

Dana T. Redford¹

The Lisbon Strategy and EU Knowledge Society: US Perspectives and Approaches

Introduction

By March of 2000, in his last year in office, President Bill Clinton was overseeing the longest ever sustained expansion of the American economy. The 107 consecutive months of growth has produced a large government budget surplus, a stock market at its peak, and productivity gains lead by technological advancement. In the European Union, heads of state and governments were at that time preparing for the Lisbon meeting at which they made a commitment to “make the European Union the most competitive and dynamic knowledge based economy in the world by 2010, capable of sustainable economic growth, with more and better jobs and greater social cohesion”. This very ambitious commitment came to be known as the Lisbon Strategy or Lisbon Process, based on internal EU benchmarking to stimulate reforms of its Member States. The Lisbon Strategy itself was a political initiative that lacked a rigorous economic analysis or underlying framework. Britain’s Prime Minister Tony Blair shared the political enthusiasm at that meeting, stating that “Lisbon should be a turning point in European

¹ Institute of European Studies, University of Berkeley. The author wishes to thank colleagues at the Institute for European Studies at UC-Berkeley as well as the European Studies Center at Harvard University. The views expressed in this paper are those of the author.

economic policy.” in an interview with *the Economist* a month before the meeting (Economist, 2000). This paper looks at the EU Lisbon Strategy and its development of a knowledge economy from a US perspective. Because the US does not have a Lisbon Strategy equivalent, it is necessary to incorporate various primary and secondary sources to achieve comparative economic and social data. The paper successively examines the three main areas of the Lisbon Strategy and assesses them from an economic, knowledge/science & technology, and social policy perspective.

Mapping the Debate: Economic Growth in the EU and the US

The political motivation underlying European integration has long been driven by competitive anxieties regarding global economic rivals. In the 1980's the EU focused on the removal of internal barriers and the creation of a common market to compete with the US and Japan. During the 1990's the European process shifted to the creation of a fully integrated economic and monetary union. By the mid to late 1990's the US economy was thriving, enjoying some of the strongest sustained economic growth rates in its history, as well as historically low unemployment rates. The US focused increasingly on innovation, investment in human capital and the “new economy” led by the Internet revolution and Information Technology (IT).

In terms of growth of real GDP, Europe continues to lag behind the US. The developing economies continue to see very strong growth levels led by China (with around 9 to 10 per cent growth) and India (with around 8% growth since 2000). The growth of the European economy has been approximately one-third less than that of the United States in recent years (see Table 1).

Table 1
Real GDP Growth (% per year)

estimates	2004	2005	2006	2007*
World	5.5	5	5.3	4.7
EU25	2.4	1.7	2.6	2.2
US	3.9	3.2	3.4	2.9

Source: Economist Intelligence Unit, September 2006

Europe is predicted to experience slower long-term economic growth than the US in the future because it lacks technological dynamism and is unable to adjust adequately to the rules of the “new economy” (Soete, 2001; Daveri, 2002).

One of the broader objectives approved in Lisbon included increasing the average EU employment rate from 61 per cent to 70 per cent by the 2010 deadline. This means there is a need to create 20 million new jobs, which in turn means having a real annual growth rate of 3 per cent for the Union as a whole. This growth rate is considerably higher than the average 2.1 per cent growth rate achieved over the previous ten years.

From 1960 to 1980 European countries generally enjoyed higher employment rates than the United States. However, since that time the US has outpaced the EU. The per capita Gross Domestic Product (GDP) of the EU has been stagnating at 70 per cent of US levels since the 1970s. The EU countries that have higher levels of labour productivity growth did show signs of catching up with the United States until the 1960s, but after 1995 the catching up process ceased as EU growth declined and American labour productivity surged ahead. This accelerated growth can be credited in large part to the effects of information and communication technology (ICT) in the service sector associated specifically with retail, wholesale and financial services. There is some debate about the types of jobs and other differences that are accounted for when using the US as a benchmark for the EU (Denmark, 2005). However, the differences in GDP per capita, hours per worker, and general employment levels across almost all European countries compared with the US are undeniable (see Table 2).

