

**SUSTAINING INCOME GROWTH IN A  
GLOBALISING WORLD: THE SEARCH FOR  
THE N<sup>TH</sup> RENT**

Raphael Kaplinsky,  
Institute of Development Studies,  
University of Sussex,  
Brighton BN8 5BP  
kaplinsky@ids.ac.uk

and

Centre for Research in Innovation Management,  
University of Brighton,  
Brighton BN1 9RH.

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## **ABSTRACT**

Heightened competition in global markets threatens the sustainability of incomes in almost all sectors and in almost all countries. Rapid technological progress and growing capabilities amongst a widening pool of producers require an agile approach in the direction of innovation and learning. This paper provides an overview for dynamic positioning in the global economy. It identifies the associated concepts of rents and barriers to entry as providing the key to sustainable income growth and provides and discusses a taxonomy for positioning by firms, groups of firms, RTOs and governments.

The analysis is situated in relation to sustaining income growth in the global economy (and particularly by developing country producers), but the argument has wider relevance to producers, supporting institutions and governments in all countries, and not just in the traded-goods sectors.

Key words:

globalisation - innovation - dynamic capabilities - economic rent - inequality

## GLOBALISATION, POVERTY AND INCOME INEQUALITY

### *Winners and losers*

A great many people in the world have gained from growing openness in factor and product markets, in communications, in cultural interchanges and in travel. Between 1990 and 1998, 670m people around the world moved out of conditions of “absolute poverty” - that is, their incomes exceeded \$1 per day (measured in 1993 purchasing power parity consumption standards). In historical terms this represents a major advance in human welfare. The forces which continue to propel openness are testament to the extent of these gains and to the economic and political power of its beneficiaries.

But not everyone has gained from globalisation, and there have been a large number of ‘casualties’. In the recent era of globalisation, the main dimensions of poverty and income inequality have been that:

- The numbers living in absolute levels of poverty remained stubbornly large during the 1990s. Although the aggregate number living below PPP\$1 per day fell from 1.2bn in 1990 to 1.1bn in 2000, this was almost entirely due to China’s rapid economic growth; excluding China the number rose slightly from 877m to 896m (<http://www.worldbank.org/research/povmonitor/index.htm>).
- The inter-country distribution of income has become markedly more unequal.<sup>1</sup>
- In almost all countries, intra-country income distribution has worsened; this includes “successful” developing countries such as China and Chile, unsuccessful developers in sub-Saharan Africa and most of the richer countries (especially the Anglo-Saxon countries in Australasia, the UK and the US) (Cline, 1997; Rodrik, 1998; Streeten 1998; Hartog, 1999; UNDP 1999)).<sup>2</sup>

There are two reasons why we should be concerned about this process of unequalisation. The first is that it threatens the very survival of globalisation itself. The late 20<sup>th</sup> century was not the first time in history that economic activities have

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My thanks to Gary Gereffi and Jeff Readman for comments on an earlier draft, and to Jeff Readman for his calculations of EU unit-price imports.

<sup>1</sup> Perversely this does not apply if distribution is measured in terms of numbers of people because of China’s rapid economic growth, despite the fact that inequality *within* China has risen dramatically (Khan, 1999). This is a reflection of China’s very rapid growth (averaging more than 8% per annum over the past 15 years).

<sup>2</sup> Income inequality has not grown so rapidly in some of the richer countries due to government transfers, but these transfers are themselves vulnerable to the growth of unequalisation – “The final distribution of income has not changed as dramatically as many – perhaps most – people think. It has widened in some countries, but by no means all. But the reason why it has *not* risen in some countries is because they redistribute more money than previously, or that they redistribute more from the rich to the poor. Underlying these figures is the stark fact that the distribution of market income has been widening everywhere. *If* this trend continues, then it will eventually become impossible to use redistribution in order to prevent a widening” (Förster, M. and M. Pearson, 2000: 31).

been conducted on a global plain; indeed, in many respects the degree of global integration in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries was as great as that at the turn of the millennium (Bairoch and Kozul-Wright, 1996; Baldwin and Martin, 1999). But the changing pattern of income distribution during this earlier period set in train social and political strains which led to a disruption of global integration (Williamson, 1998), taking the form of controls against immigration (passports were only introduced to regulate peace-time travel in 1914) and trade restrictions during the inter-war period. Hence our ability to sustain the benefits of global growth will depend on our success in constraining the negative consequences of global integration, and our failure to do so adequately is reflected in the increasing incidence of protests movements against the Bretton-Woods institutions. And, secondly, concerns with unequalisation are also driven by ethical considerations, particularly in regard to the stubbornly large numbers of people living in conditions of absolute poverty (as reflected in the global development community's target of halving this number by 2015). But it is not just absolute poverty which drives ethical concerns, since growing inequality (even if it is associated with rising absolute standards) is for many an undesirable social outcome.

If those who had lost from global integration (both in absolute and relative terms) were confined to those who had failed to participate in global factor and product markets, the policy response would be simple – “join in”. But, in fact, the losers include not only those who have been excluded from globalisation, but those who have participated actively. They are to be found in both the industrially advanced and developing economies. Thus, the challenge for the 21<sup>st</sup> century is not so much *whether* to participate in global processes, but *how* to do so in ways which provide for sustainable income growth.

### *Sub-optimal insertion into the global economy*

How is it that countries, sectors and firms may integrate inappropriately into the global economy, in the extreme case experiencing “immiserising growth”, that is an increase in economic activity associated with a decline in the global purchasing power of incomes? Let us first begin with a presentation of data to show the problems which may arise.

Individual firms can get it wrong. Consider, for example, the case of a firm “manufacturing” denim jeans in an export processing zone in the Dominican Republic during the early 1990s (Table 1). Constrained by the Caribbean Basin Initiative terms of entry into the US, it saw its core competence as lying in the sewing of materials imported from the US, designed in the US and cut in the US, and then selling under the brand name of a major international company. Even the logistics of this operation were controlled by the US principle. The local firm, working under contract, began by receiving \$2.18 per jean sewn. Then as neighbouring countries devalued (reducing the cost of their labour in US\$), so the Dominican Republic firm was forced to systematically reduce its charge-rate; but even this was not enough and the work was eventually sourced elsewhere. The vulnerability of this firm, therefore, was that it specialised in a narrow function (sewing) within a particular link (production) in a highly competitive value chain (jeans). Its value added was too low to allow for enhanced efficiency and most of the value was appropriated in the design and branding links in this chain.

