INTRODUCTION

Improving economic growth preoccupies policymakers in the European Union (EU). Europe also seems to have been inculcated with the affliction that the UK has been suffering from since New Labour came to power in 1997 of benchmarking both performance and policy against the American model (or what the American model is perceived to be). In the UK, the Labour Government has assigned increasing importance to improving competitiveness, which itself is a very nebulous concept (Kitson et al., 2004), and reducing the productivity gap with the USA (H. M. Treasury, 2000, 2001, 2003, 2004a; ODPM, 2003, 2004). The proposed way to improve competitiveness is to adopt American-type policies that put an emphasis on the superiority of market forces and the need for competition, flexibility and deregulation combined with an extra emphasis on education and innovation (Balls et al., 2004; Brown, 2005a). A similar agenda was established by the Heads of State of the European Union who met in Lisbon, Portugal, in 2000 and launched a series of reforms to close the ‘competitiveness gap’ with the USA and to make Europe the ‘world’s most dynamic and competitive knowledge-based economy by 2010’. The Sapir Report (Sapir et al., 2004) (the summary of which is The Sapir Group, 2005) is the result of an independent analysis of how to achieve the ‘Lisbon Agenda’ and how to make a success of European enlargement. The Report addresses important issues about the future of European economic and regional policy, but the purpose of the present paper is to consider the wider policy context of which Sapir is one example (also Kok, 2004) – in particular to address the preoccupation with economic growth and the notion that the ‘Americanization’ of economic policy is required to improve living standards in Europe.

This paper is organized as follows. First, it questions whether economic growth should be given such exalted status in the policy agenda for Europe. Often economic growth is blithely associated with improved welfare without a precise understanding of the links between the two. Furthermore, economic growth is commonly measured by calculating changes in Gross Domestic Product (GDP) – but that is a measure that was constructed for a different time and for a different economy, it is an indicator that is becoming increasingly redundant as a way of measuring knowledge-based economies.

Second, if policy is to be myopically focused on economic growth, this paper questions whether the extent of American superiority has been correctly identified. Since the Second World War, most of Europe for most of the period has had higher economic growth than the USA, and Europe has closed the output gap and approached the American level of prosperity. The US growth rate has surged since the mid-1990s, but this is not reason alone to rush to emulate the American model, especially as the positive factors that are generating growth in the USA will filter into Europe, and the negative factors such as structural deficits are undesirable. Shifts in economic and regional policy should not be overly influenced by short-run variations in growth that often reflect prevailing macroeconomic conditions. It is not long since American policy-makers and economists were taking ‘a hard look at the recurring weaknesses of American industry that are threatening the country’s standard of living and its position in the
world economy’ (Dertouzos et al., 1989, dust cover) (on this, see also Thurow, 1992; and Tyson, 1992).

And at the same time as policy-makers in Europe and others (Hutton, 2005; McRae, 2005) agonise over the state of the European economy, others with a perspective from across the Atlantic see Europe eclipsing American power (Haseler, 2004; Reid, 2004). According to Haseler (2004, pp. 1–2):

Europeans not only live in the most stable, peaceful and prosperous region of the world but also possess a quality of life that surpasses that of any other part of the continent, including North America. They live in what amounts to ‘a paradise’ of modern convenience and cultural tradition.

Third, it is argued that the assumption that the success of the American supply side can be easily associated with the dominance of market forces misses part of the story. There are many alternative forms of capitalism, but a useful distinction is between liberal market economies (LMEs) that rely on market forces to allocate resources and coordinated market economies (CMEs) that make greater use of institutions and non-market forms of coordination (Hall and Soskice, 2001). Ultimately, this binary distinction should be better thought of as the two ends of a spectrum or continuum of the different ways capitalism is organized.

The Lisbon Agenda and other initiatives are pushing Europe towards the LME model with the USA typically presented as the classic LME. This misses critical elements in the American story, in particular the state’s role in supporting science and innovation. Furthermore, the evidence shows that different forms of capitalism can deliver successful economic performance.

Fourth, there are significant regional disparities in Europe that are likely to persist, or possibly widen, if too much reliance is placed on the power of market forces. Europe requires a stronger regional policy with a larger regional budget and greater degree of coordination. But coordination should not come with control – regions should have operational independence to ensure that policy initiatives reflect local needs and priorities.

**MINDFUL OF THE GAP BUT MISSING THE POINT?**

As with most orthodox economic literature and most public policy documents emanating from the advanced countries, the Sapir Report (Sapir et al., 2004; The Sapir Group, 2005) identifies economic growth as the central objective of economic policy. Yet, why there is a need for ‘an agenda for a growing Europe’ is never spelt out in detail. It is largely taken as axiomatic that growth is good and the more of it the better. In The Sapir Group (2005, p. 1) it is observed that ‘Europe needs higher, sustained economic growth’. The problem with this notion is that quality of life in advanced countries is becoming increasingly disconnected from economic growth (particularly as measured by changes in GDP or associated indicators) and instead it is influenced by health, education and relationships with family and others. At best, the fixation with economic growth threatens to miss the wider agenda and, at worst, may result in policies for growth that lead to a deterioration in the quality of life – such as increasing hours worked and rising job insecurity.