Table 2
Delineation of the EU-US Income Gap

Percentage difference in	GDP per capita	GDP per hour	Hours per worker	Employment rate
Ireland	-9.7	7.3	-10.9	-6.1
Norway	-11.0	18.0	-33.1	4.1
Denmark	-17.8	0.2	-22.2	4.1
The Netherlands	-25.0	5	-35.2	5.2
Austria	-25.6	-1.1	-20.6	-3.9
Sweden	-27.5	-12.8	-16.5	1.8

Belgium	-29.2	8.6	-16.5	-21.3
Germany	-31.2	3.8	-25.8	-9.2
Finland	-31.3	-11.1	-15.6	-4.6
United Kingdom	-31.3	-15.9	-12.6	-2.8
Italy	-32.4	-4.6	-14.2	-13.5
France	-33.8	4.7	-22.9	-15.6
EU15	-34.3	-8.0	-17.1	-9.2
Spain	-50.8	-33.2	-3.2	-14.4
Portugal	-67.8	-63.9	-8.4	4.5
Greece	-68.5	-47.5	3.4	-24.4

Source: GGDC Total Economy Database 2003. www.eco.rug.nl/ggdc

As can be seen from the above chart, American productivity per capita is on average 30 per cent higher than that of European workers. The primary reason for this productivity difference is that the amount of hours worked in Europe is far lower. Europeans

work only around 1,600 hours per year whereas their American counterparts are putting in 1,865 hours of work per year.

From an American perspective, the competitive threat does not come from Europe but from developing countries such as China and India.

From an American perspective, the competitive threat does not come from Europe but from developing countries such as China

and India. In 2002, Forrester Research claimed that 3.3 million white-collar American jobs would shift offshore to countries such as India by 2015. In 2005, an updated projection of offshore outsourcing revealed that by the end of 2005, 830,000 American white-collar jobs would move offshore, a 38 per cent increase from the original forecast of November 2002 (Forrester, 2007). More Americans (38%) feel that the rise of China represents a much more important military and economic threat over the next 10 years than do Europeans (27%) (Transatlantic Trends, 2006: 12). Whereas past globalization was synonymous with westernization, globalization today means addressing the competitive challenge of emerging economies in world markets, and is the new focus of policy-makers on both sides of the Atlantic.

Science & Technology Policy in the Development of the Knowledge Economy

The Lisbon Strategy is based on the premise that the capability to generate, acquire and diffuse knowledge will be the key to future economic growth and development. Improving the quality of human resources, promoting scientific and technological activities, and fostering innovation in companies are at the core of the Lisbon Strategy. Beyond employment and productivity growth, the other major objective of the Lisbon Strategy is to achieve 3 per cent expenditure of EU GDP on research and development (R&D). However, spending on R&D remains stuck at close to 2 per cent of GDP. In 2004, Europe's total research investment was 1.97 per cent of GDP, whereas the US invested 2.76 per cent, and Japan 3.12 per cent (European Commission, 2005e). Efforts are being made to achieve this objective. For example, the European Commissions' research budget is due to rise by 75 per cent by 2013. Even though this represents less than 0.1 per cent of GDP it may play a useful role in stimulating national and private spending.

To achieve its goals, European science policy needs to introduce more innovation to the European system. The European Commission estimates that there is a €130 billion a year gap in favour of the US and that this might be widening. It is important to keep in mind that 57 per cent of US Federal Government research is appropriated for national defence research (Mora, 2005) and that only approximately \$60 billion goes into research and development for the creation of new knowledge (Duderstadt, 2006: 22). An increase from 2 per cent to 3 per cent of GDP was set for R&D in Europe. Many believe that this will be accomplished by completing common market integration and through the liberalization of important markets such as electricity, telecommunications and financial services (Mora, 2005).

In March 2006, United States Ambassador to the EU, Boyden Gray, stated that in his view, for Europe to become more innovative, it is essential to create an effective patenting system that permits universities to own and market their inventions. In the United States, protection of intellectual property rights is paramount and has been growing in importance. Outlining the United States' view on the Lisbon Strategy Ambassador Gray emphasized that, "Everything is patented, from business methods to the sale

of train tickets on the Internet at a cost 3 to 5 times less [in the United States] than in Europe” (Europolitics, 2006). Although the US is not a signatory of the European Patent Convention, Americans and American entities can file for coverage under the European treaty. For such applications, the European patent process conducts international searches under the Patent Co-operation Treaty (PCT). Progress in this area has been very encouraging and has made it easier for US businesses to forge new partnerships with European companies.

Over the last decade, technological collaboration between firms has become progressively more important as a new source of knowledge development and transfer. There is an increasing propensity for the European business community to forge technological alliances with US firms. By contrast, the European academic community is tending to opt more for intra-European partnerships rather than growing collaborative efforts with their American counterparts (Archibugi & Coco, 2005).

