Thinking About Regional Competitiveness: Critical Issues

A policy paper prepared for *emda*

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Background 'Think-Piece' Paper Commissioned by the East Midlands Development Agency

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Preamble

The aim of this 'think-piece' report is primarily twofold: (1) to provide a critical review of the concept of regional competitive advantage: the different meanings that can be given to the notion, what its key dimensions are, the problems involved in its measurement, and the limits to thinking in regional competitiveness terms, and (2) in the light of these issues, to consider how far and in what ways policy can improve a region's competitive performance. The aim is not to provide a detailed empirically-based study of the economic conditions, performance and problems of the East Midlands region; but rather to problematize the idea of regional competitiveness and thus to stimulate discussion over the relative performance of the East Midlands economy and to inform the policy debate over how to improve that performance.

1. Why The New Focus on Competitiveness?

1.1 Recent years have seen a surge of academic and policy attention devoted to the notion of 'competitiveness': the new conventional wisdom is that nations, regions and cities have no option but to strive to be competitive in order to survive in the new marketplace being forged by globalisation and the new information technologies. The credo of competitiveness has attracted a veritable host of believers and followers. Economists and experts everywhere have elevated 'competitiveness' to the status of a natural law of the modern capitalist economy. Policy-makers across the globe have been swept up in this competitiveness fever: to assess a country's competitiveness and to devise policies to enhance it have become officially institutionalised tasks in many nations, the United States, the United Kingdom, Belgium, Italy, the Netherlands, and Japan, to name but some.

1.2 This concern with competitiveness has inevitably filtered down to the regional, urban and local levels. Within governmental circles, interest has grown in the 'regional foundations' of national competitiveness, and with developing new forms of regionally-based policy interventions to help improve the competitiveness of every region and major city. In the UK, the Labour Government has focused on the competitiveness of the country's regions, cities and more recently, city-regions, as part of its aim to improve the productive and innovative performance of the national economy as a whole (HM Treasury, 2001, 2003, 2004; ODPM, 2003, 2004; DTI, 2005). Likewise, the European Commission sees the improvement of competitiveness in Europe's lagging regions as vital to the pursuit of 'social cohesion' and its Lisbon Agenda to be the "most competitive, knowledge-driven economy by 2010" (European Commission, 2003, 2004).

1.3 At the same time, regional and city authorities are themselves increasingly concerned with constructing local competitiveness indices or indicators so as to compare the relative standing of their localities with that of others, and with devising policy strategies to move their area up the 'competitiveness' league table'. Thus, in the same way that the World Economic Forum produces annual global

competitiveness indices that rank national economies, so a plethora of regional and city indices have appeared that rank places on the basis of this or that measure of competitiveness. The Progressive Policy Institute in Washington, for example, compiles various 'new economy' performance indices for US cities and regions (Atkinson, 2002; Atkinson and Gottlieb, 2001). Similarly, Robert Huggins Associates produces the World Knowledge Competitiveness Index, which seeks to benchmark the globe's leading knowledge economy regions, and a European Competitiveness Index which ranks cities and regions (Robert Huggins Associates, 2003 and 2005). Yet another of these indices of 'place competitiveness' is Richard Florida's 'creativity index', a proxy for an area's or city's openness to different kinds of people and ideas (Florida, 2002).

1.4 Why has this concern with competitiveness become so prominent in policy-making circles? Is it a new term for an old problem? Or does it reflect a new situation in the world economy? In particular, do we need the term 'competitiveness' in order to come to grips with increasing globalisation? There is little doubt that the popularity of the notion in policy circles is inextricably linked to the ascendancy and diffusion of pro-globalization, pro-market neoliberal political ideologies among the advanced nations, led by the United States, and closely followed by the UK. Under this credo, globalization is not only an ineluctable process, it brings with it expanding trade and increasingly intense competition between nations, necessitating the pursuit of efficiency, flexibility and technological innovation in order to remain 'competitive' in the global market place.

1.5 At the same time, there is now overwhelming academic agreement, amongst not just geographers but also amongst many economists and business analysts, that as part of the process of accelerating economic globalisation, *regions* are becoming increasingly important - perhaps even displacing nation states – as the key arenas of wealth production and economic governance (for example, Ohmae, 1995; Storper, 1997; Scott, 1998; Porter, 1998, 2001; Scott, 1998). It is at the regional (subnational) scale that many of the increasing returns that raise the productivity of firms and workers are created and are self-reinforcing. It is also at this scale that the 'soft' factors now increasingly believed to exert a significant influence on the performance of economic activity – such as social capital, institutional thickness, cultural facilities, and the like – tend to be embedded and are most amenable to policy support.

1.6 However, as is often the case with public policy more generally, the new policy focus on regional and city competitiveness has tended to run ahead of our understanding of the notion. To be sure, there has been a growing academic literature on the subject of 'place-' or 'territorial-competitiveness' (see for, example, Steinle, 1992; Cheshire and Gordon, 1995; Duffy, 1995; Storper, 1995, 1997; Jensen-Butler et al, 1997; Begg, 1999, 2002; *Urban Studies*, 1999; Camagni, 2003; Gardiner, Martin and Tyler, 2004; Kitson, Martin and Tyler, 2004; Krugman,

2003; Porter, 1998a, 1998b, 2000, 2001, 2003; *Regional Studies*, 2004; Bristow, 2005). But as yet there is still no widely accepted consensus on the topic.

1.7 Indeed, several issues of contention stand out from this literature. For example:

(a) There is considerable academic disagreement over what, precisely, is meant by the idea of 'regional competitiveness', and over whether and in what sense regions 'compete'.
(b) To compound the problem, there is no single, all-encompassing theoretical or conceptual framework for analysing regional competitive performance. Different theories and perspectives provide different interpretations and stress different key processes and factors.
(c) As a result, there is no consensus as to the determinants of regional competitive performance, or as to how indigenous factors interact with versus exogenous conditions and forces.
(d) Most notions and measurements of regional competitiveness or competitive performance are static in nature, and focus on regional characteristics and comparisons at a given point in time, whereas regional competitive performance is a dynamic process.
(e) What arguably matters, therefore is a region's adaptive capacity, that is its capacity to respond to exogenous forces on the one hand and, on the other, its capacity to create new paths of economic development from within.
(f) Comparative benchmarking of regions needs to be undertaken with care: no two regions are alike, and different regions face different challenges and opportunities.
(g) There is unlikely to be a 'one size fits all' policy or strategy for enhancing regional competitive performance; different regions require different policy mixes. However, there may be some basic common objectives that have universal applicability, such as the need to enhance the adaptive capacity of every region.

This is by no means an exhaustive list, but it is sufficient to highlight the ambiguous and contested nature of the idea of 'regional competitiveness'. The discussion that follows explores certain aspects of this debate in more detail. The thrust of the paper is that regional competitiveness is a key notion that should indeed be a focus of policy concern, yet it is a complex, multifaceted concept that is frustratingly elusive.

2. Competitiveness: A Contentious Concept

2.1 Although it may have had some earlier predecessors (see Reinert, 1995), the term 'competitiveness' only really entered economic parlance in the 1980s, since when it has attracted considerable – and often very heated - discussion. According to Reinert (1995), it originated as part of the constant flow of buzz-

words in management science, an example of what the *Financial Times* (1994) referred to as 'opaque, ugly and cliché-ridden management graffiti'. Michael Porter's *Competitive Strategy* (1980), *Competitive Advantage* (1985) and *Competition in Global Industries* (1986) played a key role in transferring the notion into economics and public policy. By the 1990s it had become a highly fashionable term, aided again by yet two more major statements by Porter, his *Competitive Advantage of Nations* (1990) and *On Competition* (1998).

2.2 However, the concept has drawn opposition from within the economics camp, from quite opposite ends of the ideological spectrum. In his review of Porter's *Competitive Advantage of Nations*, the non-mainstream US economist Robert Reich opened with the broadside that "National competitiveness is one of those rare terms of public discourse to have gone directly from obscurity to meaninglessness without any intervening period of coherence" (1990). Mainstream economists have been equally – if not more - critical of the idea. Thus Paul Krugman, who in general has been critical of Reich's work (Krugman, 1996a), nevertheless shared the same negative view of the notion of competitiveness, denouncing it a 'dangerous obsession' (Krugman, 1994, 1996a, 1996b):

> Concerns about competitiveness are, as an empirical matter, almost always unfounded… The obsession with competitiveness is not only wrong but dangerous… thinking in terms of competitiveness leads to bad economic policies on a range of issues (1996a, p.5)

2.3 For Krugman, the term 'competitiveness' is simply a repackaging, for consumption by a new generation of policy-makers, of a long-standing fallacy concerning international trade:

> Economists, in general do not use the word 'competitiveness'. Not one of the textbooks in international economics I have on my shelves contains the word in its index. So why are there so many councils on competitiveness, White Papers on competitiveness, and so on? It seems too cynical to suggest that the debate over competitiveness is simply a matter of time-honoured fallacies about international trade being dressed up in new and pretentious rhetoric (1996b, p.6)

Furthermore, Krugman is not convinced that a term that is usually applied to the individual firm can be meaningfully applied to economic aggregates such as the national economy (or the region):

> But what does the term national competitiveness mean? For the great majority of those who use the term it means exactly what it seems to mean: it is the view that nations compete for world markets in the same way that corporations do, that a nation which fails to match other nations in productivity or technology will face the same kind of

> crisis as a company that cannot match the costs or products of its rivals (1996b, p.17).

Drawing such an analogy between the national economy and the firm, he argues, is wrong, for two main reasons. First, nations are not like firms. Countries do not go out of business: they may be disappointed and concerned about their economic performance, but they have no well-defined 'bottom line'. Second, whereas firms can be seen to compete for market share, and one firm's success will often be at the expense of another, the success of one country creates rather than destroys opportunities for others: trade is well known not to be a 'zero-sum game'. Instead, Krugman argues that if competitiveness has any meaning, then it is simply another way of saying *productivity*; that growth in national living standards is essentially determined by the growth rate of productivity. Krugman acknowledges that

> Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker (Krugman, 1990, p. 11).

2.4 Michael Porter is also sceptical of the term 'competitiveness', and rarely uses the term, preferring the notion of 'competitive advantage' instead. Further, like Krugman, he suggests that the best measure of competitiveness is productivity:

> Competitiveness remains a concept that is not well understood, despite widespread acceptance of its importance. To understand competitiveness, the starting point must be the sources of a nation's prosperity. A nation's standard of living is determined by the productivity of its economy, which is measured by the value of its goods and services produced per unit of the nation's human, capital and natural resources. Productivity depends both on the value of a nation's products and services, measured by the prices they can command in open markets, and the efficiency with which they can be produced. *True competitiveness, then, is measured by productivity*. Productivity allows a nation to support high wages, a strong currency and attractive returns to capital, and with them a high standard of living (Porter and Ketels, 2003, p. 7, emphasis added).

2.5 The combination of a high standard of living with productivity as a measure of 'true competitiveness' is important. For while high productivity is a necessary condition for competitiveness, it is not of itself sufficient: after all, productivity can be increased by labour shedding, by capacity rationalisation, and by holding wage costs down. This is a 'low-road' route to competitiveness, and in the long-run is

not a sustainable strategy. Only a 'high-road' route to competitiveness, based on high productivity achieved through constant innovation in products and processes, investment, and a high-skilled labour force, is consistent with high wages and a high standard of living:

> A nation's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance and the economy's ability to shift output to high productivity activities which in turn can generate high levels of real wages. Competitiveness is associated with rising living standards, expanding employment opportunities, and the ability of a nation to maintain its international obligations. It is not just a measure of the nation's ability to sell abroad, and to maintain a trade equilibrium (*President's Commission on Competitiveness*, 1984, p. 2),

> Competitiveness may be defined as the ability to produce goods and services which meet he test of international markets, while at the same time maintaining high and sustainable levels of income or, more generally, the ability to generate, while being exposed to external competition, relatively high income and employment (European Commission, 1999, p. 4).

3. What is Regional Competitiveness?

3.1 The notion of regional competitiveness is also contentious. There are questions over how regions compete, and the extent to which regions are meaningful economic units to which the concept of competitiveness can be meaningfully applied. To talk of regional competitiveness would seem to imply that regional economies are like firms or nation-states, and are – in at least some sense – in competition with one another.

3.2 However, regions are neither like firms nor nations. As Cellini and Soci (2002) put it, "regions are somewhere in the middle". A region is not simply a scaled-up version of the individual micro firm, nor the simple aggregation of many such firms. Regions are not economic 'actors' in the sense that firms are (Bristow, 2005): they have limited direct control of the activities that take place within them, and the y have a lower level of organisational identity and, arguably, unity that firms and nation states. But equally, a region is not simply a scaled-down version of the macro- or national economy. Regions do not have their own currencies, and do not set their own interest rates and the like (some, in federal systems, have tax-raising powers, though these are alongside national level taxes). Rather, their economic prosperity can be significantly influenced by the macro-

level fiscal and monetary policies pursued by the nation-state (and, of course, supra-national bodies, such as the European Parliament, or the WTO).

3.3 As with nations, and unlike firms, regions do not 'go out of business'. But, unlike with nations, under certain conditions regional trade may well approach a zero-sum game. The more economically specialised a region, the more it is vulnerable to the rise of similarly specialised, direct competitor regions elsewhere, both within and outside the nation state. Unless the region in question is able to keep ahead of its direct competitors, for example through higher rates of innovation and by moving up the value-added chain in its particular specialism, or by switching into entirely new sectors and products, it can face long-term relative or even absolute economic decline. The British economic landscape is littered with industrial districts and clusters that have failed to adapt upgrade or restructure, and which as a result have experienced long-run decline.