**How useful is economic growth?**

The problem with economic growth – usually measured by the change in GDP – is that it may not adequately reflect changes in the standard of living or the quality of life. First, some components of GDP (investment and some parts of expenditure by government and some imports) are postponed consumption that will (hopefully) benefit future generations but which do not have a direct impact on the current standard of living, although they will indirectly benefit those who earn income through such expenditures. Second, GDP takes no account of the environmental impact of economic activity. An alternative – such as a ‘Green GDP’ – could take into account the depletion of natural resources, environmental degradation and long-term environmental damage, which will affect the standard of living and quality of life of future generations. Third, GDP on its own takes no account of the distribution of income. There are various measures of inequality and means of adjusting crude GDP data to allow for the adverse impact of inequality on social welfare (such as the Atkinson index; Atkinson, 1970), and on many measures US economic performance since the early 1990s would be revised downwards if account was taken of the rise in inequality. Fourth, GDP includes many items that may not be good indicators of the standard of living. For instance, deteriorating health that is treated may be shown as higher output of healthcare, and a high crime rate may lead to a high output of policing and legal services. Furthermore, having the financial power to purchase more goods and services may improve some aspects of well-being but other factors may be more important (health, education, social cohesion, etc.).

The limitations of using GDP have led to the development of better or more appropriate indicators. The Human Development Index (HDI), which combines GDP per capita with life expectancy and literacy levels, is frequently used as a superior indicator for less developed countries. Nordhaus and Tobin (1972) constructed a Measure of Economic Welfare (MEW) that excludes defence and some of the other regrettable necessities of capitalism from the calculations. Other attempts to produce superior measures that take into account environmental and social factors include those by Daly and Cobb (1989) for the USA and Jackson et al. (1998) for the UK. But despite these improvements, GDP on its own remains the crucial headline
indicator for the developed countries and for the policymakers.

The limitations of GDP are most apparent when it is compared with other indicators of the standard of living or well-being. In his analysis of the economics of happiness, Layard (2003, p. 3) concludes that 'GDP is a hopeless measure of welfare. For since the War that measure has shot up by leaps and bounds, while the happiness of the population has stagnated'. International comparisons show that once a country has reached an average GDP level of US$15 000, its level of happiness is independent of income (Layard, 2003). It seems that although GDP may be useful in assessing the standard of living in middle-income countries, it is of less use for advanced countries. The factors that have a positive impact on happiness are job security, employment, a stable family environment, low crime and good health (Blanchflower and Oswald, 1999; Di Tella et al., 2002). And in terms of many quality of life measures, the EU outperforms the USA.

Although the USA has one of the highest per-capita spending on health, it only has 279 doctors per 1 million people compared with 322 doctors per 1 million people in the EU. Additionally, in terms of the impact of healthcare, the EU is superior to the USA. The average EU citizen currently lives 1.3 years longer than does the average American (United Nations, 2002). Obesity is on the rise in both the EU and the USA, but the level in the latter is nearly three times that of the former, with 30% of Americans classed as obese (OECD, 2003). Weight has often been considered to follow a normal distribution, but developments in American eating habits and behaviour may lead to a bimodal distribution with the obese at one end and the very poor and body-image conscious at the other end. The World Health Organization (WHO) assesses overall health performance and ranks the USA as 37th of 54 developed countries. This is well below the position of the EU countries and the USA position deteriorates to last place in terms of the fairness of healthcare (WHO, 2000).

In terms of crime, the USA does 'outperform' the European Union. For instance, the murder rate in the USA is nearly four times that of the EU. Similarly, the incarceration rate is much higher is the USA – nearly eight times that of the EU. More than 2 million Americans are currently in prison (Western and Beckett, 1999) – and, as discussed below, this may help explain the lower unemployment rate in the USA.

Economic growth is important for Europe – and particularly so for the new members and candidate countries of the enlarged EU. But growth should not dominate the policy agenda and account must be taken of the impact of growth-inducing policies on the other aspects of society. A policy agenda that focused on well-being and the quality of life would attach a high priority to generating jobs, reducing job insecurity and reducing stress in the work place. Additionally, hours worked would be reduced and geographical labour market mobility might be discouraged to improve family life. In terms of individuals’ daily routines, the least satisfactory activity is commuting to work, whereas the most satisfactory activity is having sex – and, on average, twice as long is spent on the former compared with the latter (Layard, 2003, p. 6). Public expenditure would be increased in areas of health and education and redistribution may be important to increase social cohesion and improve the welfare of those on low incomes (whose happiness is linked to income). Furthermore, policies would be shaped to the needs of a particular region or locality. Since having a job is one of the most important factors influencing well-being, job generation should be a top priority for a depressed region, whereas for a prosperous region, investment and controls to improve transport and reduce commuting times would increase both well-being and productivity (Rice and Venables, 2004). This is a policy agenda that is very different to the perceived LME model, which focuses on increasing growth through increasing labour market flexibility, encouraging risk taking and limiting the role of the state. Such an agenda can lead to increased labour turnover, job insecurity and casualization of the workforce – all factors that reduce ‘well-being’.

Economic growth: fact or artefact?

Despite its limitations, economic growth remains at the forefront of the policy agenda. Can one be sure that one can accurately measure such an important indicator? In fact, there are empirical problems in measuring it accurately, and obtaining reliable measurements of GDP is increasingly problematic with the decline of manufacturing and the rise of the knowledge-based economy. GDP and its related measures are the product of national income accounting, and the desire to measure that national economy. But national income accounting is the product of another age when manufacturing was more important in the economy and when output could be reasonably accurately measured (Kitson, 2003). It is very difficult to measure the output of services (such as banking, health, education, etc.) that now comprise the largest share of GDP in the advanced countries. As no physical output is produced, measures frequently depend on input indicators (such as labour or the wage bill) and this can lead to a failure to capture correctly productivity movements and their impact on the output of the sector.

The issue of the apparent superior productivity in US retailing compared with that of France illustrates the difficulties of interpreting output data in services, as Kay (2003, webpage) observed:

National accounts measure not retail output but the volume of retailed goods. A dollar of sales is treated similarly whether it is made in Bloomingdales or Wal-Mart, in
an haute couture salon or the marché municipal. Higher productivity simply means less retail input per dollar of sales, so the conclusion that French productivity is lower is both obvious and meaningless. We take visitors to the marché because it is fun. I suspect that if you tried to photograph the displays in a Wal-Mart store you would be asked to leave, but that the problem is not often encountered. When will Americans realise that if the rest of the world is not like the US, that is not necessarily a problem – either for us or for them?

