Three

TANGLED WEBS: UNRAVELLING COMPLEXITY IN THE GLOBAL ECONOMY

CHAPTER OUTLINE

An analytical point of entry

In the previous chapter, we explored the changing contours of the global economic map, noting its immense geographical unevenness and temporal volatility. We now

turn, in the chapters of Part Two, to the *processes* of globalization; to an explanation of how these global shifts are brought about. But this is far easier said than done. Notwithstanding the hype of much of the globalization literature referred to in Chapter 1, there are, emphatically, no simple explanations of what are extremely complex and interrelated processes. So how do we start? What is a suitable analytical point of entry?

The conventional unit of analysis of the global economy is the individual country. It's not difficult to see why this should be so. Virtually all the statistical data on production, trade, FDI and the like are aggregated into national 'boxes'. Indeed, the word 'statistics' itself originally denoted facts collected about the 'state' ('state-istics'). However, such a level of statistical aggregation is less and less useful in light of the changes occurring in the organization of economic activity. Unfortunately, as in Chapter 2, we have to rely heavily on national-level data to explore the changing maps of production, trade and FDI. But, because national boundaries no longer 'contain' production processes in the way they once did, we need to find ways of getting below the national scale – to break out of the constraints of the 'national boxes' – in order to understand what is really going on in the world.

The clue to how we might proceed lies in the notion of *connectivity*. As we saw in Chapter 1, a diagnostic characteristic of contemporary globalization is that the component parts of the world economy are increasingly interconnected in qualitatively different ways from the past. Another way of saying this is that the world economy consists of *tangled webs of production circuits and networks* that cut through, and across, all geographical scales, including the bounded territory of the state. It is through an analysis of such networks – their participants, their interconnections, their power relationships – that we can begin to understand what is going on.

> The critical point about networks is that they involve relational thinking. What links people together across time and space? How are things and people connected and embedded economically, politically, and culturally? In what ways do goods and information and capital flow and why are they channelled down particular vertices and nodes? … Thinking in terms of networks forces us to theorize socioeconomic processes as intertwined and mutually constitutive.[1]

Figure 3.1 is based on such a network perspective. We need to bear in mind that it is an *idealized* representation of a world that is, in reality, infinitely more complex. Its purpose is to provide both a structural perspective on globalization processes and outcomes and also a sense of how the key 'actors' behave. In particular, it emphasizes the complex ways in which they are interconnected and governed through highly unequal *power* relationships. Of course, such a simplified diagram attempts the impossible: to capture and represent the multidimensionality of the global economy in just two dimensions. Inevitably, it both grossly oversimplifies, and also distorts, relationships and causalities. In particular, it is difficult not to

example, the networks in the central slice of Figure 3.1 do not exist in isolation. They are simultaneously both deeply embedded in the broader institutional macro-structures of the global economy (the upper slice) and grounded in the prevailing geographical structures of the material world (the lower slice). Both history and geography matter. Previous structures and trajectories exert a powerful influence on present and future patterns and processes. As we saw in Chapter 2, the precise geographical configuration of the global economy at any one point in time constrains (though does not necessarily determine) subsequent developments. It constitutes the context within which subsequent processes operate. The whole process is circuitous and highly path dependent.

In a similar vein, we must think of geographical scale in rather more nuanced ways than the conventional 'global–local' dichotomy allows. Figure 1.2 hinted at this. However, although terms like 'global', 'local', 'national' or 'regional' may be helpful, a network perspective forces us to think of scale as a *continuum*, rather than as a series of discrete 'boxes'. Instead of being thought of solely in *territorial* terms, scale can also be conceived in topological, that is, *relational* terms.[2] Networks, therefore, may be seen as being 'more or less long and more or less connected'.[3] But this sharp distinction between a territorial and a topological view of geographical scale should not be pushed too far. A topological perspective is not, in itself, in conflict with the fact that, in terms of jurisdictional and regulatory practices, territorial scales of governance remain fundamental to the organization and operation of the global political economy and its constituent parts. Bounded political spaces matter. Some, like the nation-state, matter more than others (Chapter 6). In this sense, therefore, we have a very complex situation in which topologically defined networks (for example, of TNCs: see Chapter 5) both 'interrupt' – and are interrupted by – political-territorial boundaries. What matters, however, is to think of territories not simply as 'bounded' spaces but, more importantly, as *interrelated* with a whole variety of other socially constructed scales of activity. Globalizing processes, therefore, can be thought of as an increasing *multiplication of scales* – local, national, regional, global – that overlap and interpenetrate in increasingly complex ways as the *relationships* between such scales change.[4]

Institutional macro-structures of the global economy

In this book, I choose to focus primarily (though not exclusively) on the 'central slice' of Figure 3.1: the *major actors* in the global economy and the webs of *networked relationships* between them. However, adopting such an actor-centred approach runs the risk of underestimating (even ignoring) the broader social, cultural, political and economic macro-structures in which such network processes

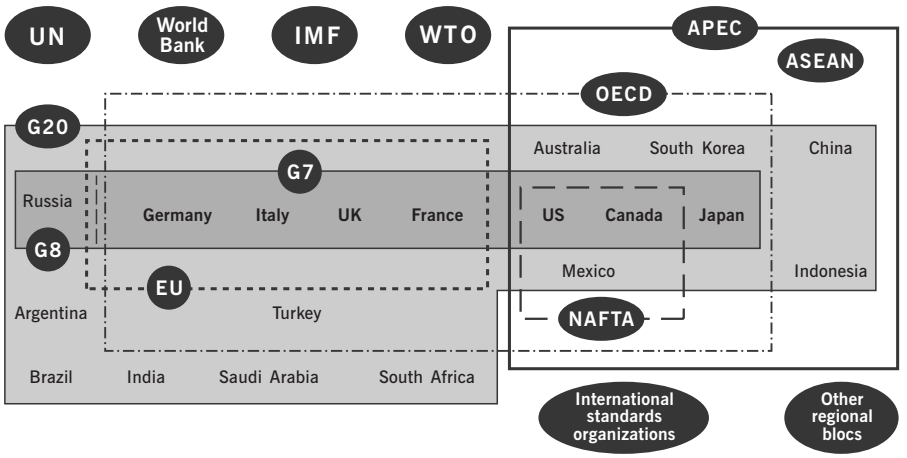

Figure 3.2 Major governance institutions in the global economy

Source: based in part on Cable, 1999: Figure 3.1

operate. There is a real danger of focusing only on atomistic decision-making, rather than understanding such decisions as being 'socially and institutionally situated … enmeshed in wider structures of social, economic, and political rules, procedures and conventions'.[5] Institutions broadly defined, therefore, play a vital role in how network actors behave, whether or not they are aware of this:

> Such institutional influences are subtle but pervasive: indeed, often so subtle that firms and individuals are not even conscious of the impact they exert over their own choices, practices, attitudes, values and expectations.[6]

The macro-structures of the global economy are essentially the institutions, conventions and rules of the capitalist market system. These are not naturally given but socially constructed – in their present form predominantly as a neo-liberal political-economic ideology. Virtually the entire world economy has become a market economy. Figure 3.2 maps the 'thickening web of multilateral agreements, global and regional institutions and regimes, and transgovernmental policy networks and summits'[7] that has developed during the past half-century or so. The International Monetary Fund (IMF), the World Trade Organization (WTO) and the World Bank, together with the various 'G' meetings (such as the G7 and, more recently, the G20) and the many international standard-setting organizations, are the most obvious manifestations of such global institutions, whose activities will be addressed at various points throughout the following chapters.

These global governance institutions are, themselves, only a part of the broader socio-cultural matrix of practices, rules and conventions that shape how the

capitalist market economy works. The rules and conventions relate to, for example, private property, profit-making, resource allocation on the basis of market signals, and the consequent commodification of production inputs (including labour). Such institutions and conventions continue to be manifested in *specific configurations* in specific places (notably within national states, but not only at that scale). In other words, they are *territorially embedded*. The geography of capitalism in the global economy, therefore, is highly *variegated*.[8] It is emphatically not the same everywhere, as we shall see.

Global production networks

The production, distribution and consumption of commodities, goods and services are set within this geographically differentiated macro-structural framework and occur through complex webs of production circuits and networks. Although such circuits and networks operate at all geographical scales, we will focus on *global* production networks (GPNs).[9] The term 'global' does not necessarily imply that such networks actually span the entire world; rather, it suggests that they are highly geographically extensive and functionally integrated across national boundaries.

The 'core' of a GPN: transforming 'inputs' into 'outputs'

The core of a GPN is the *circuit* of interconnected functions, operations and transactions through which a specific commodity, good or service is produced, distributed and consumed. (Note that 'services', like any other item of consumption, have to be 'produced'.) Figure 3.3 identifies the major elements of a GPN: the four basic operations, connected by a series of transactions between one element and the next. Inputs are transformed into products that are distributed and consumed. But note that the processes are two-way. It is a *circuit*, rather than a chain, in which

- materials, semi-finished goods and final products flow in one direction
- information (the demands of customers – tastes, preferences etc.) and money (payments for goods and services) flow in the other direction.

But there is much more to it than this, as Figure 3.3 shows. Each individual element in the production circuit depends upon:

- technology inputs
- energy inputs
- service inputs

- logistical (movement) systems
- financial systems
- regulation, coordination and control systems.

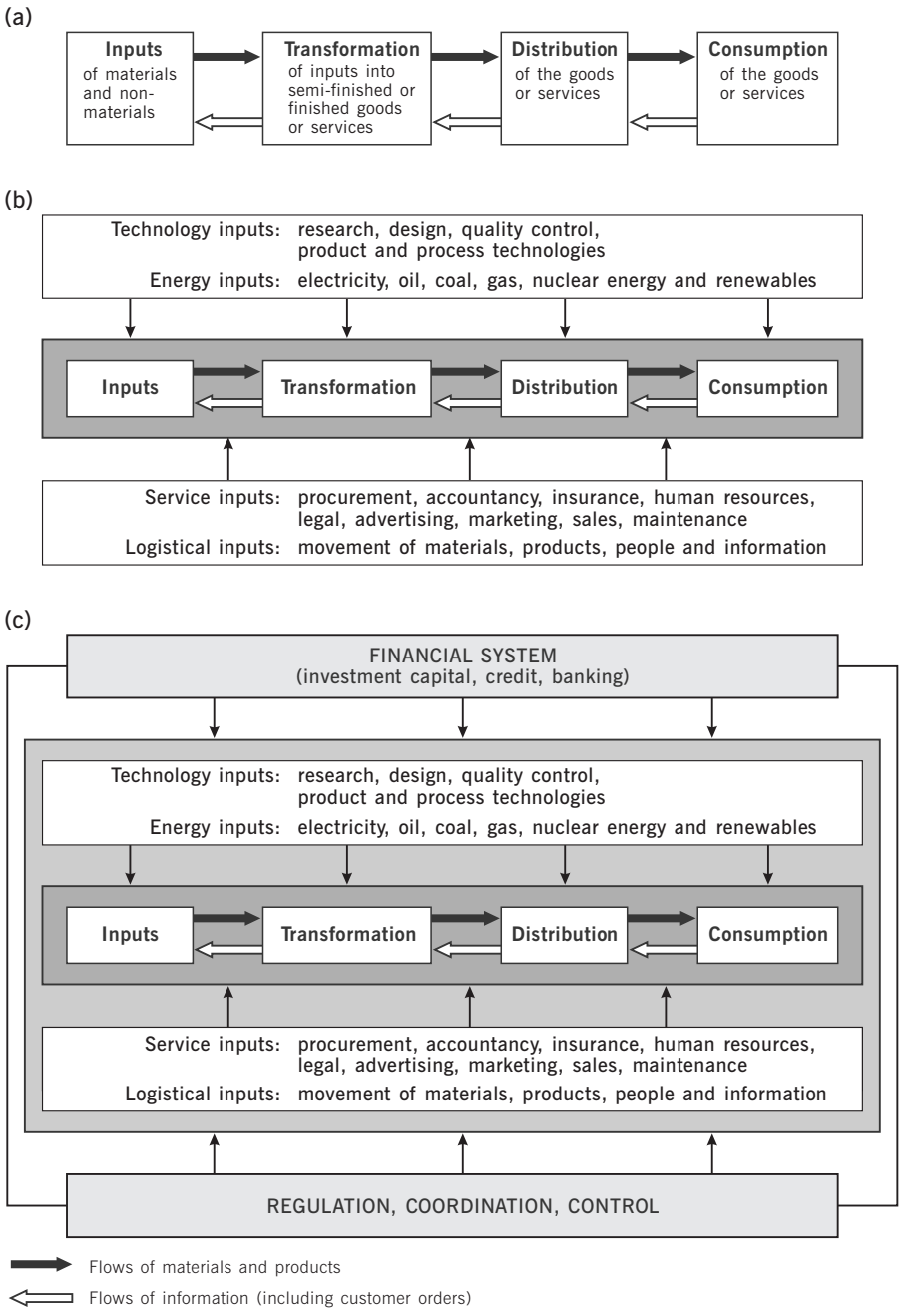

Figure 3.3 The basic components of a production circuit

The key role of services

Each of the individual elements in a production circuit depends upon many other kinds of input, both those directly related to production and also those related to circulation. In particular, what are often called advanced business services (ABS) have become especially important.