3.4 And if the spatial structure of the national economy is such that economic, financial and political power is concentrated in a core or lead region, other regions may find themselves at a competitive disadvantage in retaining or attracting skilled labour, capital and even public investment, all of which may tend to accumulate disproportionately in the core region, thereby further enhancing its competitive advantage (in effect this process raises the full employment growth ceiling of the core region, at the cost of holding back the full employment growth ceilings in the non-core regions). In the UK, the regions compete with London and the South East for labour and capital, and on occasion for infrastructural and other public investment. National economic policy also emanates from London, and is often biased by the economic conditions in that part of the UK: thus in the mid-1960s, the late-1980s and in the 1990s, inflationary overheating of the London and South East economies resulted in the Government taking national deflationary action (raising interest rates) even though spare productive capacity still existed in the remaining regions of the country. The counterclaim is that the competitive success of London and the South East is not at the cost of the other regions, but benefits all: that the economic dynamism of this part of the country diffuses to all regions. In actual fact, is there is still no comprehensive or definitive analysis of the balance between these costs and benefits.

3.5 Interestingly, in what is a dramatic turnaround in his thinking, in a recent paper on the Scottish economy Krugman (2003) argues that it may well be more meaningful to talk about competitiveness at the regional level than at the national level:

> …it makes almost no sense to talk about national 'competitiveness'. The ability of a country to export a particular good reflects comparative advantage, not absolute advantage, and each country has a comparative advantage in some goods, a comparative disadvantage in others, no matter how efficient or inefficient it may be on average….

> At a regional level, however, the story changes drastically… Success for a regional economy … would mean providing sufficiently attractive wages and/or employment prospects and return on capital to draw in labor and capital from other regions. It makes sense, then, to talk about 'competitiveness' for regions in a way one wouldn't talk about it for larger units. This isn't just a linguistic distinction: it makes interregional growth rates much more sensitive than international growth rates to differences in efficiency… Regional growth is much more sensitive to differences in productivity performance. (2003, pp 17-20).

What Krugman seems to be suggesting is that regional competitiveness has as much, if not more, to do with *absolute* advantage as with *comparative* advantage: that a region that is more efficient (productive) will be able to attract (and retain) labour and capital from other regions, and these factor inflows will tend to reinforce that region's (absolute) productivity lead still further.

3.6 The starting point for analyses and comparisons of regional competitiveness would thus seem to be examination of relative regional aggregate productive performance – output per head, output per worker, and employment. The latter are what might be termed 'revealed' measures of overall regional competitiveness, themselves the outcome of complex underlying factors and processes. Trends in a region's aggregate performance, relative to trends in other regions, should reveal something about a region's *dynamic* competitive advantage.

4. Relative Aggregate Performance and Regional Competitiveness

4.1 However, even this apparently simple exercise is in fact far from straightforward. As mentioned earlier, a common way of discussing regional (or urban) competitiveness has been to rank regions (or cities) according to this or that economic indicator, including regional rankings by standard of living (per capita GDP), and regional productivity (output per worker). But what is the relevant set of comparator regions? At one level, it makes sense to compare a given region – say the East Midlands – to all other regions of the national economy, since as noted above, regions within a national system compete, directly and indirectly, over labour, capital and other resources. Even within a national system, however, there may be significant regional differences in costs and prices, so that each region's per capita GDP should really be adjusted by its own cost or price deflator. Unfortunately, there are still no consistent and generally accepted time series of regional cost or price deflators in the UK, so a national deflator is usually applied to all regions. Further, what really matters is how a region is performing over time: regional competitiveness is necessarily a dynamic notion. It is also about comparative performance. It might be thought that a regional economy is performing successfully if, in aggregate, it is growing at

a satisfactory, or even increasing rate. This would be wrong. What matters is not the absolute growth rate of a region, but its comparative growth. Thus it would be mistaken to believe that a region whose per capita GDP grows at, say, 2.0 percent one year and 3.0 percent the next is improving its competitiveness if in the first year the national economy grew by 1 percent and in the second it grew by 5 percent. Far from improving, the region's comparative performance has declined markedly: it is less competitive, not more competitive.

4.2 Table 1 shows the rankings of UK regions by per capita GVA (at constant 1995 prices), for 1980, 1990 and 2003. Several features stand out. London and the South East have consistently topped the regional 'competitiveness league table'. Likewise, the North East, Wales and Northern Ireland have consistently been at the bottom. As for the other regions, there have been some significant shifts in relative position over the past twenty years or so. Thus the West Midlands, North West have seen a significant deterioration in their relative performance; whilst the Eastern region, the East Midlands, Scotland and the South West have all experienced an improvement.

4.3 The problem with simple rankings by per capita GDP, of course (and this applies to all such exercises and related indexes of regional competitiveness, such as that produced by Robert Huggins Associates, 2003, 2005; Local Futures, 2005; EMDA, 2005), even when computed for several points in time, is that of themselves they provide no indication of the *extent* of regional differences and movements in competitive performance: even a stable rank-ordering of regions could be consistent with progressively widening or narrowing of regional differences in per capita GDP. In the case of the UK regions, the regions have exhibited quite markedly different growth rates over this period, with increasing *divergence* in performance especially since the late-1980s (Table 1 and Figure 1. At the same time, London and the South East have not only remained at the top of the regional league table, but have pulled progressively ahead of the rest of the UK; of the other regions, only Northern Ireland has improved its relative performance noticeably, from around 1990 onwards. Other regions have lagged behind, in particular the North East. Note how, as in the case of the East Midlands, a region may move up the regional per capita GDP rankings but still have a growth rate below that of the national average. It would be viewed as improving its relative competitiveness on the first criterion, but would have to be viewed as losing relative competitiveness on the second. Thus ambiguities exist even with relatively simple comparisons of regional per capita incomes. Comparing regions on several such indicators or outcomes of competitiveness merely compounds the problem, especially when several such indicators are rolled into a single 'competitiveness index'.

	Rank by per capita GVA			Growth of per capita GVA, 1980-2003	
	1980	1990	2003	Percent	Rank
London	1	1	1	90.4	1
South East	2	2	2	86.0	2
West Midlands	3	6	8	57.1	7
North West	4	8	7	49.9	11
Eastern	5	3	3	60.2	5
Scotland	6	4	4	58.1	6
East Midlands	7	5	5	55.9	8
Yorks-Humberside	8	9	9	53.0	10
South West	9	7	6	63.0	4
North East	10	11	12	38.6	12
Wales	11	10	11	53.9	9
Northern Ireland	12	12	10	69.4	3
UK	-	-	-	65.3	-

Table 1: Ranking of UK Regions by per capita GVA (1995 prices) (Source of data: Cambridge Econometrics)

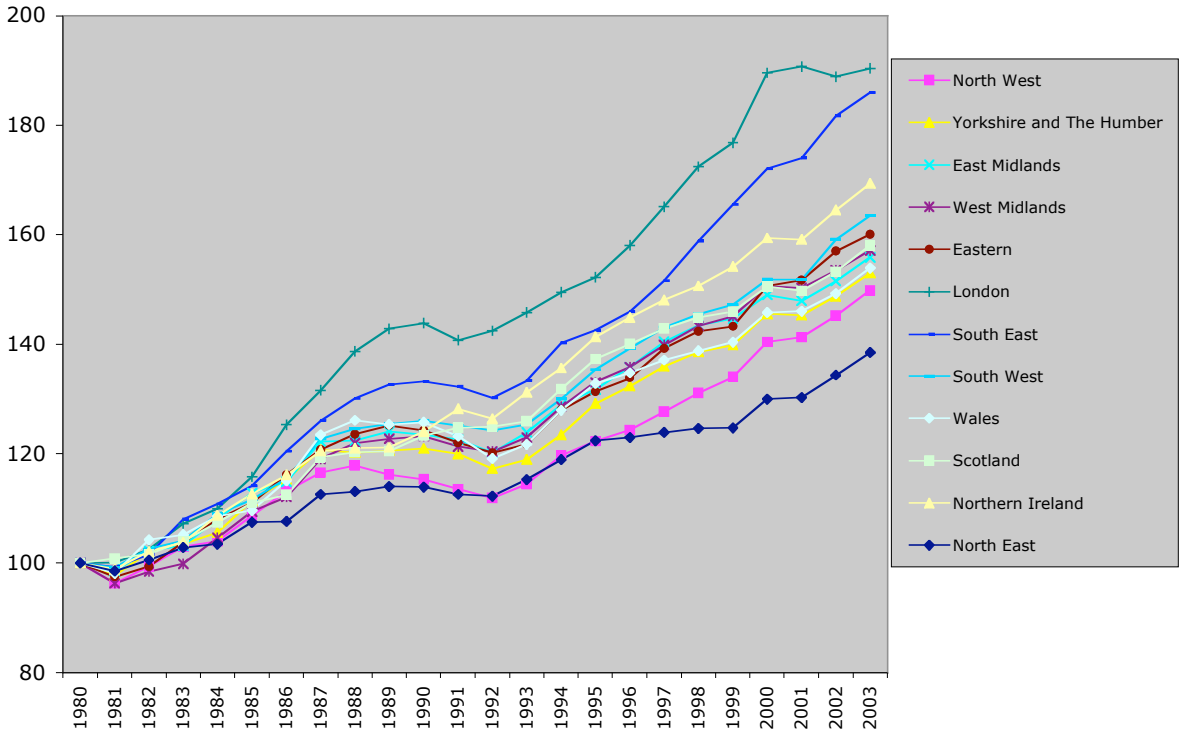

Figure 1: Growth Performance across UK Regions (GVA per capita, 1995 prices), 1980-2003

4.4 What is also evident from Figure 1 is that the relative growth performance of the UK regions has tended to show different phases of evolution. Again, the East Midlands illustrates this (Figure 2). Throughout much of the 1980s, the region seemed to hold its own in competitive terms, and its growth matched the national average. From the late-1980s to the early-1990s, however, the region's growth slipped behind the national rate. The growth gap more or less stabilised from the early-1990s to about 1997. But it has widened again since. In aggregate terms, then, the East Midlands appears to have lost aggregate competitiveness over the past seven or eight years. Since this latter phase has been a period of sustained national economic growth, the implication is that the East Midlands has failed to attract its full share of this boom (widely thought to be mainly due to the growth of high-tech 'new economy' activities).

4.5 In addition, regional differential trends in per capita GDP reflect regional differences in the movements of productivity and employment over time. These further complicate how we view the aggregate competitive performance of the UK regions. The long-run growth rates of productivity across the regions (Figure 3) reveal that although productivity has been growing in all regions, it has grown

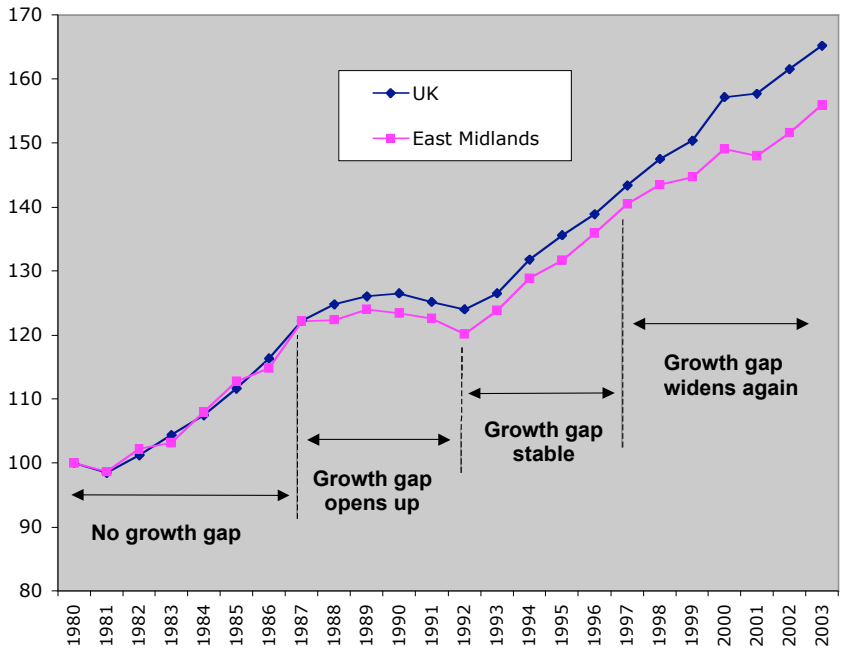

Figure 2: Phases in the Competitive Performance of the East Midlands, relative to the UK Economy as a whole: per capital GDP (1995 prices), 1980-2003 (1980=100). (Source of data: Cambridge Econometrics)

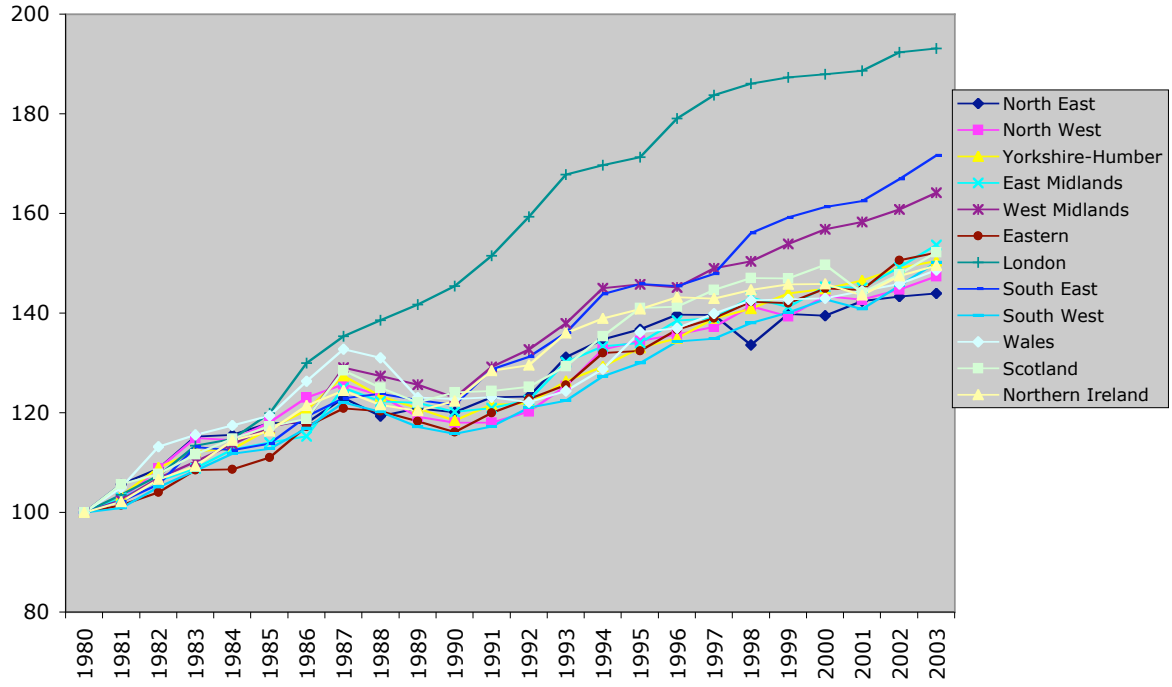

Figure 3: Regional Productivity Growth (GVA per worker) (1995 Prices), 1980-2003 (1980=100)
(Source of data: Cambridge Econometrics)

noticeably and consistently faster in London, and to lesser extent the South East, than in other regions, which, despite their own improvement, have thus slipped progressively behind (Figure 4).