Table 1. Declining unit prices and investment instability: the case of jeans manufacturing in the Dominican Republic

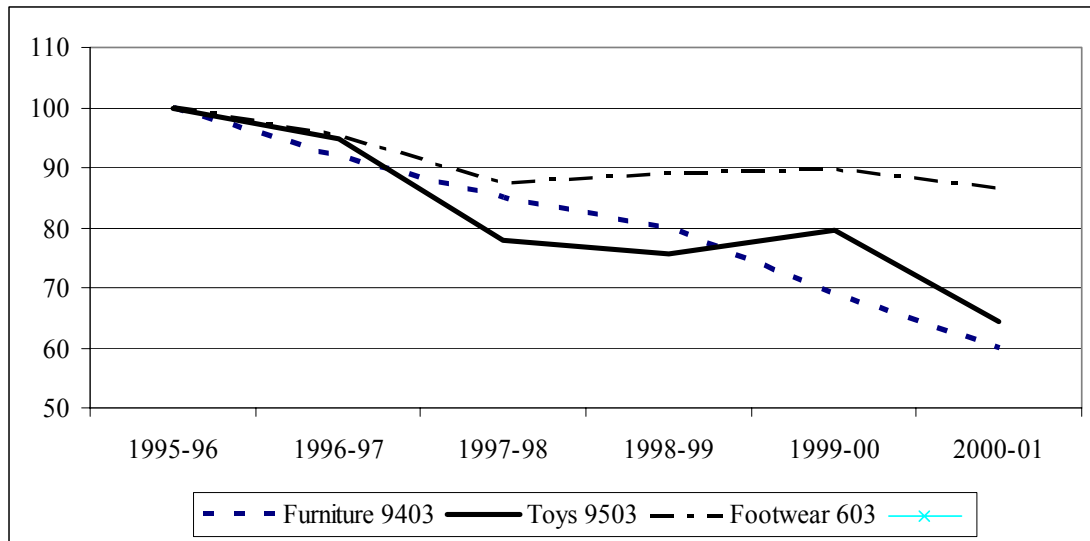
	<b>Volume (per week)</b>	<b>Unit price (\$)</b>
January 1990	9,000	2.18
October 1990	5,000	2.05
December 1990	3,000	1.87
February 1991	Arrangement terminated and assembly transferred to Honduras	
Total investment in equipment by Dominican Republic firm was US\$150,000		

Source: Kaplinsky (1993).

It is not just firm which can insert themselves inappropriately into global value chains. It can also apply to whole sectors and regions. Consider for example the experience of a clustered group of leather shoe manufacturers in the Sinos Valley in Brazil. Over a two-decade period, they became a major supplier of women's leather shoes, particularly to the US, accounting for about 12% of total global exports. Initially sales and exports grew rapidly during the 1980s, and although real wages did not grow significantly, they certainly did not fall. The "connectedness" into the US market was provided by a limited number of large-scale buyers who supplied very large US chain-stores. But once these buyers had established reliable, quality suppliers in Brazil, they then moved their supply-chain management capabilities to China, building competitive capabilities there and undercutting the very Brazilian producers which they had helped to upgrade during the 1980s! The consequence was a 40 percent fall in wages in the Sinos Valley's shoe sector during the 1980s and static real wages during the 1990s (Schmitz, 2000). Here, the problem confronted by the shoe producing sector and region as a whole was very similar to that experienced by the single Dominican Republic firm, notably that they had specialised in those particular links in the value chain (leather and shoe production) which were subject to intense competition. The design and branding links remained in the US. A similar picture can be seen with respect to the prices of EU imports of furniture, toys and footwear sectors (three of the four major developing country manufactured exports) (calculated as indexes of two-year moving prices) between 1995 and 2001.<sup>3</sup> Prices of these products declined by 34, 29 and 12 percent respectively

<sup>3</sup> Apparel was excluded from these calculations as their importation and prices were heavily affected by preferential quota arrangements (which are due to expire in the coming five years).

**Figure 1: Index of unit prices of EU imports of furniture, toys and footwear (two-year moving average, 1991/2=100)**

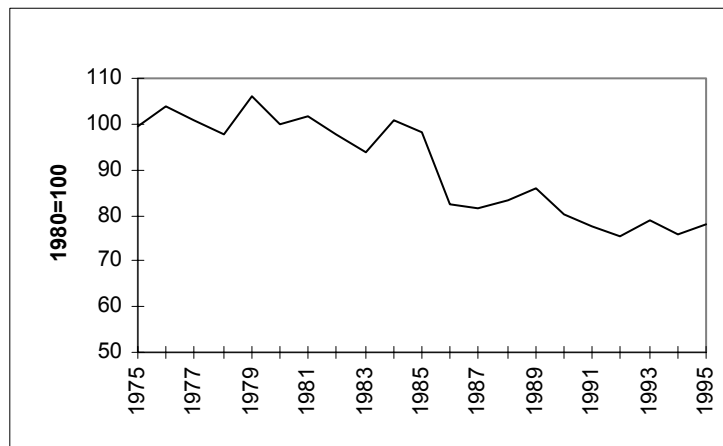


Source: Calculated from COMEXT, 2003.

Finally, whole groups of countries can also insert themselves inappropriately into global markets. Historically, countries specialising in primary commodities (minerals and agriculture) have seen their terms of trade decline against manufacturers, and this has been one of the primary reasons underlying the drive towards industrialisation. However, as can be seen from Figure 2, and particularly since China's entry into global markets in the mid-1980s, we have begun to witness a historically significant decline in the terms of trade of developing countries' manufactured exports.<sup>4</sup> So, even manufacturing is no longer a protected domain – countries specialising in labour-intensive manufactured exports are equally vulnerable to misplaced insertion into global markets.

<sup>4</sup> Wood's calculation of falling terms of trade in manufactured exports is corroborated by a study of the barter terms of trade in manufactures between developing countries and the European Union, which estimates an annual rate of depreciation of 2.2 per cent between 1979 and 1994 (Maizels, et. al., 1998). In a further study focusing on the terms of trade in manufactures between the US and developing countries for the period 1981–1997, Maizels, et. al. (1999) conclude that '[o]ver the whole period, the relative terms of trade trend of developing countries, compared with that of developed countries, has significantly worsened (Maizels, et. al., 1998: 23). It is significant that neither of these studies by Maizels et. al. reflect the fall in developing country manufactured export prices which followed the East Asian crisis of 1997–8.

**Figure 2: Price of LDC manufactured exports relative to IAC manufactured exports of machinery, transport equipment and services**



Source: Wood 1997.

## **ECONOMIC RENT AND SUSTAINABLE INCOME GROWTH**

In each of these above cases, the ability to sustain income growth (and hence to make the most of global opportunities) was undermined by intense competition. Hence, the obvious policy conclusion is for firms, sectors and countries to develop growth trajectories which enable them to either insulate themselves from competitive forces, or to upgrade by learning to increase their competitiveness more rapidly than other producers. The challenges which this poses are more complex than may be obvious at first glance, and the capacity to upgrade is only one of a number of options which are available to achieve sustainable income growth. In order to understand these challenges more deeply, we need to open-up the concept of rent, and the associated concept of barriers to entry.