> Service functions are assuming a more pivotal role in the production process. At one level, this is a reflection of a continuing escalation in the complexity of the division of labour … At another, profitability increasingly depends not just on the manufacturing part of the production process, but on the knowledge aspects and service functions within which products are embedded: R&D, design, brand creation, advertising, finance packages, service package or upgrade packages are now the sources of profitability.[10]

> Service activities not only provide linkages between the segments of production within a [production circuit] and linkages between overlapping [production circuits], but they also bind together the spheres of production and circulation. Services have come to play a critical role … because they not only provide geographical and transactional connections, but they *integrate* and *coordinate* the atomized and globalized production process.[11]

Chapters 12 and 13 examine these advanced business services in some detail. At this point, however, we need to emphasize the dominant position of *finance* in contemporary economies.

Financialization

Of all the advanced business services, financial systems play *the* central role. The decisions of financiers exert an extraordinarily powerful influence, not only in 'lubricating' production circuits but also in shaping them through their evaluative decisions on what (and where) to invest in order to gain the highest (and sometimes the quickest) return. But there is more to finance than this.

One of the most significant developments of recent years has been the pervasive *financialization* of virtually all aspects of production, distribution and consumption.[12] Financialization can be defined as

> the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies.[13]

Financialization, therefore, consists of much more than just the increased importance of financial services firms. More and more non-financial (e.g. manufacturing) firms are now driven by motives of financialization and this connects closely into the growing incidence of geographically dispersed, tightly integrated GPNs controlled and coordinated by lead firms, primarily TNCs.

> [T]he shareholder value revolution … beginning in the 1980s shifted power in corporate governance from managers to shareholders … This resulted in a change in corporate strategy from the … concern with firm growth, through retaining profits and reinvesting them, to an emphasis on shareholder value and short-run return on investment through downsizing the firm and distributing a greater share of profits back to shareholders … traditionally non-financial firms became more like financial holding companies, with a spectrum of financial services and financial investments swamping production in terms of their contribution to company revenues.
>
> Largely coincidental with financialization in the 1980s was a growing tendency by firms to break up the process of producing goods and services and locate different parts in different locations depending on costs, markets, logistics or politics …
>
> Financialization has encouraged a restructuring of production … And the rising ability of firms to disintegrate production vertically and internationally has allowed these firms to maintain cost mark-ups – and thus profits and shareholder value – even in a context of slower economic growth … global production strategies have helped to sustain financialization.[14]

In other words, financialization is an all-pervasive system of values based on the overriding prioritization of an equity culture, in which 'shareholder value' and profitability have become central to *all* aspects of economic activity to the virtual exclusion of all other interests. It is a free-market ideology in which regulation of financial markets is regarded with suspicion because it is seen to reduce market efficiency. It is the market that is regarded as the most appropriate allocator of resources. The 2008 global financial crisis made nonsense of this claim. But what kind of future system will (or should) emerge is still unclear; this is an issue we will address in the final chapter.

GPNs as arenas of contested relationships

Individual production circuits are, themselves, enmeshed in broader *production networks* of inter- and intra-firm relationships. Such networks are, in reality, extremely complex structures with intricate links – horizontal, vertical, diagonal – forming multidimensional, multilayered lattices of economic activity. They vary considerably both within, and between, different economic sectors, as we shall see in the case study chapters of Part Three.

In particular, GPNs are not simply technical-economic mechanisms through which the production, distribution and consumption of commodities, goods and services occur. They are

> simultaneously economic and political phenomena … organizational fields in which actors struggle over the construction of economic relationships, governance structures, institutional rules and norms and discursive frames … GPNs thus exist within the 'transnational space' that is constituted and structured by transnational elites, institutions, ideologies.[15]

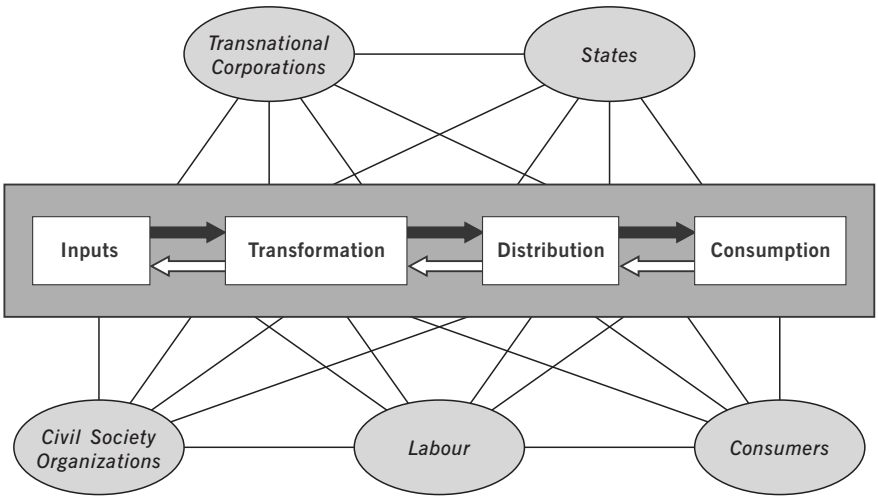

Figure 3.4 Major actor-centred networks in the global economy

In fact, it is primarily the actions of, and the interactions between, the five actor-centred networks shown in Figure 3.4 – transnational corporations, states, labour, consumers, civil society organizations – that shape the changing geographical configuration of the global economy through their differential involvement in production circuits and networks. Let us look briefly at each of these five actors. Much more will be said about each of them in subsequent chapters.