4.6 The picture in terms of employment growth, another measure of 'revealed' regional competitiveness, is quite different, however (Figure 5). Only four regions have experienced any significant employment growth over the 1980-2003 period: the South East, South West, Northern Ireland and the East Midlands. Note how some regions have hardly seen any employment expansion since the early-1980s, and that employment the North East has actually stagnated. Thus productivity growth, as one aggregate measure of regional competitive performance, is not necessarily associated with corresponding employment growth, another measure of regional competitive performance. Indeed, if national average rates are used to distinguish high (above average) and low (below average) growth regions, some distinct regional differences emerge (Figure 6). London may have been the highest productivity growth region over the past twenty years or so, but its employment growth has been below average. The only region to have recorded above average growth of both productivity and employment has been the South East. The above average growth in productivity in the West Midlands has not been accompanied by

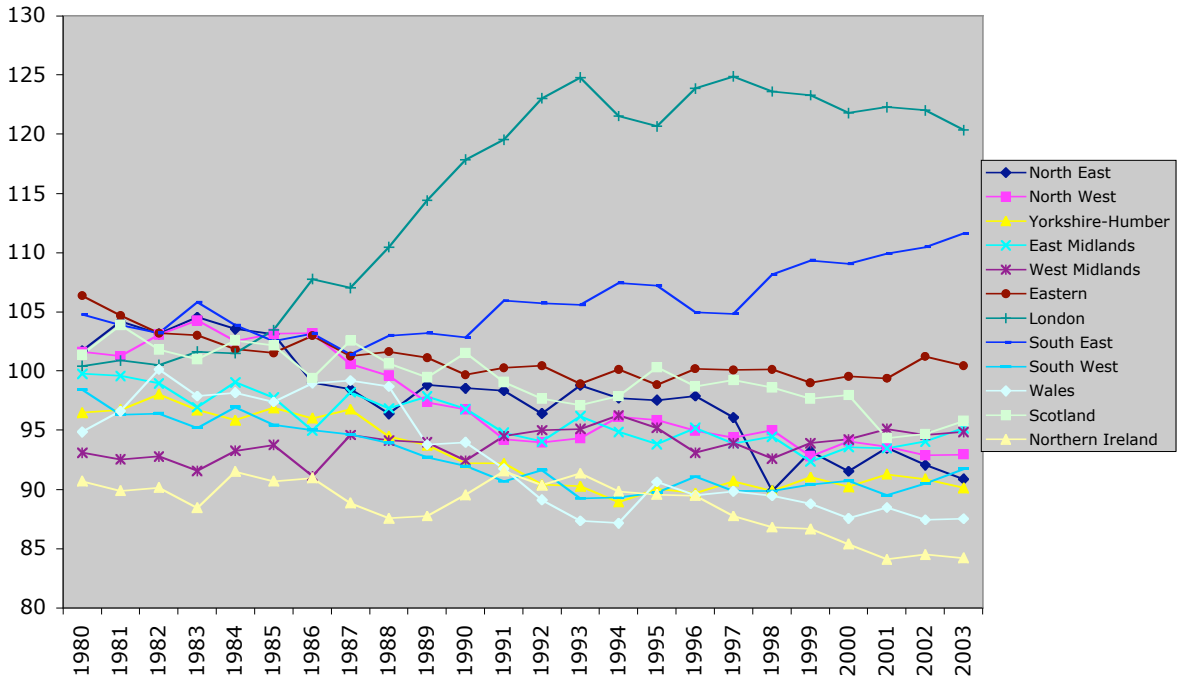

Figure 4: Relative Regional Productivity (GVA per Employee), 1995 Prices, 1980-2003 (UK=100)

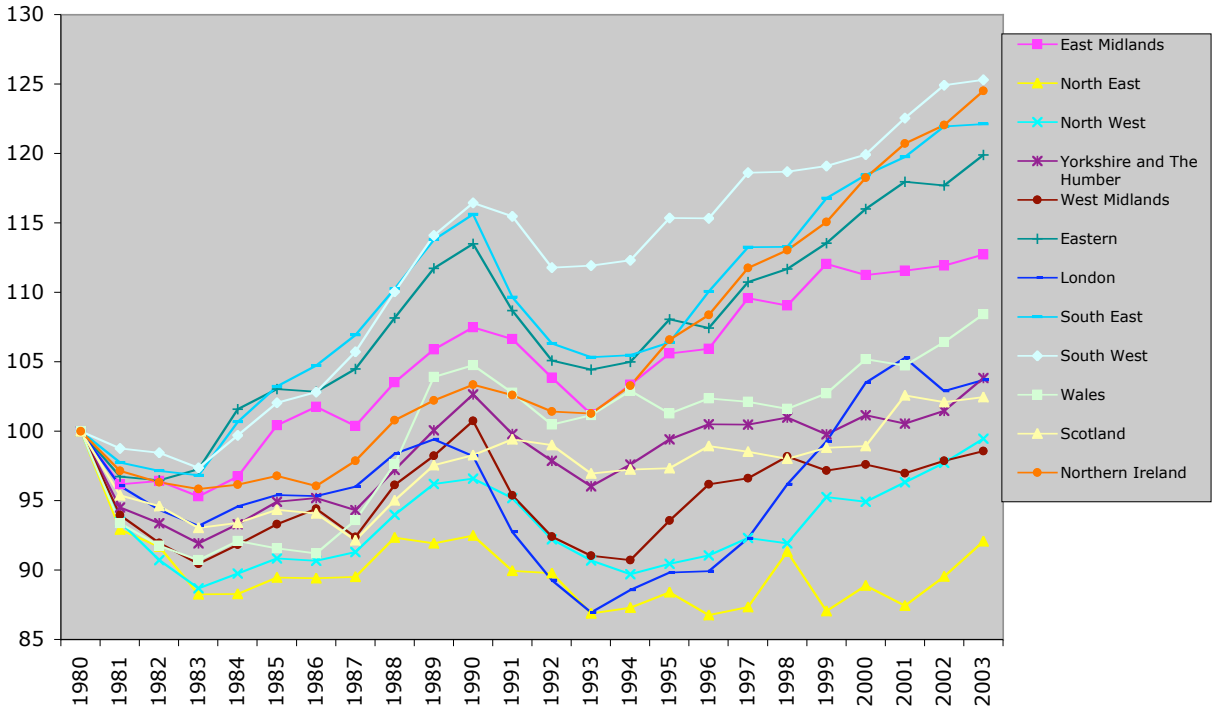

Figure 5: Regional Employment Growth, 1980-2003, (1980=100)
(Source of Data: Cambridge Econometrics)

significant employment growth. The remaining regions fall into two groups: those that have experienced below average productivity growth, but above average employment expansion (the South West, Eastern, East Midlands and Northern Ireland regions); and those with below average growth of both productivity and employment (Wales, Yorkshire-Humberside, North West, Scotland, and North East).

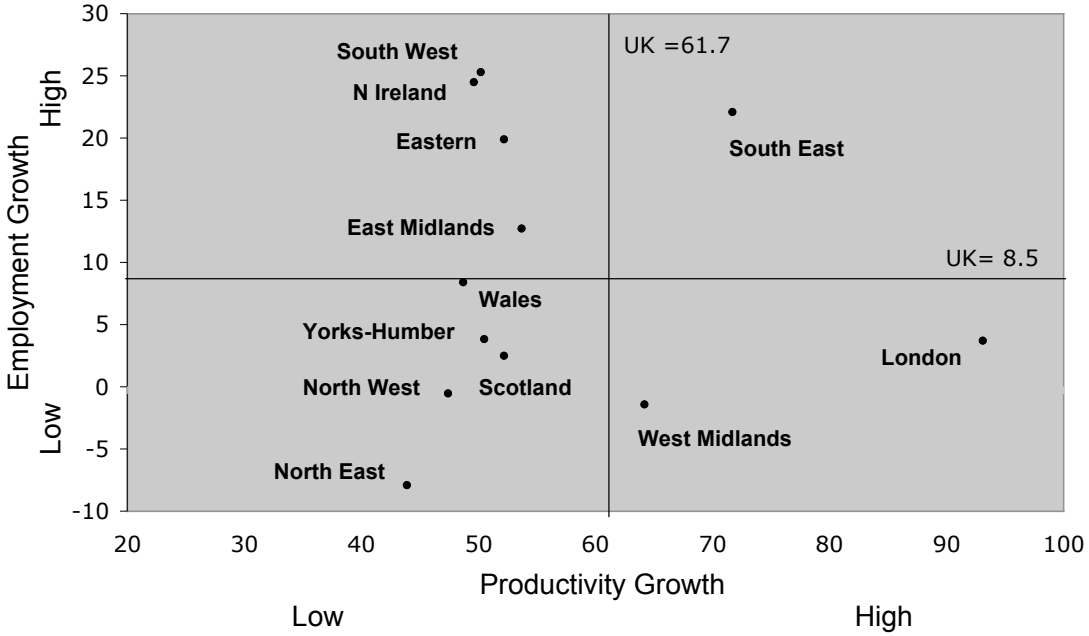

Figure 6: Regional Productivity Growth and Employment Growth, 1980-2003.

4.7 A number of points arise from this brief analysis.

(a) Even over the long-run, high productivity growth regions need not necessarily enjoy high employment growth (eg. London). Similarly, high employment growth regions may have quite low productivity growth (eg. Northern Ireland).

(b) At the very least, this renders any simple equation of regional competitiveness with productivity (as in Porter and Krugman) problematic, since the latter need not be a sufficient basis for high employment growth.

(c) What, then, should be the relative importance of productivity growth and employment growth as evidence of a region's dynamic competitive advantage? For example, should a region such as Northern Ireland, with a high rate of employment growth, but a low rate of productivity growth (and a low relative level of productivity) be considered as gaining or lagging in competitive advantage? It may be clear that the South East is a highly competitive region, as revealed by both high productivity growth and high employment growth, and that the North East is equally uncompetitive on both counts. But how we describe regions which are performing relatively well in either productivity

growth or employment growth, but not both - such as the East Midlands and West midlands - is less obvious.

4.8 And while temporal trends in relative regional growth (whether of GDP, productivity or employment), may provide measures of 'revealed' dynamic regional competitiveness, they do not of themselves tell us much about the sources of that competitiveness, *why* regions differ in productivity. The most obvious approach to answering this question is to turn to economic theory. However, here we meet another set of problems.

5. What Does Economic Theory Tell Us About Regional Competitiveness?

5.1 Unfortunately, there is no single, all-encompassing economic or economic-geographic theory that provides a generally accepted definition and explanation of regional competitiveness. What we have instead is a range of different theoretical accounts of (relative) regional *growth* (Table 1), from which implications for regional competitiveness have to be 'read off' or inferred. Only Porter's 'cluster theory' is explicitly concerned with regional competitive advantage, based directly as it is on his earlier work developed to explain the competitive advantage of firms, industries and nations.

5.2 *Export base theories* link most closely with ideas of regional comparative advantage. The success of a region's tradable base is held to be a major determinant (via multiplier effects) of the performance of the region's economy a whole (Rowthorn, 1999). It is from a region's tradable base that productivity and technological advance are stimulated, and, through various multiplier effects, demand-led growth is diffused through the region's economy. Every region will have a comparative advantage in some sectors and a comparative disadvantage in others. Regional competitive performance is thus maximised by concentrating on the former rather than the latter. The problem, of course, is that regional comparative advantage is not a static feature: it is under constant challenge by changes in consumer tastes, shifting export markets, the rise of new competitors, and developments in technology. Regions can loose their comparative advantage very quickly if they fail to respond to such pressures. The British economic landscape is littered with examples of regionally-specialised export sectors that once thrived but which have subsequently lost their competitive advantage and produced relative regional economic decline as a result. To remain competitively successful, regions need constantly to move up the value added chain in their particular specialism, or reconfigure their economic base into new tradable sectors, products and services in which they have, or can create, a comparative advantage.