Deputy Secretary of the US Commerce Department, David Sampson, argues that, “if a nation of innovators is to be established [in the US], there is no time for indulgence” (Europolitics, 2006). Simpson highlights measures outlined by President Bush to improve competitiveness in the United States such as increasing private funds invested in research, guaranteeing protection of intellectual property, attracting and retaining the world’s most brilliant minds, and reforming immigration policy to achieve the objectives of the US knowledge economy (Europolitics, 2006).

Since September 11th, immigration laws have tightened in the United States which has resulted in fewer foreign students going to US universities. However, there are still a substantial number of Europeans studying at US schools. According to the US Department of Commerce, American higher education is the country’s fifth largest service sector money-maker. International students contribute about \$13.5 billion to the US economy each year with the 2005/2006 academic year levels holding steady for the first time since 2002.

According to a European Commission survey released in 2004, more than 70 per cent of the EU-born recipients of US doctorates between 1991 and 2000 planned on staying in America. Already some 100,000 European-born researchers currently work in the US, and the European Commission frets that by the end of

this decade Europe will have 700,000 fewer scientists and engineers than will be needed to compete in the global knowledge economy.

America's knowledge infrastructure was shaped by a study group led by Vannevar Bush in 1945, which outlined the shape of modern American research universities on the basis of the country's healthcare, economics and military security research needs (Bush, 1945). A number of national research laboratories with specific missions such as atomic energy and defence among others, were developed and continually funded. In 1980, the Bayh-Dole Act was passed into law giving universities ownership of the intellectual property they developed with federal-sponsored research. This paved the way for the transfer of this knowledge to be made to the marketplace. This is the cornerstone of the modern university-industry relationship in the United States and, concomitantly, of the development of the modern US knowledge economy.

The high quality of teaching and research in the US is a prime motivator for scientists seeking career opportunities in America. Elite US universities and company research laboratories usually have much more money than

Europe invests 40 per cent less in R&D than the US, with most of the difference accounted for by the much larger private-sector investment in the US.

their European counterparts. Europe invests 40 per cent less in R&D than the US, with most of the difference accounted for by the much larger private-sector investment in the US. This reality may help explain why, for example, the four German scientists who won Nobel Prizes in physics and medicine between 1998 and 2001 all worked in the US. The major reason a large number of European scientists choose to work at US institutions is related to the average amount of money spent on individual researchers in the public, private and academic institutions (see Table 3).

Table 3
Expenditure in R&D per Researcher
(€1,000/Full Time Equivalent) & Inhabitant, 2001

	Expenditure in R&D per Researcher				Gross Ex- penditure in R&D per in habitant
	Gross expenditure	Business Sector	Higher Education	Govern- ment	
	1000 € / FTE				1,000 €
Poland	23	49	12	39	34
Hungary	37	54	24	30	53
Greece	54	101	38	86	73
Czech Rep.	55	87	31	41	80
Portugal	58	121	41	59	99
Turkey	60	125	50	35	-
Spain	78	172	41	74	155
Finland	125	156	76	103	890
Ireland	139	151	111	130	309
UK	145	164	92	214	382
Belgian	153	201	90	127	450
Norway	154	165	137	144	675
UE-25	156	214	90	147	375
UE-15	171	225	103	170	442
France	180	239	94	205	525
Austria	180	183	168	228	420
USA	182	169	171	361	845
Holland	186	223	145	170	490
Denmark	188	254	121	132	666
Italy	188	239	150	165	215
Germany	199	236	121	186	628
Japan	212	245	103	404	1133
Sweden	227	291	128	132	1175
Switzerland	266	312	171	222	951

Source: Eurostat; <http://europa.eu.int/comm/eurostat>

The biggest challenge for the United States is coming from Asia. In the US, only 4.5 per cent of college students choose engineering as their major. In comparison, Europe does much better with 12 per cent engineering majors. However, over 40 per cent of

college students are majoring in engineering in countries such as China and India. This means that the US is currently producing less than 5 per cent of the world's scientists and engineers. This is cause for serious concern for the future of the knowledge economy (Wulf, 2004).

Growth Policy and Social Cohesion

It is axiomatic that government policies can foster efficiency and growth in an economy. It has been shown through endogenous growth models that positive externalities are created and greater productive capacity achieved in the market through public investment (Romer 1986, 1990; Aghion & Howitt, 1998). The weight of government spending in the EU and US are approximately the same per capita, but is applied in very different areas.