The above observation irked the American economist Bradford Delong, who referred to Kay’s writing as ‘A piece of fast food-style journalism – i.e., low-quality, hastily-prepared, and bad for your brain (if not your heart)’ (DeLong, 2003, webpage). Delong correctly observed that US statisticians do attempt to adjust productivity for quality – but it should also be noted that the extent to which they succeed is debatable. Furthermore, as Quiggin (2003) has pointed out, the data do not take account of the negative externalities arising from people driving long distances to shop, including traffic congestion and thousands of extra road deaths.

It is also increasingly difficult to measure the output of manufactured products because as they become more sophisticated their attributes are more difficult to quantify, e.g. the power of computers has changed so rapidly that many perceive that the statistics underestimate the contribution of information and communication technology (ICT) to national output and growth. Such empirical inadequacy may be one explanation of the paradox observed by Solow (1987, p. 36) that ‘you can see the computer age everywhere but in the productivity statistics’. Attempts have been made to capture the impact of technological change on output using ‘hedonic’ prices indices. Denison (1989) has argued that in the USA such price indices have fallen too fast and underestimated the real growth in ICT, although Griliches (1994) and Triplett (1999) believe that such estimates are a ‘major advance’ (Griliches, 1994, p. 6). Whatever the advances in calculations, they have not been consistently applied across countries. According to Kay (2001), Britain’s reported growth rate would have been approximately 0.5% per year higher if the statisticians had used American price indices.

Even if computer power is correctly captured in the price indices, so what if such power is unlikely to be used? More powerful and more complex technologies are being used for typing and adding up – and although some tasks may be accomplished quicker, the technological bottleneck is more likely to be in the human mind than in the machine. The use of ICT creates a particular problem for the measurement of investment, as much of ICT expenditure is by companies and will have an impact on future output. Statisticians, therefore, have to adjust the data to allow for depreciation of ICT hardware and software. Not only is this difficult, but also assumptions concerning asset lives and the rate of depreciation have varied significantly across countries. According to Kay’s (2001, p. 21) analysis of productivity growth in the US economy from 1996 to 2000: ‘a large part of the apparent acceleration . . . may reflect the conventions which are used to calculate GDP rather than any underlying change in trend in the growth of aggregate output itself’.

A further issue is that GDP and related measures do not take into account economic activity that does not involve a legitimate financial transaction – so they ignore the black economy but also many other forms of legitimate activity such as housework and some child care. Distortions may arise over time when types of activity move from the informal economy (where they are not recorded) to the formal economy (where they are). For instance, if parents decided not to look after their child themselves but to employ a nanny or childminder, measured national output would increase even if there were no change in the real level of activity. Such changes may be important in the advanced countries due to increased female participation in the workforce and because of changes to lifestyle.

When making international comparisons in output, some account needs to be taken of country-specific (and possibly regional-specific) factors such as legal systems and variations in taste. Gordon (2004) – as reported by both Dunford and Hall (present issue) – has argued that the productivity gap between the USA and Europe might be reversed if account was taken of such factors as climatic differences that require greater use of air-conditioning and heating in the USA compared with Europe to attain any given indoor temperature, and differences in expenditure on home and business security. As noted above, it is a peculiar and notable feature of national income accounting that a less trusting and more litigious society may have higher output as it produces more legal services, insurance and security – the most extreme case being that war is good for growth. The case of superior productivity growth in American retailing may in part be indicative of the difference in planning and tastes between the USA and Europe. More relaxed land-use planning in the land-rich USA may have encouraged the development of big box stores that are more ‘productive’ in the statistics. And the American consumer may like such car-accessible developments, whereas Europeans may still desire to spend at least some of their retail therapy time in city streets and metropolitan areas.

Economic growth may be important but it is increasingly difficult both to measure and interpret it as a indicator of the standard of living. The concern is that economic policy is in danger of becoming a slave to a defunct metric.

**The Superiority of the ‘American Economic Model’?**

Most Americans consider the United States far ahead of Europe economically. Over the last thirty years, real per
capita income (based on purchasing power parity) has consistently been 30 percent higher in the United States than in the EU-15 ‘western’ countries of the European Union (the EU15). In the last decade, the US economy has expanded much faster than that of the EU15, and demographic trends suggest this disparity will continue.

(Pozen, 2005, p. 8)

The Sapir Report shows that many Europeans have opinions similar to those of Pozen. And in some parts of Europe the gloom is blackening. As Blanchard (2004) has noted, two economics books on the best-seller’s list in France in 2003 were Le Fall of France (Baverot, 2003) and Le desarroi Francois (The French Disarray) (Duhamel, 2003). An analysis of the (albeit flawed) data, however, suggests a more optimistic analysis and indicates that much of the European angst is based on the recent differences in economic growth between the USA and Europe, which may not continue.

The productivity performance of the EU compared with the USA for 1970 and 2000 is shown in Fig. 1. Looking at GDP per capita, the assessment of Pozen above is accurate, but if one looks at GDP per hour worked, a different picture emerges and a different story is needed concerning the productivity gap. As shown, GDP per hour worked in Europe was only 9% below the USA level in 2000 – and productivity in France, on this measure, is on a par with that in the USA. Throughout most of the post-Second World War period, growth in the EU outstripped that in the USA, and this resulted in the EU substantially catching up with the level of prosperity in the USA when account is taken of hours worked. There are two important issues, however, that should be examined. First, is the lower number of hours worked in Europe a by-product of unemployment? Second, why did the European catch-up process with the USA slow and go into reverse from the mid-1990s?