Theory	Main Source of Regional Growth and Productivity
Export-base theories	The competitiveness (productivity) of a region's tradable base is an important determinant of its overall economic performance and success. Export base theory highlights the role that a region's export sectors play – both directly and via multiplier effects on the region's non-tradable activities – in stimulating incomes, investment and productivity advance.
Endogenous growth theory	The accumulation and attraction of educated and skilled human capital is the key source of local economic growth and productivity advance, via its effect on technological progress. The localised concentration of such workers promotes knowledge creation and spillovers, and thence innovation.
Neo-Schumpeterian theory	Innovation, technological advance and entrepreneurialism are the key drivers of regional competitive performance. There are two opposing views as to what stimulates local innovation: local economic specialisation (through rivalry between similar and competing firms), or local economic diversity (through the greater scope for novelty and market opportunities).
Cluster theories	A region's competitive advantage depends on the presence of localised clusters of specialised export-orientated industries, and associated supporting supplier and institutional networks. Such clustering stimulates: inter-firm rivalry and knowledge spillovers, innovation, investment, and a local pool of specialised skilled labour, all of which increase local productivity.
Evolutionary Theory	An evolutionary perspective emphasises dynamic competitive advantage, and the adaptive capabilities of a regional economy to respond to shifts and changes in markets, the rise of new competitors, and the development of new technologies. A region's competitive advantage is the complex outcome of its past development - path dependence - and its capacity to create new pathways of development. The evolution of institutional forms and is crucial to this process.
Instutionalist theory	A region's competitive advantage is held to derive from the 'thickness' of its institutions. That is, a well-developed and regionally embedded set of informal and informal institutions, from business and trade associations, to educational and training institutions, to entrepreneurial culture, to civic trust and other forms of social capital, all with a common sense of purpose, provide a highly favourable environment for economic development and expansion.
Cultural theory	A looser body of 'theory' that attributes regional (and city) success to the existence, on the one hand, of cultural diversity and tolerance (which allegedly stimulates creativity, innovation and entrepreneurship), and, on the other, to favourable cultural amenities and infrastructure which enhance the quality of life and help to attract workers and businesses.

Table 1: Competing Theories of Regional Competitiveness

5.3 *Endogenous growth* and *neo-Schumpeterian* theories both place particular emphasis on the role of knowledge and technological change as sources of regional competitive advantage (see Martin and Sunley, 1998). Under endogenous growth theory there are important increasing returns associated with the localised accumulation of skilled and knowledgeable workers. Education and research are thus key drivers of regional success, since these enhance local innovation and technological advance, and hence productivity growth. Knowledge spillovers are argued to be localised so that local innovation becomes self-reinforcing. Neo-Schumpeterian theories also assign primacy to innovation as the key to regional competitive advantage. The argument here is that competition depends on the search for competitive advantage, and the development of new products and processes is the principal way this is achieved. In other words, regional differences in competitive advantage hinge on regional differences in knowledge creation and application, that is on innovation. Innovation drives competition and competition derives innovation. The local determinants of innovation, and of entrepreneurship – a key source of innovative activity - thus assume a central role in explaining regional differences in competitive advantage. And this implies in turn that for a region to maintain its competitive advantage over time, it needs continuously to maintain a high rate of innovation relative to fits competitor regions. Correspondingly, a primary indicator of dynamic regional competitiveness is evidence on the changing relative importance over time of different technological improvements and advances amongst the region's firms and their activities.

5.4 *Cluster-based theories* of regional growth and competitive advantage are most closely associated with Michael Porter (1998, 2001, 2004) and with the so-called 'new economic geography' models of Krugman (2001, 2003). These focus on the importance of local external economies associated with the spatial agglomeration of economic activity. According to Porter, local clusters of export-orientated industrial specialisation are held to be the building blocks of regional success. Clustering of similar and related firms generates various external economies that are sources of increasing returns to the firms concerned, in particular the presence of a pool of specialised labour, dedicated suppliers, and networks of supporting institutions. Clustering also intensifies inter-firm rivalry and knowledge spillovers, both of which stimulate innovation, and thus higher productivity, and thence the export competitiveness of the firms in the cluster. Krugman's models are very similar, though they also allow for the effect of external economies of market size arising from the presence of large, and not necessarily industrially specialised, urban agglomerations. Porter's cluster model of regional competitiveness has been enormously influential in policy circles, but is not without its limitations and shortcomings (Martin and Sunley, 2003). It tells us little about how such clusters develop, or about why they can also decline; it says nothing about how clusters impact on the regional economy as a whole (that is on

the 'non-cluster spaces'); nor is the evidence wholly supportive of Porter's claim that innovation is invariably higher amongst firms in clusters than it is in non-clustered firms.

5.5 *Evolutionary perspectives* on regional competitiveness are as yet in an early stage of development, but potentially offer a very fruitful approach, since they stress the dynamic nature of regional competitive advantage (Boschma, 2004). A number of key assumptions underpin an evolutionary perspective: first, that regional economies are inherently different from one another; second, that differences among them persist through time; third, that what determines the competitive advantage of a region is the capability of its businesses, workers and institutions to adapt to a constantly changing environment (markets, competitors and technologies); and fourth, that each region influences its competitive environment by its own innovations and development. A region's dynamic competitive advantage is assumed to be the outcome of a complex evolutionary process involving the interplay of forces making for regional path dependence (the inherited legacy of previous development) on the one hand, and the forces making for novelty and the emergence of new paths of economic development, on the other.

5.6 *Institutional and cultural* accounts of regional competitive advantage focus on the role of various 'soft' factors in shaping economic growth and performance. Institutional 'thickness' – the range and common orientation of local institutions, both formal and informal - is held to be especially important. Supportive institutions facilitate business development, innovation, labour skill formation, and trust and cooperation amongst local firms: they can help form a common sense of purpose and direction in the local economy. The role of 'social capital' – of local attitudes, traditions, and forms of social association – is also emphasised, though much less easy to measure and identify (see Fine, 2000; Casey, 2004). Similarly, cultural accounts tend to stress the importance of an open and diverse cultural base to regional success: cultural diversity and openness are alleged to promote creativity, and according to analysts such as Florida (2002), the ability of a region or city to attract and cultivate a 'creative class' is now a key driver of economic success. The attractiveness of regions and cities to these creative and enterprising workers is itself argued to be highly influenced by the range of a region's or city's cultural amenities and infrastructure, which enhance the local quality of life. By their nature, the 'soft' aspects of the institutional/cultural capital of a region are not easy to assess, nor do we know much about their dynamics (for example how they co-evolve with the local economy). But the increasingly accepted view is that institutional-cultural factors may play a formative role in local economic governance, and as such have a critical bearing on the relative competitive advantage of regions.

5.7 Given these different – though to some extent overlapping - approaches, one solution would be to distil a list of 'key determinants' of regional competitive advantage from these various bodies of theory. This might include: productive capital (the region's inherited economic and business structure, including the degree and type of specialisation), human capital (labour force skills and qualifications across the region), the region's creative capital (knowledge, innovation and entrepreneurship), its infrastructural capital (both hard and soft, public and private), what might be called the region's socio-institutional capital (extent, depth, and orientation of business networks and associations, workplace traditions, public organisations, etc), and cultural capital (range and quality of cultural facilities and assets). The Government's own approach has been to identify what it calls key 'drivers' of national productivity – skills, innovation, entrepreneurship, investment and competitive environment - and to apply these at the regional level. The Government has also produced a similar list of drivers of city competitiveness, though these differ slightly (economic diversity, skilled workforce, connectivity – internal and external, strategic planning capacity, innovation, and quality of life).

5.8 What also matters is not simply what key determinants or 'drivers' are thought to be critical, but also how these 'drivers' are supposed to develop and interact within a regional setting. The Government's thinking on this is reproduced in Figure 7: skills and enterprise would seem to be the basic twin pillars of regional productivity (competitiveness) in this model, and innovation seems to be the key driver of productivity. Why no link is shown back from innovation to competition (a high rate of innovation amongst firms may well increase their rivalry), or from competition back to enterprise (a highly competitive environment may itself stimulate enterprise) is not clear. Moreover, there is nothing about this schematic that is inherently regional. The regional dimension has been added mainly in the form of the Government's enthusiasm for Porter's notion of clusters. For while the drivers in Figure 7 are not the same as the main elements of Porter's competitive diamond, there is clearly some connection: thus labour skills are part of Porter's 'factor supply conditions', and competition relates to the 'firm rivalry and strategy' component of his diamond. And in Porter's cluster model, the localised interaction of his four diamond elements is supposed to promote investment and innovation. Yet, in the Government's own discussions of the drivers of regional competitiveness (eg, HM Treasury, 2004), and in its regularly published regional competitiveness indicators (www.dti.gov.uk/rci), the approach has been to describe regional variations in each of the drivers (and indicators), in turn and in isolation, rather than attempt to analyse regional variations in their interaction.

5.9 There is in fact an underlying common thread linking most of the theories in Table 1 that relates to this idea of regional-specific interaction, namely the role of *regional external economies*. This refers to the fact, noted above, that the very

process of geographical agglomeration and localisation of economic activity can itself generate important benefits (economies) that are external to individual firms but which can positively raise the productive performance of them collectively (or

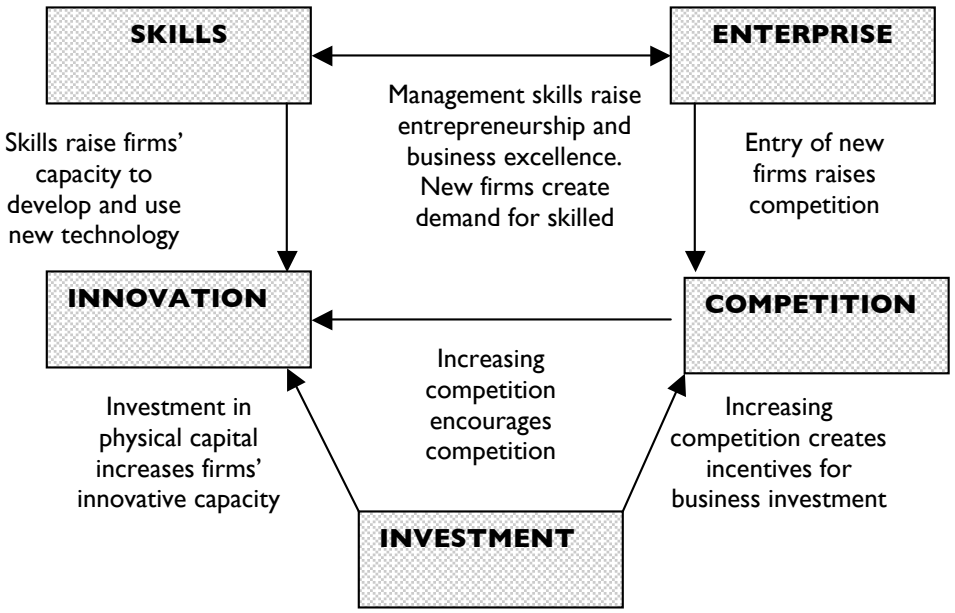

Figure 7: Drivers of Regional Productivity Used in UK Regional Competitiveness Policy (Source: HM Treasury, 2004)

at least many of them). In his study of the Scottish economy, referred to earlier, Krugman (2003) invokes 'regional external economies' as one of two primary sources of regional competitive advantage, the other being what he calls 'regional fundamentals':

> Given that modest differences in total factor productivity can have large growth consequences at the regional level, what accounts for such differences? A broad division would be between 'fundamentals' – differences rooted in a region's characteristics – and 'external economies' that are themselves a consequence of a region's pattern of economic development. Examples of fundamentals would be a well-educated local population, the result of a strong tradition of good schooling; a local culture of entrepreneurship; natural advantages of climate or resources; and sustained public policy differences, such as differences in tax rates and quality of infrastructure. These can clearly be sources of regional advantages or disadvantages. They can also play a catalytic role in promoting virtuous circles based on external

> economies. External economies are the spillovers that result from regional concentrations of industry, and therefore explain the snowball effect of a virtuous circle of growth, … First is the ability of a large local concentration to support specialized suppliers of intermediate inputs, both goods and services. Second is the presence of a 'thick' labor market in specialized skills, with skilled workers benefiting from the job security provided by a variety of potential employers and employers benefiting from the flexibility of a deep pool of potential employees. Third are pure knowledge spillovers resulting from personal contact among people working on closely related projects. To these we might add a fourth, which is in the same tradition. Although it is hard to judge its importance, anecdotal evidence suggests that venture capital has become an important determinant of regional industrial success (Krugman, 2003. pp. 23-24).

5.10 According to this line of reasoning, then, a region's fundamentals are essentially locally-specific and embedded 'nontradable' assets or endowments that are immobile between regions, what Camagni (2002) has termed 'regional absolute advantages'. These fundamentals condition a region's underlying economic and social environment, and thus influence the nature of its economic development. A region's external economies are those region-specific characteristics that derive from and are associated with its particular pattern of economic activity and specialisation. Thinking in these terms does at least assign an explicit role to the region itself in relation to the sources of competitiveness: that is, a region's competitiveness is not simply the sum or average of the particular firms that happen to be located there, but has to do with whether, and in what sense, there are indigenous, region-specific characteristics or processes that tend to influence the productivity of a region's firms. The European Commission (1999) puts it this way:

> [The idea of regional competitiveness] should capture the notion that, despite the fact that there are strongly competitive and uncompetitive firms in every region, there are common features within a region which affect the competitiveness of all firms located there (p. 5)

Thinking in these terms would also seem to suggest a possible division of emphasis and focus of policies intended to raise a region's relative competitiveness, for example into those policies aimed at improving and upgrading a region's fundamentals (such as its educational base, its entrepreneurial culture, or its public infrastructure), and those aimed at maximising and enhancing the positive externalities associated with the region's existing economic base and with any new activities and specialisms that are emerging (such as helping to promote innovation and technology transfer, or providing skills training, or marketing support).

