

# THE LISBON STRATEGY AT MIDTERM: EXPECTATIONS AND REALITY

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# Contents

<b>Contributors</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>5</b>
<b>1. Lisbon at mid-term: How to refocus the policy agenda?</b> .....	<b>9</b>
1.1. What has the Lisbon Strategy achieved so far? .....	10
1.2. The Lisbon's objective of fostering employment creation .....	12
1.3. Towards faster labour productivity .....	18
1.4. Towards a successful Lisbon Strategy? .....	22
References .....	27
Annex .....	28
<b>2. Managing thin air – UE's Lisbon strategy: Benchmarking, targets and the open method of co-ordination</b> .....	<b>31</b>
2.1. Introduction .....	31
2.2. The Lisbon ambition .....	32
2.3. The economic performance .....	33
2.4. Prosperity, productivity and micro policy .....	36
2.5. The OMC instrument .....	38
2.6. National quantitative targets .....	41
2.7. The way forwards? .....	45
References and further reading .....	49
Annex .....	50
<b>3. Monitoring targets of the Lisbon Strategy</b> .....	<b>53</b>
3.1. Introduction .....	53
3.2. Description of the Lisbon Strategy .....	54
3.2.1. Objectives .....	54
3.2.2. Structural indicators .....	57
3.2.3. Overall evaluation .....	63
3.3. Analysis of the structural indicators evolution in the last decade .....	68
3.3.1. Global analysis for the period of 1994-2003 .....	68
3.3.2. The state of play: Evolution during the period of 1999-2003 .....	74
3.4. Conclusions .....	76
References .....	80
Annex .....	81

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# Introduction

CASE – Center for Social and Economic Research inspired an extensive discussion on the Lisbon Strategy, its goals and objectives, successes and failures. The fervent debate, which took place in Warsaw at the end of 2004, investigated the future of the Strategy in Europe and Poland. The publication, which we are proud to present, is a result of this discussion.

The Polish context for achieving the Lisbon goals was explored at a conference on December 9, 2004 entitled “The Lisbon Strategy in Poland: Directions of Necessary Reforms”. Earlier, however, answering the question whether the Lisbon objectives successfully support competitiveness in Europe was of chief concern to a group of scholars and specialists attending the conference entitled “Lisbon Strategy as an Effective Tool of Increasing Competitiveness in Europe?” (The meeting took place in Warsaw on November 8, 2004). The conference dialogue resulted in a systematic and inquisitive debate on the causes of successes and failures of the Lisbon Strategy against the background of the current economy in the united Europe. The perspectives for the future implementation of the Strategy and its desired effects also proved to be of great concern. The arguments presented by the authors of the present publication continue the discussion, which has now been enriched by the contributions by conference participants.

The Lisbon Strategy launched by the European Union in 2000 was designed to increase the growth and modernize Europe, while caring for sustainable development and social cohesion. The Strategy represented an innovative approach to development because economic objectives were not juxtaposed with social ones. Instead, the Strategy endeavoured to demonstrate that economic and social objectives are intertwined and the implementation the economic objectives might feed-back support and strength to the social objectives, and vice versa.

Directing European economies to new paths of development was the backbone of the Strategy’s success. The success could be achieved through increasingly intensive participation of knowledge-based economy in the overall development (research, education, access to information technology) with the concurrent improvement in functioning of a single European market, support for entrepreneurship and strengthening

of sound macroeconomic frameworks. The necessary action to accomplish such goals was an intensive enhancement of societies' general knowledge and capability and a constant closing of the social exclusion gap. The Strategy decided that in the age of information society a sustainable growth could be achieved only through a high employment level in all social groups together with a continuing increase in labour productivity. Greater care for natural environment could also contribute to a higher quality of life.

Such goals were of primary importance to all countries of the European Union, although their implementation depended on the policy of individual countries. Special tools were designed to monitor the progress of the Strategy and to provide multilateral support in its implementation. Today, when the Strategy has reached a midterm point, we already know that some of its ambitious assumptions cannot be put into practice, at least not in the planned implementation period of 10 years. The most spectacular goal of the Strategy remains out of reach: closing the economic gap between Europe and the United States and advancing ahead of the USA.

The reasons for missing the goal should be attributed to the fact that when the Strategy was designed Europe enjoyed very positive development trends, which perhaps led to excessive and unfounded optimism about the future plans and expectations. The beginning of the new millennium brought a deterioration of the European economic outlook. The origins of such decline were difficult to predict at the early stages of the Lisbon Strategy planning; a general slowdown occurred in economic dynamics and a recession which followed lasted several years. As a result, some objectives of the Strategy could not have been implemented on the planned level, while the distance to reach some of the goals has even increased.

Does it mean that the important objectives, commonly agreed upon between the countries of Europe in the framework of the Strategy should be abandoned? What would this mean for the new Member States, which so painstakingly embarked on their most difficult systemic reforms? Are they to arrest restructuring which would lead to modernization and greater competitiveness of their economies?

Romano Prodi, the President of the European Commission, has said upon leaving office at the end of last year that the Strategy had proven a huge failure and had not fulfilled the expectations. It seems, however, that frustration resulting from a large discrepancy between hopes and reality hid behind his bitter words. The official communications of the current Commission strike a significantly different tone as the Commission strives for strengthening and revitalizing of the Lisbon Strategy. The report prepared in November 2004 under the leadership of Wim Kok carries a similar message: he sharply critiques these Strategy's shortcomings, which could have been prevented (for example, too slow introduction of a single market). At the same time, however, Kok emphasizes the importance of the Strategy

today in comparison with five years ago: especially now the Strategy should be implemented. The Kok report describes the direction of necessary changes and points to the means to achieve success.

Our discussion had a similar pragmatic tone; the debate took place parallel to the publication of the Kok report and resulted in this book.

We have asked the following questions:

- Is the rationale for the Lisbon Strategy correct? Is it based on a correct identification of the most important barriers to the growth of European economies?
- What are the reasons behind the failure of several Lisbon goals, of which some are of key importance?
- Is there a need for revision of the Strategy goals? Should they be “downgraded” (i.e. made less ambitious)?
- Is the scope of the Lisbon Strategy too broad? Is there a need for a more focused approach?
- Does the Lisbon Strategy need new instruments?
- Is the open method of coordination an efficient tool for motivating European governments to reform?
- How does the recent EU enlargement impact on the implementation of the Lisbon Strategy? Is the Strategy more difficult to implement in a larger Europe composed of countries lagging behind? Or is it a chance to reinvigorate the Lisbon process, given that the new Member States are in some respects less ‘eurosclerotic’ than the EU-15?
- What are the main challenges for the new Commission? What are the planned or recommended institutional solutions within the new Commission?

Each of the articles presented in the publication attempts to answer these questions, each from a different standpoint. Patrick Lenain, an OECD expert, discusses the European economic situation and the causes of increasing distance between Europe and countries which develop the fastest in the world. In his view, all undertakings which couple the productivity growth with increasing employment are very important for future growth. However, difficult structural and regulatory reforms would be needed. Ulrik Mogensen concentrates on elements supporting European entrepreneurship. Being a European Commission employee, he also gives his view on the possibilities to implement the Strategy in its present institutional form, especially as regards to the so-called open method of coordination requiring high volumes of voluntary cooperation of all countries participating in it. Vicente Royuela – Mora, a professor at the University of Barcelona and a co-author of the report “Euro and the Lisbon Strategy” prepared by the European Forecasting Network, focuses on the

methodology of monitoring the Lisbon goals. He suggests that a proper implementation of the Strategy requires improvement of its tools. Together with the members of his research team, Royuela – Mora seeks appropriate measures for the development of a knowledge-based economy. All three authors agree that the Lisbon Strategy brought limited although very visible results, while its main directions have been rightly chosen and they continue to be valid.

In the last five years, some countries have made a much better progress in the Strategy's implementation than others. Also, states which entered the path of competitiveness at a later time have successfully managed to catch-up. Having this in mind, one could see the future possibilities to implement the Lisbon Strategy more optimistically, under the condition that its goals are treated by all countries with due attention and respect. The Strategy renaissance and its reinvigoration might be helped by the discussion of the European Council in its midterm report; the report by the Kok group is one of the most important elements of the discussion.

The implementation of the structural reforms proposed by the Strategy is very important also for the new Member States. Going along the Strategy's path they might faster cover the distance separating them from the most developed European countries.

Thanking the authors and discussion participants for their invaluable input, the editors of this publication hope that it would become a source of better understanding of Lisbon Strategy and would propagate the knowledge about its importance to the growth of the united Europe.

We would like to thank CASE – Center for Social and Economic Research for support during project implementation and the National Bank of Poland and its Programme for Economic Education for financial assistance with the conferences and the publication.

Barbara Błaszczyk

January 2005



# I. Lisbon at mid-term: How to refocus the policy agenda?<sup>1</sup>

**Patrick Lenain<sup>2</sup>**

In March 2000, at the outset of their Summit in Lisbon, leaders of the European Union<sup>3</sup> pledged to transform the EU into the “*most dynamic and competitive knowledge-based economy in the world*” by 2010. This commitment, which has come to be known as the Lisbon Strategy, has recently been the center of an academic and public debate. As the EU is preparing for a mid-term review of the Lisbon Strategy, some concerns have come to the surface. Since Lisbon, the overall economic performance of the European Union has been modest and some of the ambitions formulated in Lisbon now appear out-of-reach.

The debate has focused on two sets of questions. *First*, why has the economic performance of the EU been so modest since the adoption of the Lisbon Agenda? While recognizing that the period 2000-04 has been characterised by a cyclical slowdown and a series of negative shocks, observers note that other parts of the global economy have achieved a stronger performance, including the United States, and thus fear that structural rigidities continue to impede the underlying achievements of the European economy. This leads to the *second* question: has the Lisbon Strategy provided sufficient impetus to the policy reform agenda in member states and, if not, what else could be done to foster more forceful activism in structural reforms?

The present paper discusses these two questions successively. After a brief presentation of the Lisbon Strategy in the first section, the paper reviews the recent performance of the European economy, asking why it has been so modest. For this

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<sup>1</sup> This paper was initially presented at the CASE conference “Lisbon Strategy as an effective tool for increasing competitiveness in Europe”, 8 November 2004, Warsaw. The author benefited from comments and suggestions from participants to this conference and would especially like to thank, without implicating them, Professor Marek Dabrowski and Professor Barbara Blaszczyk.

<sup>2</sup> The views expressed in this chapter are those of the author and should not be construed as those of the OECD.

<sup>3</sup> In this paper, the European Union refers to the fifteen member states prevailing when the Lisbon Strategy was adopted, i.e. before the enlargement on 1 May 2004, unless explicitly noted.

purpose, the paper scrutinises the cross-country differences in GDP, labour utilisation and productivity trends. The last section of the paper asks whether the Lisbon Agenda is really adapted to stimulate structural reforms in Europe or if another approach should be attempted. This paper suggests that the basic framework is sound and appropriate, but needs to be refocused on policies where there are obvious cross-border spillover effects and where policy coordination is therefore beneficial.

## **1.1. What has the Lisbon Strategy achieved so far?**

With the Lisbon Agenda, EU political leaders made a comprehensive and ambitious commitment. They pledged to make the European Union by 2010 “*the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment*”. This ambitious commitment was further broadened in subsequent European Summits, where leaders undertook to achieve additional objectives in the economic, social and environmental spheres<sup>4</sup>. The European Council eventually adopted a set of 14 quantitative targets that summarise their commitment to economic growth, employment, social, educational, regional and environmental objectives<sup>5</sup>. Of these 14 objectives, five are frequently considered to be particularly important in the economic area: the goal that 70 per cent of those at working age should be employed by 2010, almost 6 percentage points more than prevailing when the Strategy was adopted; the implicit goal that real GDP should grow by 3 percent per year on average<sup>6</sup>; the goal that 50 per cent of older workers should be employed in 2010, compared with 38 per cent at the start of the decade; and the goal that spending on research and development (R&D) be increased from 2 per cent of GDP to 3 per cent by 2010 (Table 1).

Because many of these policy areas are the prerogatives of member states, the Lisbon Strategy is based on the “open method of coordination”, a framework which eschews the traditional centralisation of policy formulation and relies instead on the peer review of progress made by individual member states. The European Commission

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<sup>4</sup> These various commitments can be found on the web site of the European Commission at the following link: [http://europa.eu.int/comm/lisbon\\_strategy/index\\_en.html](http://europa.eu.int/comm/lisbon_strategy/index_en.html)

<sup>5</sup> The 14 basic structural indicators are the following: GDP per capita; labour productivity; aggregate employment rate; employment rate of older workers; education achievement; expenditure on research and development; business investment; comparative price levels; at-risk-poverty rate; long-term unemployment; dispersion of regional employment rates; greenhouse gas emission; energy intensity of the economy; and volume of transport.

<sup>6</sup> The goal of 3 per cent real GDP growth was heavily publicised, but is not officially included in the Summit communiqués.

**Table 1. Key EU targets for 2010**

	1997	2001	2010	European Council
Employment rate Total	60.7	64.1	70	Lisbon, March 2000
Age 55-64	36.4	38.8	50	Stockholm, March 2001
Female	50.8	55	60	Lisbon, March 2000
Effective retirement age	n.a.	60.3	Plus 5	Barcelona, March 2002
R&D as a per cent of GDP Total	1.86	1.98	3	Barcelona, March 2002
Private	1.1	1.2	2	Barcelona, March 2002

Source: OECD (2004a)

regularly monitors the structural indicators targeted under the Strategy<sup>7</sup>, and the European Council meets every spring to discuss progress and determine new targets if necessary. A mid-term review will take place in Spring 2005.