European productivity: the product of leisure or unemployment?

Differences between GDP per capita and GDP per hour worked reflect variations in unemployment rates, labour force participation and preferences regarding the work–leisure trade-off. Hours worked in Europe have fallen substantially compared with the USA. As shown in Fig. 1, they are around three-quarters of the USA level. Does this reflect Europe’s preference to consume the productivity dividend in terms of more leisure – or is it an indicator of high involuntary unemployment in a failing European economy? A decomposition of the change in hours worked undertaken by Blanchard (2004) shows that the main differences between the USA and France are, first, the increased working age population in the former; and, second, the difference in hours worked per worker in the latter. In short, the productivity story is not one that is being driven by unemployment. As Turner (2003, p. 3) observed:

if French people are happier with more leisure but less income than Americans – then no liberal economist should criticise them for that choice, the aim of liberal economies being to ensure that the economy achieves efficient frontiers of production and utility preference functions, but not to tell individuals where along those utility preference functions they should make their trade-offs. And what is true of France is true of the rest of Europe.

Growth: convergence or divergence?

Within an orthodox neoclassical growth framework, the process of catch-up would slow as the followers approached the leader – once the ‘low hanging fruit’ of technological and organizational competence had been plucked, it would become progressively more difficult to import productivity-enhancing technologies. But not only did the process of European catch-up slow, but also economic growth in the USA accelerated past that of Europe in the mid-1990s. For some, this is testament to the superiority of the LME model. However, an alternative interpretation (see below) is that it is also indicative of the contrasting macroeconomic regimes in Europe compared with the USA and that, to the extent that it was driven by new technology, Europe will catch up in the future.

The trend growth in labour productivity in the EU
Ininklaar and McGuckin use a Hodrick–Prescott filter to separate trend and cycle. The filter estimates a trend by minimizing the deviations from this trend, and minimization is constrained by a smoothness parameter referred to as the lambda parameter. The filter takes the following form:

$$\min \sum_{t=1}^{T} (X_t - T_t)^2 + \lambda \sum_{t=2}^{T} [(T_t - T_{t-1}) - (T_t - T_{t-1})]^2$$

where $X_t$ is the original series and $T_t$ is the trend. The choice of lambda parameter will influence the estimates (for alternative estimates, see Gordon, 2003).

and the USA from 1979 to 2001 is shown in Fig. 2. Throughout most of the period, labour productivity growth in Europe exceeded that in the USA leading to the convergence of productivity levels. The trend in US productivity growth, however, started to accelerate in 1990–91 and productivity growth in Europe slowed from 1992–93; by 1995–96, productivity growth in the USA had overtaken that in Europe leading to a divergence in productivity levels. This raises important issues regarding the relative performance of the USA compared with Europe. First, is the trend increase in US productivity sustainable in the long-term? Second, can Europe follow the American lead or will the divergence in economic performance between the two blocs persist?

To disentangle the productivity story, it is necessary to examine the performance of different sectors in the two economies. Fig. 3 shows productivity growth in major industry groups for the EU and the USA for 1990–95 and 1995–2000. In the first period, Europe had higher overall labour productivity, but its productivity in ICT-producing industries lagged behind that of the USA. In the second period, overall labour productivity in the USA surged and overtook that in Europe. In both Europe and the USA, there has been an increase in productivity growth in ICT-producing industries in 1995–2000, and in fact, the US lead over Europe was reduced during this period. The important driver of US productivity growth, however, was the acceleration in productivity in ICT-using industries, whereas this was stagnant in Europe. This illustrates important points about technology and growth that are evident with all major innovations (Crafts, 2003). First, it is the use (not the generation) of technology that has the major impact on overall productivity, not least because technology–using sectors are a much larger part of the economy than technology–producing sectors. Second, that there will be long lags before technology has a productivity payoff (this may be another explanation for the Solow paradox noted above). In the USA the rapid productivity growth in wholesale trade, retail trade, and security and commodity brokers accounts for much of the overall US–EU gap in productivity growth since 1995, and one company (Wal-Mart) contributed significantly to US growth (Solow, 2001).

So will or can Europe follow the US lead and increase productivity growth in ICT-using sectors? The optimistic assessment is yes, as investment in ICT in Europe increases, and more important there is more diffusion in ICT-using industries, then overall productivity growth will improve and catch-up growth will return. A more pessimistic interpretation – as featured in the Sapir Report (also Blanchard, 2004) – is that only continued regulatory reform will revive Europe. According to Sapir et al. (2004) and The Sapir Group (2005), a six-point agenda is required to boost European growth: (1) to make the Single Market more dynamic; (2) to boost investment in knowledge; (3) to improve the macroeconomic policy framework for EMU; (4) to redesign policies for convergence and restructuring; (5) to achieve effectiveness in decision-taking and regulation; and (6) to refocus the EU budget. As indicated by Hall (present issue), in essence many of the Sapir recommendations reflect the conventional
Wisdom that has already been embraced through acceptance of the Lisbon Agenda by politicians in Europe. The substantive issue of departure between Sapir and Lisbon is not one of economics but one of governance and in particular the ways of delivering policies. And the economics is of the LME type:

speed productivity growth by removing barriers to product market entry, by fostering innovation and by improving education systems. At the same time ... to ensure that labour is used more efficiently by reforming labour markets and social policies.

(The Sapir Group, 2005, p. 962)

But is a move towards a more LME necessary for European prosperity?