5.11 Krugman's approach thus views a region's fundamentals and its external economies as inputs to regional competitiveness, and regional productivity as the main output. But is this division as clear-cut as it seems? Also the very term 'regional fundamentals' would seem to imply that these are somehow prior to, and independent of, regional external economies. And how does the idea of 'drivers' fit into this conception?

6. Regional Competitiveness as a Self-Reinforcing Process: The Interdependence of Inputs and Outputs

6.1 There is certainly a value to Krugman's argument about identifying regional fundamentals and external economies as primary sources or inputs of regional competitive advantage. And a region's comparative productivity (growth) is certainly a key aggregate measure of revealed competitiveness. But closer inspection suggests that distinguishing between inputs and outputs is not without confusion. Is a region highly productive (high output per head and per employee) because it is competitive? Or is it competitive because it is productive? In reality, regional competitiveness is probably best seen as an evolving complex self-reinforcing process, in which outputs themselves become inputs, and thus influence future outputs. This opens up room for feedback and cumulative causation, whether of a positive or negative form.

6.2 Figure 8 tries to capture this more realistic picture. At any given point in time, a region will have a particular configuration of fundamentals, and specific sets of external economies, both inherited from the region's past. The evolution of fundamentals and external economies are not independent processes, however. Fundamentals and external economies interact, and this interaction will vary from one part of a region to another, as different localities have developed along different industrial specialisms and trajectories. For example, a particular type of local industrial development is likely to have engendered a particular form of entrepreneurial culture, work traditions and other institutional forms. These in effect become part of that locality's 'fundamentals'. At the same time, the locality's industrial specialism will have spawned a specific set of local external economies (such as local labour skills). These fundamentals and externalities will, to some extent, shape and reinforce one another. As an example, consider the emergence of a dynamic high-technology cluster in a particular sub-region. This may originally have been influenced by the presence locally of a high-quality science-led university, from which technology spin-outs, transfers and commercialisation stimulated an indigenous high-tech industry. High-tech industries tend to attract highly enterprising, educated and talented individuals, leading to the local development of a distinct entrepreneururial culture, and a pool of specialised workers. In turn, the growth of the high-tech cluster may stimulate further the development of science research in the university and the creation of specific university-industry links,

networks and institutions to facilitate the flow of ideas from the university into the local high-tech sector. The outcome is a high rate of local innovation, a high rate of new firm formation, a highly skilled labour market, and the emergence of a local venture capital market. All this is likely to raise productivity growth, wages and wealth creation.

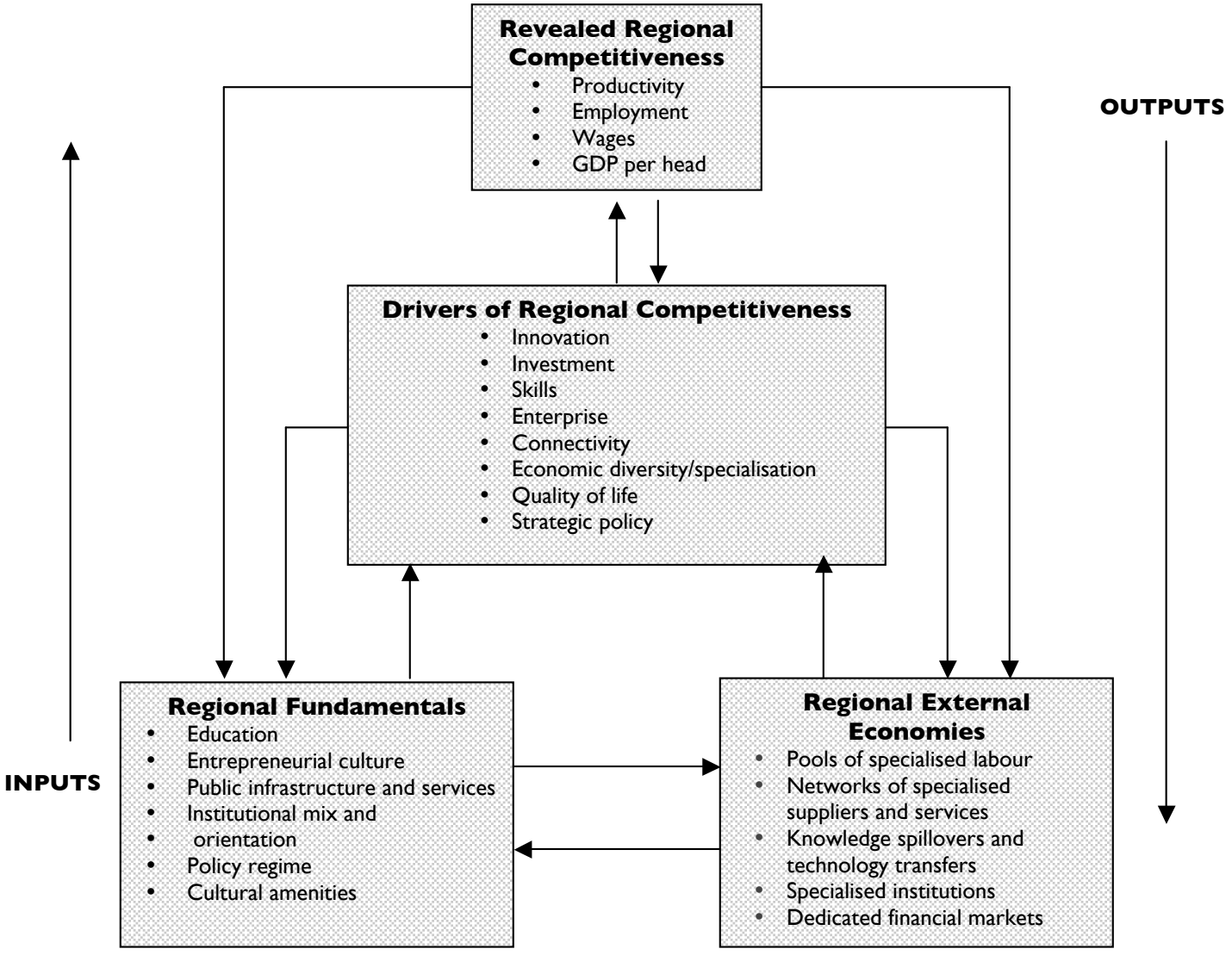

Figure 8: Regional Competitiveness as a Self-Reinforcing Process

A highly educated, wealthy workforce will demand high quality housing, good schools, a modern infrastructure and good cultural amenities. In this way, outcomes feed back to influence drivers, fundamentals and externalities: all co-evolve, in this instance in a virtuous circle.

6.3 Of course, the whole process can operate in the opposite direction. There is an inherent tendency arising from the co-evolution of fundamentals and external economies for a region's or sub-region's economy and institutions to exhibit strong *path dependence*; that is, for particular configurations of industry, skills and even technologies, to become 'locked in'. No region is immune from this tendency. The very process of regional economic development, especially when based on constellations of particular economic and technological specialisms, contains within itself the potential for lock-in and rigidity (for example of products, production methods, skills, institutions). One major source of lock-in and rigidity is what can be termed the 'inter-relatedness' of local economic development. The more that local firms are interlinked through sub-contracting networks, dense supplier relationships, knowledge spillovers, common labour pools, and even the sheer commitment to sunk capital, the more difficult it is for individual firms to break free from existing markets, products and technologies and forge new paths of competitive development. And if an area's fundamentals are also closely tied in to its economic structure, this too may contribute additional sources of inter-relatedness and rigidity.

6.4 The disadvantage of lock-in, the potential weakness of strong ties, can become all too evident if the competitive environment that a locality's firms face changes substantially. Then what were previously positive external economies can all too easily become negative externalities, the industry and locality lose competitive advantage, and relative or even absolute local decline can set in. This reduces innovation and enterprise, so that the drivers of local competitiveness lose their momentum. Local entrepreneurship may wither and infrastructure may become obsolete or run down. Slow or stagnant productivity growth feeds into slow wage growth and lagging wealth, and enterprising and skilled labour leaves, all of which in turn reinforce the slowdown in the economy as a whole, and if sustained can even lead to a relative decline in educational standards, public services, social amenities and other regional fundamentals. There are many examples of local economies that have lost competitiveness through this process, such as the footwear industry in the East Midlands, the pottery-ceramic industry in the West Midlands, clothing and textiles in the North West, and so on. Even local high-tech clusters are potentially prone to the problem. The only possible difference is that by their very nature they are based on knowledge, learning and innovation much more than on capital-intensive production, hard products and strong local supplier networks, so that – in theory at least – they should be less susceptible to lock-in and more able to adapt to changing markets and competition. But, ultimately, what is crucial for the competitive advantage and performance of any region, regardless of its economic structure and mix, is the *adaptive capability* of its firms, workers and institutions.

7. Regional Competitiveness as Adaptive Capability

7.1 Regional competitiveness is necessarily an evolutionary process. It is evolutionary for several reasons. First, because it depends on the constant *generation of variation and change* amongst the firms and industries making up the regional economy. This covers the entire field of innovation, radical or incremental, carried out by existing regional firms or associated with the creation of new firms, together with the processes determining rates of new firm entry and old firm exit. In this the elimination of 'old' firms, technologies and skills is a significant as the creation of 'new' ones.

7.2 Second, because regional economic development is inherently a *path-dependent process*, in which the existing economic structure, technologies, skill base, and institutional arrangements in the region both constrain and guide the range of possible patterns of the region's future economic development and the bases of its future competitive advantage. This applies to individual firms, whole sectors, and to regional fundamentals and external economies.

7.3 Yet, because, third, at the same time a region's economic future development path is not mechanically determined by its previous path. Constantly changing market and competitive conditions, combined with processes of innovation, also create new 'windows of opportunity' and hence potential *new pathways* of regional economic evolution, as new firms, new technologies, products, and skills emerge. Numerous examples exist of regions that have managed to reverse relative economic decline and falling competitiveness by reconfiguring their economies around such new windows of opportunity.

7.4 Such reconfiguration involves a major shift of resources between sectors, technologies and skills, and is ultimately market-led. But typically it also requires change in regional institutional forms and behavioural norms, since these shape innovation and the way that markets transmit change. Policy can potentially play a key role here. What matters, then, for dynamic regional competitive advantage is the 'dynamic adaptive capability' of a region.

7.5 By 'dynamic regional adaptive capability' is meant the capacity of a region's firms, industries, and institutions to sense opportunities (market, technological, organizational), to nurture, adapt and regenerate their knowledge assets and competences, and to develop and enhance the organizational capabilities that translate that knowledge into effective actions. This general notion applies to individual firms, to whole industrial sectors, to social and public institutions, and to policy-making bodies alike. It reflects the capacity of firms to experiment with and shift to new product-specific capabilities; for industrial sectors it has to do with the success with which the firms in that sector are able to move into new or upgrade existing markets; it has to do with the capacity of local entrepreneurs to identify and venture into new products and technologies; and it has to do with the capacity

of institutions of all kinds to be receptive to change and new opportunities. In short, the greater the dynamic adaptive capability of a region's economy and socio-institutional base, the more likely it is to maintain or enhance its competitiveness. A 'high-flex' regional economy is one that is adaptive. The terms 'adaptive' and 'high-flex' are to be preferred to 'resilient', a phrase sometimes used to describe the ability of a region to maintain its competitiveness over time in the face of changing market and technological conditions. Resilience refers to the ability to 'recover form and position elastically' following a shock to the system, and does not necessarily refer to structural or organization change. The adaptive capability of a regional economy explicitly entails such change and evolution.

7.6 Dynamic capability implies the operation of a learning spiral. Essential to a region's adaptive capabilities is its propensity to create, acquire, and absorb knowledge. Some regions seem better at this process than others. Economic geographers have even identified the concept of the 'learning region' (Morgan, 1997), and have emphasised the key role that local knowledge creation, tacit knowledge, and collective learning play in promoting local innovation and economic growth. Considerable effort is being devoted to mapping and understanding regional and sub-regional differences in knowledge creation and absorption, including the regional distribution of knowledge workers, knowledge-intensive industries, R&D activity, and innovation in new processes and products. There is now convincing empirical evidence to indicate that both innovation and knowledge spillovers tend to be distinctly localized processes, and take time to diffuse more widely, so that a region's growth and productivity are enhanced if its firms can establish a 'first-mover advantage' in the development or application of new technologies and techniques. And recall that localized knowledge spillovers are one of the main regional external economies emphasized by Krugman, Porter and others. Likewise a region's ability to attract educated and highly qualified workers from elsewhere will add to its knowledge base, as will high quality regional education institutions, from schools to universities (all part of the region's fundamentals).

7.7 Regional dynamic adaptive capability is ultimately about innovation. Innovation enables existing firms in a region to increase productivity, switch into new markets, and adjust to changing market pressures and opportunities. It also tends to be associated with high rates of entrepreneurship and new firm formation, and hence with the emergence of new types of economic activity and employment. In most advanced economies, regional economic growth rates tend to be closely correlated with regional rates of innovation: the higher the rate of innovation, as represented for example by patenting or by R&D activity, the higher that region's prosperity. The same picture holds for the UK (see Figure 9: London is the exception to the rule, in having the highest GDP per head, but a below average total per capita expenditure on R&D).