It is difficult to assess the accomplishment of the Lisbon Strategy only four years after its adoption. EU political leaders aimed at revitalizing the European economy by 2010 and it would be inappropriate to draw conclusions after just a few years of implementation. Besides, it is widely accepted that the type of structural reforms envisaged in the Lisbon Strategy has long transmission lags and that immediate results cannot be expected. The present section thus examines the progress made towards achieving the main economic goals of the Strategy during the first part of the decade, without attempting to draw conclusions regarding success or failure.

The first half of the decade has been difficult for the European economy. Output has been moving in fits and starts, without embarking on a sustained expansion. Between 2000 and 2004, annual growth of real GDP was 1.4 per cent on average, less than recorded in the overall OECD (2.1 per cent) and notably less than in the United States (2.5 per cent)<sup>8</sup>. Thus, growth fell short of the goal of 3 percent assumed in the Lisbon Strategy. Admittedly, the overall context was difficult. Just like the early-1980s and early-1990s, the decade started with a cyclical slowdown. In addition, a succession of adverse shocks contributed further weakness, notably the burst of the technology bubble, the scaling-back of business investment, terrorist attacks, corporate scandals and rising oil prices. However, these various influences cannot explain everything. Outside Europe, countries were subject to the same negative influences but, apart from Japan, nonetheless managed to achieve stronger growth. There is therefore a widespread perception that the EU economy is not performing well and risks falling behind other regions.

A more careful examination of the data qualifies this assessment, but does not modify the overall picture. The performance of the United States appears a bit less impressive

<sup>7</sup> The most recent statistics related to these structural indicators are provided by the European Commission at the following link: <http://europa.eu.int/comm/eurostat/structuralindicators>

<sup>8</sup> Source: *OECD Economic Outlook* No. 76. Statistical Appendix.

once expressed in terms of GDP *per capita*, due to the rapid increase of the US population, but it nonetheless remains more robust than that of the EU. This confirms that Europe is not converging towards the level of income prevailing across the Atlantic and has even been diverging from it during the recent period (Chart 1). The widening of the income gap vis-à-vis the United States in the past ten years is a source of discontent for European leaders. It is, therefore, important to understand why the EU is lagging behind.

Most analysts use growth-accounting frameworks to assess why Europe is lagging behind. These frameworks, in their simplest forms, decompose *per capita* GDP growth into two components: labour productivity (output per working hour) and labour utilisation (total hours worked per person)<sup>9</sup>. Using this approach, the gap between the EU and the US can be decomposed into two components: a gap of 14.4 per cent in labour utilisation and a gap of 16 per cent in labour productivity (Table 2). This suggests that the EU needs to achieve stronger performances in both labour market performance and labour productivity. This explains why the Lisbon Strategy stands on two pillars, which are discussed successively in the rest of this paper.

**Table 2. Decomposition of per capita GDP, 2002 (United States = 100, PPP exchange rate)**

	<i>Per capita</i> GDP a+b	Effect of labour resource utilisation (a)	Effect of labour productivity (b)
European Union	71.9	85.6	84.0
United States	100	100	100

Source: OECD (2004a)

## 1.2. The Lisbon's objective of fostering employment creation

An important target of the Lisbon Strategy is to raise employment levels through labour market reforms. Governments seek to improve work incentives, encourage wage moderation, reduce labour taxes, reactivate those who had been excluded and introduce a greater degree of flexibility in labour market regulation. To this aim, labour market reforms have been introduced since the mid-1990s, with recent initiatives including the reform of the public sector pension scheme in France and Agenda 2010

<sup>9</sup> More precisely, GDP *per capita* is decomposed into three components: labour utilisation, labour productivity and the share of working wage persons in total population. In practice, the latter component varies

only marginally. In accounting terms:  $\frac{Y}{POP} = \frac{Y}{EMP * HOURS} \times \frac{EMP * HOURS}{POP_w} \times \frac{POP_w}{POP}$  where

Y is real GDP, EMP is total employment, HOURS is the average length of working hours, POP<sub>w</sub> is population of working age and POP is total population.

in Germany. Reflecting this new policy setting, employment increased substantially during the second part of the 1990s and did not retreat during the recent slowdown, suggesting that it may have become more resilient to the business cycle.

Labour market conditions have not improved identically for all groups of workers. Prime-age male workers, who were already predominant in labour supply, remain employed in large numbers. The progress has concerned groups that were under-represented in the workforce, notably female and older workers (Table 3). Women are increasingly employed, not only due to cultural changes, but also thanks to the rapid growth of the service sector, which predominantly employs women. The deregulation of part time jobs and temporary contracts, which provide the working time flexibility that women may be looking for, has also helped. The increased participation of older workers notably results from the phasing-out of early retirement schemes, which previously encouraged workers to retire at an early age.

**Table 3. Employment rates tend to increase, (share of persons of working age in employment, in per cent)**

	1992	1995	2000	2003
Total employment rate, of which	61.2	60.1	63.4	64.4
– Male workers	72.8	70.5	72.8	72.7
– Female workers	49.7	49.7	54.1	56.1
– Older workers (55-64)	36.3	36.0	37.8	41.7

Source: EU structural indicator database

Hence, some progress has been made towards reaching the employment goals of the Lisbon agenda. Achieving the aggregate employment rate of 70 per cent by 2010, as pledged by European leaders, would however require doubling recent employment growth rates, which appears ambitious<sup>10</sup>. The Lisbon target for older workers also appears ambitious: the employment rate of older workers increased by a surprisingly large 4 percentage points between 2000 and 2003 and could achieve 50 per cent in 2010 only if it stayed on this rapid course. The employment rate of female workers increased by 2 percentage points between 2000 and 2003, and achieving an employment rate of 60 per cent by 2010 looks equally ambitious, although not impossible. Continuing the inclusion of these under-represented groups into the labour force would require implementing further reforms to increase work incentives and eliminate barriers impeding their access to the labour market. The next two sections discuss the policies specifically aimed at these two groups.

<sup>10</sup> Total employment has increased in the EU by 0.7% per year during 2000-04. Achieving the Lisbon employment rate target would require annual increases of 1.4 per cent.

### ***Older workers***

Past labour market policies encouraged the exit of workers at an early age. Early-retirement programmes facilitated the exit before reaching the official retirement age and traditional pension schemes discouraged working after this age. With the decline of working-age population projected for coming decades, the employment of older people requires special policy reforms. Recent OECD research shows, indeed, that the design of old-age pension and social transfer systems distort individual decisions by effectively providing financial incentives for premature withdrawal (Duval, 2003). This empirical research shows that individual decisions to remain active or withdraw from the labour market at an older age are largely driven by the key parameters of pension and social benefit systems. In a number of countries, particularly in continental Europe, three parameters appear to have a particularly large impact on early retirement decisions: i) the age of entitlement to pension benefits; ii) the level of benefits; and iii) the expected gain from continuing to work instead of retiring.

- The standard age of entitlement to a pension is found to radically influence retirement decisions. Workers retire when they reach this standard age, if they have not done so earlier. This reflects deeply-entrenched social practices of retiring at “customary” ages. In addition, in some cases, people may not be permitted to work after the standard retirement age, even if so desired. Across the OECD, the standard age of eligibility to a full pension differs from a low of 60 in a few countries (e.g. France and Turkey) to a high of 67 (e.g. Iceland and Norway).
- Individual decisions to retire or stay active also depend on the generosity of pension systems. To find out how pension benefits vary across countries, the OECD has computed a new dataset of expected gross replacement rates over a future five-year period at ages 60 and 65. This dataset takes into account recent reforms in pension arrangements. It reveals that the various arrangements currently in place in OECD countries result in very different levels of pension benefits. At age 60, for instance, expected replacement rates vary from 0 (where the earliest age of eligibility is 65) to 70 per cent in the most generous countries. The decision to continue or stop working also depends on several other financial considerations: the amount of additional pension benefits gained for staying longer in the labour force; the pension income lost when retiring later; and the supplementary contributions paid. Depending on how these various parameters are set, the decision to retire or continue working can have markedly different financial consequences.
- Combining these various parameters, the data gathered by the OECD shows that continuing to work at an older age has different financial consequences across countries, depending on their institutional arrangements. Broadly speaking,

continuing to work at an older age is not financially rewarding in continental European countries (with a few exceptions) compared with Nordic and English-speaking countries as well as Japan. This reflects the impact of two factors: high replacement rates, which make it costly for workers to continue to work instead of drawing their benefits; and/or insufficient actuarial neutrality for anticipated and deferred retirement.

To quantify these cross-country differences, the OECD has calculated indicators summarising the net financial impact of continuing work. This new indicator, called the *implicit tax on continued work*, is defined as the decline in pension wealth (i.e. the present value of the future stream of pension payments), net of additional contributions paid, resulting from a decision to postpone retirement. As calculated, implicit taxes on continued work generally tend to rise rapidly as individuals age. In ordinary pension schemes, the implicit tax is not high at age 55 (5 per cent on average), but by age 60 it has risen to 30 per cent on average.

The indicator reveals striking differences across countries. In systems that are “actuarially neutral”, the implicit tax is rather low because the cost related to continuing work is offset by additional benefits. Most of the time, however, continuing in activity is a costly decision because the offset is not complete. Older workers facing a high implicit tax on continued work have an incentive to take their pension rights and withdraw definitely from the labour market.

Apart from standard old-age pension schemes, older workers may also use other pathways into retirement in many OECD countries. This includes special early-retirement schemes as well as unemployment-related and disability benefits, which enable workers to withdraw from the labour market well before the normal age of eligibility to a full pension. These schemes strongly influence retirement decisions because they typically provide high replacement rates and allow the accumulation of additional pension rights even, if, in some cases, at a reduced rate. OECD calculations taking into account these “early retirement routes” (typically through a period of unemployment assistance preceding retirement) suggest that workers face implicit tax rates on continued work of 30 per cent on average in the OECD at age 55, with wide variations across countries. When early-retirement schemes are included, Continental European countries have above-average implicit tax rates, approaching 100 per cent in some cases (Chart 2).

The empirical evidence gathered by the OECD also shows that the labour-force participation of older workers is highly sensitive to the financial incentives embedded in implicit tax rates. This suggests that a comprehensive overhaul of pension and transfer systems that removed early retirement schemes and made old-age pension systems actuarially neutral, for instance, could have very significant effects.

Knowing the order of magnitude of these effects is important for the appropriate design of policy reforms. The OECD has therefore sought to estimate quantitatively the influence of pension scheme parameters on labour-force participation of older workers. Simple estimates, taken at face value, suggest for instance that a 10 percentage points decline in implicit tax rates would slow the decline in older-worker participation by 3 to 4 percentage points. Multivariate analysis based on panel data regressions, points to a smaller, but nonetheless very significant effect.

Using these elasticities, model simulations have been undertaken at the OECD to assess the impact of pension reforms. The simulations suggest that removing early-retirement schemes and making old-pension systems “actuarially-neutral” would have sizable positive effects on the labour force participation of older workers (Chart 3). Phasing-out early-retirement schemes appears to be the most straightforward policy to raise participation rates. Where these schemes are still being used extensively (e.g. Belgium, France, Germany), their closure would increase the labour force participation of the 55-64 age group by 6 to 15 percentage points.

### ***Female workers***

The participation of women in the labour force has been rising in the OECD over past decades, but important differences continue to prevail across countries. These differences are in part rooted in culture and social norms. But OECD empirical work suggests that government policies – notably taxation of second earners, working-time arrangements and childcare benefits – also play important roles (Jaumotte, 2003). The implication of these findings is that policy reforms could do much to raise female labour supply further in some countries.

In most OECD countries second earners in married couples (typically women) are taxed more heavily than single individuals, discouraging participation. Taxation is heavier because the combined family income is taxed at a higher marginal rate or because the dependant spouse allowance is lost when both spouses work. It is noteworthy that countries with high levels of female participation generally offer a favourable tax treatment of second earners (e.g., Nordic countries, Austria, France and United Kingdom).

Access to part-time work boosts female participation because it offers the possibility to combine paid employment with family-related activities, such as child care. Indeed, OECD countries with flexible working-time arrangements tend to have higher female participation. Removing distortions against part-time participation would therefore boost female participation.



Governments provide support to families with young children in different ways, such as paid parental leaves, childcare subsidies and child benefits. Paid parental leaves are found to boost female participation, if they are not too long. Beyond a certain length (estimated at 20 weeks in the OECD study), parental leave may weaken labour market skills and damage future career prospects. Childcare subsidies reduce the cost of caring for children and therefore increase the net return of paid employment. By contrast, child benefits appear to depress female participation, because they raise the income of families and thereby reduce the need for women to return to the labour market.

Female participation is also affected by other government policies. For instance, excessive regulations of the service market tend to hinder the development of the service sector, which is the predominant employer of women. And make-work-pay schemes (such as the Earned Income Tax Credit in the United States and the Prime Pour l'Emploi in France) significantly increase the activity rate of low-income people in general, and single mothers in particular.

Although these findings are not particularly new or surprising, recent OECD research has gone further and sought to quantify the impact of the key policy and non-policy factors affecting female participation. In particular, the results of multivariate econometric estimates have been used to assess the effects on female participation of various policy reforms. It has been estimated that, if every OECD member adopted the policies of the most pro-work country in respect of taxes and childcare, female participation would on average be some 10 percentage points higher than would otherwise be the case.

Overall, these recent OECD studies suggest that the removal of various disincentives and barriers impeding access to the labour market could have significant effects on employment rates. Increasing the incentives for these persons to work is not enough, however. A new approach is needed to stimulate the demand of older workers, including life-long learning, without which older workers with eroded human capital would have difficulties finding employment.

### *A digression on working time*

The Lisbon Strategy is rightly focused on employment rates, which are low in the European Union in comparison to the levels recorded in the United States. Another important factor depressing labour utilisation in the European Union is the short length of working time. During the past thirty years, while the length of working time remained almost unchanged in the United States, it fell by 17 per cent in Europe (Table 4).

