chains. It remains to be seen, therefore, whether our hypotheses will also be evidenced in value chains historically producing more differentiated products for northern markets. We believe – but this belief necessarily requires testing – that the nature of the developments which we have sketched out in earlier sections will be even more relevant in the case of less commodified products.

What might this mean for meeting development objectives in low-income economies? Naturally this is a complex picture, reflecting different sectors and different types of low-income economies. There are, however, some general observations which can be made. First, on the positive side, enhanced demand from the rapidly growing and very large Asian Driver economies provides the potential for a significant income-enhancing effect, with either an increase in export earnings, or some level of compensation for falling exports to the north. A second positive outcome is that there is often a link between process and product technologies such that products for low-income consumers often involve labor-intensive process technologies (Kaplinsky, 2010). Third, meeting the standards in GVCs serving northern markets generally is not just a costly exercise, but requires a literate and numerate labor force and forms of management which may be beyond the reach of many small scale enterprises. Accessing the Asian Driver markets may therefore be promoting of the role played by SMEs in GVCs.

On the “dark side”, achieving standards can often contribute to the development of upgrading capabilities by the firm, so that exclusion from demanding standards-intensive markets may undermine the drive to capability-building in the firm. Further, from the perspective of both the firm and the economy as a whole, the blocking of attempts to deepen value added by advancing along the value chain means that producers are likely to be stuck in pockets of static comparative advantage. Moreover, being confined to niches of low productivity (for example, value added per worker) is likely to undermine the move into the higher value added activities which underwrite high incomes.

It is clear from this that there is much ambiguity in outcomes. To some extent this ambiguity reflects sector and technological constraints. But it also reflects the way in which individual producers and economies respond to these challenges posed by the transition in final markets. Will the advance of China and India as the major poles of consumption lead to a restructuring of value chains which will be “bad” or “good” for development in other low-income economies? Well, that all depends....

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