*The concept of rent is used to describe a world where the parties who control a particular set of resources are able to insulate themselves from competition by taking advantage of, or by creating barriers to the entry of competitors.*

In analysing the nature of different types of rents and barriers to entry, it is possible to distinguish between two broad categories:

- ❑ those rents which arise from command over the production process, and which are largely endogenous to the value chain
- ❑ those rents which arise from barriers to entry created by parties external to the chain.

As we shall see below, these two categories are not quite as distinct as might seem at first glance, since producers are often able to influence the external world by lobbying

for the erection or removal of particular types of entry barriers. Similarly, actors in the world outside of direct production may also be able to influence the capabilities and actions of producers who may be striving to take advantage of rents.

Before engaging in this discussion of rents, it is necessary to situate the terrain of analysis. Hitherto, most of the literature on rents and upgrading has focused on the individual firm (for example Teece, Pisano and Shien, 1997), the industry (for example, Porter, 1990) or the country (for example, Reich, 1991). But in this paper our lens will be the *value chain* defined as the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. The reasons for focusing on the value chain are that it:

- offers a holistic arena in which the dynamic characteristics of upgrading can be assessed
- identifies the practical steps which producers (and their governments and national systems of innovation) can take to achieve upgrading
- exposes the power relations which enable or constrain the capacity of individual actors in the chain to upgrade, and therefore
- provides an important insight into the factors which determine the spreading of gains as global production networks expand in importance.<sup>5</sup>

### *Rents which are largely endogenous to the value chain*

The importance of rent was first identified by Ricardo - '[r]ent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil' (Ricardo 1817: 33). Ricardo, as we shall see below, began with the observation that agricultural land was not homogenous, and that those who had access to the scarce, fertile plots consequently derived a rent. But although Ricardo hinted that these rents were not merely a bounty of nature (for example by improving land through investments in irrigation), it was left to Marshall and particularly to Schumpeter to develop a framework for understanding the process whereby rents could be created. These rents are referred to as "producer", "entrepreneurial" or "Schumpeterian" rents.

Schumpeter provided an analytical framework to show how scarcity can be constructed. For Schumpeter, the entrepreneur played a unique role in this through 'the carrying out of new combinations' (Schumpeter 1961: 107). He saw entrepreneurial surplus as the return to the innovation of a 'new combination', one which competitors found difficult to replicate (at least in the short-run). It was rewarded by rates of return which were greater than the cost of the innovation and those which could be obtained in other economic activities. These returns to innovation are a form of super-profit, premised on the existence of barriers to entry.

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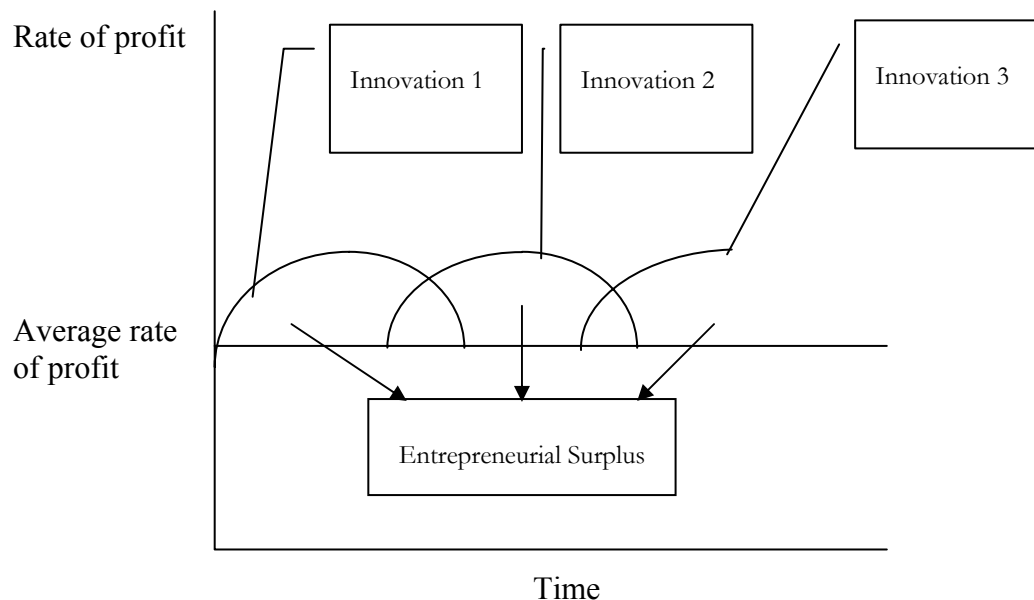
<sup>5</sup> For an extended discussion of these attributes of value chain analysis, see Kaplinsky (2000) and the various contributions in Institute of Development Studies (2001).



They act as an inducement to replication by other entrepreneurs, and when they are copied, the process of diffusion increases productivity in the economy as a whole. In time, the innovation is superseded by a superior “new combination” and it is this “Schumpeterian motor” which spurs the innovation process and which drives forward economic growth. For Schumpeter, then, these entrepreneurial rents were almost always dynamic.

Figure 3 shows the process at work. In each industry the equilibrium is defined by the ‘average’ rate of profit. Following the introduction of a ‘new combination’ the entrepreneur reaps a ‘surplus’ – what we might term a producer rent. Then as the new combination is copied – a process of diffusion – the producer rent is whittled away, prices fall, and the innovation accrues in the form of consumer surplus. But all this does is to renew the search for a ‘new combination’, either by the same entrepreneur or another entrepreneur, in the continual search for entrepreneurial surplus.

**Figure 3: The generation and dissipation of entrepreneurial surplus**



Much of the early neo-Schumpeterian literature was focused on technology as the driving force to innovation (Freeman, Clarke and Soete, 1982; Rosenberg 2000). In part this reflected the initial focus of the literature on the chemicals, machine tools and electronics sectors. But it also arose from the concentration of much of the early literature on the firm as the driving force of innovation. However, in recent years, two developments have widened the focus on Schumpeterian rents. The first was the recognition that firms were imbedded in local and national systems of innovation, drawing inputs and services from a range of local actors including research and technology organisations (RTOs), educational establishments, service providers, business associations and government (Nelson, 1993; Lundvall, 1992). And, secondly, it was recognised that firms were simultaneously imbedded in vertical value chains, as final products were progressively constructed by a range of sequential activities, increasingly performed on a global scale (Gereffi, 1994; Kaplinsky 2000).

Using this wider systemic focus, it is possible to distinguish five major types of Schumpeterian rents which are largely endogenous to the chain – technology rents, human resource rents, organisational rents, marketing rents, and relational rents. Let us consider each of these categories briefly in turn, bearing in mind that the central component of rents is its scarcity which arises from barriers to the entry of competitors.