**Table 4. Why has labour supply contracted in the EU? (Percentage of change during 1970-2002)**

	Hours per capita	Hours per worker	Employment rates	Share of workingage population in total
United States	20.0	-3.1	18.0	5.0
EU-15	-12.6	-16.8	-1.6	6.8
Germany	-17.1	-24.8	2.5	7.6
France	-23.5	-21.9	-6.9	5.4

Source: OECD Employment Outlook: 2004

As a result, the average American worker now works 1815 hours per year, while the European worker only works 1580 hours. In large European countries such as France and Germany, where working time is even shorter, the average working time is 25 per cent shorter than in the United States, contributing to lower labour utilisation and depressing GDP *per capita*. These differences reflect a variety of factors such as shorter working week, longer paid holidays and other absences from the workplace for non-holiday reasons (OECD, 2004b). Governments have become aware of the costs implied by this shortfall and, in some cases, have envisaged initial steps to liberalize regulatory policies constraining the flexibility of working hours. Surprisingly, despite the importance of this situation, the Lisbon Agenda does not mention this issue. A revised strategy could recognize this gap and incorporate the deregulation of working time in the policy agenda.

### **1.3. Towards faster labour productivity**

From the mid-1970s to the mid-1990s, the European economy increased its labour productivity at an impressive speed. This demonstrated Europe's capacity to enhance productivity through rapid economic modernisation, upgrades of worker skills and high rates of private and public investment. The pace of productivity decelerated, however, to a modest crawl after the mid-1990s, while it sharply increased in the United States (Table 5 and Chart 4). The fact that this difference continued during the recent slowdown suggests that something fundamental might be at work.

This section starts by discussing cross-country comparisons of productivity *levels*, which shows that Europe has high levels of productivity, although maybe not as high as frequently estimated. The section then moves to comparisons of productivity *growth*, suggesting that the EU might fall behind unless policies are changed to create a more productivity-enhancing environment.

**Table 5. Labour productivity has slowed in the EU (GDP per hour worked, annual percentage change)**

	US	EU11 <sup>11</sup>
1970-1980	1.6	3.6
1980-1990	1.4	2.3
1990-1995	1.2	2.5
1995-2003	2.2	1.6

Source: OECD Productivity Database

### *Levels of productivity are comparatively high in the EU*

After catching-up during most of the post-war period, EU countries have achieved enviable levels of labour productivity. Caution is needed however in making cross-country comparisons of productivity levels<sup>12</sup>:

- Productivity measures the efficiency of employed workers, rather than of the general working-age population. In countries with low levels of employment, those employed are likely to be more skilled, and therefore more productive, than average. The exclusion of low-skilled persons leads to an upward bias in the level of productivity. By contrast, in countries nearing full employment, low-skilled workers are more likely to be employed, which tends to depress productivity numbers. To correct these biases, Blanchard (2004) uses the U.S. wage distribution to fill the French wage distribution, so as to adjust for the over-representation of highly skilled workers in France. Using these calculations, he finds that the French productivity level should be lowered by 6 per cent.
- Cette (2004) uses another method based on differences in employment rates by age groups. His method is based on the assumption that young workers are less productive than prime-age workers, because they lack experience, and that older workers are less productive because their human capital is eroded. Both young and older workers are under-represented in the European labour force, which tends to bias productivity levels upward. He evaluates the bias for France to be 7.5 percentage points compared to the United States. Another adjustment to the level of productivity made by Cette (2004) reflects differences in working hours. Empirical evidence gathered by the author suggests that the level of productivity is inversely correlated to the length of working time, reflecting the decreasing return of work with time. The author assumes that workers become less productive when working time lengthens. In the case of France, he reduces the level of productivity by 5 percentage points to adjust for this bias.

<sup>11</sup> EU11 excludes Austria, Greece, Luxembourg and Portugal which do not have long time series for working hours.

<sup>12</sup> For more information on these statistical difficulties, see Ahmad et al. (2003) and OECD (2003).

- The productivity numbers quoted above refer to labour productivity. They do not measure the technological efficiency of production (“Solow residual”) because they are not adjusted for the level of the capital-labour ratio<sup>13</sup>. It appears that European workers have at their disposal a greater quantity of capital, reflecting the high price of labour compared to capital and the substitution that has been underway for many years. Blanchard (2004) estimates that the capital-labour ratio is 30 per cent higher in France than it is in the United States. Based on this, he makes another adjustment of 10 per cent to the level of productivity in order to determine Total Factor Productivity (TFP).

Overall, it appears that the level of labour productivity based on a simple growth-accounting framework may overstate somewhat the level of productivity in Europe. Hence, it is likely that the level of labour productivity is still below the level reached in the United States. This would suggest that there is still a potential from catching up toward the leader. In this context, the decline in productivity growth observed since the 1990s is worrisome.

### ***The productivity growth gap has been reversed since the mid-1990s***

The post-war period was characterised by rapid productivity increases in many countries around the world, in a typical pattern of catching-up towards the most advanced economy – the United States. Productivity increased faster in the European Union than it did in the United States during most the second half of the 20th century, helping to close the gap in output per capita and income.

After 1995, two opposite changes occurred separately: productivity growth accelerated in the United States while it slowed in the European Union, reopening the productivity gap that had previously been steadily closing in previous decades (Table 5). Determining what happened is made difficult by the multiplicity of determinants influencing productivity, including the accumulation of human and physical capital, technological progress, managerial organisation, quality of institutions and good policies. A large part of the recent literature on this topic is devoted to the dissemination of information and communication technologies (ICT), which appears to have boosted productivity growth in the United States, particularly in ICT-producing and ICT-using sectors (e.g. Jorgenson et al., 2004). By contrast, detailed empirical analysis by various authors suggests that Europe may have missed the ICT-related productivity acceleration (Cette, 2004).

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<sup>13</sup> Using a Cobb-Douglas production function, labour productivity can be written:  $(\hat{Y} - \hat{N}) = \hat{T} + (1 - \alpha) \cdot (\hat{K} - \hat{N})$  where  $T$  is total factor productivity,  $Y$  is output,  $N$  is employment and  $K$  is the stock of capital, and where  $\hat{\phantom{x}}$  denotes percentages of change.

In addition, the employment-friendly policies implemented in Europe are likely to depress the growth of productivity. This may occur through two channels. *First*, there might be a slowdown, or a reversal, in the substitution of capital to labour. Changes in labour productivity can be decomposed into two elements: the accumulation of capital per worker, so-called “capital deepening”; and change in TFP (i.e., exogenous technological progress). Wage moderation and cuts in labour tax wedges, as prevailed in Europe during the second half of the 1990s, reduced the price of labour compared to the price of capital and therefore encouraged a substitution of labour to capital. This process is likely to reflect a transition to a new equilibrium characterised by a different combination of production factors, with more labour input. The empirical evidence is that the substitution of capital to labour decelerated since the mid-1990s in Europe, and accelerated in the United States during the same period (Chart 5).

*Second*, the deepening of labour utilisation could lead to a change in the average quality of labour. For instance, the lowering of labour costs may “price in” low-skilled workers previously excluded from the labour market because their marginal productivity was inferior to their labour cost. Deterioration in the quality of labour may result in lower productivity as it is traditionally measured, that is, average productivity unadjusted for the quality of production factors.

If Europe is embarked on a prolonged process of “labour deepening”, as it is envisaged by the Lisbon Strategy, productivity growth could remain modest for years to come. This undesirable development could be avoided by accompanying the job-friendly framework of the Lisbon Strategy with productivity-friendly policies aimed at boosting TFP growth.

### ***Product market regulation reform and productivity***

There is growing evidence that the degree of competition in product markets has an important influence on productivity. This is because the policies and institutional settings that promote product market competition play a key role in influencing firms’ incentives to seek efficiency gains either via the adoption of technological or organisational best practices. Governments have recognised the positive impact of product market regulatory reforms and have taken steps to introduce a more pro-competitive climate in many OECD countries. In Europe, progress towards the completion of the EU single market for goods and services has helped boost competitive pressures arising from cross-border activities. The process of EU integration has also contributed to significant reforms in network industries, including via privatisation and opening of market access to potential competitors in sectors traditionally dominated by monopolies.

Recent studies have explored the various channels through which product market regulatory reforms can influence productivity. The European Commission (2004) finds evidence that the *direct* influence of product markets on productivity, via decreased costs of doing business and lower barriers to penetrate markets, is relatively small. By contrast, the same study estimates that the *indirect* effects are more important. Three indirect effects are identified. *First*, the reduction of mark-ups that results from heightened competition leads to a more efficient allocation of resources, as consumer demand is met through a better allocation of resources. *Second*, increased competition leads to greater *productive efficiency*, as firms reduce or eliminate the under-utilisation of their production factors. *Third*, competition encourages firms to innovate and to move closer to the modern technology frontier (dynamic efficiency). The first two indirect channels are mostly once-off effects and can be accrued relatively rapidly, as firms take strategic decisions to compete in the new, more deregulated business environment. The third channel has longer transmission lags but has a long-lasting dynamic effect: the incentives for firms to innovate and move closer to the frontier can increase the growth of productivity to a persistently higher level. But this cannot happen overnight, because it implies the rather long process of developing innovation capabilities.

Overall, recent empirical evidence suggest that labour utilisation growth has started to accelerate in Europe, as governments began to implement some initial measures to reform their labour markets and ameliorate work incentives. By contrast, productivity growth appears to have decreased since the mid-1990s, partly as a transitory effect of the “labour deepening” process. This dichotomy underscores the importance of undertaking employment-friendly and productivity-enhancing reforms at the same time. The next section discusses whether the Lisbon agenda can really achieve these two ambitious objectives.

#### **1.4. Towards a successful Lisbon Strategy?**

This paper began by noting the apparent disillusion of many observers with the performance of the European economy, compared with aspirations. Indeed, numerous analysts and observers have expressed concerns that the Lisbon Strategy may not be on course to achieve its objectives. The High Level Group chaired by Wim Kok, in charge of preparing of midterm review of the Lisbon Strategy for the European Council, came to the following conclusion: “*Too many targets will be seriously missed. Europe has lost ground to both the US and Asia and its societies are under strain*” (Kok, 2004). Similarly,

in assessing growth performance, the European Commission concludes that the “reform agenda is all the more pressing given that the EU’s underlying growth rate has been trending downwards since the second half of the 1990s and since the medium to long term outlook points to a continuation of these trends” (European Commission, 2004). In the same vein, the OECD concludes that “the medium-term baseline scenario [...] suggests that these targets will not be met on current policy settings” (OECD, 2004a). Finally, the IMF summarised its consultation with the euro area as follows: “there was full agreement on the need to impart new momentum to growth through structural reform, in line with the Lisbon agenda. The area’s pace of longer-term growth was deemed unsatisfactory, and Europe’s social and economic model needed to be retooled to take advantage of the opportunities offered by globalisation and new technologies and to meet the challenge of population ageing” (IMF, 2004).

This disappointment with the progress made so far needs to be put in the historical context of the Lisbon Council Meeting. When EU leaders met in Lisbon, in March 2000, the European economy was at the top of its business cycle and stock markets were at their highest points<sup>14</sup>. Real GDP in the EU was about to grow by 3.8 per cent in 2000 – the strongest rate since the late 1980s’. The unemployment rate had declined by 2 percentage points in just two years. More globally, the economic system seemed to have entered into a new era dominated by information technology and knowledge societies. In this environment, it was easy to become excessively optimistic. Given the exuberant context of March 2000, the aspirations of the Lisbon summit now appear somewhat inflated.

### ***A broad reform agenda is needed***

Nonetheless, faced with various challenges, Europe has no other choice than to embrace an ambitious policy agenda. On the external side, Europe faces the challenge of coping with the acceleration of technological innovation in the United States, illustrated by the market shares gained by U.S. firms in knowledge-related products and services. At the same time, the continent faces the challenge of the economic take-off of China and India and their predominance in labour-intensive markets. European countries also need to address internal challenges, including the financial difficulties of social protection systems and the rapid ageing of its population (European Commission, 2004; Kok, 2004; OECD, 2004; IMF, 2004; Camdessus, 2004).

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<sup>14</sup> The Nasdaq composite index reached its highest point (slightly over 5000 points) on 10 March 2000. The European Council of Lisbon took place only two weeks later, on 23-24 March.

### ***The Lisbon Strategy is sound and helpful***

The framework provided by the Lisbon Strategy is sound and helpful to address these challenges. The Strategy appropriately seeks to raise medium-term growth rates of GDP, through appropriate structural reforms. It intends to achieve higher growth by both encouraging labour utilisation and nurturing a climate favourable to productivity increases and innovation.

An important contribution of the Lisbon Strategy is that it encourages European leaders to agree a common economic framework for the decade. This is helpful in an environment where national differences are important and where cultural values and social choices differ. Also, by establishing quantitative benchmarks against which progress can be monitored, the Strategy provides a transparent method of fostering a dialogue with all interested parties.

### ***Some targets will be difficult to reach***

By establishing quantitative targets, the Strategy tries to provide incentives for achieving progress. This approach, however, is not without risks. Establishing excessively ambitious targets might not only discourage policy-makers, but also reduce the credibility of the entire framework. By contrast, targets that are too easy to reach would not sufficiently mobilize the energies of stakeholders.

In this context, the goal of transforming Europe into the “most dynamic and competitive knowledge-based economy in the world” by 2010 appears out of reach and risks losing credibility if the income and productivity gaps vis-à-vis the United States continue to widen. What matters is that Europe embarks on a virtuous circle of improvements both in the macroeconomic and microeconomic spheres.