The National Intelligence Council, a governmental US intelligence think-tank states that, "While [the EU's] military forces have little capacity for power projection, Europe's strength may be in providing, through its commitment to multilateralism, a model of global and regional governance to the rising powers, particularly if they are searching for a "Western" alternative to their strong reliance on the United States" (NIC, 2004: 57). The US has the most technologically advanced military and represents over 40 per cent of the world's military spending. Nevertheless, over the last 50 years, EU nations have supplied 80 per cent of UN peacekeeping forces and 70 per cent of the funding for those forces. During the Cold War a large amount of young people were employed by European governments through the armed forces. The US National Intelligence Council concludes, "Either European countries adapt their work forces, reform their social welfare, education, and tax systems, and accommodate growing immigrant populations (chiefly from Muslim countries) or they face a period of protracted economic stasis that could threaten the huge successes made in creating a more United Europe" (NIC, 2004: 57).

The total fertility rate across Europe is estimated at 1.47 children per woman in 2006. Demographically speaking this is well below the necessary 2.1 replacement level. Americans have an aggregate rate of 2.09 children per woman. During the next 15 years,

several million additional workers will be needed in West European economies to fill positions vacated by retiring workers.

The modern “European dream” encompasses welfare, public education and healthcare (Rifkin, 2004) whereas the American dream does not. The European dream is characterized by emphasizing, “community relationships over individual autonomy, cultural diversity over assimilation, quality of life over the accumulation of wealth, sustainable development over unlimited material growth, deep play over unrelenting toil, universal human rights and the rights of nature over property rights, and global cooperation over the unilateral exercise of power” (Rifkin, 2004:23). The idea and ideals of the European dream may be debated, but clearly there is a difference in attitudes towards social welfare that indicates a real difference between European and American culture and a different balance between public and private sector responsibility.

Policies supporting the modern European economy were built to ensure fundamental social rights whereas policies supporting the US economy have been created to ensure that an individual

The modern “European dream” encompasses welfare, public education and healthcare whereas the American dream does not.

is able to pursue economic gain and social mobility. These philosophical differences help to explain the role society expects government to play in supporting social cohesion. Vos (2005) suggests that the European social model demonstrates further

convergence when considering the common concepts and policies of individual Member States. He argues that the similarities are, in part, apparent because of the differences with the US model. The Barcelona Council emphasized the social model to be pursued in the Lisbon Strategy as, “based upon good economic performance, a high level of social protection, education and social dialogue”. In the US, social issues are largely excluded from debates about economic growth and related government policies.

Although low US employment statistics are impressive in comparison with much higher rates experienced throughout Europe, US unemployment figures are “enhanced” by factors that are not normally associated this kind of data, such as the dramatic increase in the country’s prison population from 500,000 in 1980

to over 2 million today. The US currently holds one-quarter of the world's prison population at 685 prisoners per 100,000 people (the EU rate is 87 per 100,000).

As noted above, Europeans currently have shorter working hours, longer vacations, a more comprehensive social safety net as well as lower productivity per hour and higher rates of unemployment than Americans. Some Europeans worry that these facts are now "forcing" their social welfare model to respond to policies more like those of the US because of global competitive forces (Vos, 2005). Soft coordination in the areas of employment, social inclusion and pension policy has been a hallmark of EU convergence. Social protection, education and social dialogue are part of the delicate balancing act as the EU tries to match economic progress based on competitive forces and solidarity as the basis for social cohesion.

There are historical differences between the various European welfare systems. Models have been divided into the Liberal or Anglo-Saxon model; the Corporatist or Continental model; and the Social-Democrat or Scandinavian model (Esping-Andersen, 1990). Each system combines essential socio-economic objectives such as a high employment rate, a fundamental degree of social equality, and a sustainable level of public expenditure. However, no model seems capable of achieving all three objectives simultaneously. "Generally, the European welfare state has led to open and hidden unemployment, and discouraged labour market participation" (Groot et al. p.128). In practice, corporatist welfare states have relatively low employment rates; social-democrat welfare states tend to have high levels of taxation; and liberal states are known for higher rates of poverty. The incompatibility of the objectives suggests that welfare states in Europe have to choose between sacrificing high employment, social equality and/or sustainability of the welfare system. By contrast, Americans seem content to do without social cohesion and equality, whereas the European Union and its citizens seem to have not yet decided which area they are willing to sacrifice most for the sake of economic and employment growth (Danish Ministry of Economy, 2005).