### Technology rents

Technological rents arise when producers command scarce capabilities with regard to process or products. A classic example of a process technology providing high rents was the discovery of the float glass process by Pilkington during the 1960s. By inventing a process whereby molten glass was cooled on a bed of molten tin, Pilkington was able both to produce a superior product and to remove the costs of grinding which had previously been used to produce flat glass. Float glass was heavily protected by patents, and whilst these patents lasted, Pilkington was one of the most profitable UK companies, with prestigious headquarters and generous expense accounts for staff. But once the patents expired in the early 1990s, its profitability collapsed, the headquarters had to be sold off and Pilkington has languished as a relatively unprofitable company, vulnerable to take-over by competitors who had mastered the float technology and improved it even further (Barker, 1977).

A similar story can be constructed in regard to a number of product technologies. In some cases, product technology rents are protected by property laws, such as those governing branded pharmaceuticals. When these patents expire, competitors produce generic substitutes and the innovation rents are eroded. The story of the modern pharmaceuticals sector is the continual search for new products, with even the most successful companies (investing more than \$1bn p.a. on R&D) happy if they are able to produce one or two new products a year. In other cases, product technology rents are eroded by superior products. For example, for many years the computer operating system developed by Apple was a superior product to its competitors, and the Apple Corporation was highly profitable. But when the PC-based operating systems produced software of equivalent or superior quality, Apple's high profitability collapsed (Management Review, 1996). The new commander of software – Microsoft – is currently benefiting from barriers to entry in its product capabilities, although there are signs that competing products such as Linux may erode these product rents in the future.

### Human resource rents

As process and product technologies become more complex, so the skill and training content in production has become increasingly demanding. From the producer's perspective, this makes demands both on generic and specific skills. In most cases, generic skills are provided by public educational systems, and this includes basic numeracy and literacy. Skills which are specific to a particular firm – for example, determining the accuracy of production or speed of machine changeover – tend to be the responsibility of the firm itself or of sectoral associations such as industry training boards.

Invariably, the higher the level of skills and training in the labour force the higher the productivity with which resources are converted into final products. But this is not the same as saying that the higher the level of skills and training, the higher the level of

incomes which are sustained. This is because if all producers utilise skilled labour forces, although productivity may be higher, there will be no human resource rents, and incomes will be bid down. These rents only arise when a producer has a *relatively* more skilled labour force than its competitors. Hence, two or three decades ago it was believed that countries and firms with a literate labour force were at an intrinsic advantage and could expect to benefit from higher living standards. Then as more and more countries invested in primary education it was believed that secondary education was the key asset. Now that countries such as China and India – with vast numbers of secondary school graduates and significant investments in industrial training programmes – have entered global production networks, it is increasingly believed that firms with tertiary level skills will triumph. But the process of ratcheting-up continues. Human resources rents, as all rents, are intrinsically dynamic.

#### Organisational rents

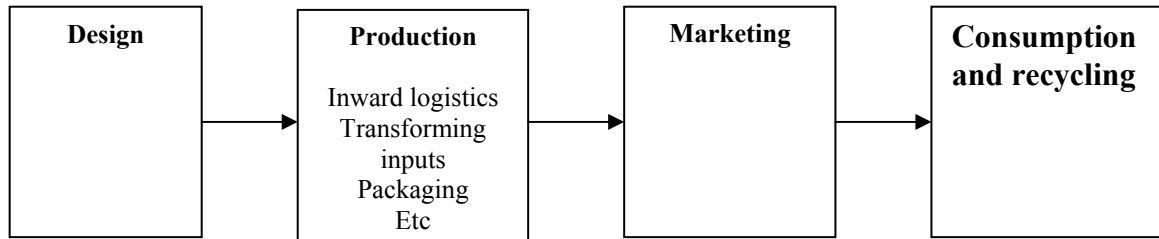
Organisational routines have contributed significantly to the competitive advantage of firms (Nelson and Winter, 1982) as is shown by the experience of the global automobile industry. During the late 1960s and early 1970s, Japanese automobile producers accounted for a growing share of the US market. At that time the auto industry was the world's second largest economic sector and this market penetration was of growing concern to US policy-makers and individual firms alike. The response of the US industry was to focus on technological innovation which they saw as the key to the growing process and product competitiveness of their Japanese rivals. Between 1976 and 1985, General Motors alone invested more than \$75bn in advanced electronics based automation technologies. At the beginning of this investment surge its market share was 44%; one decade later it had fallen to 33% (and is currently less than 30%).

The reason why GM got it wrong is because they misread the basis of Japanese industrial strength. Although process and product technology played an important role (more for Nissan than Toyota), the key to the success of the Japanese firms lay in their development and adoption of a new form of production organisation (Hoffman and Kaplinsky, 1988; Womack and Jones, 1996). The ability which this new production system provided to slim inventories, to produce high-quality products at a low cost and with growing flexibility in product innovation and design laid the basis for sustained income growth. Conversely, it eroded the incomes which General Motors and other auto firms had obtained from their innovation in previous decades of mass production organisation. Consequently, once the US (and belatedly the European) auto firms had learned to copy this new form of production organisation, so the profits of the Japanese firms were eroded. And now, those auto firms who had pioneered the development of new forms of production organisation (such as the factory-satellite plants) are the ones who are achieving disproportionate profitability and will continue to do so until their rivals catch-up.

#### Marketing and design rents

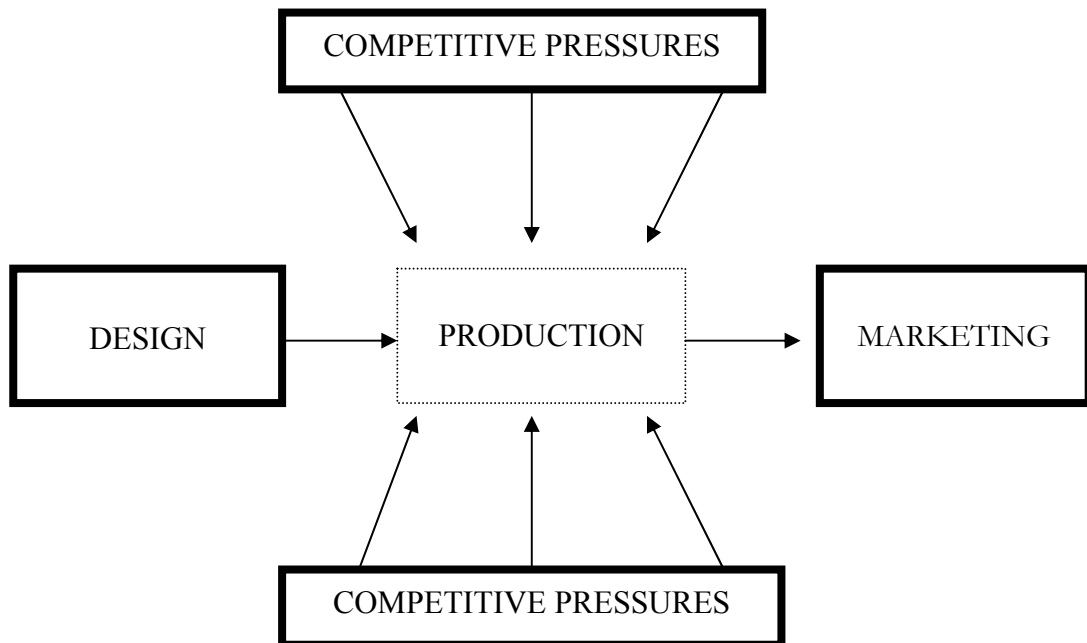
Considered in its most elementary form, the value chain takes the shape as described in Figure 4. As can be seen from this, production *per se* is only one of a number of value added *links*. Moreover, there are a range of activities within each link of the chain (only those for production are detailed in the Figure).