### ***What is the way to Lisbon?***

As European leaders prepare for a mid-term review of the Lisbon Strategy in 2005, it is useful to take stock of what has been achieved so far and what else could be done. As mentioned above, the Strategy has been helpful in focussing the minds of stakeholders on a common policy agenda. The agreement to achieve common quantitative targets and to monitor progress in their direction has injected a useful degree of benchmarking and transparency in the process. The report of the group chaired by Wim Kok (2004) has provided a warning about the risks of missing many of the important targets and exhorted political leaders to act more energetically to achieve the Lisbon goals.



The effectiveness of such pressure is, however, debatable. In areas where policies largely remain within the prerogatives of national governments, it is not obvious that exhortations from various bodies of the European Union make a large difference. As the experience of the Stability and Growth Pact shows, national governments prefer to follow their own agenda and are reluctant to abide by external constraints. In fact, subsidiarity is the key guiding principle in the design of Community policy, and many policies are still conducted at the national level, without EU interferences.

At the same time, common policies and policy coordination processes are widely accepted in areas where there are obvious externalities, notably where co-ordination can produce a common good. EU policies have been most successful where the externalities were obvious to all and where cross-country spillover effects justified common policy actions. For instance, the EU has been most successful in creating a Single Market for goods, because this produced a common good with benefits to all. Similarly, the process of monetary union, including the launching of the euro and the establishment of the ECB, have had positive externalities associated with lower transaction costs, exchange rate stability and low inflation in all member countries.

The same test cannot be applied successfully to all aspects of the Lisbon Agenda. Most notably, the ambition of increasing employment rates impinge on labour market policies that are largely within the prerogatives of national governments. While higher employment has obvious benefits at the national level, the cross-border effects of labour market reforms are less certain. This is because ambitious labour market reforms do not necessarily benefit trade partners. In fact, they may have negative trade effects on neighbouring countries, insofar as labour market reforms may reduce unit labour costs and improve export performance. Thus, the benefits from coordinating labour market reforms are doubtful. In addition, labour market structures and policies differ considerably in the EU, and the way wage negotiations function remains very diverse. Hence, a target of raising the employment rate to 70 per cent may well be appropriate for a particular country, but insufficiently ambitious or out-of-reach for another country. Adopting identical quantitative employment targets for all countries is not the right approach.

The disenchantment with the Lisbon Strategy may therefore well come from the fact that it covers many policy areas where the benefits from policy coordination are not obvious. If governments and the public opinion do not see clear benefits from a common initiative, they are unlikely to subscribe to it. In this light, it would seem appropriate to refocus the Lisbon Strategy on areas where there are obvious externalities. Completing the Single Market, so as to boost product market competition and foster innovation and productivity, seems a good candidate. While the Single

Market has promoted competition on goods markets, cross-border competition in the area of services remains impeded by national barriers and various administrative impediments.

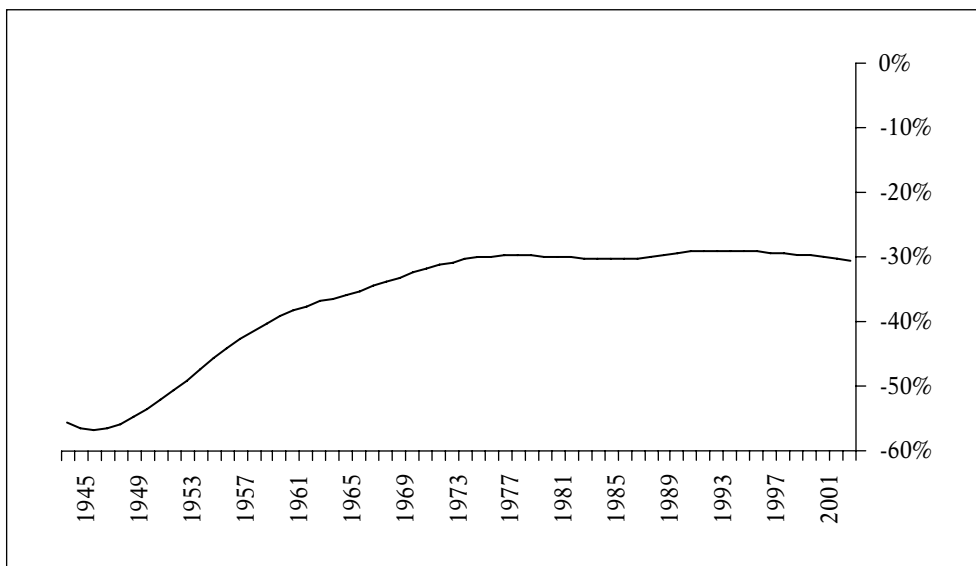
The second half of the decade could usefully be devoted to promoting free competition in the field of professional and household services – as foreseen by the EU draft *Services Directive*. By putting this goal at the centre of the Lisbon Strategy, the mid-term review by political leaders would give Europe a greater chance to become a very competitive and dynamic region by 2010.

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## Annex : Charts

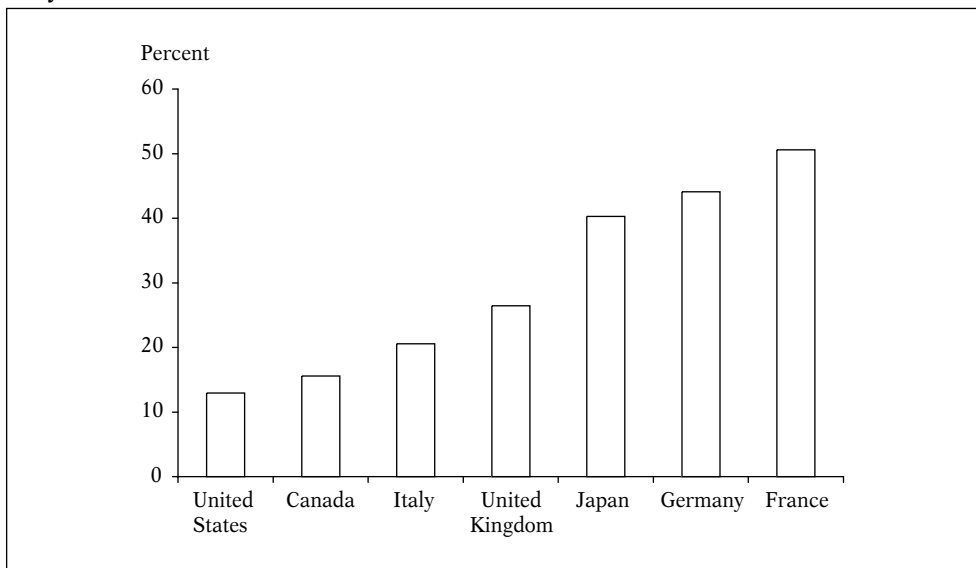
**Chart 1: EU15 per capita GDP gap vis-a-vis the U.S. (2000 PPP, 1945-2004)**



Note: Smoothed with an HP filter with a parameter of 100 over 1921-2011.

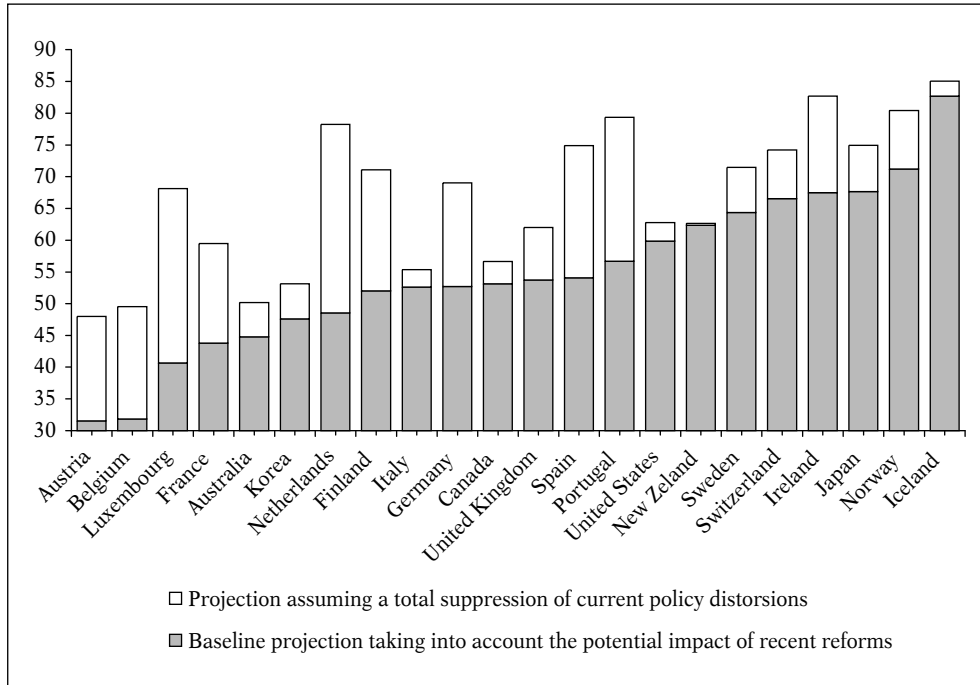
Source: OECD, Maddison (2003), EU EPC, U.S. Census Bureau.

**Chart 2: Implicit tax on continued work at age 60 in currently legislated pension systems and early retirement schemes**



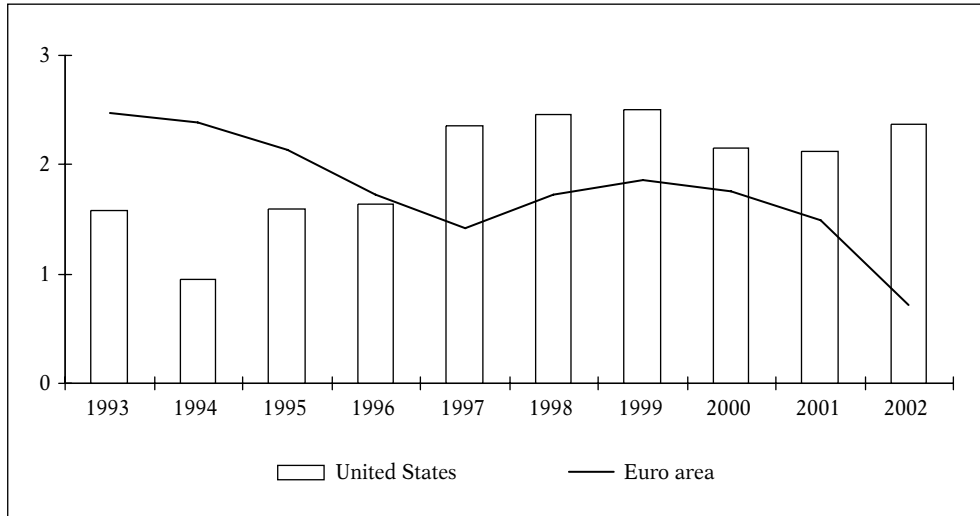
Source: OECD Economic Studies No. 37.

**Chart 3: Potential impact of pension reforms on labour force participation of older workers (projected labour force participation rates of the 55-64 age group in 2025 under different scenarios)**



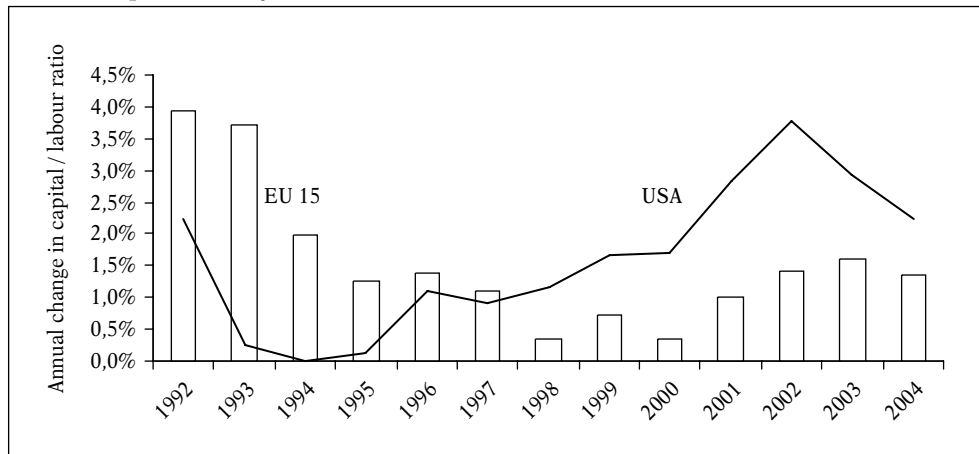
Source: OECD Economic Studies No. 37.

**Chart 4: Labour productivity per hour (Real GDP divided by total hours worked, annual growth, moving average (centered, over 3 years))**



Source: OECD.

**Chart 5: Capital intensity**



Source: European Commission (AMECO Database).

## 2. Managing thin air – EU’s Lisbon strategy: Benchmarking, targets and the open method of co-ordination

**Ulrik Bützow Mogensen<sup>15</sup>**

*The ambitious Lisbon strategy aims for EU to become the world’s most competitive economy by 2010, but EU is now further away from this objective than when the strategy was launched in 2000. This does not mean that the strategy is wrong or that it has not produced progress, but it means that it needs to be significantly improved and that efforts need to be stepped up.*

*EU becoming the world’s most dynamic knowledge based economy in 2010 is looking increasingly unlikely. However, the real issue is whether EU is able to respond to today’s economic and social challenges successfully. More broadly, the issue is the future of the European welfare states in a world of global competition and rapid innovation.*

*A key element in the Lisbon strategy is the much discussed ‘open method of co-ordination’ (OMC). This article adds to the discussion by reviewing the Lisbon process and the OMC based on enterprise policy experience.*

### 2.1. Introduction

**2.1.1.** Early November 2004, the Kok report was presented to the European Commission and to the European Council. The report was produced by a high level group of experts and chaired by the former Dutch Prime Minister, Mr Wim Kok. The report contains a rather harsh assessment of the progress achieved so far and provides an important input to the mid term review of the Lisbon Strategy planned for the European Summit in March 2005. Observers have commented on

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<sup>15</sup> The author would like to thank the following persons for comments and advice: Tassos Belissiotis, George Lemonidis, Christian Lettmayr, Peter Bouwen, Barbara Blaszczyk and Krzysztof Szczygieski. The views expressed in this article are however exclusively those of the author and may not reflect the position of the European Commission.

the report and the general assessment is that the analysis is sound but that the recommendations are not sufficiently strong. However, under the current legal and political conditions strong proposals are not in ample supply.