Transnational corporations

In capitalist market economies, production networks are coordinated and regulated primarily by *business firms*, through the multifarious forms of intra- and inter-organizational relationships that constitute an economic system. As Figure 3.5 shows, economies are made up of many different types of business organization – transnational and domestic, large and small, public and private – in varying combinations and interrelationships. The firms in each of the segments shown in Figure 3.5 operate over widely varying geographical ranges and perform rather different roles in the economic system.

A major theme of this book, however, is that it is the *transnational corporation* (TNC) that plays the key role in coordinating *global* production networks and, therefore, in shaping the geoeconomy.

> **Transnational corporations (TNCs) are firms that have the power to coordinate and control operations in more than one country, even if they do not own them.**

In fact, TNCs generally do own such assets but they are also, as we will see in Chapter 5, typically involved in intricate and multiple spiders' webs of collaborative relationships with other legally independent firms across the globe.

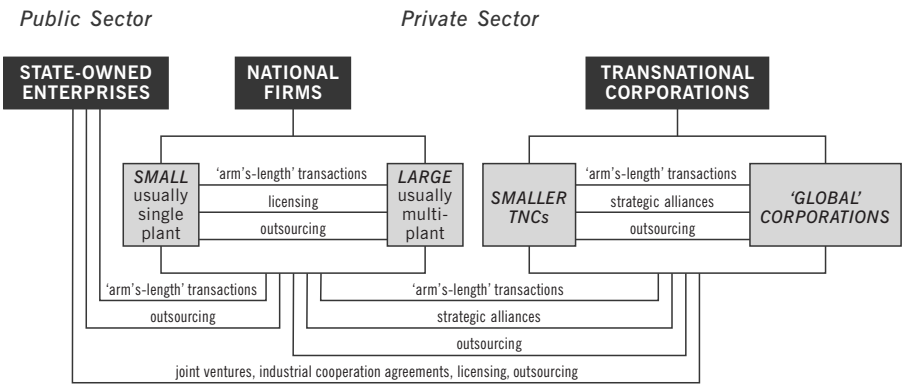

Figure 3.5 Types of firms in an economy

The significance of the TNC lies in three basic characteristics:

- its ability to coordinate and control various processes and transactions within transnational production networks, both within and between different countries
- its potential ability to take advantage of geographical differences in the distribution of factors of production (for example, natural resources, capital, labour) and in state policies (for example, taxes, trade barriers, subsidies)
- its potential geographical flexibility – an ability to switch and to reswitch its resources and operations between locations at an international, or even a global, scale.

Hence, much of the changing geography of the global economy is shaped by the TNC through its decisions to invest, or not to invest, in particular geographical locations. It is shaped, too, by the resulting flows – of materials, components, finished products, technological and organizational expertise, finance – between its geographically dispersed operations. Although the relative importance of TNCs varies considerably – from sector to sector, from country to country, and between different parts of the same country – there are now very few parts of the world in which TNC influence, whether direct or indirect, is not important. In some cases, indeed, TNC influence on an area's economic fortunes can be overwhelming.

The nature of the coordination process within a TNC's production network depends, in part, on where the firm draws the boundary between those functions it *internalizes* (i.e. performs 'in-house') and those it *externalizes* (i.e. outsources to other firms). Theoretically, at one extreme, the whole TNC production network may be internalized within the firm as a *vertically integrated* system crossing national boundaries. In this case, the links consist of a series of *internalized transactions*, organized 'hierarchically' through the firm's internal organizational structure. At the other extreme, each function may be performed by separate firms. In this case, the links consist of a series of *externalized transactions*, organized either through 'the market' or in collaboration with other firms in a kind of 'virtual' network.

This dichotomy – between externalized, market-governed transactions and internalized, hierarchically governed transactions – grossly simplifies the richness and diversity of the governance mechanisms in the contemporary economy. In fact, there is a *spectrum* of different forms of coordination, consisting of networks of interrelationships within and between firms. Such networks increasingly consist of a mix of intra-firm and inter-firm structures. These networks are dynamic and in a continuous state of flux; the boundary between internalization and externalization is continually shifting. They are also affected by the shifting *power relationships* between firms within a GPN. In some cases, one dominant actor calls all the shots; in other cases, power may be more widely dispersed with a greater degree of collaboration involved.

Territorial embeddedness of production networks: states as regulators in GPNs

Capital, it is often argued, has become 'hyper-mobile', freed from the 'tyranny of distance' and no longer tied to 'place'. In other words, economic activity is becoming 'deterritorialized' or 'disembedded'. The sociologist Manuel Castells argues that the forces of globalization, especially those driven by the new information technologies, are replacing this 'space of places' with a 'space of flows'.[16] Anything can be located anywhere and, if that does not work out, can be moved somewhere else with ease. But such seductive ideas are highly misleading. The world is *both* a 'space of places' *and* a 'space of flows'. GPNs don't just float freely in a spaceless/placeless world. Although transportation and communications technologies have, indeed, been revolutionized (see Chapter 4), both geographical distance and, especially, place are fundamental.

Every component in a GPN – every firm, every economic function – is, quite literally, 'grounded' in specific locations. Such grounding is both physical (in the form of the built environment) and also less tangible (in the form of localized social relationships and in distinctive institutions and cultural practices). Hence, the precise nature and articulation of firm-centred production networks are deeply influenced by the concrete socio-political, institutional and cultural contexts within which they are embedded, produced and reproduced.[17]

The *national state* continues to be the most important bounded territorial form in which production networks are embedded (Chapter 6). *All* the elements in a GPN are regulated within some kind of political structure, whose basic unit is the national state, but which also includes such supranational institutions as the IMF and the WTO, regional economic groupings such as the EU or the NAFTA, and 'local' states at the subnational scale. The international institutions themselves exist only because they are sanctioned by national states; subnational institutions are commonly subservient to the national level, although the situation is more complex in federal political systems. As we shall see, the number of national states has grown markedly in the past 20 years.