7.8 Regional variations in R&D derive mainly from differences in the resources devoted to this activity by local private sector firms (Table 2). But marked regional

differences also exist in the contributions from the Government Sector and from Higher Education Institutions. In the UK these too tend to follow the regional pattern of private sector R&D, with which they doubtless interact, so that all three tend to reinforce one another at the local level.

7.9 Of particular significance, then, is the question why some regions are more innovative than others. Considerable academic attention has been devoted to this issue in recent years, but there is still no unequivocal explanation. There are two rather opposing views on the topic. The so-called Marshall-Arrow-Romer view is that innovation is stimulated by *local economic specialisation*, where it is driven by intense rivalry between, and knowledge spillovers amongst, local firms in the same industry (or in closely related industries). This is essentially the assumption employed by Porter in his cluster model. In the so-called Jacobs view, however, innovation is promoted by *local economic diversity* and heterogeneity, since this maximises both the scope for interaction and the variety of market opportunities for new ideas.

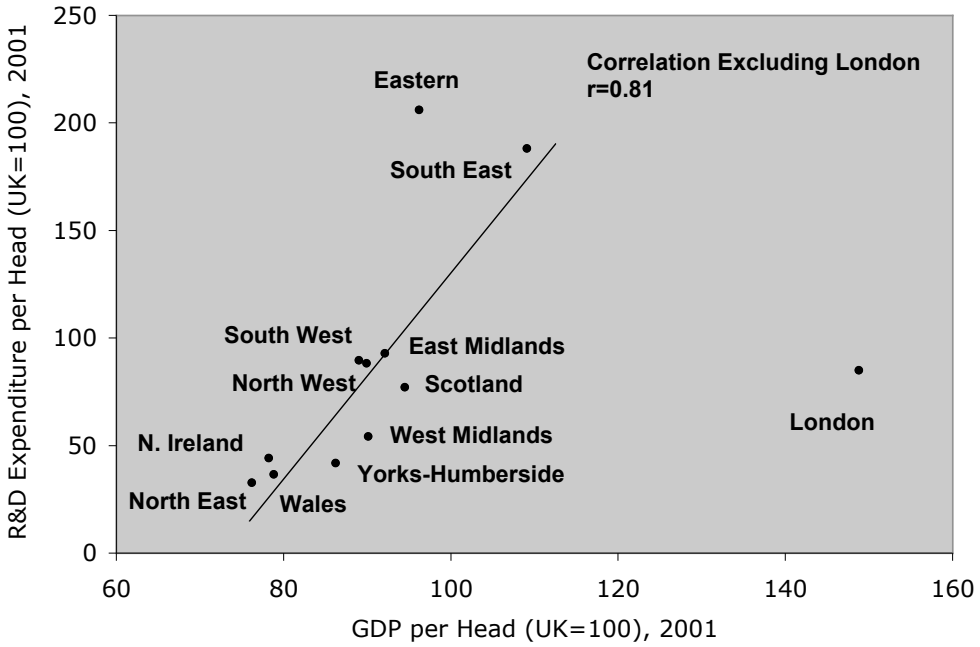

Figure 9: Innovative Regions are also Prosperous Regions

7.10 The truth may in fact lie somewhere in the middle. The two most innovative regions in the UK (in terms of patent activity and R&D) are the Eastern and the South East (Figure 9). The impressive innovation rate recorded by the Eastern region (one of the highest in Europe) is in fact almost entirely due to the Cambridge

sub-region, which contains a specialised high-tech sector. In aggregate terms, the South East region is very diversified. But on closer inspection, it contains several highly specialized clusters of innovative activity, such as the biotechnology cluster around Oxford, aerospace clusters to the west of London and in south Hampshire, the motorsport cluster stretching from Buckinghamshire southwards into Surrey, to name but some. In fact the South East's economy is perhaps better described as one of 'clustered diversity'. But yet further, clusters themselves may be internally more diversified than they are frequently portrayed. Thus the Cambridge 'high-tech' cluster is in fact made of at least seven sub-clusters (telecoms, computing, inkjet printers, wireless communications, scientific instruments, software, and biosciences), and is becoming more diversified over time.

	Business Sector	Government Sector	Higher Education Institutions
North East	118	4	142
North West	1512	66	322
Yorks-Humber	298	50	317
East Midlands	950	68	224
West Midlands	641	65	207
Eastern	2913	277	366
London	737	238	980
South East	3693	565	562
South West	1022	254	138
Wales	136	49	155
Scotland	512	226	510
N. Ireland	150	16	73

Table 2: Regional R&D Expenditure by Major Sector (£ millions), 2001

7.11 Having dynamic R&D orientated clusters is only one aspect of the role that innovation plays in dynamic regional competitiveness. What also matters is the continuous *technological upgrading* by existing firms and industries. A region's adaptive capability is not simply defined by its ability to spawn new high-tech industries and specialisations (and not every region can have a successful biotechnology industry), but also - and perhaps in some cases, more importantly – by the ability of its existing firms and industries to adopt and absorb technological improvements and advances. As mentioned above, in the UK many local clusters of specialized industry have failed over time to do just that, and have progressively lost competitive advantage as a result.

7.12 To summarise, a region's adaptive capability would seem to be key to its dynamic competitiveness. Yet we know little about the processes of regional economic adaptation, or about why some regions seem to be more adaptive than others. This is an area where evolutionary economics could be usefully explored, not only to better understand regional competitive advantage and how it changes though time, but also for thinking about policy interventions. An evolutionary perspective on regional competition and competitiveness would place particular policy emphasis on a region's propensity to innovate, both within and amongst its firms, and within and amongst its institutions.

8. Tracking Dynamic Regional Competitiveness: The Benchmarking Fad

8.1 Regional 'benchmarking' - the systematic and continuous comparison of a region's economic (and possibly also societal and environmental) performance with that of other, competing regions, provides one way of assessing how successfully a region is adapting and adjusting to a changing set of market, technological and competitive conditions. As mentioned earlier, numerous regional 'competitiveness indices', 'score cards' and 'league tables' have been devised that seek to provide a basis for benchmarking. Because they tend to combine several 'competitiveness indicators' into a single composite measure, such exercises are not always easy to interpret. It is also vital that such regional competitiveness indexes, 'score cards' and 'league tables' are conducted at regular intervals if they are provide any insights into a region's adaptive capabilities and dynamic competitiveness.

8.2 Regional benchmarking aimed at improving a region's economic growth and performance involves at least three inter-related sets of issues:

(a) The selection of 'competing' regions (the set of 'benchmark' or 'comparator' regions)
(b) The choice of the regional competitiveness and performance indicators used as the basis of benchmarking
(c) How the results of regional benchmarking are translated into policy action

8.3 The first problem concerns the choice of the set of benchmarking regions against which a given region should be compared. What, for example, are the most meaningful regions for benchmarking the East Midlands economy? The simplest answer is the set of other UK regions: after all, the East Midlands competes with other UK regions for labour, capital, and public spending, and like the other regions, is part of a common, unified monetary and regulatory economic space. On the other hand, does it make sense to compare the East Midlands with, say, London?

8.4 Or should it be entire set of EU regions? Given that much of the external trade of UK regions, including the East Midlands, is with the EU, and that the latter has moved increasingly to a single, unified market, a case can be made that the economic performance of the East Midlands is best compared to that of all other EU regions, rather than just those in the UK. This is essentially the approach adopted by the East Midlands Development Agency.

8.5 Or should benchmarking be restricted a more relevant and specific 'league table' of comparator regions? For example, in their benchmarking of Swiss regions, BAK Basle Economics (2003) compares and tracks each Swiss region against a different and specific subset of EU benchmark regions defined to be the most relevant for the region in question. Thus, Swiss metropolitan regions are benchmarked against other EU metropolitan regions; Swiss high-tech regions against EU (and US) high-tech regions; Swiss regions of specialised traditional industry against their EU counterparts, and so on. This approach requires considerable detailed empirical investigation in order to identify the most 'meaningful' set of benchmarking regions, but is justified on the grounds of comparing 'like with like'. This is an interesting argument, given that regions differ considerably in their economic structures and specialisations, their institutional arrangements, and so on, so that benchmarking the East Midlands against, say, London, or Baden Wurttemberg, or Lazio, may not be that meaningful.

8.6 On the other hand, it could be argued that policymakers will be interested in comparing their region not with other closely similar regions, but with the best-performing or leading regions, regardless of any differences in economic structure and the like, because they see the growth and prosperity of this leading subset as the goal to aim for. Thus the East Midlands might be compared to the top 10 or top 20 most prosperous, or fastest growing, regions in the EU, to see if it is catching up with or falling behind this group, This again, is an integral part of the benchmarking undertaken by the East of Midlands Development Agency (2005).

8.7 Yet another variant would be to identify comparator regions that previously had a similar industrial structure or similar economic problems to the region being benchmarked, but which have since successfully adapted and reconfigured their economies around new activities, technologies and skills, and achieved a marked improvement in their competitive performance as a result. In this case benchmarking would be based on a set of 'best practice' regions.

8.8 Still further, given that most regions contain a range of industries and sectors, it could be argued that benchmarking should be conducted on an industry-by-industry basis, so that for example a region's motor vehicle industry would be benchmarked against that same industry elsewhere, its footwear sector against that

European Region (NUTS1)	Country	GDP/Hd 2000 (PPS)	Rank 1985 (out of 71 NUTS1 Regions	Rank 2000 (out of 71 NUTS1 Regions
Brussels	Belgium	49,191	1	1
Hamburg	Germany	41,025	2	2
Ile de France	France	35,783	3	3
London	UK	33,223	4	4
Bremen	Germany	32,298	7	5
Åland	Finland	31,463	6	6
Lombardia	Italy	30,402	8	7
Hessen	Germany	29,249	10	8
Emilia Romagna	Italy	29,183	9	9
Bayern	Germany	28,022	15	10
West Nederland	Holland	27,896	14	11
Ostösterreich	Austria	27,872	13	12
Baden-Wurttemberg	Germany	27,576	16	13
Nord Est	Italy	27,255	12	14
Nord Ovest	Italy	26,341	11	15
Westösterreich	Austria	25,999	16	16
Lazio	Italy	25,512	17	17
South East	UK	24,989	18	18
Comunidad de Madrid	Spain	24,855	19	19
Centro	Italy	24,590	20	20
Nordrhein-Westfalen	Germany	24,556	24	21
Vlaams Gwest	Belgium	23,971	21	22
Zuid Nederland	Holland	23,957	22	23
Eastern	UK	23,491	28	24
Manner-Suomi	Finland	23,458	23	25
Noord Nederland	Holland	22,962	27	26
Centre Est	Italy	22,607	25	27
Noreste	Spain	22.010	30	28
Scotland	UK	21,978	29	29
Saarland	Germany	21,888	32	30
Rheinland Pfalz	Germany	21,851	38	31
EU-15 Average		**21,819**		
East Midlands	UK	21,214	31	37
West Midlands	UK	20,786	26	38
South West	UK	20,575	35	40
Yorkshire-Humber	UK	19,924	42	44
North West	UK	19,701	34	45
Wales	UK	18,214	45	50
Northern Ireland	UK	18,099	59	52
North East	UK	17,499	55	54

Table 3: Rankings of UK Regional Economies in the EU League Table (Non-UK EU regions with GDP per head below EU average not shown)
(Source of data: Cambridge Econometrics)

industry elsewhere, and so on. In this way a given region would be benchmarked against several different sets of regions, each set defined in terms of a particular

industry. This makes sense in terms of monitoring the changing competitive conditions in, say, each of a region's main export markets. The disadvantage of this approach – apart from the heavy data analysis requirements - is that it detracts from the interdependencies, inter-relationships and spillovers that typically exist between the different industries in a region.

8.9 Most existing regional competitiveness benchmark rankings and league tables (such as that produced by Robert Huggins Associates, by Local Futures Group, and by the East Midlands Development Agency in its *Top 20 Index of European Regions*) tend to rank UK regions against the whole set of EU regions. Table 3 shows such an exercise using per capita GDP (adjusted for national differences in purchasing power), with rankings for 1985 and 2000. Only one UK region – London – figures in the EU's top ten regions in terms of per capita GDP, and only two – London and the South East in the top 20 regions. Only four regions - London, the South East, Eastern and Scotland – have maintained per capita GDP levels above the EU-15 average, and maintained their relative competitiveness. All other UK regions have per capita GDP levels below the EU-wide average, with the East Midlands the top of this group. More worrying, however, is that all of the regions below the EU average in fact slipped further down the EU per capita GDP league table between 1985 and 2000, indicating a loss of relative competitiveness over the period. Thus, whether the East Midlands is benchmarked against the top regions in the EU - Brussels, Hamburg, London, Ile de France - or against more similar industrial regions such as Lombardy, Emilia Romagna, Bayern or Baden Wurttemberg, the same pattern of a loss of relative competitive performance is evident.

8.10 What Table 3 also makes clear is that there is a high degree of stability or inertia in the regional rankings: in general there are no dramatic movements of regions up or down the rankings. The top 10 regions show hardly any changes in rank over the 15-year interval. Likewise, there are no sudden shifts in position, either up or down, of regions elsewhere in the rankings. The basic point that Table 3 suggests is this: the task facing policymakers in seeking to move their region substantially up the competitiveness rankings is an extremely challenging one, and is almost certain to be a lengthy undertaking. The problem is that it takes time to reconfigure a region's economy – and especially its fundamentals – and even if this is being achieved, the rest of the world is hardly standing still. In short, a region's policy-makers face a continuously moving target.