**2.1.2.** The mid term review is nonetheless a welcomed opportunity to discuss in depth the management of the Lisbon strategy and how the process can be improved. The present article gives a personal view of the issues seen from an enterprise policy angle<sup>16</sup>.

## **2.2. The Lisbon ambition**

**2.2.1.** The Lisbon Strategy was launched at the summit in March 2000. At the time, the economic climate was very different from now. The summit took place at the culmination of 7 years of economic upswing, a period of unprecedented technological progress, the “new economy” was a big topic and prospects for the future were enthusiastic. An indication of this bliss was that the Lisbon Summit assumed a 3 % average annual GDP growth in Europe over the coming decade was both feasible and necessary. However, conditions changed rapidly. Shortly after the summit the Internet bubble burst and a period of recession and business failures set in. In the following 3 years a remarkable setback was recorded in the overall economic climate. On top of this, the 9/11 attack, the WorldCom and Enron crisis the appreciation of the euro against the dollar and volatile and high oil prices have been bad news for the Lisbon strategy. It is therefore fair to say that the Lisbon Strategy has had a difficult childhood.

**2.2.2.** It is important to keep in mind that the Lisbon process is a long term strategy. The full economic benefits of measures taken in the first half of the Lisbon term will only appear over the long term. For example, new initiatives improving commercialisation of research results will take time before they generate more innovation and before this innovation results in more jobs and wealth. Hence, the Lisbon strategy aims at structural change, meaning changing the basic framework conditions for doing business in Europe. The benefits deriving from the structural reform initiatives will take time to materialize. It is therefore still early to evaluate the results of the strategy though we are now nearly halfway to the Lisbon deadline of 2010.

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<sup>16</sup> The social and environmental dimensions of the Lisbon strategy are outside the scope of this article.



**2.2.3.** It should also be recognised that the Lisbon agenda is different from many other economic projects hitherto undertaken in Europe. The EMU was a huge project but involved a more limited set of institutions, ministries and economic indicators. The Single Market Programme is also primarily driven through legal acts (albeit a large number) adopted at the European level and implemented at the national level. The Lisbon project is much broader and involves many more policy instruments. In addition, most of these instruments are outside the control of the European institutions. The strategy involves a large number of national ministries and agencies as well as several formations of the European Council and Commission services. As the strategy also aims at maintaining a high level of social inclusion and high environmental standards, the process requires change in practically all areas of economic life. Apart from changing economic incentives, including reallocation of national and regional government's budgets as well as EU budgets, it involves building new institutions, changing perceptions and traditions and creating a new business and entrepreneurial culture. Culture is obviously very difficult to change but this is nonetheless what is required. For these reasons, the Lisbon process is – at the European level – primarily about management and communication, however in a form more complex and challenging than for any previous European projects.

**2.2.4.** Since May 2004, the European Union has 25 members, which is not making the task easier. The new Member States are economically weaker than the old members, but this may be counter-weighted by their more dynamic economic conditions. The question is how the community and in particular the OMC can adapt to the many participants with quite dispersed economic, social and cultural conditions while simultaneously enhance its effectiveness.

## **2.3. The economic performance**

**2.3.1.** Economic progress towards the Lisbon goals has been meagre. Simultaneously, other regions (including the US) have progressed faster than Europe. Consequently, on the present track the Union will not be able to achieve the ambitious target of becoming the most competitive and dynamic economy in the world by 2010. As said, the Lisbon Summit envisaged an average annual growth rate of 3 %. However, GDP growth collapsed in 2000 and the EU economy

- started to recover only in late 2003 and only at a slow rate. In the US, growth resumed faster and is now close to pre-recession levels<sup>17</sup>.
- 2.3.2.** Weak economic growth has been matched by disappointingly slow employment growth. The Lisbon strategy set a target for the employment rate: 70 % by 2010. While 6 million new jobs have been created<sup>18</sup>, the employment rate has only increased moderately. Between 2000 and 2003, the employment rate rose from 62.4 % to 62.9 % in EU-25 (from 63.4 % to 64.4 % in EU-15).
- 2.3.3.** The annual European Competitiveness Reports show that there has been a systematic underperformance of the EU compared to the US. In the past twenty-five years, apart from cyclical fluctuations, there has been no catch-up of the EU to the US standard of living. On the contrary, the gap has widened and is now larger than ever in the past quarter of a century. At present, GDP per head in the EU is less than two thirds of the US level.
- 2.3.4.** Until the mid-1990s, labour productivity growth in the EU consistently outperformed the US, even though the level of productivity in the EU was continually lower than in the US. This convergence process appears to have come to an end in the mid-1990s when US productivity growth outpaced that of the EU by a substantial margin (See annex 1 for an illustration of this). Moreover, the weaker employment performance of the EU combined with the decline in productivity growth contributed directly to the stagnation in the EU GDP per head compared to the US.
- 2.3.5.** In the second half of the 1990s, the US experienced a rapid acceleration of labour productivity growth, which was linked to the increased use of information and communication technologies (ICT)<sup>19</sup>. The EU failed to realise similar productivity gains in spite of large investments in ICT. The ICT producing industries in the US have seen record improvements in productivity. Similarly, service sectors that are intensive users of ICT, in particular wholesale, retail trade and financial services have recorded high productivity growth too<sup>20</sup>. In

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<sup>17</sup> It is being argued that Europe is less resilient to adverse economic shocks than the US. Whereas the US growth curve has been V-shaped, the European curve is L-shaped (or more optimistically) banana shaped. See for instance, Patrick Lenain (OECD) at

[http://www.case.com.pl/strona-ID-seminaria\\_publiczne,seminarium\\_id-3631052,nlang-710.html](http://www.case.com.pl/strona-ID-seminaria_publiczne,seminarium_id-3631052,nlang-710.html)

<sup>18</sup> See European Commission (2004): *Delivering Lisbon – Reforms for the enlarged Union*, COM(2004)29 final/2, Brussels.

<sup>19</sup> See Gordon (2004) for a good overview article on the EU versus US productivity issue. The article argues that product market regulation and differences in innovation systems have played a larger role than ICT investments. However, Jorgenson (2004) underlines the role of ICT in the continuously high performance of US productivity growth.

<sup>20</sup> According to Van Ark (2003), page 28, the distributive trades and financial services cover about 25 % of total value added in the US against 19 % in EU, whereas manufacturing in the US covers about 14 % in the US against 19 % in EU.

Europe, however, similar developments have not taken place and this has raised concerns about the speed of technological modernisation and the implementation of organisational reforms in the EU. Annex 3 illustrates the sector contributions to the overall productivity development in the EU based on figures from Van Ark (2003).

- 2.3.6.** GDP per head is 27 % lower in EU than in the US. In annex 2 this gap is decomposed. Out of the 27 %, the lower level of the employment among the working age population in the EU accounts for 11 % point. The lower average annual working time being shorter in EU than in US accounts for another 5 % points. The remaining difference, 11 % point, is caused by the lower level of labour productivity in EU than in US.
- 2.3.7.** Evidence shows<sup>21</sup> that the increasing gap in productivity levels and growth between the US and Europe can be referred mainly to the bigger continental countries (Germany, Italy and France) and to the service sectors, particularly the distributive trades and financial services as mentioned above. These sectors have not been showing the same kind of speedy productivity growth as seen in the US. These sectors are big IT-users but it appears that Europe has not been able to exploit IT investments as effectively as the US. Against this background, the importance of the Lisbon strategy becomes evident.
- 2.3.8.** In spite of the widening productivity gap between EU and US, a number of positive results have been achieved by the Lisbon strategy so far. The Commission Spring Report 2004<sup>22</sup> provides a list of these results. It mentions that 6 million jobs have been created increasing the employment rate in Europe – as mentioned above – and that long term unemployment has been reduced from 4 % in 1999 to 3 % in 2003. In addition, a number of key markets have been liberalised including the telecom sector, rail freight, postal services and the electricity and gas markets. There has also been good progress in the uptake of IT, e-government and in particular on the access of enterprises to Internet (see annex 4). However, the economic benefits of these improvements in enterprise framework conditions have yet to be materialized in terms of jobs and growth.

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<sup>21</sup> See table in Annex 3, which is based on figures from Van Ark (2003).

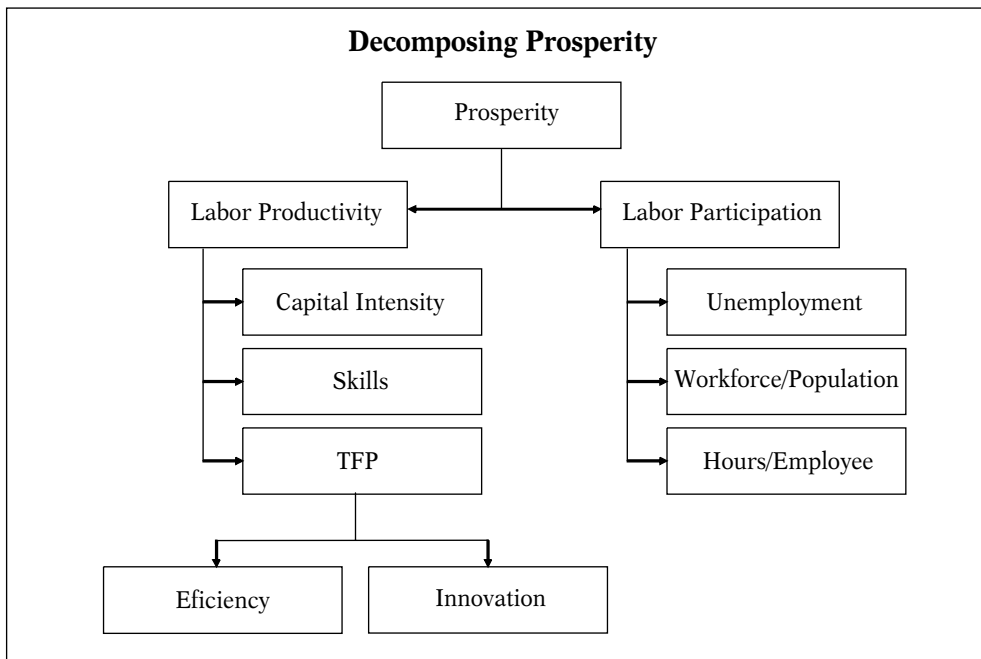
<sup>22</sup> See European Commission (2004): *Delivering Lisbon – Reforms for the enlarged Union*, COM(2004)29 final/2, Brussels.

## 2.4. Prosperity, productivity and micro policy

**2.4.1.** The following section presents a framework for conceptualising drivers of growth and economic prosperity. The level of prosperity in an economy is typically measured by GDP per head. GDP per head is the product created by the labour input (the employment rate and the working hours put into production) and the level of labour productivity. The chart below shows how overall prosperity can be decomposed.

**2.4.2.** Labour productivity is determined by capital intensity and total factor productivity (TFP)<sup>23</sup>. TFP is the part of productivity, which cannot be assigned directly to factor inputs. TFP depends on how labour and capital are combined, the organisation of businesses, on how technology is applied, on the level of competition in the markets, on the exploitation of economies of scale and scope, etc. In other words, TFP is determined by the level of efficiency and innovation in production. Improving TFP growth through improvements in efficiency and innovation is therefore a central objective of enterprise policy.

**Chart 1: Decomposing prosperity**

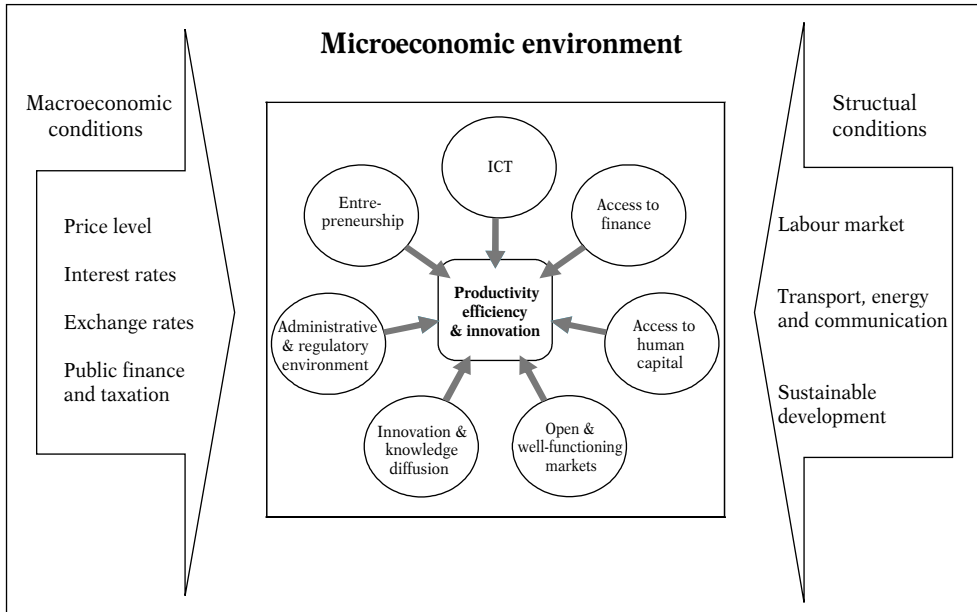


Source: The chart has been presented by Christian H. M. Ketels, PhD, Institute for Strategy and Competitiveness, Harvard Business School.