**POLICY: THE AMERICAN ECONOMIC MODEL – OVER HYPEDE, OVERSTRETCHED AND NOW OVER HERE?**

The policy consensus that is emerging is that if Europe is to match American prosperity levels it must move in the direction of the American model, although concerns about the social impact of unleashing the full forces of competition suggest that Europe may not wish to emulate the USA completely. As the data show, the most obvious way Europeans could become more American is to work longer hours and take fewer holidays. But even this would not make up all the difference (for Europe as a whole) – so will more ‘American-style’ flexible markets work? The first problem with relying on this approach is that there is little evidence that one form of capitalism is necessarily superior to others in delivering economic growth (let alone well-being). The second problem is that presenting the USA as the archetypical LME is an incomplete story of the successes of the American model. The third problem is that the comparative perspective often ignores the significant differences in macroeconomic regimes between Europe and the USA – differences that have led the latter to becoming an overstretched economy.

*Are liberal market economies better at delivering growth?*

The American model is typically presented as the classic LME that relies on the interplay of demand and supply in competitive markets (Hall and Soskice, 2001). This contrasts with the CMEs that are more prevalent in Europe and which are organized around strategic interactions between firms and other agents in the economy. The presumption behind many of the initiatives to improve the operation of market forces in Europe is that LMEs have better economic performance than...
CMEs. But, as shown by Hall and Soskice (2001), both LMEs and CMEs are capable of producing satisfactory economic growth and low levels of unemployment. As they have argued (Hall and Soskice, 2003, p. 242): ‘many of the regulations and policies that others see exclusively as the source of rents or rigidities actually enhance the operation of CMEs and their employment performance’. Thus, the structure of labour, product and financial markets in CMEs allows agents in the economy to coordinate effectively and repeatedly to create a productive environment. Wage-setting behaviour and training programmes foster the development of skills and human capital. Interfirm collaboration improves the development and diffusion of innovation (Kitson and Wilkinson, 2003). And access to ‘patient capital’ allows investment in projects that have a long development period (Hall and Soskice, 2001; Goodin, 2003).

Although both LMEs and CMEs can deliver satisfactory economic performance, there is the possibility that the move from one form of capitalism to another may result in a deterioration in economic growth. Hall and Gingerich (2001) find evidence of a ‘U’-shaped relationship between coordination and growth. Countries that are highly liberal or highly coordinated have higher growth rates than those countries occupying the middle of the spectrum. The implication is that an attempt to push Europe (or more precisely, those parts of Europe with highly coordinated economies) in the direction of a more LME may have a harmful impact. Such a push may reduce the institutional complementarities that engender the trust and cooperation that currently facilitate growth in many parts of Europe.

The American model: the role of science and innovation

The characterization of the American model as the classic LME misses critical elements in the American story. When evaluating long-term growth in the USA, account must be taken of the important role of investment in science and technology by government and other Federal organizations. Second, when accounting for growth over the short- and medium-term, account must be taken of the prevailing macroeconomic conditions.

Despite the chimera of the notion that innovation is the product of market forces, the economic history of the American economy shows the importance of the public sector for the commercialization of science. Whereas the EU undertakes approximately 25% of the world’s research and development (R&D), the USA undertakes 37% (OECD, 2004) and the scale of the investment in the USA creates the benefits of economies of scale and positive externalities. The EU is committed to raising R&D (Kok, 2004; Sapi et al., 2004) and the Barcelona European Council has set a target to raise European R&D expenditure to 3% of GDP. But it is not only about the scale of R&D expenditure, but also about the effectiveness of the innovation system. The innovation system in the USA is dependent on an active role for the public sector and the important enabling role of government can be traced back to the industrial revolution. In the post-Second World War period public-sector investment was important in the development of jet aircraft, semiconductors, ICT, nuclear energy and the forerunner of the Internet (Wessner, 2004); and, more recently, state aid has helped the development of biotechnology and nanotechnology industries. The most important source of public sector R&D in the USA is the Department of Defense, which is responsible for over 50% of public-sector R&D. The size of the military budget reflects the legacy of Cold War and American foreign and military objectives, but it does mean that many investments in science are undertaken that are high risk and have long product development periods. These investments would not be undertaken under free market conditions alone – the payoffs are too uncertain and, to the extent that they generate externalities, the rewards accrue to society rather than to the investor. Large-scale investment through the military budget is far from ideal and it is not the optimum way to commercialize science. But it is a ‘second best’ strategy that has resulted in long-term benefits for the US economy – in particular, the development of innovations that could be used productively for peaceful purposes.

Another aspect of the US innovation system is the important role of knowledge exchange between universities and business. The USA has a developed infrastructure of linkages among and between firms, universities and government that allow quicker information diffusion and faster product deployment. These linkages are reflected in terms not only of patents, spin-outs and licences, but also of consultancies arrangements and student internships. Many US universities see the commercialization of science and engagement with business as an integral part of the educational process, whereas in many European countries such activities are largely independent and classed as a ‘third stream’. Furthermore, the US system has developed an institutional framework that allows the development and exploitation of research that has both a commercial potential and contributes to fundamental understanding. Stokes (1997) showed that the linear model of the innovation process is inaccurate. Instead, as shown in Fig. 4, he distinguished between research that is only concerned with use (typified by the work of Thomas Edison), research that is only concerned with fundamental understanding (typified by the work of Niels Bohr) and research that involves both (typified by Louis Pasteur). According to Hughes (2003, p. 62):

the success of the USA in industrializing knowledge is to be understood less in terms of specific policy initiatives to transform basic into applied research but in the ability of
its university system to populate all boxes and enable interaction across them.

In particular, the US system has effectively exploited the potential in Pasteur’s quadrant – as just one example indicates: over 70% of US patents cite publicly funded research papers (Narin et al., 1998).