8.11 However, comparing rankings of regional per capita levels over time, whilst certainly informative, is nevertheless restricted. As stressed above, stable or only slowly changing rankings can be consistent with somewhat different underlying growth trends: a stable ranking, for example may be consistent with either

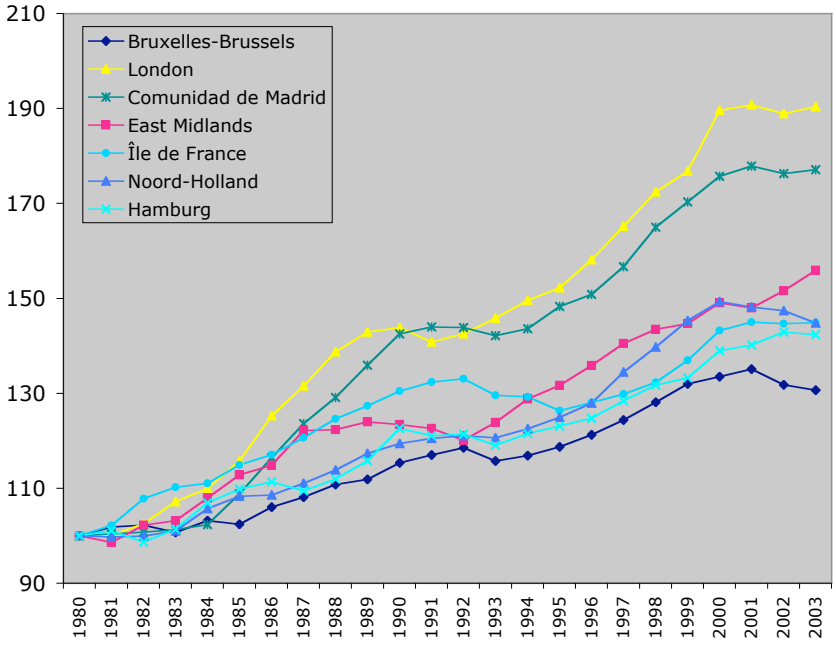

Figure 10: Benchmarking the East Midland's Growth Performance Against Selected European Metropolitan Regions. Growth in GDP per capita (1995 prices), 1980=100 (Source of data: Cambridge Econometrics)

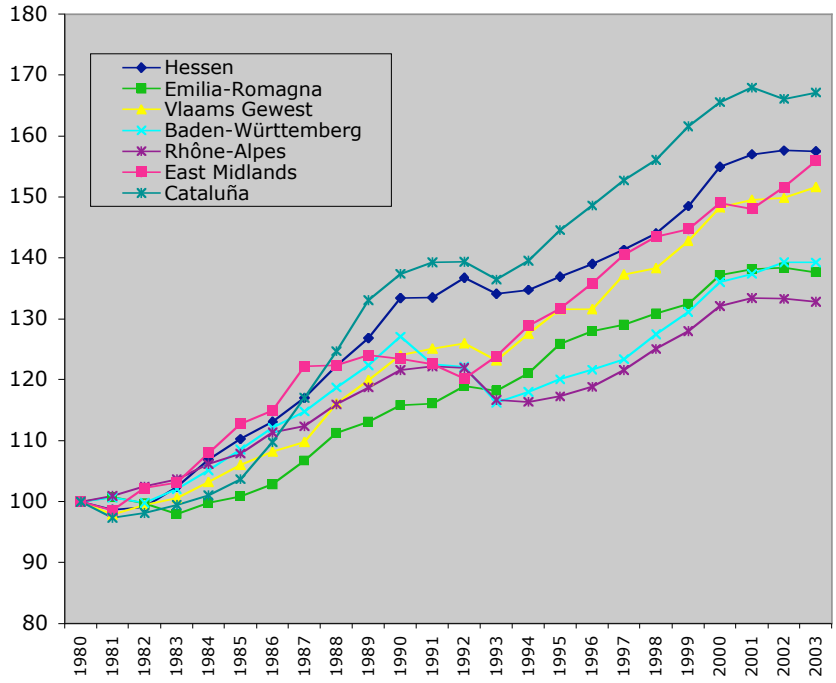

Figure 11: Benchmarking the East Midland's Growth Performance Against Selected European Industrial Regions. Growth in GDP per capita (1995 prices), 1980=100 (Source of data: Cambridge Econometrics)

narrowing or widening inequalities in relative per capita GDP. Benchmarking regional growth performance is equally important, therefore. Figures 10 and 11, for example, show that the East Midlands may have not have improved its overall ranking in the EU regional GDP league table, but it has actually compared quite favourably in long-run growth terms, whether compared with major EU metropolitan regions or, perhaps more relevant, with certain other EU industrial regions.

8.12 Thus, a region wishing to compare itself with competing regions in order to achieve better regional growth by learning from the competition will first of all be interested in a comparison of performance, both in terms of level and dynamism. And besides economic performance, the comparison should also embrace environmental and societal performance (sustainability benchmarking; the East Midlands Development Agency's Top- 20 index attempts to do this). But if the performance comparison is to yield conclusions that are useful for policymaking, one also has to know something about the factors – the drivers, the externalities and the fundamentals - underlying the region's performance, compared to the significance and the quality of those factors at relevant competing locations. This is not easy. For one thing, obtaining reliable and consistent time series data on such factors as innovation, enterprise, labour skills, venture capital activity and the like across regions are not always available, especially when making international comparisons (as in benchmarking UK regions against their European counterparts). For another, it is not often clear whether a given set of factors functions in the same way across different regions, or whether a given factor should be given the same importance in every regional economy. This relates back to the issue of selecting the appropriate set of competitor regions to use for benchmarking. It can also be the case that a given region scores rather differently on different drivers or factors. Table 4 shows the rankings of the UK regions on various drivers. While a highly competitive region like London or the South East tends to score highly on almost every driver or factor, and highly uncompetitive regions, like the North East region, rank poorly on every factor, other regions, such as the East Midlands, tend to a mixed pattern, with favourable scores on some factors and unfavourable scores on others.

8.13 From a policy viewpoint, therefore, there is a strong case for of benchmarking separately on each driver and factor, as in Table 4. Thus, for example, Table 4 suggests that while the East Midlands compares favourably against other UK regions in terms of innovation and enterprise, it suffers from a distinct competitive disadvantage in terms of the low educational and skills attainment of its workforce, the small scale of its creative-knowledge based economy, and its limited ability to attract venture capital. Policy might therefore give priority to these relative weaknesses. Ideally, of course, such benchmarking should really be undertaken on an industry-by-industry basis, although the data requirements involved, particularly if comparisons are made with regions in other countries, obviously escalate dramatically.

8.14 The mission of the English RDAs is to ensure that their respective regions can compete with the best in Europe, and at the very least to ensure that they can reach the European average performance standard. Benchmarking against European regions is thus crucial to this policy aim, and some of the RDAs are now doing this (for example East Midlands Development Agency). Yet at the same time, benchmarking is a contentious issue, and despite the increasing number of regional competitiveness indexes and league tables now produced, is still far from an exact or generally agreed science. To be meaningful, benchmarking requires careful prior consideration of the competitor region set used, the types of performance measures and factors used as the basis of comparison, the quality and consistency of data, and how the results are to be used to inform the policy process.

	Innovation (R&D Exp as %of GDP) (2002)	Enterprise (Business Start-up Rate 2003)	Creativity (Proportion of Knowledge-Based Businesses, 2003)	Venture Capital Activity (% of investments) (2000-2003)	Education and Skills (% of working population with NVQ4+ (2002-2003) GB=100	Investment (Average Annual growth rate, 1995-2003)
London	1.46 (6)	5.0 (1)	28.6 (1)	20 (1)	126.2 (1)	3.8 (3)
South East	2.12 (2)	3.8 (2)	26.9 (2)	24 (2)	114.5 (3)	5.5 (1)
East of England	3.07 (1)	3.4 (3)	21.6 (3)	10 (3)	91.7 (5)	3.2 (6)
South West	1.59 (4)	3.2 (4)	18.7 (5)	5 (7)	103.5 (4)	3.5 (4)
East Midlands	1.63 (3)	3.0 (5)	16.6 (8)	4 (8)	82.4 (10)	2.4 (7)
West Midlands	0.84 (6)	2.9 (6)	17.6 (6)	7 (6)	85.6 (9)	2.1 (9)
North West	1.58 (5)	2.8 (7)	20.2 (4)	8 (5)	88.4 (7)	1.3 (12)
Yorks-Humber	0.46 (10)	2.4 (8)	15.6 (9)	5 (7)	86.3 (8)	2.0 (10)
Scotland	0.75 (7)	2.4 (9)	17.0 (7)	9 (4)	115.9 (2)	3.4 (5)
N Ireland	0.63 (8)	2.4 (10)	15.2 (11)	2 (9)	No data	4.2 (2)
Wales	0.46 (11)	2.2 (11)	14.1 (12)	3 (8)	90.9 (6)	1.7 (11)
North East	0.37 (12)	1.8 (12)	15.4 (10)	3 (8)	80.0 (11)	2.2 (8)
UK	1.19	3.2	21.2	100	(GB=100)	3.0

Table 4: Ranking of UK Regions on Various Competitiveness 'Drivers' (Rankings in Parentheses)
(Sources of data: ONS, BVCA, LFS, Cambridge Econometrics)

9. Building Regional Competitive Advantage: The Scope and Limits of Policy

9.1 Where does all of this leave policy? Historically, the approach to UK regional policy rested on a series of implicit assumptions and explicit goals that are now regarded as incompatible with the pursuit of regional economic success in a rapidly changing global market place. The primary cause of regional economic inequalities was seen to reside in a lack of demand for the products of certain regions: in other words the 'regional problem' was interpreted to be essentially

structural in nature, in that certain regions were over-dependent on older industries experiencing long-term decline in demand, whether domestically or in export markets. Essentially, the aim of regional policy was seen as securing a more balanced regional distribution of aggregate demand and employment by diverting investment and jobs from more prosperous regions to less prosperous regions. There was little or no strategic or developmental direction to this policy, however, in the sense of giving priority to the promotion of particular sorts of industries or jobs in the regions.

9.2 With the rejection of Keynesian demand management in the 1980s, national policy concern has since been primarily supply-side focused, involving a general withdrawal of state intervention and the government from the economic system, frequently in the name of 'competition'. Indeed under the Thatcher governments, reference to 'competition' often seemed to be in the neo-Darwinian sense of 'survival of the fittest': free market competition would weed out inefficient firms, industries, and work practices.

9.3 This micro-economic 'supply-side turn' has increasingly filtered into regional policy thinking and practice. Lagging regional economic performance is now seen as due not to a lack of demand, but as arising from inefficiencies, rigidities, inflexibilities and *lack of adaptability* on the supply-side of a region's economy, weaknesses that prevent the region's firms, industries and workers from responding adequately to changing market conditions and hinder its ability to spawn new firms, industries and jobs. Poor regional growth is thus attributed to a lack of competitive advantage which in its turn is the outcome of inferior supply-side processes and characteristics in the region. This reinterpretation of the 'regional problem' thus puts considerable emphasis of the *indigenous* causes of a region's lagging competitive performance, and hence on the need for policy to likewise focus on improving a region's indigenous supply-side features and capabilities – on (re)building regional competitive advantage from within, from the 'bottom upwards'.

9.4 At the same time, however, current Government policy sees regional policy – as implemented through the economic strategies of the RDAs – as serving a national and not just regional purpose, as contributing to its goal of raising national competitiveness, in the dual sense of raising national productivity and helping the UK to become a leading knowledge-driven economy. To this end, through the various reports and papers produced by the DTI, the ODPM and the Treasury, a broadly common set of arguments and a broadly similar set of drivers have been used to discuss productivity and competitiveness at a whole variety of geographical scales: the national economy, the regions, the nation's cities, and even local authorities. Herein lies an interesting potential contradiction: on the one hand, there is considerable stress on the need for regional policymakers to focus on their region's specific indigenous strengths and weaknesses. These, by definition, vary from region to region. But at the same time, in order to ensure that the economic

strategies pursued by the regions tie into its overall national policy goals, Government has sought to push a general set of arguments, interpretations and policy priorities (clusters being a prime example) that should inform economic strategy across all of the RDAs. Perhaps not surprisingly, some commentators have criticised this approach as 'treating unequal regions equally' (Morgan, quoted in Fothergill, 2005, p. 665). The same problem attaches to national level policies, from monetary policy, to taxation policies, to measures to promote innovation to policies to support small firms: these are 'nationally' devised and administered, but because regions differ in their economic conditions, such policies are almost certain to affect different regions differently.

9.5 Making policy recommendations is, of course, the hard part. But the reason policy can matter so much is that the processes that promote regional growth and success – or alternatively relative decline – tend to be self-reinforcing. Thus a small push in the right direction at the right time can have cumulative effects on regional productivity and growth. And it is easy to find examples that appear to testify to this sort of take-off and cumulative competitive success – such as Silicon Valley, Ireland's recent 'economic miracle', or Cambridge's high-tech 'phenomenon'. Such examples would seem to hold out tantalising possibilities for clever policies of sectoral or cluster promotion given sufficient resources and a well developed system of strategic policy making. However, it is usually only in retrospect that it becomes possible to identify exactly what the pivotal initiative or intervention was behind such regional or sub-regional success stories. At the time, it would have been impossible to have imagined or predicted the long-term outcomes of those original initiatives.