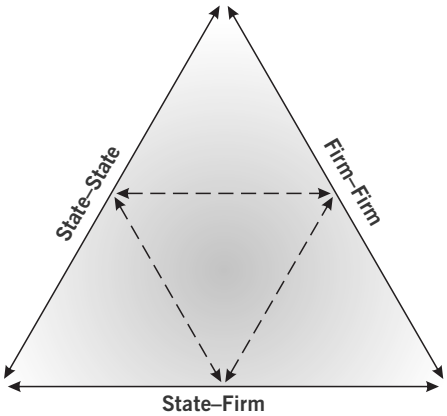

Figure 3.6 The triangular nexus of relationships between firms and states

Source: based on Stopford and Strange, 1991: Figure 1.6

All *global* production networks, by definition, have to operate within *multiscalar* regulatory systems. They are, therefore, subject to a multiplicity of geographically variable political, social and cultural influences. On the one hand, TNCs attempt to take advantage of national differences in regulatory regimes whilst, on the other hand, states attempt to minimize such 'regulatory arbitrage'. The result is a very complex situation in which firms and states are engaged in various kinds of power play (Chapter 7): a triangular nexus of interactions comprising firm–firm, state–state, and firm–state relationships (Figure 3.6).[18] In other words, the geoeconomy is essentially being structured and restructured not by the actions of either firms or states alone but by complex, dynamic interactions between the two sets of institutions.

Of course, TNCs and states are not the only actors involved in the operation of GPNs. As Figure 3.1 suggests, TNCs and states are continuously engaged in relationships with other major actors – labour, consumers, civil society organizations – some of which also have strong territorial bases.

Labour

In most economic analyses, labour tends to be treated as a commodity – as a mere 'factor of production'. But such a dehumanized view overlooks the many and varied ways in which labour (whether organized in labour unions or acting as individuals) influences how production networks operate.[19] Indeed, labour is absolutely *central* to production networks because it embodies the knowledge and skills necessary for production to be carried out. *All* production of goods and services needs labour, either directly in the form of workers, or indirectly in the labour that is embodied in machinery and equipment. However, there are significant

asymmetries in the relative power of labour and capital and these asymmetries have profound implications for how global production networks operate.

One of the most fundamental differences between labour and, especially, transnational capital (in the form of TNCs) is that, on balance, labour is more *place-bound* and generally far less geographically mobile than capital. Of course, the strength of labour's tie to place varies a great deal between different types of labour. On average, male workers are more mobile than female workers; skilled workers are more mobile than unskilled workers; professional white-collar workers are more mobile than blue-collar workers. Clearly, there are exceptions to such generalizations, as shown by the substantial waves of labour migration at different periods of history. Such flows do not, however, contradict the basic point that labour is strongly differentiated spatially and deeply embedded in local communities in distinctive ways. As Harvey has observed, 'unlike other commodities, labour power has to go home every night'.[20]

This spatial asymmetry between capital and labour, though not the only issue, is fundamental in the context of *global* production networks. The dispersed nature of TNC operations and the tendency towards remoteness in corporate decision-making have made it very difficult for labour unions (which tend to be nationally based) to organize effectively to counter such issues as plant closure or retrenchment. In order to counteract the geographically extensive operations of TNCs, therefore, labour has to find ways of organizing across national boundaries. Although there have been some successful international labour union initiatives, their impact has been relatively limited.[21] Indeed, the proportion of the labour force organized into labour unions has been falling for a long time. For example, in the US, the unionization rate fell from 20 per cent of the labour force in 1983 to 12 per cent in 2006; in the EU, there was a reduction in union membership of 15 per cent between 1993 and 2003. At the same time, the effective global labour supply quadrupled between 1980 and 2005 as countries like China, in particular, became more integrated into the global economy.

Consumers

Production networks involve more than just 'production'; they are driven, ultimately, by the necessity, the willingness and the ability of customers to acquire and consume the products themselves, and to continue doing so (see Figure 3.3). Each of the case study chapters of Part Three shows how the nature of consumption varies according to the specific sector involved. Here, we need simply to emphasize some basic aspects of consumption processes.

First, we need to distinguish between the consumption of 'producer' goods or services (sometimes called intermediate products because they are purchased by firms within a production circuit for further transformation) and 'consumer' goods ('final demand' goods: those purchased by individuals and households). In fact, the boundary between these two types of consumption is often blurred. Second,

consumption is very much more than merely the economic process of 'demand'. Obviously, it is greatly influenced by levels of income. But it is also a complex set of *social and cultural* processes, in which all kinds of personal motivations are involved. People buy (or aspire to buy) particular goods for a bewildering variety of reasons, ranging from the satisfaction of basic *needs* to ensure survival (food, shelter, clothing) through to ever more sophisticated *wants* (discretionary goods, such as fashionable clothing, particular kinds of car, exotic or organic foods, and the like).

Consumption, therefore, may be driven by the desire to acquire particular kinds of products (even specific varieties or brands) either because they are regarded as desirable in themselves or because they send out social messages signifying the particular lifestyles, attitudes, social positions or self-evaluations of the consumer. 'Positional' goods have become increasingly important. However, they lose their value as more and more people have access to them. New positional goods have to be sought.[22]

> 'The material object being sold is never enough' … Commodities meet both the functional and symbolic needs of consumers. Even commodities providing for the most mundane necessities of daily life must be imbued with symbolic qualities and culturally endowed meanings.[23]

It is, of course, precisely these *symbolic* qualities of consumption that the advertising, retailing and media industries attempt to manipulate. How far consumption is, or can be, manipulated in such ways is open to question. Some argue that consumption (and consumers) is becoming increasingly more important in the global economy than production (and producers). In Miller's view, the consumer has become the 'global dictator' and he describes consumption as the 'vanguard of history'.[24]

The bewildering proliferation of choice within many product areas is a direct reflection of producers' perceived need to meet the increasingly fragmented demands of consumers. The days when Henry Ford could dictate to his potential customers by telling them that they could have any colour Model T, as long as it was black, are long gone. Of course, in many cases the variety on offer is more apparent than real (heavily advertised 'newness' often being little more than superficial modification). But, in some cases, there is no doubt that consumer demands directly drive production circuits. It is also clear that the emergence of the Internet (Chapter 4) is transforming the abilities of consumers to make informed choices:

> Consumers select what they want from a far greater variety of sources – especially with a few clicks of a computer mouse. Thanks to the internet, the consumer is finally seizing power … consumer power has profound implications for companies, because it is changing the way the world shops … Today, window-shopping takes place online. People can compare products, prices and reputations.[25]

Hence, the idea that consumers are becoming more alike, that local tastes and preferences are being replaced by global consumer brands, needs to be treated with caution. The 'globalization of markets' identified by Levitt some 25 years ago is not as clear as he claimed.[26] Other than in a superficial sense, Levitt has been proved wrong. Consumer diversity is the norm almost everywhere. Although there are some, mostly generation-related, mass markets, geographical variation in consumption patterns persists. Indeed, the experiences of many leading consumer-product TNCs, especially American, show that failure to be sensitive to local variations in tastes and preferences can be almost fatal.