The USA has fostered university–business links by a series of policy initiatives where the public sector has supported the innovation process. The Bayh–Dole Act (1980) permits universities and small businesses to have ownership of inventions made under federal funding and to become directly involved in the commercialization process. There has also been the relaxation of anti-trust laws to enable research joint-venture collaborations. The Small Business Innovation Research program (SBIR) requires Federal agencies to allocate around 2.5% of their budgets for innovation awards for small businesses. According to Wessner (2004), the SBIR stimulates the commercial application of science and helps to bridge the ‘valley of death’ by providing seed capital for private investors. An important feature of the SBIR is that the selection of projects to support is based on an assessment of a proposal’s degree of innovation, technical merit and future market potential, i.e. the policy is about ‘picking winners’. It is, therefore, not a market-orientated policy – and it can be contrasted with such initiatives as the UK R&D tax credit system that is non-selective and which is not having a significant impact of the rate of innovation in the UK (Kitson and Primost, 2005).

The innovation system is the USA is highly ‘lubricated’ by public sector intervention. But does that suggest that the USA will maintain a persistent innovation lead over Europe and a superior level of output? The answer to both questions is probably no. First, although the USA invests more in R&D than the EU (as a whole), recent trends suggest that the overall level of R&D in the USA (as a share of GDP) is static, and the trend of public-sector R&D is declining (National Science Board, 2000). Second, as noted above, the EU has highlighted the importance of innovation and R&D for future growth, and the overall level of current innovation activity obscures the fact that the EU leads the USA in many technologies such as wireless technology and grid computing. Third, and perhaps most important, the impact of innovation on growth is uncertain, complex and, as noted above, it takes a long time. An empirical examination of the impact of innovation on the growth of the high-income countries in the EU found no relationship (European Union, 2004). One of the explanations for this concerns the distinction made above between technology-producing and -using sectors. Whereas it is the latter that contribute most to economic growth, it is the former that are the focus (albeit not exclusively) of many innovation policies and programmes. Fourth, the economic history of the EU has largely been one of catch-up and convergence towards the USA and it is reasonable to expect the process to resume as technology-using sectors increase their use of technologies such as ICT.

**USA and Europe: the impact of macroeconomic imbalances**

The comparative analysis of American and EU economic performance has increasingly drawn long-term inferences from relatively short-term experience. Furthermore, analysis of recent experience must take into account the contrasting macroeconomic conditions in the two regions. The USA has become an ‘over-stretched’ economy (Levy and Brown, 2005) with spiralling twin deficits (fiscal and trade). Conversely, the EU has been gripped by a highly deflationary regime – first, through the Maastricht criteria and subsequently through the monetary policy of the European Central Bank and the constraints of the Stability and Growth Pact (SGP). The short-term impact of these structural problems has been to give a demand boost to the American economy while making Europe a demand-constrained economy.

The current account deficit is the USA is currently around 6% of GDP (Quiggin, 2004), which reflects high levels of consumption – part of which also gives a boost to the domestic economy. The corollary of a large current account deficit is a corresponding capital account surplus – in effect the extent of US borrowing to fuel its consumption. The advantage of a highly globalized capital market is that it makes it relatively easy to borrow on the massive scale required by the US economy. For instance, the Chinese central bank will soon own nearly US$1 trillion in US government bonds. What is unknown is how long the US trade deficit can persist, in effect how much of American wealth can be sold before consumption growth has to slow – and if there is any adjustment will it be orderly or associated with a crisis.

**Can the USA deliver jobs?**

A major advantage attributed to the US economy is that it generates jobs. The argument is that the unregulated

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**Fig. 4. Pasteur’s Quadrant**

Source: Stokes (1997)
labour market in the US, where unions are weak and the coverage of the welfare system is minimal, can explain the employment and unemployment performance of the USA. But even here the evidence is questionable. First, account must be taken of the demand for labour – and, as discussed above, the US economy has had expansionary macroeconomic conditions that have increased employment for most of the period. However, note that since 2001 the USA has been witnessing a ‘jobless recovery’ (Freeman and Rogers, 2004). Second, as noted above, the differences in unemployment during the 1980s and 1990s can be explained by the significant increase in the prison population in the USA (Western and Beckett, 1999). Third, empirical analysis does not support the orthodox view that an unregulated labour market generates jobs. According to Baker et al. (2005), the empirical results supporting the orthodox view are not robust. Furthermore, Ball (1999) has shown empirically that different labour market institutions or reforms cannot explain the evolution of different unemployment paths in Europe. So what are the advantages of an American-style labour market? Traditionally, it has underpinned the notion that America is a land of opportunity, but even that has now evaporated. According to Blanden et al. (2005), the USA (along with Britain) has the worst social immobility in a sample of eight rich nations.

**IMPLICATIONS FOR REGIONAL COMPETITIVENESS AND POLICY**

Regional policy in Europe has had a short and uneven history and in many ways it has developed like ‘topsy’, according to Tarchys (2003, p. 21), ‘to understand its different elements, one has to engage in archaeological excavations and dig through several geological layers of European political history’. As part of the agenda for a growing Europe, the Sapir Report argues that EU convergence policy should focus on low-income countries and not on low-income regions, which could be construed as a recommendation to end European regional policy. This proposition, which it should be noted has been rejected by the EU commission (Hall, present issue), might be tenable if the extent of regional disparities were insignificant, or if such disparities were likely to be corrected by the current European economy in conjunction with the other proposals recommended by Sapir.