*Figure 4: A simple value chain*



As more and more countries have developed their capabilities in industrial activities, so the competitive pressures have heightened in manufacturing (Figure 5). This has become particularly apparent since China, with its abundant supplies of educated labour, entered the world market in the mid-1980s. It is this, too, which underlies the falling terms of trade of developing countries manufactured exports (Figure 2). Consequently, the primary economic rents in the chain of production are increasingly to be found in areas outside of production. For example, Nike now concentrates on the ‘D’ (develop) and ‘S’ (sell) rather than on the ‘M’ (make) and ‘B’ (buy) of its value chain.

*Figure 5. The changing distribution of rents in production*



One of the major reasons why marketing rents have become increasingly dominant (as production rents have declined) is because of the nature of the entry barriers which are involved. Innovations in production are protected either by process know-how (which the firm may be reluctant to patent, since disclosure may make copying possible) or by patents. Process know-how (as in the case of Coca Cola) may be retained for many decades (although arguably the essence is easily copied, and it is the brandname which explains Coca Cola's sustained dominance). But patents only have a limited

lifetime, generally between 12 and 15 years. By contrast, brandnames last in perpetuity, and copyright for the lifetime of the creator plus 50-75 years (depending on the country of jurisdiction).

Allied to the characteristics of property-rights, growing incomes and growing income-inequalities have led to the increasingly prominent role of “positional goods” in consumption baskets. (Positional goods define status as well as performing a function. For example, a Gucci belt does more than hold up a pair of trousers!). For all these reasons, marketing and design rents are of growing relative importance. The durability of their property rights has led to a corresponding trend in advertising and promotion, either to protect brand identities or to create new ones. These indirect activities in the value chain – design, advertising, marketing – are therefore becoming increasingly prominent components of “value added”.<sup>6</sup> But not all marketing rents are durable, and nor do they carry the same weight in all markets. For example, in the early 1990s, Levi’s 501 jeans were seen as a “commodity” in the US, selling for \$26.99 at Macy’s, \$34.99 at JCPenney Online and for \$30 at a store in Manhattan. In the UK, where 501s retain something of a premium, “positional” status, they sell at between £45 and £49.99, nearly double the US Price (Financial Times, April 25, 2001).

#### Relational rents

In broad terms, the history of the global industrial economy in the second half of the 20<sup>th</sup> century can be grouped into three major periods. Between 1950 and 1975, the dominant production system was mass production, in which post-war reconstruction was allied to the development of a production system designed to produce standardised products through the use of standardised procedures and dedicated equipment. By the mid-1970s, this production system faltered on two major fronts; the products were too homogeneous and of inadequate quality to satisfy growing incomes, and the conditions of production (including the labour processes involved) made it difficult to reduce production costs. Increasingly, thereafter, a production system came to dominance involving new organisational rents (see above) and spread rapidly through the global economy, including in service activities.

But towards the end of the 1980s, after an increasing number of firms had begun to reorganise their internal operations and master lean production, there was increasing recognition that the frontier of competition lay in more effective forms of inter-firm relations. On the one hand, firms operating in vertical value chains realised that without an effective process of restructuring throughout the chain, it was of little value to be an island of efficiency in a sea of inefficiency. Hence the growing importance of ensuring that just-in-time, total-quality-control and concurrent engineering procedures were adopted not just within firm operating procedures, but also with regard to inter-firm procedures. On the other hand, many firms realised that horizontal forms of cooperation were also crucial to their sustained competitiveness. SMEs, building on Italian experience with “consorzia” (Piore and Sabel, 1984; Department of Trade and Industry 2001), gained advantage from joint marketing, joint purchasing and shared common services, and large firms tackling major

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<sup>6</sup> This raises broad philosophical concerns about “value”. Arguably the activities surrounding branding – advertising, legal processes, and so on – do little to add intrinsic value to inputs, particularly in a world where 1.2bn people continue to live in conditions of absolute poverty.

technological innovations were increasingly forced into alliances (Ernst and Ravenhill, 1997).

Thus those firms who have been able to manage their inter-firm relations effectively, have been able to gain a competitive advantage (Lorenzoni and Lipparini, 1999). Toyota gained from its command over supply chain efficiency and its development of supply chain management procedures. Leading US auto firms are striving for a similar advantage through the use of B2B in their supply chain management. Governments throughout Europe are promoting network leaders as a way of encouraging cooperation between SMEs, and large firms such as IBM have developed the capability of forming technological alliances with a range of different parties.

### *Rents which are largely exogenous to the chain*

The rents described in the previous section are largely those which are under the control of the firm, either in its internal operations or in its relationships with other firms and the science and technology system. Although the firms may be assisted by other parties in the pursuit of these rents, and in the construction of barriers to entry, they are essentially operating in an environment where they, or competing firms, make the key decisions. However, there is a second category of rents in which other parties external to the firm or its competitors play the leading role. Although some of these may also be partially “constructed” by the firm (which may exercise pressure on policy-makers, or engage in collusive activity) they cannot be classified as innovation or Schumpeterian rents in the same way as those which are endogenous to chain participants.

#### Resource rents

Leaving aside innovation rents which reduce the costs of extraction (and where the capabilities are unevenly spread through the world), resource rents in both agricultural and commodity industries are defined by the bounty of nature. Gold, tin, copper and all other minerals are to be found at different levels, in different topographies and will differential purity. Thus, countries and corporations with otherwise low-productivity production structures have been able to achieve relatively high incomes through their access to low-cost deposits. This is especially true of the Middle East hydrocarbon deposits where the costs of uplift are much lower than those marginal producers in other parts of the world (such as the North Sea) whose extraction costs set the world price for oil. The difference between these extraction costs accrues as a resource rent, split to varying degrees between host countries and oil companies.