Global civil society organizations

In so far as both labour and consumers are often (though not always) relatively powerless compared with the TNCs that dominate GPNs, they need to *organize* to be effective. The problem is that such organization needs to be *trans*national to operate on the same playing field as TNCs. Within the past 25 years, as Figures 3.7 and 3.8 show, there has been phenomenal growth in the number and diversity of global civil society organizations (GCSOs), ranging from the pre-1970 'old' social movements through the 'new' social movements of the 1970s/1980s, the NGOs and the transnational civic networks of the late 1980s and 1990s, the 'new'

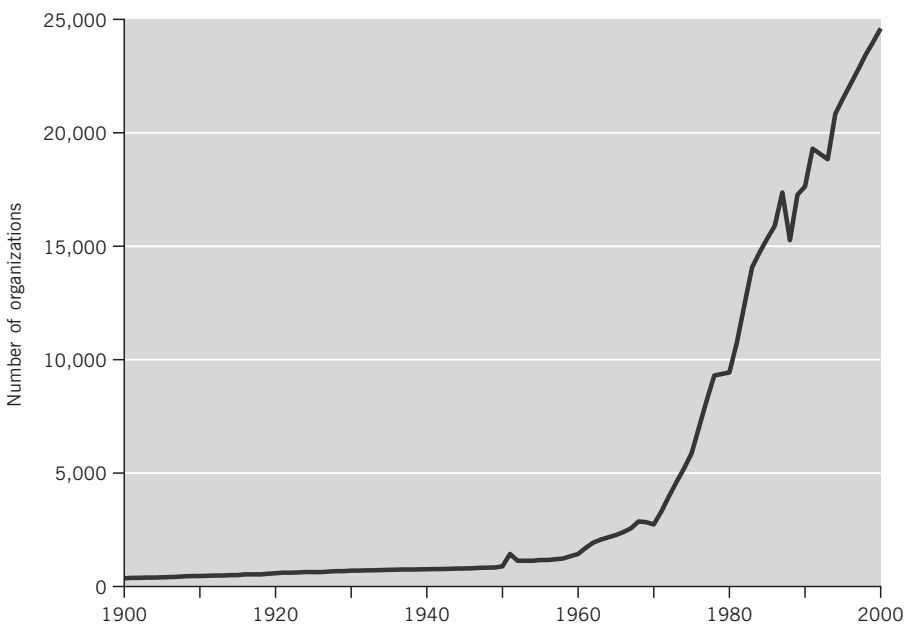

Figure 3.7 The growth of global civil society organizations

Source: based on Glasius et al., 2002: Figure 8.1

	'Old' social movements pre-1970	'New' social movements c. 1970s and 1980s	NGOs, think-tanks, commissions c. late 1980s and 1990s	Transnational civic networks c. late 1980s and 1990s	'New' nationalist and fundamentalist movements 1990s	'New' anti-capitalist movement c. late 1990s and 2000s
Issues	Redistribution, employment and welfare; self-determination and anti-colonialism	Human rights; peace; women; environment; third world solidarity	Human rights; development and poverty reduction; humanitarianism; conflict resolution	Women; dams; land mines; international criminal court; global climate change	Identity politics	Solidarity with victims of globalization; abolition or reform of global institutions
Forms of organization	Vertical, hierarchical	Loose, horizontal coalitions	Ranges from bureaucratic and corporate to small-scale and informal	Networks of NGOs, social movements and grass roots groups	Vertical and horizontal, charismatic leadership	Networks of NGOs, social movements and grass roots groups
Forms of action	Petition, demonstration, strike, lobbying	Use of media, direct action	Service provision; advocacy; expert knowledge; use of media	Parallel summits; use of media; use of local and expert knowledge; advocacy	Media, mass rallies, violence	Parallel summits; direct action; use of media; mobilization through Internet
Relation to power	Capturing state power	Changing state/society relations	Influencing civil society, the state and international institutions	Pressure on states and international institutions	Capturing state power	Confrontation with states, international institutions and transnational corporations

Figure 3.8 The diversity of global civil society organizations

Source: based on Kaldor, 2003: Table 4.1

nationalist movements of the 1990s, and the 'new' anti-capitalist movements of the late 1990s and 2000s.

They include the long-established NGO pressure groups such as Oxfam, Greenpeace and Friends of the Earth; more recent ones like Jubilee 2000; organized labour unions like the AFL-CIO or the TUC; labour support organizations like Women Working Worldwide or the Maquila Solidarity Network; organizations focused primarily on TNCs and big corporations (like Corporate Watch or Global Exchange); right-wing nationalist/populist groups (exemplified by such figures as Pat Buchanan in the US or Jean-Marie Le Pen's extreme right party in France); anti-capitalist groups (like ATTAC or the Socialist Workers Party); and various anarchist groups. Widespread awareness of such groups dates primarily from the street protests at the Seattle WTO meeting in December 1999. Since then, similar protests (both peaceful and violent) have occurred at virtually every international meeting of government leaders and of bodies such as the IMF, the WTO, the World Bank, the G8 and, more recently, the Copenhagen global environmental summit.

Although the influence of GCSOs varies enormously, there is no doubt that, as important actors in the global system, they have to be taken into account in any analysis of global production networks. In some GPNs, as we shall see in the case studies in Part Three and in Chapter 17, they are particularly prominent and have a significant influence on corporate behaviour.

The unevenness of power relations within GPNs

As we observed earlier, GPNs are contested fields. Each of the actors and institutions involved has their own agendas. The extent to which these can be realized depends on the relative power configuration in specific situations. Significant variables in determining relative power are, first, control over key assets (such as capital, technology, knowledge, labour skills, natural resources, consumer markets) and, second, the spatial and territorial range and flexibility of each of the actors. The two are not unconnected. Ability to control access to specific assets is a major bargaining strength. Where such assets are available virtually everywhere, then the power gradient is shallow or even non-existent. But where assets are 'localized', whether geographically, organizationally or even personally, then the power gradient may be very steep. However, actors able to tap into localized assets across geographical space have a significant advantage over those without such spatial flexibility. Power relationships within GPNs are highly *asymmetrical*.