Regional economies are now increasingly recognized as important foundations of national prosperity (Porter, 2003) and as important sources of competitiveness (Kitson et al., 2004). The EU is committed to strengthening economic and social cohesion and this has a strong regional dimension as the ‘Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas’ (Europe, 2005, webpage). Currently, there are wide disparities in economic performance in Europe. As an example, Fig. 5 shows that the regional variability in labour productivity in Europe is significant and much higher than in the USA (and the variability is much greater for the enlarged Europe). Disparities are also apparent with other indicators such as employment and inequality. Such disparities could be considered to be unsurprising in a relatively young economic entity that has brought together a diversity of nations and regions. Yet during the period of integration there has, at best, been only a very slow erosion of regional disparities. According to Gardiner et al. (2004), the rate of regional catch-up of labour productivity has been less than 1% per annum and much of that which did occur took place during the boom conditions of the second half of the 1980s. A similar evaluation comes from the UK government that suggests that disparities between regions within each Member State increased between 1990 and 2000, with only Austria, France and Germany having reductions in the variation of labour productivity across regions (H. M. Treasury/DTI/ODPM, 2003).

One of the current problems for the lagging regions of Europe is the inflexible macroeconomic policy regime. The traditional response to slow growth was to stimulate aggregate demand through monetary, fiscal or exchange rate policy. The use of such macroeconomic levers is now severely constrained in Europe. The introduction of the euro means that monetary and exchange rate policy is fixed for all the euro countries with no scope to accommodate national or regional requirements. Furthermore, the SGP’s rules for fiscal policy have created a deflationary bias, which has hampered lagging regions. Normally, fiscal policy operates through fiscal stabilizers whereby the government budget moves into surplus in fast growing periods and into deficits in slow growing periods or during

![Fig. 5. Regional variations in labour productivity, 1998](source: DTI (2003))
recessions. The regional counterpart to this (although not measured as such) is that slow growing regions tend to have deficits with central government and fast growing regions have surpluses. Yet, the SGP rule that states that a country’s budget deficit must not exceed 3% of its GDP has constrained growth by limiting the operation of fiscal stabilizers and discretionary fiscal policy. Instead of slow growth being ameliorated by the boost of an automatically rising deficit, governments were often required to cut expenditure or raise taxes, or both – thereby exacerbating slow growth. Many EU governments have not abided by the SGP rules and there have been many calls for revision, including from Sapir, and the revised rules agreed by the European Council in 2005 will allow fiscal policy to vary over the business cycle. More flexible fiscal rules will help growth in Europe, but they are not as effective as a fully integrated European fiscal policy. The macroeconomic policy bind that faces Europe (or specifically Euroland) is that it now has a monetary policy (and therefore an exchange rate policy) that is implemented at the European level, but fiscal policy is implemented at the national level. It is, therefore, a half-baked policy framework. If Europe had an integrated fiscal policy, slow growing regions and nations would automatically receive a demand boost whereas fast growing or overheating regions would have a reduction in demand.

A high level of aggregate demand has been associated with regional convergence (Gardiner et al., 2004). The current macroeconomic framework in Europe, however, is highly deflationary as the European Central bank has adopted a very tight monetary policy. This has reduced growth in the EU and slowed regional convergence. A more expansionary macroeconomic framework may also have long-term benefits for lagging regions if economic activity that is stimulated by a demand boost becomes sticky or embedded. Although there may also be negative effects if lagging regions become sources of reserve armies of labour, this may result in such regions suffering from large business cycles.

The evidence has shown the importance of demand for regional growth. However, such an important factor is largely ignored in the Sapir Report with its focus on improving the supply side. Increasingly, the need for ‘macroeconomic stability’ is taken as meaning low and stable inflation with little account of the importance of increasing the demand for labour. So will a continued focus on the supply side, including a move to a more LME in Europe, help lagging regions and reduce regional disparities? The answer is that it is highly unlikely. Greater market flexibility is likely to lead to greater divergence between the core and peripheral areas of Europe as skilled labour and capital flows increase from the former to the latter. Will the Sapir recommendations to invest more in areas of excellence help the lagging regions? Possibly, if such areas are located in the lagging regions, but at best this may create ‘cathedrals in the desert’ and may lead to the policy problem evident in the UK of regions desperately trying to create centres of excellence. Will the Sapir recommendation that cohesion funds should be allocated to nations and not to regions help? Only, if such funds are used to help the lagging regions in those nations – and this may conflict with the ‘centres of excellence’ strategy.

With the scale of regional disparities in Europe and the constraints imposed by the current European macroeconomic framework, there is an important need for an active regional policy embracing three core principles. First, there is the need for a much larger regional budget. Currently, the EU only spends around 0.5% of EU Gross National Income (GNI) on regional assistance, and with eastern enlargement the need for a bigger budget has increased. Second, there is the need for much greater clarity and coordination of European regional policy. As pointed out in the Sapir Report, the EU has several instruments aimed at achieving several objectives creating confusion and inefficiency. Recent reforms have provided some extra clarity, but an important tension remains between the use of domestic and EU funds to support economic development and regional policy. Domestic funds for regional assistance are both significant and highly variable across the nations of the EU. According to Begg (2003), for Germany and Italy, domestic funds for regional policy are greater than EU transfers. Two different sources of funds creates coordination problems and the scope for place competition (Malecki, 2004) – a system which coordinated and managed the deployment of all regional aid would be more efficient. Third, and possibly most importantly, there should be much more scope for flexibility over implementation of regional policy. A problem with the Sapir Report is that it recommends a European policy to be implemented by nations. In contrast, in the UK there is a national economic strategy that is implemented at the regional level. The UK policy framework is presented as being one where the regions have independence over policy but in reality they are all following the national agenda and direction (Fothergill, 2005). What is needed in Europe (and in the UK) is a regional policy that is regional in content and implementation. There are potential difficulties particularly when policy is driven by metrics, but these can be reduced by using a wide range of measures (and not solely those concerned with growth and productivity) and evaluation techniques.