But constraints on resource availability are not always a bounty of nature, that is, absolute constraints on supply. They can also be artificially induced by a cartel of producers. Although this has often been the case in oil, because of its longevity, the most striking case of this resource rent is the diamond-selling cartel, in which the De Beers Corporation has for many years organised a central selling office for diamonds, limiting the amount of diamonds put on the market, and allowing not just South Africa to sustain a relatively high level of income, but also other cartel-member countries such as Botswana and Russia. Indeed, Botswana was one of the most rapidly growing economies in the world between the 1970s and 1990s, despite having virtually no industry and very poor agricultural land. This was almost entirely due to

its deposits of low-cost, high-quality diamonds and the workings of the diamond cartel.

Despite their fragility (see below), resource rents have been an important determinant of the global distribution of income. The most notable examples are oil-dependent exporters in the Gulf. But many other countries gain from the exploitation of scarce natural resources, including ‘industrialised’ economies such as the USA, Canada and Australia. Where the industrialised countries differ is that they have been able to augment natural resource rents through Schumpeterian innovation rents (for example, the development of hybrid maize in the US during the 1930s), and to extend their operations along the value chain to undertake downstream processing activities. Thus, while the Gulf States extract oil, high-productivity extracting economies such as the USA and the UK have more developed hydrocarbon-based processing activities; India and South Africa are large producers of aluminium (where the primary ‘resource’ is in fact energy rather than bauxite), but Canada and the USA complement their aluminium production more effectively with the production of aluminium products; Brazil and South Africa produce pulp, but Finland and Sweden not only export pulp, but also manufacture paper-making machinery.

#### Policy rents

Policy rents arise from artificial scarcities created by government policies. These rents may affect the distribution of income within countries (with particular groups gaining disproportionately from the policy regime) or between countries (with producers in different countries benefiting from privileged access to policy regimes).

The differential access to policy regimes has been most widely considered in relation to the internal distribution of income and the impact this has on the nature and rate of growth. The “rent seeking” literature (for example, Krueger, 1974; Lal 1983) arose from a critique of industrial policies in developing countries. It was argued that these dirigiste policies created the search for permits and policy concessions. This not only biased the distribution of income and encouraged corruption, but the search by entrepreneurs for permits diverted their attention from the pursuit and exploitation of the innovation and resource rents which provide the well-spring for sustainable income growth.

However, other types of policy rents have been much more important in determining who gains from participation in *global* value chains. The capabilities and effectiveness of governments is a key generic issue. There is persuasive evidence that in recent decades governments have played a key role in the rapid externally oriented growth achieved in Japan (Best, 1995), Korea (Amsden, 1989), Taiwan (Wade, 1990), and Singapore and Malaysia (Mathews and Dong-Sung Cho, 2000). But government capabilities alone are not enough to sustain income growth; it also depends on the capacity which firms have to design suitable policies, to implement them, and to take advantage of opportunities opened by policy makers in other environments.

Trade policy rents are probably the most significant form of policy rent affecting the global distribution of income. Many countries have gained from them, that is from preferential access to external markets and from protection in their domestic markets. As liberalisation proceeded after World War Two, the primary beneficiaries of these trade policy rents have been LDCs, although producers in some sectors in the

industrialised economies such as in apparel and textiles and in the agricultural sectors have continued to benefit from protection. In the mid-1990s, preferential market entry conditions in many external markets continued to be significant. By contrast, the growing pace of trade policy reform from the mid 1980s severely eroded trade policy rents in the domestic markets of many LDCs.

The experience of those countries that have taken greatest advantage of these various forms of trade policy rents to generate sustainable income growth has been that this ability is fostered by having a flexible productive system, able not only to upgrade the unit value of exports within individual sectors, but to redefine product specifications as trade preferences reach their limit or change their nature. Yoffie (1983) gives a number of examples of the flexibility of East Asian producers in taking advantage of changing trade policy rents during the early period the export oriented growth. For example, in the 1970s, Hong Kong producers had exceeded their MFA quota limits on coats, but not on vests or apparel components. A fashion was thus deliberately created of jackets that had zipped sleeves and collars. This allowed the Hong Kong producers to continue to ship 'vests' and 'components' (sleeves and collars), and then allowed these to be rapidly assembled in the final markets prior to sale. Another form of corporate response to trade policy rents, of increasing importance in those sectors still governed by quota access in major markets (such as apparel) was what Gereffi has termed "triangular manufacturing". Agile producers in countries which had exhausted available quotas, acted as entrepreneurs and intermediaries to global buyers by nurturing and expanding production in countries whose quotas had not been taken up (Gereffi, 1999).

#### Infrastructural rents

The reaping of competitive advantage by individual firms or by groups of firms is significantly affected by the availability of suitable infrastructure. With the onset of the industrial revolution, transport became a primary infrastructural input. Adam Smith observed that the division of labour (which provided scope for substantial productivity improvements) was limited by the extent of the market. Producers who had the ability to penetrate distant markets therefore found themselves at an increasing competitive advantage. So, from the onset of the industrial revolution, there has been a strong link between corporate growth and profitability, and the physical infrastructure that has provided access to markets.

The importance of access is not limited to product markets, but also applies to factor markets, reflecting the ability of producers to bring suitable factor inputs (raw materials, components and also labour) to the site of production at low cost and with reliability. One of the major developments in the post-1945 global economy has been the reduction of transport costs; sea containers and low-cost air travel have had a significant impact in lowering these costs. A key component in this evolving transport infrastructure has been the role played by energy: initially steam in the case of the nineteenth-century railroads, and then hydrocarbons to fuel the internal combustion engine in the twentieth century.

In recent decades, as technology has increasingly become disembodied and located in tacit knowledge in individuals (that is, in human resource rents) and in organisational and relational rents, so the ability to communicate relatively effectively and relatively cheaply has become important. This is a reflection not just of reduced transport costs,



but also of very significant advances in telecommunications and information-processing technologies. But energy and information-processing and switching technologies are not the only infrastructures that influence the efficiency of production systems. Clean water (important in the electronics sector) and an unpolluted environment are also important constituents of effective production, as well as being incentives that help to keep highly skilled staff. So too are reliable and low-cost energy supplies.

Many infrastructural services are public goods, that is, access cannot be restricted and in general they are not used up in the process of consumption. For this reason, they are generally difficult to appropriate, and there is thus a reduced incentive for individual firms to invest in their production. Moreover, many infrastructural services also display significant externalities, and this too is a further reason why there may be a divergence between private and social benefit. It is for these reasons that governments have historically come to play an important role in the provision of infrastructure.<sup>7</sup> It is also one reason why countries display different endowments of infrastructure, as is reflected by the indicators of infrastructure in Table 2. So the ability of a firm, or a group of firms, to compete in global markets is to a significant extent enhanced by the quality of national infrastructure. Since this infrastructure is unevenly spread through the global economy, it provides a form of rent to those firms operating in infrastructure-rich environments. It is significant that the disparities in national availability are higher for those forms of infrastructure that are particularly important in the latter part of the twentieth century (the internet) than for those that were important in the earlier decades of the century (energy) (Table 2).