<sup>23</sup> The outline here is based on a simple standard production function.

**2.4.3.** The relationship between the enterprise policy and TFP is however complex. Increased productive efficiency and innovation are the two crucial ways in which TFP and henceforth prosperity can be improved over the long term. This requires a business environment supportive of entrepreneurial ventures, innovation, competition and business dynamism. These elements are therefore key determinants of long term economic and productivity growth.

**Chart 2: The microeconomic business environment**



**2.4.4.** Chart 2 presents these factors and their impact on the business environment within which enterprises operate. Macroeconomic conditions such as price stability, stable interest rates, stable exchange rates and balanced public finances are clearly very important conditions for the business environment. Without these conditions, an environment conducive to innovation and growth cannot be established. They are, however, not sufficient for a competitive environment, but they provide a basic prerequisite. Other structural factors such as the labour market conditions and transport, energy and communication sectors may similarly have a negative impact on the business environment if these elements are not functioning well.

**2.4.5.** However, in order to achieve a business environment conducive to entrepreneurial growth and innovation, the microeconomic climate has to stimulate and encourage competition, knowledge and technology transfers, etc. so that

productive efficiency and innovation can flourish. The role of enterprise policy is to identify and implement such conditions. Only by creating excellence in the microeconomic environment through a combination of micro policies addressing the 7 core areas identified in the chart above – often referred to as framework conditions – (entrepreneurship, access to finance, access to human resources, innovation and knowledge diffusion, information and communication technologies, open and well functioning markets, administrative and regulatory environment), a truly competitive environment can be generated<sup>24</sup>. Consequently, an essential part of the Lisbon strategy is to promote, encourage and improve micropolicies in these areas.

**2.4.6.** DG Enterprise tries in different ways to identify micro policies 'best practice' for the business environment and disseminate information about these across Member States<sup>25</sup>.

## 2.5. The OMC instrument

**2.5.1.** The Lisbon strategy devotes two main instruments for the European Community to pursue the objectives of the Lisbon strategy. First, the community method, which refers to the 'traditional EU law making', where the European Commission proposes regulation and the Council of Ministers and Parliament adopt it, and Member States implement it. This instrument is obviously very important for some crucial and strategic measures of the Lisbon strategy such as the European Patent, the implementation of an effective internal market for services and the well functioning of an integrated financial market in Europe. Nonetheless, this article concentrates on the second instrument, the open method of co-ordination (OMC).

**2.5.2.** The OMC was designed at the Lisbon Summit as an attempt to structure community work carried out within policy areas where either the Community has

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<sup>24</sup> This section builds on work by Harvard professor Michael Porter, who in his book *"The Competitive Advantage of Nations"* in which he - based on the empirical study of a range of economic successful regions - identifies competitive clusters and the framework conditions that have determined their success. Based on research in ten leading trading nations, the book offers a theory of competitiveness based on the causes of the productivity with which companies compete. The book introduces Porter's "diamond," as a way to understand the competitive position of a nation (or other locations) in global competition. Porter's concept of "clusters," or groups of interconnected firms, suppliers, related industries, and institutions that arise in particular locations, has become an integrated way for companies and governments to think about economies, assess the competitive advantage of locations, and set public policy.

<sup>25</sup> A rich source on micro policies is the annual publications from The European Charter of Small Enterprise. See European Commission (forthcoming): *Report on the [RTF bookmark end: \_Toc498148176] implementation of the European Charter for Small Enterprises in the Member States of the European Union*, Commission Staff Working Paper.

limited or no legal competence or where the Community's traditional legal instruments are not suitable due to the nature of the area. The OMC was in fact nothing new; it had already been applied for some years, in particular under the so-called Luxembourg process of employment policy and the Cardiff process of product and capital market reform. But at the Lisbon Summit the method was formalised, baptised and inscribed in the summit conclusions where it was assigned an important role in the process.

**2.5.3.** What is the OMC? It is a relative loose framework for co-ordination and co-operation along the following principles:

- Setting guidelines for the Union combined with specific timetables for achieving goals for the short, medium and long term.
- Establishing quantitative and qualitative indicators and benchmarks against the best in the world and tailored to the needs of different Member States and sectors as a means of adopting best practice.
- Translating European guidelines into national and regional policies by setting specific targets and adopting measures, taking into account national and regional differences.
- Conduct periodic monitoring, evaluation and peer reviews organised as mutual learning processes.

**2.5.4.** Hence, the OMC is a flexible methodology for mutual learning and progress. By applying tools such as benchmarking, exchange of best practises, by setting objectives and deadlines, by mutually monitoring progress and policies, the OMC is designed to deliver progress through non-legislative means. The method is based on the voluntary participation of Member States as the clear majority of practical policy instruments are placed in their hands. There are no formal means of giving incentives or sanctions to Member States. An informal 'sanction' is sometimes mentioned as 'blaming and shaming' or 'peer pressure', which basically means visualising and discussing poor performance and rankings of individual Member States in particular areas. Member States participating in the OMC obviously should not need such sanctions, but it cannot be denied that sometimes this is the way progress is made.

**2.5.5.** Since the definition of the OMC is rather loose it can be applied in many ways and this is exactly what has happened. It is true to say that the OMC has been applied in a 'bottom up' approach. Every policy area has launched processes which would suit the ways and workings of that particular area. Since the Lisbon process involves so many different bodies both on the European and on the national levels, the methodology has been adapted to each specific policy area

whereas co-ordination and coherence across policy areas has been relatively limited. This has been both an advantage and a drawback. It has allowed the methodology to adapt to specific circumstances and hence may have increased 'ownership' in the various policy camps. On the other hand, the overall co-ordination and communication has suffered and the Lisbon Strategy has not been communicated as a consistent and coherent drive for progress. In addition, the current practice has not fully taken account of the cross-functionality of competitiveness – that competitiveness is an issue which spans across many policy fields. The establishing of the Competitiveness Council, basically merging the former Industry, Research and Internal Market councils, shows that attempts are made to implement a cross-fertilizing approach.

- 2.5.6.** Since the European community is not directly involved in the actual policy implementation, the community has been confined to work on ex-ante issues (setting objectives, targets, guidelines and benchmarks) and ex-post issues (policy reviews and performance monitoring). The structural indicators may be an example of the latter. The ex-ante part has been developed in the course of the Lisbon Strategy trying to guide and motivate Member States to progress. Most notably, the Lisbon strategy has resulted in setting a number of overall European quantitative targets – in particular the employment target of reaching 70 % employed of the active working population and the 3 % target of expenditure on R&D<sup>26</sup>. Such specific targets are a relatively new phenomenon in European politics.
- 2.5.7.** The targets have been controversial for various reasons, one of them being that targets inherently are somewhat arbitrary. It can always be argued whether it should have been higher or lower and there is rarely any explicit rationale for choosing exactly one specific level. Targets have been accused of reflecting wishful thinking or encouraging overinvestment in specific areas which would be economically unsound. In particular, it has been argued that there are too many targets<sup>27</sup> and that the targets are inconsistent.
- 2.5.8.** The question of too many targets is a concern because it may serve to diffuse focus. Many targets however reflect the fact that the strategy indeed concerns a very wide range of issues. Too miss the point that the strategy is very broad would be a mistake. Too many targets may be a problem in terms of communication. Effective communication requires focus and sending clear key messages. A communication strategy should therefore not involve too many targets. However,

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<sup>26</sup> See annex attached to the Kok report.

<sup>27</sup> This has been argued by the Kok group and by others.



if the policy objective is there, the target in itself is just a forceful way of communicating it. Notwithstanding, there seems to be a need for a better economic underpinning of the targets and for an improved rationale in order to enhance their credibility.

**2.5.9.** It has been argued that the European targets are inconsistent, which would mean that targets would be mutually exclusive. It is difficult to say whether this is really the case. The Nordic countries provide examples of how high social and environmental standards are being pursued maintained simultaneously with high competitiveness performance. Targets clarify policy priorities and by doing so they highlight relationships between different policy objectives. Take – for instance – the target of reducing state aid to 1 % of GDP and the target of improving life long learning. Obviously, a reduction in state aid across the board would also reduce aid to life long learning activities, in which case the two targets would seem inconsistent. The two objectives however can be achieved simultaneously by redirecting aid allowing for an expansion of state aid to life long learning activities and a reduction of other types of state aid. Targets may thus seem inconsistent but in fact they may not be; it may be a question of pairing balancing of different objectives with effective implementation.

## 2.6. National quantitative targets

**2.6.1.** The OMC has been applied by various Enterprise policy initiatives in recent years such as the European Charter for Small Enterprises, the Enterprise Policy and Innovation Scoreboards and the BEST projects. In the following, the article concentrates on the Quantitative Targets Project.

**2.6.2.** The project<sup>28</sup> was launched in 2001 by DG Enterprise to advance policies towards making the Lisbon goal a reality. The basic idea was to improve the framework conditions for European enterprise performance through national commitments to specific objectives - in the form of quantitative targets. These

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<sup>28</sup> The Quantitative Targets Project is a joint project of DG Enterprise and the Member States. It was launched in Autumn 2001, see *Quantitative Targets in Enterprise Policy, Steps towards the Lisbon Objectives*, Commission Staff Working Document, SEC(2002)1214 of 7/11 2002. Quantitative targets at the EU level and the national level should be distinguished. The discussion early mainly addresses the overall EU wide targets set on the level of the European Council (i.e. 70 % employment rate, 3 % of GDP in R&D investments, etc.), whereas this project refers to quantitative targets set by Member States in their national enterprise policy strategies addressing their national conditions. An important difference is obviously that Member States have more instruments available to achieve their goals than the EU has.

targets should be based on enterprise policy indicators important for enterprise competitiveness and the promotion of the knowledge-driven economy.

**2.6.3.** Over the years, Member States and also some non-Member States have announced quantitative targets to DG Enterprise. Currently, the list of targets contains a total of 125 targets announced by 21 European countries. These targets are grouped under the headings monitored by the Enterprise Policy Scoreboard, i.e.; entrepreneurship, innovation and knowledge diffusion, access to finance, access to human capital, information and communication technology, open and well functioning markets and administrative and regulatory environment. These areas correspond to the circles presented in the chart on the microeconomic environment shown previously.

**2.6.4.** Benchmarking exercises and evidence from Scoreboards are widely used as basis for policy recommendations and dissemination of 'best practises'. The national targets builds on this methodology and works as a device through which enterprise policy in individual Member States can be inspired and progressed by learning from the best performer(s). The role of the quantitative targets is the following:

- Strengthen the commitment to achieve policy objectives
- Raise awareness and facilitate public debate of enterprise policy objectives
- Provide more precise objectives for public administrations
- Demonstrate linkages, facilitate coherence and address messages to neighbouring policies (research, education, employment, etc.)
- Reduce uncertainty for businesses and markets by giving clear commitments to a favourable future business environment
- Improve the monitoring of policy progress

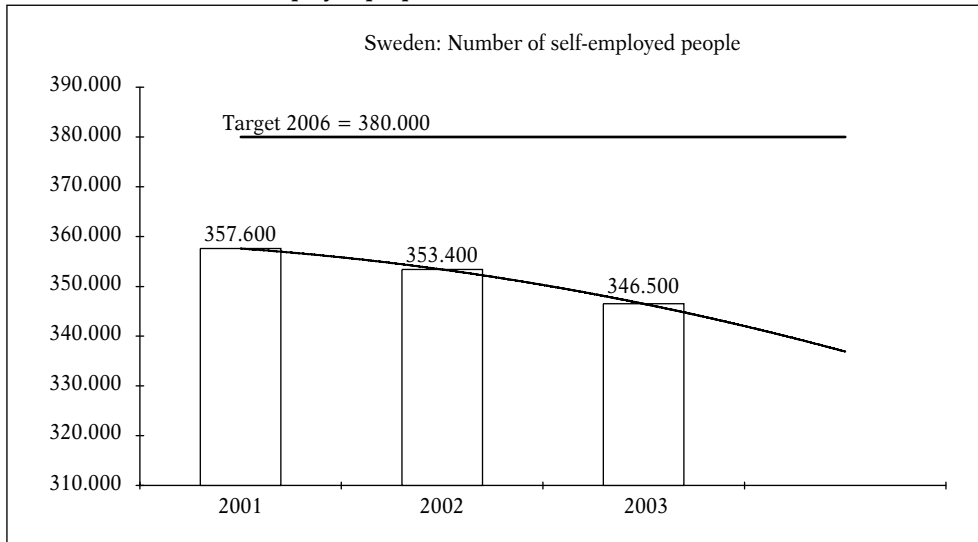
**2.6.5.** The implementation of quantitative targets in European enterprise policy, as mentioned previously, follows a voluntary, non-legislative process, based on dialogue. The Commission sees its primary role as a facilitator in the exchange of good practises and in the monitoring of progress towards the common goal. The Commission is monitoring progress towards these national targets/benchmarks in the annual Enterprise Scoreboard. In addition, peer reviews have been planned to review specific targets and evaluate policy progress pursued to achieve them.