CONCLUSIONS

Myths die hard. Despite the fact that America’s job miracle turned out to be short lived and less robust than the hype would warrant, many European policy leaders and public officials continue to look to the American model for their inspiration and guidance. Their enthusiasm is misdirected. (Rifkin, 2004, p. 55)
Not only do some myths die hard, but also others are continually emerging. Take the recent observation by Ferguson (2005, p. 75) that: ‘The combination of economic sclerosis and social senescence means that Europe is bound to stagnate, if not decline.’ This is just vapid and vacuous polemic. Europe will grow and develop. What is at issue is how fast it will grow, how will it perform in other aspects of development, what policy direction it will take, and what will be the implications for all the regions of Europe?

Economic growth is the focus of the Sapir Report, the Lisbon Agenda and a plethora of other European initiatives. This focus is important but it should not distract from the notion that economic growth does not necessarily deliver improvements to the quality of life and well-being. Furthermore, the preoccupation with the productivity gap with the USA can be misleading and result in misdirections in policy. There are significant empirical problems in deriving robust comparisons between the growth records of different advanced countries. Furthermore, drawing off policy conclusions from simplified comparisons can be distortionary. Positing US economic performance as the standard for the regions of Europe will not erode regional disparities – and replacing regional policy with a fiscal strategy at the national level will not necessarily deliver improvements to the quality of life and well-being.

Regional economic disparities persist in Europe across a wide range of variables. And one of the lessons of European economic history is that regional convergence has been slow and protracted. A move towards a more LME in Europe will not eradicate regional disparities – and replacing regional policy with a national policy focusing on key sectors is also unlikely to help. What is needed is a more robust policy that includes coordination of initiatives by the EU and the individual nation states of Europe with flexibility and operational independence at the regional level. Proposals that involve bigger budgets and greater involvement of the EU will encounter the common refrain that they are not feasible because of a ‘lack of political will’, but the history of the EU suggests a lack of political will only delays – and rarely prevents – the process of European integration.

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NOTES

1. Unless otherwise stated, ‘Europe’ refers to the EU-15 countries. It is of course important to recognize that the notion of the European economy as a single entity is subject to debate.
2. It could be argued that the UK government is a major cause of this affliction. See the recent speeches by the Prime Minister (Blair, 2005) and the Chancellor of the Exchequer (Brown, 2005b) arguing for Europe to become more competitive and more flexible.
3. GDP is defined as the total value of all goods and services produced within a territory during a specified period. An alternative is Gross National Product (GNP), which includes inter-country income transfers.
4. ‘Hopefully’ because as the case of the Soviet Union demonstrates, increased investment does not always ensure further economic growth.
5. This section develops issues discussed in Kitson (2005).
6. The modern version of national income accounts developed during the inter-war period in the UK and the USA as a tool for war planning. Simon Kuznets, working in the US Department of Commerce in the early 1930s, developed a uniform set of national accounts that evolved into a measure of GDP. Kuznets, however, had reservations about the national accounts that he helped to create. In his first report to Congress (Kuznets, 1934), he concluded that: ‘The welfare of a nation can scarcely be inferred from a measurement of national income’ (quotation in HRSD, 1997, p. 6).
7. According to some estimates, GDP per hour in France has surpassed that of the USA. According to H. M. Treasury (2004a, chart 1.2), GDP per hour worked in 2002 was 11% higher in France than in the USA.
8. There are a number of factors that have contributed to Wal-Mart’s productivity growth including the use of technology to improve its inventory and supply chain and the treatment of its workers. Furthermore, the recent decline in output at Wal-Mart suggests it may have also benefited earlier from a cyclical boost to productivity.
9. Nicoletti et al. (2000) evaluate the extent of product and labour market regulation in OECD countries. Based on their analysis, France, Greece, Italy, Portugal and Spain can be classified as strong coordinated market economies. Austria, Belgium, Denmark, Finland, Germany, the Netherlands and Sweden can be classified as moderate coordinated moderate economies. Only two European countries can be classified as liberal market economies: the UK and Ireland (other non-EU liberal market economies include the USA, the UK, Canada, Australia and New Zealand). Note that Greece and Luxembourg are not included in their analysis.
10. Also http://europa.eu.int/growthandjobs/areas/fiche05_en.htm
11. In 2004, unemployment was 8% in the EU-15 and 5.5% in the USA.
12. The notion of hysteresis is used to explain how short changes or shocks may have persistent effects. Regional hysteresis may occur when an increase in demand encourages firms to expand activity in areas with excess labour but following a contraction in demand, such firms remain in those areas.
13. All the Regional Development Agencies (RDAs) in the UK are seeking to establish high-technology clusters. These strategies are encountering a number of problems. First, the focus on high-technology may be inappropriate to the region’s economic history and development.
Second, the positive impact is likely to take a long time to be realized. Third, there is the potential for place competition and an adverse impact on national policy if numerous regions attempt to create similar clusters.

14. One of the first critiques of metric-driven policy is Goodhart’s law, which in its general form states that when a measure becomes a target, it ceases to be a good measure. Thus, if productivity is taken as a good measure of regional prosperity, once it is used as a target for regional policy it will no longer be an appropriate measure.

15. They are many other similar observations based on rhetoric and ideology rather than on reasonable assessment of the evidence. According to Subacchi (2005), Europe’s decline is inevitable, mirroring the collapse of Venice in the 18th century. Subacchi argues: ‘Current economic and demographic trends clearly point to stagnation and contraction in European economic activity with a consequent deterioration of living standards and increases in uncertainty, political instability, nationalism and protectionism’ (p. 18). Similarly, albeit less stridently, an Editorial (Leader) in the Financial Times (2005, p. 18) argues that ‘Reform is a necessity not a luxury. At a minimum it requires revamping welfare systems so that they are compatible with flexible labour markets. Better to go beyond this and seize the opportunity to redesign structures invented for the industrial economies of the 20th century to meet the challenges of the 21st century post-industrial society’.

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