9.6 And to compound the difficulty, while it is certainly instructive to examine and learn from 'exemplar' successful regions, and this is the main impetus behind regional competitive benchmarking, policy-makers should be wary about treating them as exemplars that can be easily replicated or adopted in their own region. Policies rarely travel well: successful strategies developed in one region (especially in another country) need not transplant easily into other regions (in other countries). Indeed, given that many of the sources of regional competitive advantage are indigenous to the region, that is locally based and embedded, policies necessarily have to respond to and take account of regionally-specific circumstances. Given the problems in defining, measuring and explaining regional competitive advantage discussed in this paper, it follows that there is unlikely to be any 'one size fits all' strategy for enhancing regional competitiveness. Different regions will face different problems, different types of competition, and require somewhat different policy mixes and emphases. And being 'competitive' certainly does not mean having to posses the same sectoral, technological or knowledge base as other regions.

9.7 Nevertheless, careful and meaningful benchmarking would seem to be an essential prerequisite for informed and strategic policy-making. If done properly,

regional benchmarking can help identify a region's competitive strengths and weaknesses, and hence form the basis of policy formulation and priorities. It can help mobilise and articulate the interests of the key actors and groups in the regional economy: the local business community, workers, public and private institutions. It can help the region to forge a common sense of purpose in terms of its ambitions for the future, and in presenting itself to the global market place, even in lobbying efforts to influence Government policies and to obtain more resources. Regional benchmarking can facilitate the development and ongoing review of a vision defining the region's role in a world economy characterised by a steadily increasing and ever-shifting division of labour. Above all it helps pinpoint those industries and sectors in which the region is clearly successful and which should be built up and assisted (for example by polices that identify and enhance the external economies associated with these activities). Conversely, industries and sectors that are found to be lagging or declining in comparison with other competing regions confront regional policy makers with a choice: should the decline be accepted as a logical structural change and reconfiguration within the region's strategic vision, or are the activities in question of sufficient strategic importance to justify them by improving their adaptive capabilities to adjust to changing market conditions?

9.8 Regional benchmarking can also help determine whether and to what extent a region is falling behind in the development and upgrading of its fundamentals, especially education, entrepreneurial culture, and infrastructure. These underpin the operation of the entire regional economy, and shape its ability to share in and gain a competitive role in newly emerging industries (such as knowledge industries and creative industries). This is not to argue that every region should strive to have a major presence in each and every one of these new growth sectors: that is manifestly not possible. But every region should be able to develop a competitive advantage in at least one or two such activities. At the very least, it needs to ensure that its industries and sectors are fully able to incorporate, absorb and apply new technologies as these emerge.

9.9 Following the discussion of this paper, it might be argued that three main (and interdependent) policy foci are needed to help enhance and improve a region's competitive performance (Figure 12): policies aimed at tackling weaknesses and inadequacies in regional fundamentals; those aimed at improving the adaptive capability of a region's economic base (firms, industries, workers and institutions); and those aimed at enhancing the external economies associated with the region's existing and potential industries and clusters. Different regions may be expected to assign different relative emphasis to these groups of policy, but in almost all regions, policies will be needed on all three fronts.

9.10 As Krugman (2003) remarks, regional external economies are difficult to identify, even after the fact, and harder still to predict. Since they are associated with spatially concentrated industries – that is with localised industrial specialisation

– the use of Porter's cluster model provides a possible tool. Porter's cluster-based approach to raising regional competitive advantage has in fact been the one policy that all RDAs have incorporated into their regional strategies. Its advantage is that it focuses attention on the presence of (or potential for) localised networks of firms in a particular sector, or set of closely related (upstream and downstream) sectors, and on the synergies, spillovers and inter-relationships among the firms involved. But, as Krugman (2003) also remarks, cluster policies should only be a *part*, and possibly a *relatively minor part*, of the overall policy armoury. First, cluster theory is not without its limitations and problems, and is prone to encourage exaggerated expectations, especially about creating new clusters from scratch (Martin and Sunley, 2003). Policy-makers can all too easily be drawn into believing their region can have a cluster in this or that exciting new economy type activity (eg. biotechnology, creative media) just because other regions have one: the problem of 'aspirational clusters'. Policymakers need to build on, adapt and evolve existing strengths and specialisms, and be realistic in what they wish to achieve.

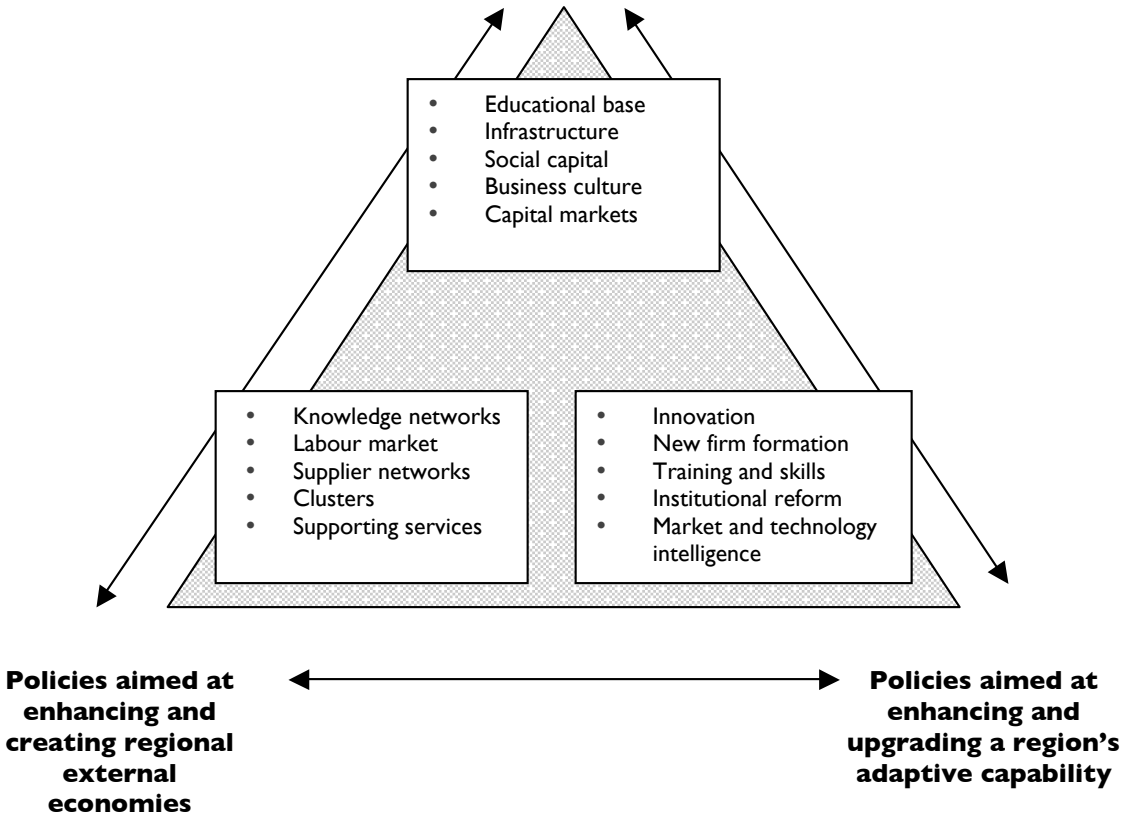

Figure 11: Three Key Policy Foci for Building Dynamic Regional Competitive Advantage

Second, previous research on mapping the UK's clusters (Miller, Martin et al, 2001) suggests that while there may be over 150 clusters across the UK, in various

sectors, and at various stages in their life cycles, typically clusters do not account for more than about a quarter of a region's total employment (London being the main exception) (Table 5). Regional economic strategies thus need to be broader-based in terms of their policy scope and spatial focus.

	Industrial Specialisation Index	Number of Clusters	Percent Employment in Specialised Industries	Of which: Percent in Clustered Industries	Of Which: Percent in Non-clustered Industries
London	0.50	18	49	43	6
South East	0.26	17	28	20	8
Eastern	0.26	12	29	25	4
South West	0.26	13	22	17	5
East Midlands	0.34	12	31	27	4
West Midlands	0.29	11	25	21	4
Yorkshire-Humberside	0.27	10	24	21	3
North West	0.23	17	19	15	4
North East	0.37	9	35	17	18
Wales	0.38	14	40	17	23
Scotland	0.32	13	35	28	7
Northern Ireland	0.54	8	52	24	28

Table 5: Regional Specialisation and Industrial Clusters
(Source: original data in Miller, Martin et al, 2001)

9.11 Critically, every region needs to promote the continual upgrading of its fundamentals. One of the key fundamentals, possibly the *prime* fundamental, for long-run regional competitive growth, is the educational and skills base of a region. The relatively low levels of educational and skills attainment of the East Midlands' workforce has already been mentioned. Fostering a local culture of high educational standards, improving vocational skills and producing – and retaining - a high proportion of graduates are key policy issues. A well educated workforce is likely to be more productive, more innovative and creative, and more enterprising. Also important is the quality and provision of public infrastructure, from roads to airports to housing and cultural amenities. A good and modern infrastructure attracts business and workers, and improves local economic efficiency. A high quality transport and communications infrastructure ensures the accessibility and connectivity that is essential to regional economic growth. All too often in the UK, investment in public infrastructure lags behind local economic development, frequently occurring only after supply problems and bottlenecks have already emerged and have begun to threaten local economic growth.

9.12 What is clear is that competition among regions (and cities) has evolved considerable over the past two decades, from fruitless attempts to offer the lowest cost to prospective investors and migrants, to, more recently, sophisticated self-assessments that reflect honest analysis and comparison. Continual monitoring and benchmarking of what the 'competition' is doing is now demanded. The growing divergence between successful and lagging regions is largely a divergence in orientation toward innovation-prone and innovation-averse regions (Rodriguez-Pose, 1999). In innovation-prone regions, infrastructure, innovation support for firms and innovation policy vision are present. In innovation-averse regions they are much less developed or backward. Lack of regional innovation also is symptomatic of a lack of external orientation - the degree to which local firms and public sector organisations receive, learn, absorb and adapt experience, knowledge and expertise, from elsewhere. Innovation-prone regions also seem to be characterised by thick and well developed networks, both internal to the region and external, connecting local firms, organisations, and institutions to the wider external market place. Some observers (eg Malecki, 2004) go as far as to suggest that current regional competitiveness policies really fall two types – growth enhancing and network enhancing – both far removed from the earlier 'place selling' approach (Table 6).

'Zero Sum'	**'Growth Enhancing'**	**'Network Enhancing'**
Pure place promotion Capturing mobile investment Investment subsidies Subsidized premises	Education Training Fostering entrepreneurship Helping new firms Business advice Coordination Infrastructure investment	Internal networking External (non-local) networks Benchmarking assessments Connectivity and accessibility (road, rail, air, broadband links) Scanning globally for new knowledge

Table 6: Some Regional Competitive Policies (after Malecki, 2004)

9.13 There is good reason to think that policy can make a very big difference to regional competitive performance and yet at the same time it is very hard to know exactly what the right policy is. So the challenges for a region like the East Midlands are real. But there is international evidence that regions can find a second or third 'wind' by understanding their inherent advantages, by examining their historic legacy, by judicious public spending, and in particular by an appreciation of the roles that an educated labour force, high quality infrastructure and an entrepreneurial/innovative business culture play in influencing regional prosperity. But what the international evidence also suggests is that the scope for and effectiveness of strategic policy may well be enhanced the greater the degree of regional political and financial autonomy. Research in North America and Europe

has shown that, in many cases, the economies of regions where there is close geographical coincidence between the region's territory and the political and policy authorities responsible for establishing the underlying conditions influencing competitive advantage (from fundamentals to externalities to drivers), or of regions that have joined forces politically or on a policy basis to secure that congruence, appear to be more adaptive, more innovative and more successful than those of regions that lack autonomy or are politically and institutionally fragmented. US regions (states and cities) of course enjoy considerable financial, fiscal and regulatory autonomy. Likewise, it is possibly no coincidence that small, region-sized, states in Europe (Luxembourg, Switzerland, Ireland), which have economic and political autonomy, have also performed very favourably economically. This is not to argue mechanistically that regional federalism or devolution necessarily equates with increased economic dynamism, or that the UK regions would prosper more if given greater autonomy. But there are intriguing questions here that have only recently begun to receive adequate attention.

9.14 Twenty to thirty years ago, regional devolution was seen as a way to avoid socio-economic and political homogenization, and as a vehicle to assert local identities: that is, as a means for preserving local uniqueness. Today, regional devolution is seen as a means of fostering and promoting local economic development and competitiveness (Rodriguez-Pose and Gill, 2005). Of course assessing the 'economic dividend' from regional decentralisation and devolution depends on the precise form and extent of that decentralisation and devolution. But as the contemporary shift across the OECD countries towards an economic argument for regional devolution and decentralisation continues, these issues are almost certain to attract increasing attention.

9.15 In the UK, the RDAs are seen as key players in a new devolved approach to economic policy. How far this new 'regional policy' will succeed in raising the productivity, competitiveness and growth performance of the less prosperous regions, and reduce regional inequalities, remains an open question. The resources and policy freedoms available to the RDAs remain limited. There is also arguably a confusion of purpose. When does a locally run regional policy become simply a national competitiveness policy implemented in the regions? The distinction is at present blurred. Crucially, if the Government's five drivers of regional competitiveness were to be pursued with equal vigour in all the regions, this would not really be a regional policy at all. To be sure, regional flexibility is permitted, but this does appear to be more an instance of 'local flexibility within national guidelines' than true devolution. Ultimately, each region must find its own specific route to increased economic performance and prosperity, and be allowed to experiment on the policy front.

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