**2.6.6.** A few concrete examples are discussed in the following:

The Swedish government has adopted a target on the overall number of self-employed in Sweden. The benchmark is set at 380000, which is to be reached by 2006. However, the chart below shows that so far the number of self-employed has been declining and if this continues, the target will not be reached. Hence,

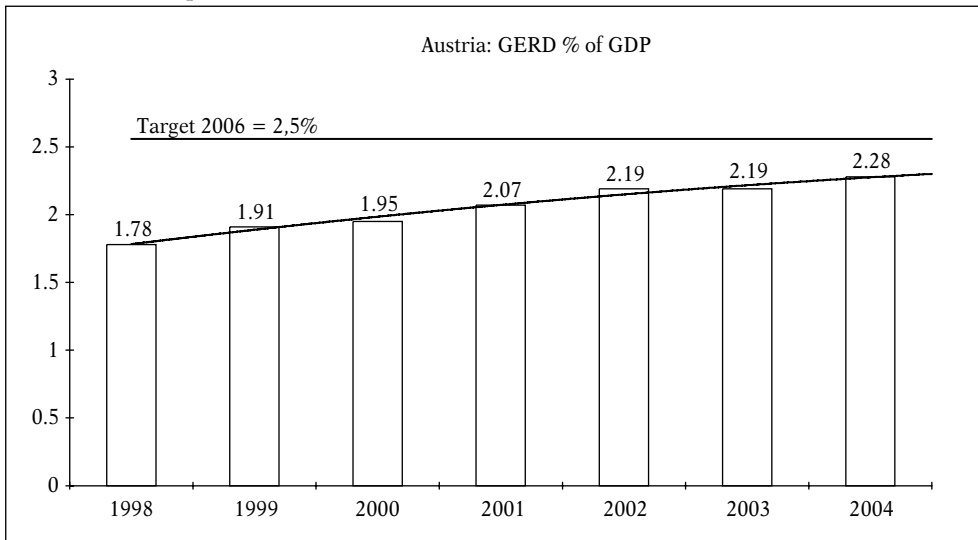
this example suggests the need for scrutiny and possible policy change in Sweden. The Commission could organise a policy review of this target and look into the reasons for this unfortunate development and with the participation of other countries, Sweden could improve its knowledge base for policy initiatives in this area in order to get a better basis for achieving its objectives in the future.

**Chart 3: Number of self employed people in Sweden**



Source: Swedish Ministry of Industry, Employment and Communications.

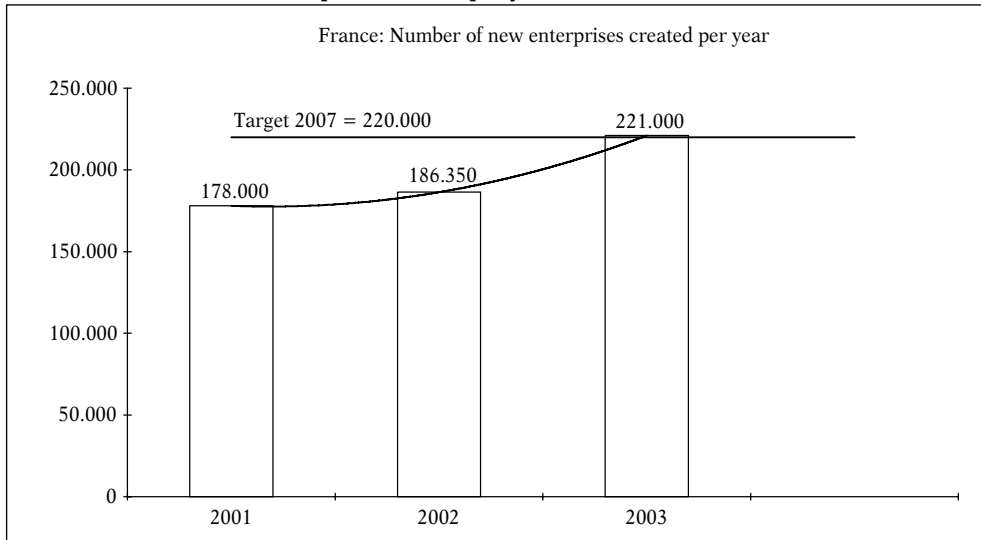
**Chart 4: Gross expenditure on R&D in Austria**



Source: European Commission: Results from the 2004 Enterprise policy Scoreboard and Eurostat: Structural indicators.

Another example is Austria's target for R&D expenditure for 2006, an intermediate target towards the Barcelona target set for 2010. The chart below shows that Austria has been able to progress steadily towards this target in spite of the economic slowdown in the early 2000s. Austria thus seems to be on the right track to achieve the target. A closer review of the case could generate a better understanding for the many other countries having similar objectives.

**Chart 5: Number of new enterprises created per year in France**



Source: French Ministry of Industry, Information Technology and Postal Services.

In France, the Ministry of Industry and Information Technology has fixed a target on the number of new businesses created every year. This number was in 2002 178.000 and the aim is to reach 220.000 in 2005. The objective however has already been met as the number of businesses created between mid 2003 and mid 2004 were 221.000. This number, however, concerns newly registered enterprises and therefore may also include associations, etc. It is not clear if and how this result is linked to policy changes, but it would be interesting through a peer review exercise of this target to process and disseminate information about this.

**2.6.7.** The above examples may serve to illustrate how benchmarking and targeting may be useful management tools for policy making also at the European level. Benchmarking and targeting are already widely applied in the private business sector as management instrument to encourage performance and progress.

Obviously businesses can use these tools in a more concrete way but the principles may still be applied to policy making as well. The Commission as well as the Member States could learn from such management tools applied by the private sector.

**2.6.8.** As illustrated above, the intention is to conduct peer reviews on individual targets in order to promote cross fertilization and exchange of best practices. Such peer reviews have been introduced already, but they need to be pursued more rigorously and Member States need to adopt a more constructive attitude towards the undertaking of such exercises. In this way, national targets provide a means to organize policy learning across the Member States.

## **2.7. The way forward?**

**2.7.1.** The Lisbon process is encountering difficulties. Researchers, government officials and other observers have lost belief in the process as too many promises have not been fulfilled. Many see the process as an example of alienating politics and of increasing (in) difference between European citizens and their leaders. It is sad but perhaps understandable how such sentiments may flourish. However, the issue at stake is still too important to allow for despair.

**2.7.2.** Very little progress can be documented in economic terms towards the ambitious objective set out in 2000. The European Commission as well as the Kok Group are stating that the main responsibility of the lack of progress lies with the Member States. Firstly, the Member States have not been able to agree in the Council on some crucial strategic measures of importance to the Lisbon Strategy. A prime example is the European Patent, which still remains undecided. Secondly, the Member States have not implemented vigorously common decisions taken by the Council, for instance in terms of implementation of single market directives. The targets set for minimum implementations have not been met<sup>29</sup>. Finally, the Member States have not progressed sufficiently in those areas (the OMC) where they have the legal competence and political responsibility for carrying out reforms and where the Commission can only stimulate progress through (structured) dialogue. Even though the Member States bear the bulk of

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<sup>29</sup> The European Council has fixed a target for reducing the compliance deficit (the directives not transposed into national law within the deadline) to 1.5 %. However this deficit still remains at 2.2 % (June 2004) meaning that 134 Internal Market Directives have not been fully transposed in the EU. Particularly France has a bad record.

the responsibility for the lack of progress, the Commission and the Council could and should still do more in trying to improve the situation.

**2.7.3.** The Kok Group has issued interesting suggestions for future improvements and the report is a very valuable input to the mid term review. The box below summarises some key recommendations.

**Key recommendations of the Kok Group:**

- The Lisbon strategy should be revitalised with more focus on growth and employment.
- Member States should produce biannually national action programmes.
- The EU budget should be reshaped to reflect the Lisbon priorities.
- Financial incentives for Member States should be considered to advance towards Lisbon targets.
- The OMC should be improved with more emphasis on benchmarking and peer reviews. More transparency of results and progress on fewer targets (fame, shame and blame).
- Better co-ordination on EU as well as national levels.
- Annual league table of Member States progress should be published.
- The Commission should launch a new Communication strategy.

Source: Kok Report (2004).

**2.7.4.** On the European level the Lisbon Strategy mainly concerns management and communication. The challenge facing the community is to spur progress over a very wide range of issues. To be taken seriously the strategy must become credible. With a voluntary, co-operative framework for 25 Member States (the OMC) as the most important tool the Commission must seize leadership of the process. Member states will expect that the Commission becomes a driving force in the process.

**2.7.5.** A coherent and comprehensive plan must be created. This plan will have to be complemented with the national action plans recommended by the Kok group. The Member States should be urged to commit themselves to concrete objectives as well as a time plan for achieving them. The OMC could play an important part in providing input and follow-up to such a plan and national quantitative targets could be systematically reviewed within the context of the National Action Plans.

**2.7.6.** Obviously, the political commitment to such a plan is vital. But the commitment should run deeper than that. A plan as ambitious as the Lisbon strategy will only succeed, if a culture of progress and change can be implemented in the national and European administrations themselves. Currently, too many administrations are reluctant towards change. The administrative cultures too often support status quo rather than innovation and progress. The message of innovation, entrepreneurship and a dynamic knowledge based business sector is simply not

credible, if the administrations themselves do not follow through. Innovation and change is just as important for the public sector as it is for the private sector.

- 2.7.7.** Simultaneously there is a need for better communication to reach the main stakeholders with the concerns of the Lisbon Strategy. This point has been emphasised by the Kok Report. This communication strategy must make the negative consequences of poor or no policy decisions more visible for European citizens and must show the way forward. The media, the parliament, business groups and other interest groups should be involved and Member States should be held responsible for their actions or lack thereof. Under the current conditions and in the eyes of European citizens, political responsibility for failure is assigned to 'Brussels' rather than to the respective capitals. The Communication Strategy will have to change this perception.
- 2.7.8.** The OMC should be applied in a more vigorous and convincing manner. The OMC does not require a formal qualified majority in the Council. Projects under the OMC can be launched with those who are active and wish to join. It should be made attractive to participate in OMC projects. By making the projects generate important new knowledge and inspire progress, Member States (at least those interested) will have an incentive to participate. The fact is that many OMC projects now follow the lowest common denominator making them rather uninteresting for many Member States. The co-operation is too often ruined for those Member States who are genuinely interested and looking for solutions to improve their policy making. The OMC should be an offer to Member States who wants to progress. It should be emphasising and inspire learning and mutual progress rather than assign blame and shame. In this context benchmarking, quantitative targets and peer reviews could play a more active role.
- 2.7.9.** European co-operation under the OMC should also be reformed to allow for more tailor-made solutions designed to address the great variety of conditions throughout the enlarged Europe. In this context, the OMC could be more demand-driven than is presently the case. The OMC instrument could for instance be offered also for special break-out groups. Such groups could bring together Member States who are particularly interested in one specific area (for instance in developing a model for assessing administrative burdens). Similarly, the OMC could be applied in a regional context. For instance, the Baltic Sea Area is an upcoming region with strong potential synergies. There are already strong networking efforts across the region which involves not only the national level but also regions and local authorities as well as research institutes, universities and others. The OMC should allow for a more diversified application embracing all

active partners who are seeking to integrate and develop competitiveness across Europe. In such groups particular stakeholders and interest group should be involved and allow for a broader regionally based competitiveness effort (combining regional, national and EU level interests). By concentrating on a region such groups could focus on specific regional conditions and enterprise clusters, specific industries and the regions overall competitive environment. Such break-out groups could serve as 'front runners' for the rest of the Community paving the way for other Member States to participate or to learn from the experiences of the break-out groups. These groups could bring forward a more focused effort which would be more effective. The groups would respond better to the needs and demands of Member States. Member States would be able to focus their effort within certain priority areas rather than allocating scarce resources to a broad range of projects.

**2.7.10.** The issues outlined above take up some of the concerns expressed in the Kok-report on the challenges facing the Lisbon strategy and add some ideas for ways forward. Currently, a lot of work is being devoted to the relaunch of the Lisbon Strategy at the midterm review in March 2005. For the sake of job and wealth creation in Europe, for the Lisbon process and for the future image of the European Union, hopefully the review will be successful in coming up with solutions for better management of the OMC.