The United States is a federal republic whose constitution unambiguously dictates the responsibilities of the federal level of government. Issues other than foreign affairs, national defence,

regulation of currency and interstate commerce not cited are left to the 50 independent state governments and, below them, county and city governments. State and local governments account for 44 per cent of total government expenditure in the US and close to half of total tax receipts. The US works as a cooperative federalist system under which all states are offered subsidies for welfare, education and various other programmes in return for following policies set at the federal level. For example, although the federal minimum wage last rose in September 1997, minimum wages in the United States have not been static since then. At the end of 2005, 17 states and the District of Columbia raised their state minimum wage a total of 47 times. Two-thirds of the states have minimum wage levels higher than that required by Federal law. With the newly elected Democratic-lead 110th congress the issue of the Federal minimum wage has been raised. Since 1996 states have been fully responsible for their welfare programs. The result of eliminating federal involvement in this area means that welfare packages vary greatly from state to state. The New England area and other more liberal states tend to maintain levels on a par with pre-1996 federal packages. In several southern and mid-western states, however, long-term beneficiaries are now obligated to participate in employment schemes to become recipients of benefits. Initially, the costs of welfare programmes fell after power was returned to the states, but in 2002 and 2003 they became more costly as a result of rising medical costs. To meet the growing costs of Medicaid programmes that aim to provide healthcare for the poor, Congress passed a stimulus package in May 2003 that included \$20 billion in aid to the states.

Healthcare is a major economic and social issue in the United States that is part of the economic divide. It is estimated that over 47 million Americans have no health insurance and this is up from 45 million in 2003. For six consecutive years the number of Americans without health insurance has increased. In 2005, 46.6 million Americans had no healthcare according to a report by the non-partisan, non-profit Economic Policy Institute. The rate of those uninsured has grown from 14.2 per cent of the population in 2000 to 15.9 per cent in 2005 despite the steady growth of the US economy. The share of individuals covered by employer-sponsored healthcare has dropped by 4.1 per cent, affecting more than

3 million people, and this has been the major contributing factor to this increased rate of people without insurance. Fewer than 30 per cent of whites were uninsured in 2005, compared with close to 50 per cent of blacks and close to 60 per cent of Hispanics.

Healthcare is poised to become America's largest industry. Currently, 1.3 million people are employed at government-run hospitals. However, employment in the private health services industry has increased 16 per cent since 2000 (it employs 12.6 million people). In comparison, the manufacturing sector that once dominated the US economy now employs 14.2 million, an 18 per cent drop since 2000. Thus, the United States is quickly nearing the point at which more Americans will be employed delivering health-care than producing manufactured goods. In 2004, the United States spent 16 per cent of its GDP on healthcare, compared with the 8 per cent European Union average. It is projected that by 2015 the US will dedicate 20 per cent of GDP to healthcare (Borger, 2006).

According to the US census income inequality in the US has been increasing since the 1970s. In 2004, the top 25 per cent American households accounted for almost half of all income, while the lower 50 per cent only represented a little over one-tenth. The top 5 per cent of the economic pyramid corresponded to 22 per cent of household income in 2004. According to the Census Bureau, 12.7 per cent, or 37 million Americans, were classified as living below the poverty line. Since 2000, 5 million additional people have joined the ranks of America's poor. A disproportionate number of the poor are Black (25%) and Hispanic (22%). The median annual income for non-Hispanic Whites is \$61,000; Black Americans on average earn \$35,200 with Hispanics earning \$35,400.

The Gini coefficient, a measure of income inequality where a '0' coefficient would imply perfect income equality and a '100' coefficient perfect inequality, ranks the United States the lowest among the G8 industrialized countries. The US Gini coefficient stood at 46.6 in 2004 according to the Census Bureau, and has deteriorated over the past decade. The Gini coefficient of 0.25 is the inequality value of a typical Northern European country whereas the US rate is closer to China's inequality ratio (44.7). As of 1960, the US had the largest middle class and was one of the

most egalitarian of all the developed nations and it now ranks among the lowest. American writer, Jeremy Rifkin, who contrasted the American and European Dreams in a book of 2004 stated about this growing inequality: “That’s disgraceful and most Americans would be shocked if you told them that. Barely 51 per cent of Americans believe in the American Dream according to a Ford Foundation survey. One-third say they don’t believe in the dream at all, which is devastating because that’s the social glue, that’s what binds us together, much more than Wall Street or Washington or even the US constitution” (Rifkin, 2005: 45). In 1980, the average American Chief Executive Officer (CEO) earned forty times the average manufacturing employee’s wage. Today, in Britain the average CEO earns 24 times more, in France 15 times more and in Sweden 13 times more than the average employee’s wage. The top-tier of US CEOs now earns 475 times more than the average worker and if assets and not income were taken into account that ratio would be even higher (Blackburn, 2002: 201, Table 3.2).