But there is a further dimension. Each of the major actors in GPNs is involved in *both* cooperation and collaboration on the one hand *and* conflict and competition on the other. Such apparently paradoxical behaviour warns us against assuming that relationships between certain actors are always of one kind: for example, that those between TNCs, or between TNCs and states, or between TNCs and labour, or between TNCs and CSOs, are always conflictual or competitive. Or, conversely, that relationships between groups of workers or labour organizations are always cooperative (in the name of class solidarity). Not so. These various actor networks are imbued with an ever-changing mixture of both conflict and collaboration. Thus, although power relationships within GPNs are asymmetrical, they are not fixed.

So, for example, TNCs in the same industry are fierce competitors but also, invariably, enmeshed in a complex web of collaborative relationships (see Chapter 5). States compete in cut-throat fashion with other states to entice internationally mobile investment by TNCs (see Chapter 7) or to find ways to keep out certain types of imports whilst, at the same time, increasingly engaging in preferential trading arrangements, including bilateral and multilateral agreements, often within broader regional groupings (see Chapter 6). Labour unions in one country engage in competition with labour unions in other countries in the scramble for new jobs or to protect existing jobs whilst, at the same time, unions strive to create international alliances with unions in other countries, especially those involved in the geographically dispersed operations of major TNCs. They also increasingly attempt to negotiate international framework agreements with TNCs to protect workers' rights. CSOs, likewise, are not immune from these conflicting actions. In the context of the anti-globalization protests, for example, CSOs have developed collaborations across national boundaries but, at the same time, the goals and values of individual CSOs are not always compatible, to say the least.

Even in a globalizing world, economic activities are geographically localized

The view of the 'hyper-globalizers' (see Chapter 1) is that increasing *geographical dispersal* at a global scale is now the norm. But, as we saw in Chapter 2, as soon as we break free of the national statistical boxes in which most economic data are packaged, *geographical concentrations* of economic activity not only still exist but are, indeed, the normal state of affairs. Such concentrations occur at different geographical scales, though the most prominent is, of course, the city. One of the most striking features of the global economic map, therefore, is the degree to which cities and localized clusters at smaller geographical scales dominate. Why do such 'sticky places' continue to exist in 'slippery space'? [27]

The bases of geographical clusters

Figure 3.9 identifies two types of geographical cluster: *generalized* and *specialized*. Both are based on the notion of *externalities*, the positive 'spillovers' created when activities in a particular place are connected with one another, either directly (through specific transactions) or indirectly. Both are based on the idea that the 'whole' (the cluster) is greater than the sum of the parts because of the benefits that spatial proximity provides.

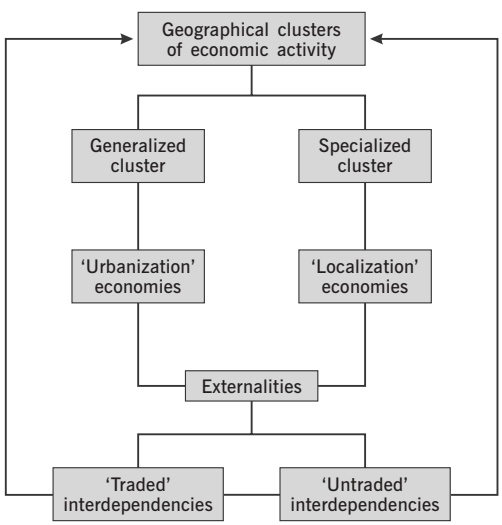

Figure 3.9 The bases of geographical clusters

- *Generalized clusters* simply reflect the fact that human activities tend to agglomerate to form urban areas. Hence, such benefits have traditionally been labelled *urbanization economies*. General clustering of activities creates the basis for sharing the costs of a whole range of services. Larger aggregate demand in, say, a large city encourages the emergence and growth of a variety of infrastructural, economic, social and cultural facilities that cannot be provided where their customers are geographically dispersed. The larger the city, quite obviously, the greater the variety of available facilities and vice versa.
- *Specialized clusters*, on the other hand, reflect the tendency for firms in the same, or closely related, industries to locate in the same places to form what are sometimes termed 'industrial districts' or 'industrial spaces'. Such benefits have been called *localization economies*. The bases of specialized clusters arise from the geographical proximity of firms performing different – but *linked* – functions in particular production networks.

Clusters generate two types of interdependency:

- *Traded interdependencies* are direct transactions between firms in the cluster (e.g. the supply of specialized inputs of intermediate products and services). In such circumstances, spatial proximity is a means of reducing transaction costs either through minimizing transportation costs or by reducing some of the uncertainties of customer–supplier relationships.
- *Untraded interdependencies* are the less tangible benefits, ranging from the development of an appropriate pool of labour, to particular kinds of institutions (such as universities, business associations, government institutions and the like) to broader socio-cultural phenomena. In particular, geographical agglomeration or clustering facilitates three important processes: face-to-face contact; social and cultural interaction; and enhancement of knowledge and innovation.

Above all, it is the potential for *face-to-face contact* that is the single most important 'glue' in the localized clustering of activities. We will see this, especially, in Chapter 4 in the context of innovation and technology, and in Chapter 12 in the context of advanced business services, including finance. But it underlies the geographical concentration of *all* human activities. It is a key element of the human condition.

Why do clusters develop in the first place?

But why do clusters form in the first place? Why do they arise in one place rather than another? And how do they develop over time? These are difficult questions

to answer. The reasons for the origins of specific geographical clusters are highly contingent and often shrouded in the mists of history.

> Within broad limits the power of attraction today of a center has its origin mainly in the historical accident that something once started there, and not in a number of other places where it could equally well or better have started, and that the start met with success.[28]

Once established, a cluster tends to grow through a process of *cumulative, self-reinforcing development* involving:

- attraction of linked activities
- stimulation of entrepreneurship and innovation
- deepening and widening of the local labour market
- economic diversification
- enrichment of the 'industrial atmosphere'
- 'thickening' of local institutions
- intensification of the socio-cultural milieu
- enhanced physical infrastructures.