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<sup>7</sup> During the early 1990s there was a vigorous debate in the US on the dangers of foreign ownership of productive assets. Reich (who subsequently became the Secretary of State for Labor) argued that ownership was much less important than the location of high value added activities, and here the US had a major advantage in its best-in-class tertiary educational system and its physical infrastructure. Her argued that these should become the primary arenas for US government's industrial policy (Reich, 1991).

**Table 3 Some indicators of the per capita global distribution of infrastructure, (in ascending order of per capita incomes)**

	<b>Commercial energy use (kg of oil equivalent per capita) (2000)</b>	<b>Internet users ('000) (2001)</b>
Bangladesh	76	250
India	363	7,000
Kenya	127	500
China	714	33,700
Zimbabwe	919	100
Colombia	885	1,154
Chile	2,011	3,102
S. Africa	3,800	3,068
Brazil	1,743	8,000
Korea	4,847	24,380
Italy	4,315	6400
USA	11,822	142,823

Source: World Bank World Development Indicators 2003.

#### Financial rents

There is a large body of evidence that suggests that access to finance has been a key part of economic success in many parts of the global economy. This is partly a reflection of the quantum of finance available to spur innovation. Analyses of the experience of the East Asian newly industrialised countries suggest that a key part of their competitive performance has been their high savings and investment ratios. In fact, total factor productivity growth rates (reflecting a combination of organisational, human resource, relational and technological rents) have been relatively low in these economies (Singh 1995). But it is a matter not just of the quantum of finance, but also of the terms on which it is made available to the productive sector. There is a strong correlation between indicators of effective financial intermediation and economic growth (King and Levine 1993, 1993b; Griffith-Jones 1996).

A number of factors are important here. The first is the quality of the system of financial intermediation. An efficient financial services sector reduces the cost of providing funds to borrowers. The second is the terms on which finance is made available. This is a function both of the costs of the loan and of the terms on which it is being provided. Insofar as risky innovative ventures are concerned, the system of financial intermediation needs to have a venture capital facility; this applies as much to asset-poor innovators in the industrialised countries as to those in the informal sectors in LDCs. But it is also a matter of the time horizon of loans. For example, although stock markets have an important role to play in providing finance, as the experience of the UK shows, the short-termism of much of this finance militates against the reaping of technological and other forms of rent that have relatively long gestation periods. Another important feature of the banking system is the extent to which it provides development finance to rescue ailing firms and innovators rather than to liquidate them in times of difficulty. Here the Japanese and German banking systems seem to play a different role to the banks in the Anglo-Saxon economies (Albert 1993).

A fourth important feature of finance rents is the extent to which domestic savings can be made available to finance innovation, particularly by domestic firms. Although external finance clearly has an important role to play, and although FDI may be a wellspring of investment and innovation, experience suggests that domestic sources tend to be less footloose. Accumulation in many countries in recent years has been plagued by sudden and significant outflows of funds (Griffith-Jones, Gottschalk and Cailloux, 2003; Teunissen, Joost and Teunissen, 2003), and departing foreign investors have been a source of instability in many developing countries, especially those depending on export processing zones (such as Jamaica).

Thus, innovators who obtain access to low-cost funds, to funds that have a relatively long maturity period, and to funds with undemanding security requirements are clearly advantaged. This is especially relevant for leading sectors (such as biotechnology in the current environment) where investments may be especially uncertain and the pay-off period relatively long. But access to such finance affects the ability of firms across the board to innovate effectively.

### *Rents are cumulative and dynamic*

The associated concepts of rent and barriers to entry are thus important analytical tools in understanding the determinants of income distribution in production. (So, too, are value chains, and *global* value chains in helping to explain the *global* distribution of income). Their importance arises not just in terms of “positive” analysis (that is, explaining why things are as they are), but also as “normative” tools (that is, how can the existing order be changed). In this latter regard there are two features to rent which are particularly important – rents are cumulative, and rents are dynamic.

At the beginning of the 1980s, the total global market for computer-aided design (CAD) equipment was \$100m. It was widely (and correctly) believed then that this market would grow to more than \$4bn by the end of the decade. The largest CAD firm at that time was Computervision, with a turnover of \$70m. Its CEO was asked whether, in the light of this major market opportunity, he was worried that firms such as GE (with a post-tax profit figure of more than \$1bn) would see this market opportunity and seize it. His response was that “you can’t make a baby in one month with nine women” (Kaplinsky, 1982). As it turned out, although he was too sanguine about Computervision’s ability to ride out competition (as its technological rents were eroded), his judgement about the cumulative and sequential nature of innovation rents was correct and the new winners came from closely-related sectors. Thus, a primary characteristic of many barriers to entry - particularly in innovation rents, but also in infrastructural and finance rents - is the trajectory and path-dependency of a particular value chain.

The second important feature of rents and barriers to entry is their dynamic nature (clearly recognised by Schumpeter, as we have seen in earlier discussion). Table 3 gives examples of how primary areas of rent have shifted in each of the domains discussed in the previous section. Each of these areas of rent are dynamic, both within categories of rent (as in Table 3) and between categories of rent. In this latter regard, we are witnessing an important shift - the barriers to entry in some categories are increasingly falling, and competitive pressures are growing. For example, those rents

which are based upon natural endowments are being eroded by technological progress. This is partly because new deposits are generally found for most materials (stimulated by high resource rents) and partly as a result of the development of substitutes. One of the most striking examples of the development of new sources has been the maturation of technologies to make it feasible to mine small deposits of gold productively. This has opened up gold exploitation in Asia and in Latin America at the cost of the large-scale South African producers. Substitution has eroded resource rents in a large number of products, most notably in the case of rubber, where the synthetic product displaced production of the natural, climate-specific product. A further source of instability in resource rents arises from the fragility of sellers' cartels. The diamonds cartel is a somewhat unusual case of enduring cooperation, to be counterposed to the declining success of OPEC and the International Coffee Organisation (ICO), and the rapid death of CIPEC (the copper producers' attempt at cartelisation).

A second type of rent which is being eroded are policy rents. Global political pressures are growing against industrial policies designed to promote the development of Schumpeterian rents in the private sector. Similarly, these various forms of trade barriers are being reduced globally following the evolution of negotiations in the World Trade Organisation (WTO).<sup>8</sup> This has not only lowered the extent of trade policy rents, but also changed the distribution of potential beneficiaries. For example, the Multifibres Agreement (MFA) has allowed African states to gain relatively since their exports have not been subject to quotas; as the MFA is phased out as a consequence of WTO negotiations, this opportunity to appropriate trade rents will be reduced. There is increasing evidence that a new form of trade barrier – certification – is flourishing, for example in the form of ISO9000 quality standards, ISO14000 environmental standards and labour standards.