Whereas in Europe it is expected that the State adopt the majority of initiatives aimed at increasing social cohesion and assisting the downtrodden, in the United States the private philanthropic sector is more significant.

In Europe it is expected that the State adopt the majority of initiatives aimed at increasing social cohesion and assisting the downtrodden, in the United States the private philanthropic sector is more significant.

Americans give approximately 260 billion US dollars each year to charity according to an Indiana University study. Nearly 100 per cent of respondents with household incomes of more than \$200,000 or assets in excess of \$1 million reported making a gift last year, compared with 67 per

cent of all US households. Among the most popular causes were education, religion, and adding to a foundation (AAVV 2006b). Annual giving to “worthy causes” is part of a broader US societal belief that private charity is more effective than State assistance achieved through mandatory higher rates of taxation. There is a social expectation that “successful” people give back to their community in some way, and they do so much more extensively than their European counterparts.

The Environment

In 2004, the High Level EU Group chaired by Wim Kok, former Prime Minister of the Netherlands, presented a report entitled *Facing the Challenge*. The basic message of this report was that “while all three pillars of the Lisbon strategy – economic, social and environmental – remain valid, the priority now is for Europe to boost its economic growth rate and increase employment” (Commission, 2004, p.1). The Commission used this report to declare that the social and environmental aspects of the Lisbon Strategy were no longer a top priority. This being said, environmental sustainability is still an important tenet: as stated by the Commission, “stimulating eco-innovation, building leadership in eco-industry and pursuing policies which lead to long-term and sustained improvements in productivity through eco-efficiency” (Commission, 2004, p.2). This helped to reaffirm the environmental aims of the Lisbon Strategy and the commitment made by all the members of the European Union in 2002 (then 15) that submitted the relevant ratification paperwork to the UN related to the Kyoto Protocol.

By contrast, although a signatory to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, the US has neither ratified nor withdrawn from the Protocol. The signature of then Vice President Al Gore in 1998 was only symbolic. In the previous year, the US Senate unanimously voted that the country should not sign any protocol that did not include binding targets and timetables for developing as well as industrialized nations. The US rejection of Kyoto could be considered “old news” in the area of environmental conservation. Indeed, the environment, and specifically climate change, is a “hot” topic in the US as it is elsewhere. Whereas the World Economic Forum 2006 focused principally on the plight of Africa, this year the focus was undoubtedly on the environment. The most significant development at Davos this year was that global warming is now being discussed at the chief executive level, including many CEOs of the largest US companies, who are now starting to lobby their government to look at how they can create legislation and incentives to assure that America reduces greenhouse gas emissions (Weber, 2007). The EU, with its 22 per cent of global greenhouse emissions, is committed to the Kyoto Protocol’s goal. The 2002 EU sig-

natory will cut their emissions by 8 per cent on average from 1990 levels, and are thus “ahead” of their American counterpart. However, a number of states across the US are pressing ahead with rules aimed at cutting emissions. Many have already taken measures to cut carbon dioxide pollution from power plants. Over seven States in the north-eastern region have already approved a mandatory limit that will stabilize emissions by 2009 and in 10 years reduce them by 10 per cent. The national goal set by President Bush is to reduce national greenhouse gas intensity by 18 per cent by 2012.

If California were a country it would be the world’s ninth-largest economy. It is the world’s twelfth-largest polluter of carbon dioxide and has levels similar to that of Australia. A poll in July of 2006 showed that two-thirds of Californians wanted their state to address the issue (PPIC, 2006), and at the end of October of

The main argument against “green” measures is that they threaten jobs.

that year a bill was passed requiring a 25 per cent cut in carbon dioxide pollution produced within the state by 2020. Efforts to bring total CO₂ emissions down to 1990 levels are moving

forward in at least eight other states. It appears that there is significant political momentum in the US that will lead to the establishment of mandatory limits on the emissions of greenhouse gases, despite the Bush administration’s consistent reliance on and advocacy of policies that rely on voluntary enforcement. As the world’s largest single emitter of carbon dioxide this is a very positive trend.