The cumulative nature of these processes of localized economic development suggests that the process is *path dependent*. In other words, an economy becomes 'locked into' a pattern that is strongly influenced by its particular history. This may be either a source of continued strength or, if it embodies too much organizational or technological rigidity, a source of weakness. However, even for 'successful' clusters, such path dependency does not imply the absolute inevitability of continued success. Rigidity of local practices may reduce the capacity to adapt to external changes. Cities rise and fall – and some rise again if a new virtuous circle of development can be initiated. Decline, like growth, can become locked in.

Networks of networks

We can think of the global economy as the linking together of two sets of networks:

- the *organizational* (in the form of production circuits and networks)
- the *geographical* (in the form of localized clusters of economic activity).

The major advantage of adopting such a grounded network approach to understanding the global economy is that it helps us to appreciate the interconnectedness of economic activities across different geographical scales and within and across territorially bounded spaces. The production of any commodity, whether it

is a manufactured product or a service, involves an intricate articulation of individual activities and transactions across space and time. Such production networks – the nexus of interconnected functions and operations through which goods and services are produced and distributed – have become both organizationally and geographically more complex.

Global production networks not only integrate firms (and parts of firms) into structures which blur traditional organizational boundaries (for example, through the development of diverse forms of equity and non-equity relationships) but also integrate national and local economies (or parts of such economies) in ways which have enormous implications for their economic development and well-being. At the same time, the specific characteristics of national and local economies influence and 'refract' the operation and form of larger-scale processes. In that sense, 'geography matters' a lot.

The process is especially complex because, while states and local economies are essentially territorially specific, production networks themselves are not.[29] Production networks 'slice through' boundaries in highly differentiated ways, influenced in part by regulatory and non-regulatory barriers and in part by local socio-cultural conditions, to create structures that are 'discontinuously territorial'. This has major implications for the relative bargaining powers of the actors involved, including labour, consumers and CSOs. The geoeconomy, therefore, can be pictured as a geographically uneven, highly complex and dynamic web of production networks, economic spaces and places connected together through threads of flows.

Figure 3.10 captures the major dimensions of these relationships. Individual production networks can be regarded as vertically organized structures configured

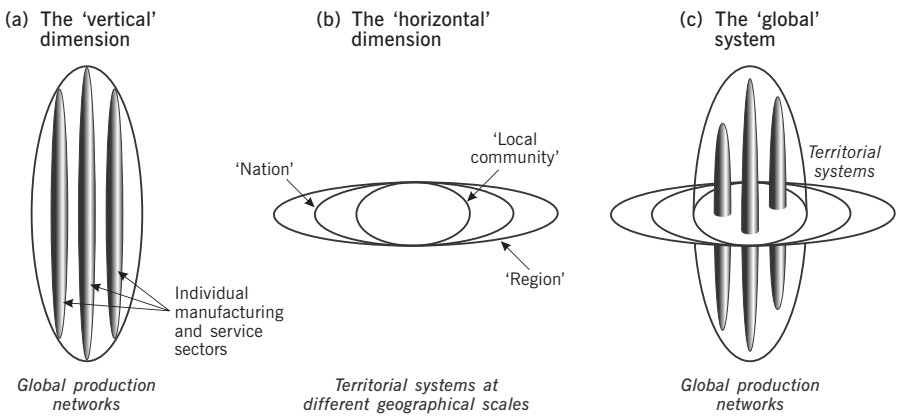

Figure 3.10 Interconnecting dimensions in a globalizing economy

Source: based in part on Humbert, 1994: Figure 1

across increasingly extensive geographical scales. Cutting across these vertical structures are the territorially defined political-economic systems which, again, are manifested at different geographical scales. It is at the points of intersection of these dimensions in 'real' geographical space where specific outcomes occur, where the problems of existing within a globalizing economy – whether as a business firm, a government, a local community or an individual – have to be resolved.

NOTES

1 Mitchell (2000: 392).
2 Amin (2002).
3 Latour quoted in Thrift (1996: 5).
4 See Swyngedouw (2000).
5 Martin (2000: 79). See also Berndt and Boeckler (2009), Lee (2006; 2009).
6 Gertler (2003: 93).
7 Held and McGrew (2007: 137).
8 Peck and Theodore (2007).
9 The GPN concept is explored in detail in a theme issue of *Journal of Economic Geography* (vol. 8, 2008). See, in particular, Coe et al. (2008a), Henderson et al. (2002). The GPN perspective is closely related to, but broader than, that of global commodity chains (GCCs), initially pioneered by Gary Gereffi (1994; 2005), and global value chains (GVCs), developed by Gereffi et al. (2005). See also Neilson and Pritchard (2009).
10 Daniels and Bryson (2002: 978).
11 Rabach and Kim (1994: 123).
12 Dore (2008), Epstein (2005), Lee et al. (2009), Milberg (2008).
13 Epstein (2005: 3).
14 Milberg (2008: 423, 424, 445).
15 Levy (2008: 948).
16 Castells (1996).
17 Granovetter (1985) pioneered the concept of 'embeddedness' within the field of economic sociology. It has become a ubiquitous (though contested) term since then. See Hess (2004) for a recent discussion of the concept in a spatial/territorial context. Neilson and Pritchard (2009) stress the need to reinsert place and institutions in these analyses.
18 Stopford and Strange (1991).
19 See, for example, Castree et al. (2004), Cumbers et al. (2008), Herod (2001), Hudson (2001), Jones (2008), Peck (1996).
20 Cited in Peck (2000: 141).
21 Some examples are provided by Cumbers et al. (2008), Herod (2001), Wills (1998; 2002).
22 Hirsch (1977).

23 Hudson (2005: 65).
24 Miller (1995: 1).
25 *The Economist* (2 April 2005: 9).
26 Levitt (1983).
27 Markusen (1996). 'Clustering' has become a hot topic in policy debates in virtually all parts of the world (Martin and Sunley, 2003; Porter 1990; 1998; 2000). However, the concept itself, as opposed to its policy connotations, has a very long history. See, for example, Amin and Thrift (1992), Bathelt et al. (2004), Dicken and Lloyd (1990), Krugman (1998), Malmberg (1999), Scott (1998; 2008), Storper (1995; 1997), Storper and Venables (2004).
28 Myrdal (1958: 26).
29 Dicken and Malmberg (2001).

Four

TECHNOLOGICAL CHANGE: 'GALES OF CREATIVE DESTRUCTION'

CHAPTER OUTLINE