Perhaps most significant in historical terms is the erosion of barriers to entry in the physical transformation of inputs into outputs. This follows from the growth of capabilities in the developing world which, as we saw in Figure 2, has led to a decline in the terms of trade of developing country producers not just in primary commodities, but also in manufacturing activities

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<sup>8</sup> However, if globalisation continues to be characterised by growing inequalities, it is possible that protectionist pressures will remerge, as they did during the inter-war period.

Table 3. Examples of shifting rents

Type of rent	Previous areas of rent	New and emerging areas of rent
<u>Endogenous rents</u>		
1. Technology	<input type="checkbox"/> Copy lathes <input type="checkbox"/> Internal combustion engines	<input type="checkbox"/> CAD, EDI and CNC equipment <input type="checkbox"/> Fuel cells
2. HR	<input type="checkbox"/> Toolmaking artisans	<input type="checkbox"/> Software writers
3. Organisational	<input type="checkbox"/> Mass production, quality inspectors	<input type="checkbox"/> Single-unit flexible production, quality at source
4. Marketing/design	<input type="checkbox"/> Levi-Strauss	<input type="checkbox"/> Diesel, Earle, The Gap
5. Relational	<input type="checkbox"/> Price competitive arms-length suppliers	<input type="checkbox"/> Long-term suppliers, and supply-chain development programmes
<u>Exogenous rents</u>		
1. Resource	<input type="checkbox"/> High-grade copper deposits	<input type="checkbox"/> High grade platinum deposits
2. Policy	<input type="checkbox"/> Support for plant efficiency <input type="checkbox"/> Import protection	<input type="checkbox"/> Promotion of value chain efficiency <input type="checkbox"/> Export marketing support
3. Infrastructural	<input type="checkbox"/> Roads and railways	<input type="checkbox"/> Telecommunication highways
4. Finance	<input type="checkbox"/> Low rates of interest	<input type="checkbox"/> Venture capital

At the same time, new forms of rent are becoming pervasive. In all product groups the importance of intangible activities and elements in value chains are increasing. This is represented by a shift of costs and rents from the transformation of tangible goods. Thus just as barriers to entry in manufacturing are falling, so barriers to entry in branded marketing are increasing. Similarly, whilst the capability to physically transform materials into outputs is diffusing (for example, sewing of clothes or manufacture of furniture), the increasingly sophisticated optimisation of inventories and logistics is providing greater power to systems-integrators (such as The Gap and IKEA).

Thus, perhaps the single most important observation that can be made with regard to the structure of rents, concerns their dynamic nature. From the perspective of a firm or country trying to come to terms with this dynamic structure of rents, three lessons are critically important. The first is an awareness of the importance of different forms of rent in a dynamic context: which types of rent are waxing and which are waning. The second is that barriers to entry are seldom absolute, and are generally a matter of degree. The question which producers have to decide is with whom they wish to compete. For example, it may not make sense for the US to concentrate on shoe

production, but for new entrants such as Vietnam it might represent an opportunity to raise living standards. In general, the higher the barriers, the higher the levels of sustainable income which can be supported. And, third, to avoid incomes declining it is essential that new forms of rent are identified and appropriated. This applies in relation to different types of ‘sub-rents’, that is, new forms of organisational rent, access to new types of trade policy rent, and so on. However it also involves the identification of new categories of rent, beyond the categories discussed above. We can term this as *the search for the Nth rent*. The search for the Nth rent may be considered the holy grail of sustainable income growth.

## CONCLUSIONS

Participation in the global economy offers substantial rewards. But these rewards may be unevenly distributed between countries, classes, types of firms, genders and regions. For those inserted sub-optimally in global production networks, the costs may be greater than the rewards. Thus the challenge for policy-makers at all levels, including the government, the firm, and the individual is to find a way of participating in the global economy so that income growth can be sustained. Here, four important lessons should be borne in mind.

First, participating gainfully in the global economy requires countries to make the most of their comparative advantage (cheap labour, abundant skills, high quality raw material deposits, etc.), and firms to make the most of their competitive advantage (proprietary software, patents over particular products, effective utilisation of CNC machines, etc.). However, firms and countries cannot rest on their laurels. As Schumpeter made abundantly clear, in almost all cases firm-specific competitive advantages are subject to emulation; similarly, country-specific advantages are also vulnerable to catch-up pressures from rivals. So, the first lesson to be learned is that rents are vulnerable, precisely because barriers to entry can be eroded. For if a single generalisation is to stand, it is that rents are dynamic. Not only do they change in relative importance over time, but new rents are continually being developed as a way of escaping the tyranny of competition. It is for this reason that the developmental challenge may well be christened as “the search for the Nth rent”.

So, secondly, is the capacity to learn an adequate response to the likely erosion of static barriers to entry? Unfortunately, the answer is “no”. Innovation (and the learning which this implies) is of course a critical component of successful participation in the global economy. But the problem with this response is that it misses the insights offered by an analytical framework built around rents and scarcity. If competitors are also innovating, and particularly if they are innovating more rapidly and effectively, than innovation in itself may not be adequate. What is required is upgrading, that is, a process of *relatively* rapid and effective innovation, learning faster than competitors. (I prefer to use the concept of “upgrading” as incorporating this relative component of performance, and hence to distinguish it analytically from innovation).

Thirdly, for an upgrading strategy to deliver sustainable income growth at the level of the firm, it needs to be seen in the light of a value chain framework, and increasingly

a *global value chain* framework. An island of increasing relative effectiveness embedded in a sea of languishing performance does not provide the capacity for sustainable income growth. And as technology becomes increasingly complex, so the inter-firm division of labour grows, and so this value chain perspective grows in importance. But this systemic perspective on upgrading capabilities does not only apply to the firm and its customers and suppliers. It applies equally to those determinants of sustainable income growth which are exogenous to the firms in a particular value chain. It involves the capacity of its governmental supporting structure and the network of actors in its national and regional systems of innovation to also display the capacity to enhance their capabilities more effectively than those supporting other firms and other value chains.

And, finally, it is fashionable to argue that the growing integration of global product markets and some global factor markets (for example, finance, but not unskilled labor) spells the demise of national and local actors. This would not only be an illegitimate conclusion (witness the importance of national determinants of human resource investments and technology support measures), but it may also be premature. The increasing unequalisation of the global economy is such that we may yet witness a retreat from unfettered “global governance” (whether this be exercised by firms such as Exxon) or institutions such as the WTO. There is still space for national actors, but a different space and one which requires not only ingenuity, but political will and social and political agility.

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