The main argument against “green” measures is that they threaten jobs. The two goals, environmental protection and job creation coexist in the Lisbon Strategy, but the Kok group demonstrated that job creation and economic growth are the top concerns. Despite the recent political shift in the US about the environment, the “jury is still out” and will continue to be so until legislation begins to emerge in the central and southern “heartland” states of America.

Current and Future EU-US Relations

Many Americans think the EU suffered a severe setback after the defeat of the proposed constitutional treaty referendums in May-June 2005. This view was confirmed when European leaders chose to take a 12-month period to “lick their collective political wounds”.

The principle that apparently “enforces” the Lisbon Strategy is peer pressure, but this contributes to a general lack of ownership. The high level European Commission group chaired by Wim Kok has suggested that this maybe overcome with the development of national Lisbon Agenda Strategies by national parliaments, social partners and the public at large. The common benchmarking practices follow the Open Method of Coordination (OMC) model adopted early on with European Economic and Monetary Union. This model uses comparative benchmarks as an integral part of the Lisbon Strategy. However, there has been criticism that these benchmarks are not dynamic enough and that they focus action only at the national level to the detriment of the global dimension (Room, 2005). US analysts of the Lisbon Strategy also generally agree that the manner in which the EU enforces its Lisbon policy recommendations is problematic. As stated by Daly, “while the EU has played an important role in boosting productivity and employment, the role of the Lisbon Strategy itself has been minimal. This is not to be critical of the Lisbon Strategy – it is difficult to see how an EU-led agenda could have achieved more in a field where there is no collective authority....Whether the EU’s collective responsibility should extend to the areas that the Lisbon Strategy address is a moot point – there is little realistic prospect of national governments giving up these competencies. EU Member States should instead concentrate on completing the single market. There are numerous examples of existing EU single market legislation that have not been fully implemented and of sectors where domestic markets and companies remain protected from competition (e.g. energy, transport, and even financial services). According to the European Commission’s Internal Market Scoreboard, France and Germany – the two countries most closely associated with the ‘European Project’ – rank as two of the worst offenders in terms of failing to implement EU internal market directives. By contrast, Denmark and the UK – the EU’s traditionally more Euro sceptic

countries – are two of the best performers” (Daly, 2005: 3). Daly reports the blunt view expressed in a Global Economic Paper by researchers at the US investment house, Goldman Sacks, “In truth, there was never a realistic prospect of many of Lisbon’s objectives being met” (Daly, 2005: 4), although the paper also concludes that the “EU’s existing economic performance is routinely portrayed too negatively. In particular, the gap between EU and US growth trends” (Daly, 2005: 1).

Bilateral ties between the EU and US have been strained since the start of the Iraq War. Europeans now view US leadership in world affairs as undesirable (57%), compared with the 64 per cent who saw it as positive and desirable in 2002 (Transatlantic, 2006, p. 5). Europeans generally distinguish between President Bush and the United States in general. Whereas Europeans’ approval of President Bush’s handling of international affairs has fallen to 18 per cent from 38 per cent in 2002, there exists a 19-point gap that has stayed relatively constant over the past 5 years between the evaluation of the President’s leadership and that of the United States in world affairs (Transatlantic, 2006: 6). President Bush’s approval rating in the United States has also fallen, with more Americans disapproving of him than approving since the record high levels of approval immediately after the September 11 attacks in New York and Washington. According to polls taken right after the President’s January, 2007 State of the Union address, his approval ratings ranged from 28 to 30 per cent, the lowest rating since the Watergate Scandal that forced President Richard Nixon to resign.

The most important transatlantic questions affecting the American-European alliance are: “Is there a gap in the threat perception of Americans and Europeans concerning international terrorism and Islamic fundamentalism? Do Americans and Europeans draw the line on civil liberties differently when asked to grant greater governmental authority to antiterrorist efforts? What do they think their governments should do about the threat of a nuclear Iran, especially if diplomacy fails? How do they view the growing power of China or increased immigration within their own borders? Do they still support NATO in light of this fall’s summit addressing its future? Given instability in the Middle East, how do Americans and Europeans feel about democracy promotion and its chances in the region?” (Transatlantic, 2006, p. 3). These issues are not resolved, although there are many indications that the al-

liance is addressing them in a systematic and positive manner. Support for greater Europeans independence from the United States in security and diplomatic affairs has been increasing on both sides of the Atlantic, with 55 per cent of Europeans wanting more independence compared to 50 per cent in 2004 (Transatlantic: 6). American support for closer military and diplomatic ties with the EU has also dropped from 60 per cent in 2004 to 45 per cent in 2006, with more Americans advocating greater US independence (from 20% in 2004 to 30% in 2006) (Transatlantic, 2006: 6).

U.S. Assistant Secretary of State for Europe, Daniel Fried, stated in the fall of 2005 that, “The relationship between the United States and Europe is focused less on itself...and more on putting that relationship to work” (Fried, 2005). European Commission President José Manuel Barroso recently commented that “EU-US relations have strengthened considerably over the last year, and we are working together systematically to address common economic, political, and environmental challenges” (Barroso, 2006). Indeed, “despite all the transatlantic political bickering, the hype associated with the rise of China and India, and constant warnings of a transatlantic divorce, the bilateral economic bonds of the United States and Europe have only grown stronger since the beginning of this decade” (Hamilton & Quinlan, 2007: 1). In terms of economic ties the US remains the most important trading partner for the European Union in both imports and exports (see Tables 4 & 5).

Table 4
Exports from the EU25

Country	2005	2006	% change
US	98	110.3	12.6
China	19.2	24	25
Switzerland	33	34.9	5.8
Russia	20.5	25	22
Japan	17.5	18.4	5.1
Norway	13.2	15.2	15.2
Turkey	15.5	18.9	21.9
South Korea	7.9	8.8	11.4
India	8.1	9.5	17.3
Canada	9.1	11.1	22

Source: Eurostat

Table 5
Imports to the EU25

Country	2005	2006	% change
US	66.5	74	11.3
China	57.6	72	25
Switzerland	26.1	29.1	11.5
Russia	41.9	57.9	38.2
Japan	30.3	31.6	4.3
Norway	25	33.7	34.8
Turkey	13.5	15.7	16.3
South Korea	12.6	15.6	23.8
India	7.9	9.6	21.5
Canada	6.5	7.7	18.5

Source: Eurostat

The relative weight and importance of this economic relationship has grown and continues to grow for both the EU and US, despite the growing importance of China as a trading partner for both. These economic ties are the most important drivers behind the exchange and growth of the knowledge economy on both sides of the Atlantic. It is estimated that the transatlantic economy generates roughly three trillion US Dollars in total commercial sales a year and employs up to 14 million workers in the US and EU that enjoy high labour, wage and environmental standards with their companies having open, non-discriminatory access to each others' markets (Hamilton & Quinlan, 2007).

Conclusions

For the EU, the United States is a moving benchmark undergoing changes because of globalization. The difference between the wealthy and the poor in the US has been growing since the 1960s as blue collar, and now white collar, jobs are being outsourced to other countries, and as the economy becomes even more heavily weighted toward the service sector. The knowledge economy holds some hope for post-industrialized economies, and the US continues to achieve excellence in scientific and technological innovation. Research institutions in the United States still attract

the best and the brightest with higher amounts of research dollars. Healthcare-related advances have been driving a significant amount of non-military related research as the relative weight of this sector continues to increase in the US economy.

Whereas the European Union has a variant of market capitalism that stresses social dialogue, the trend in the United States has been toward ever less prominent collective bargaining. In the EU, 77 per cent of worker wages and working conditions are covered by agreements as of 2000, in comparison to only 13 per cent of workers in the United States (Freeman, 2006: 6). These political choices may benefit workers but they also carry a price in a global economy, in which economic benchmarks are increasingly being set by the emerging economies.

The transatlantic partnership still remains one of the most important relationships for both sides. There are many important knowledge economy ties between universities and within the private sector between the two. The respective approaches to the development of ITC are affected by the economic and labour systems in which they are embedded. In the United States, it takes on average 7 days to form a company compared to 64 days in the European Union (Freeman, 2006: 7). If the EU wishes to make the Lisbon Strategy a reality then it can learn much from the US in terms of making business and interstate commerce easier, and ensuring a more productive workplace. At the same time, the Lisbon Strategy contains fundamental principles that the US can learn from if it wants to become more humane and socially cohesive, and if it wants to return to its more egalitarian past.