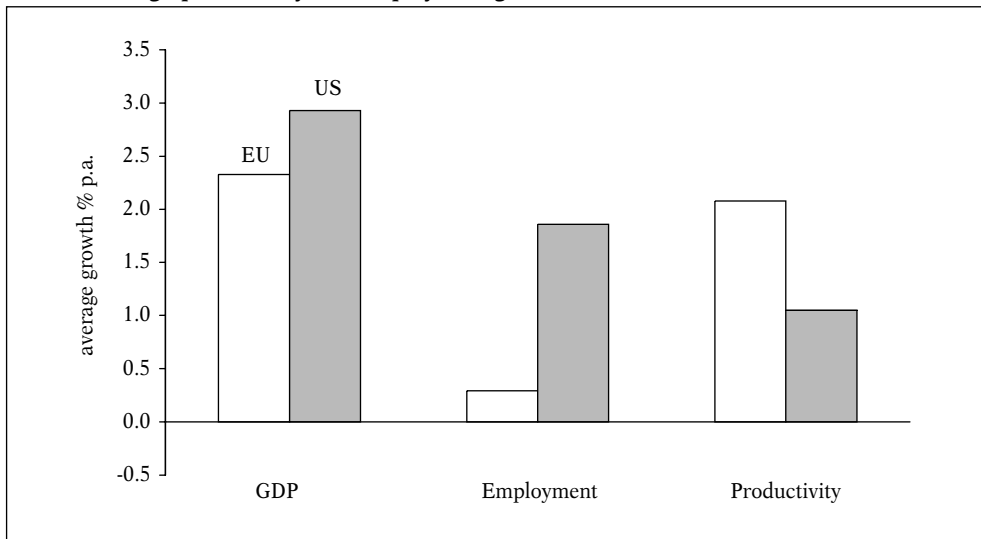
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## Annex

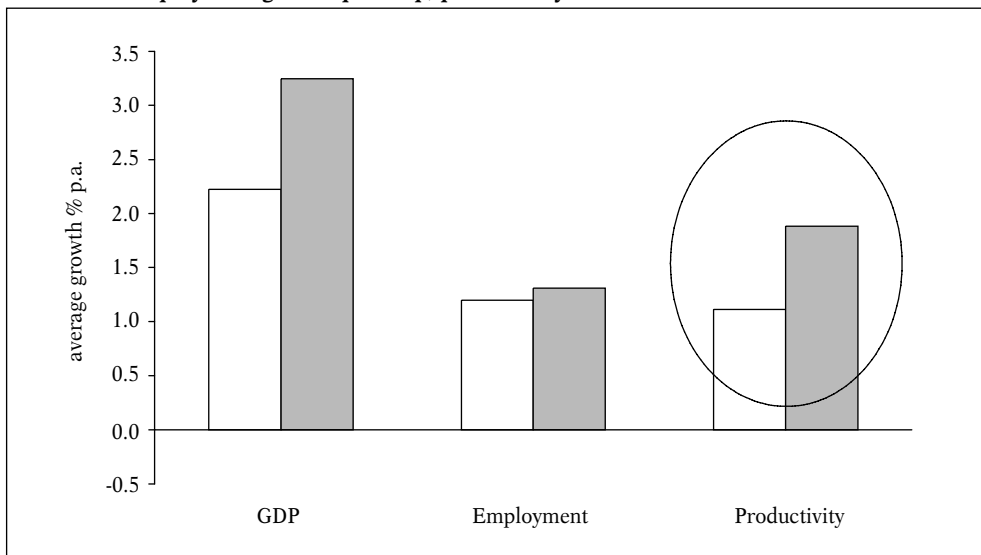
### Annex 1: Productivity and employment growth in EU and US

#### 1973-1995: high productivity, low employment growth in EU



Source: Eurostat. Productivity: GDP per employed person.

#### 1996-2002: employment growth picks up, productivity slows down in EU

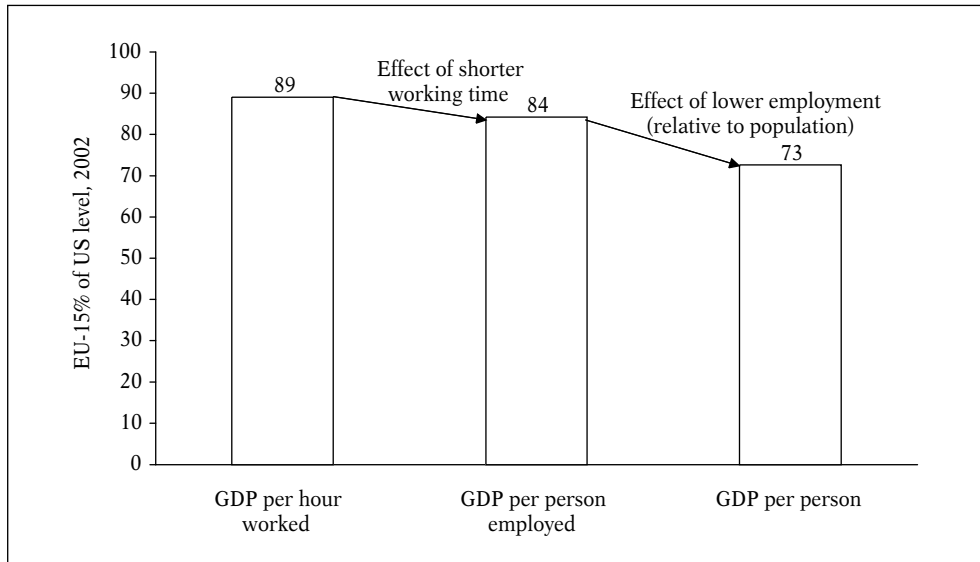


Source: Eurostat. Productivity: GDP per employed person.

## Annex 2: Decomposition of GDP per person gap between EU and US

EU-US GDP gap: result of Europeans

a) working less efficiently, and b) working less



Data source: Eurostat, Structural Indicators (update of 11.7.2003). GDP in PPS.

## Annex 3: Cross country and sector productivity growth in EU

Heterogeneity across countries...

	1979-1990	1990-1995	1995-2001
<b>Total economy</b>			
Belgium	0.08	0.09	0.03
Denmark	0.04	0.05	0.02
Germany	0.59	0.68	0.22
Greece	0.01	0.02	0.05
Spain	0.18	0.15	0.22
France	0.40	0.27	0.22
Ireland	0.02	0.04	0.10
Italy	0.27	0.36	0.18
Luxembourg	0.01	0.01	0.01
Netherlands	0.14	0.13	0.11
Austria	0.07	0.09	0.04
Portugal	0.02	0.02	0.04
Finland	0.05	-0.01	0.04
Sweden	0.06	0.03	0.06
United Kingdom	0.31	0.38	0.39
EU-15	2.26	2.31	1.72
United States	1.26	1.10	2.25

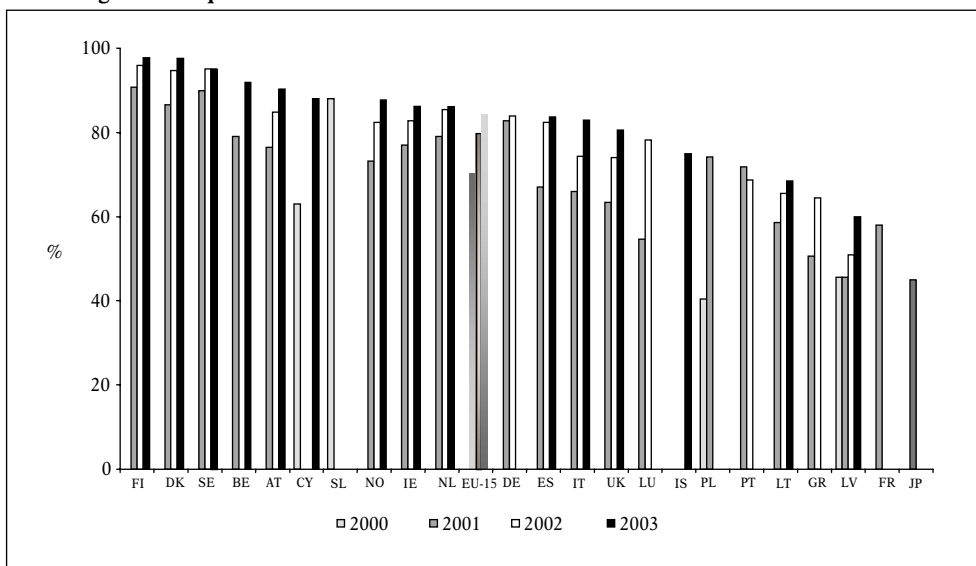
...as well as across industries

**Labour Productivity Growth for 12 Main Sector, EU and U.S., 1979-2001**

	EU-15			US		
	1979-90	1990-95	1995-01	1979-90	1990-95	1995-01
Total Economy	2.2	2.3	1.7	1.4	1.1	2.3
Agriculture, Forestry and Fishing	5.2	4.8	3.3	6.4	1.7	9.1
Mining and quarrying	2.9	13.1	3.5	4.4	5.1	-0.2
Manufacturing	3.4	3.5	2.3	3.4	3.6	3.8
Electricity, gas and water supply	2.7	3.6	5.7	1.1	1.8	0.1
Construction	1.6	0.8	0.7	-0.8	0.4	-0.3
Distributive trades	1.3	1.9	1.0	1.8	1.5	5.1
Transport	2.8	3.8	2.3	3.9	2.2	2.6
Communications	5.2	6.2	8.9	1.4	2.4	6.9
Financial Services	2.2	1.0	2.8	-0.7	1.7	5.2
Business Services*	0.7	0.7	0.3	0.1	0.0	0.0
Other community, Social and Personal Services	-0.3	0.4	0.3	1.2	0.9	-0.4
Public Administration, Education and Health	0.6	1.1	0.8	-0.4	-0.8	-0.6

#### Annex 4: Percentage of enterprises with access to Internet (2000-2003)

Percentage of enterprises with access to Internet



## 3. Monitoring targets of the Lisbon Strategy

**Rosina Moreno, Vicente Royuela-Mora, Esther Vayá**

### 3.1. Introduction

The Lisbon Strategy is a response to shifts caused by globalization and the development of a knowledge-based economy. Responding to the changes requires designing of an overall strategy with individual objectives and defined ways to achieve them.

In order to measure and monitor the progress of the Lisbon Strategy, a complex system of over a hundred indicators was developed, upon which the Structural Indicators Table is based. These indicators were to constitute a means for the Commission to prepare an annual synthesis report on the Strategy's progress. Structural indicators pertain to five dimensions: employment, innovation, economic reform, social cohesion and environment. To better describe the most important issues, the Commission reduced the initial number of 107 indicators to the final 14. The authors suppose that the reduction in the number of indicators was done to better facilitate the objective stated in the Communication from the Commission (dated October 8, 2003) to produce indicators which are easy to read and understand. However, one of the most fundamental assumptions of the Lisbon Strategy has been neglected, namely the multiplicity of objectives.

Nonetheless, it is not certain whether the final structural indicators truly reflect the ultimate objective of the Lisbon Strategy, which is, in the words of the Commission, for the European Union (EU) *“to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”*. Two approaches are thus considered. The first one analyses the relationship between the main objective of the Strategy (defined as a general economic background) and other structural indicators, which relate to the five dimensions of the overall Strategy mentioned above. The second approach helps to identify the most important forces contributing to the growth of the

EU countries in the last ten years. In other words, the approach indicates whether the general growth of the economies has been accompanied with a similar growth in employment, knowledge and human capital, investments and social cohesion.

This paper is structured as follows. Section 2, which follows the introduction, describes the Lisbon Strategy with a focus on its objectives, presents an overview of the structural indicators considered within the Strategy and evaluates its results. In section 3 the authors offer an analysis of the changes in the behaviour of the structural indicators during the last decade against the indicators measuring the general economic background both at cross section and temporal dimensions Section 4 presents the conclusions.

## **3.2. Description of the Lisbon Strategy**

### **3.2.1. Objectives**

In 2000, the European Council gathering in Lisbon launched a ten-year strategy focused on achieving leadership in a dynamic and competitive economic development of the European Union<sup>30</sup>. The four main challenges are:

- Reaching a knowledge-based economy, which comes after:
- Modernising the European social model;
- Developing a framework of appropriate and stable macroeconomic policies;
- Achieving sustainable development.

The implementation of these policies would result in achieving a sustainable and non-inflationist growth with lower unemployment rates and more stable public finances.

In order to work along all four lines, the European Union has established several objectives at different European Councils (Lisbon, 2000; Stockholm, 2001; Gothenburg, 2001; Barcelona, 2002; Brussels, 2003). These objectives have been grouped into five areas:

- Employment
- Innovation and research
- Structural economic reforms
- Social cohesion, and
- Environment

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<sup>30</sup> It should be noted that the Lisbon Strategy has been extended to apply to the New Member States of the European Union as well as the original EU-15.

These areas are quantified through structural indicators, which are comparable against a 10-year basis allowing policy makers to evaluate the progress of the overall Strategy. All broad objectives contain specific objectives which ensure the completion of the original concept behind the Strategy. The specific objectives can be summarized in the following list:

***A.1. More and better jobs for Europe: developing an active employment policy.*** In

order to reduce unemployment and to raise the employment rate, it is important to improve employability and reduce skill gaps; increase adaptability through life long learning; increase employment in services; and reduce occupational segregation.

***B.2. Information society for all.*** The shift to a digital, knowledge-based economy has to be based on an inexpensive, world-class infrastructure that avoids info-exclusion. The promotion of secure e-commerce and a telecommunications-competitive regulatory framework is needed, together with ensuring resources in education and public services.

***B.3. Establishing the European Area of Research and Innovation.*** The creation of the European Research Area may ensure an integrated, efficient and innovative alternative for the people most valuable to Europe in terms of their input into the development of the continent. The most obvious solutions are: networking research together with coordination and benchmarking of national research and promoting mobility; improving private research investment and start-ups and securing the Community patent as a tool for rewarding innovation.

***B.4. Education and training for living and working in the knowledge society.***

Europe's education and training systems should offer learning and training opportunities of the knowledge society through three main components: development of local learning centres, promotion of new basic skills and increase in transparency of qualifications. Particular targets become clear: halving the proportion of 18 to 24 year olds with only secondary level education; promoting schools as multi-purpose local learning centres; creating a European diploma for basic IT skills; promoting mobility for the education actors; deciding upon a common format for curricula vitae.

***C.5. Creating a friendly environment for starting and developing innovative businesses, especially SMEs.*** Lower costs of doing business can be achieved through a better regulatory climate and key interfaces in innovation networks (start-ups, risk-capital initiatives), with a special focus on small companies which are an engine for job-creation in Europe (micro-enterprises).

**C.6. Economic reforms to achieve a complete and fully operational internal market.**

Removal of barriers in services; freeing gas and electricity markets, postal services and transport; updating public procurement rules (making electronic procedures available); simplifying the regulatory environment; promoting competition, reducing support to individual companies or sectors, and focusing on the most important issues.

**C.7. Efficient and integrated financial markets.** Increased efficiency of financial and risk-capital markets should be ensured through policies enhancing the comparability of companies' financial statements or promoting better functioning of government bond markets.

**C.8. Coordinating macro-economic policies: fiscal consolidation, quality and sustainability of public finances.** A relationship of trust between all actors involved in policy making must be created in order to have a proper understanding of each other's positions and constraints. Clearly, fiscal consolidation and improvement of quality and sustainability of public finances must be pursued. Particularly, reducing tax pressure on labour; redirecting public expenditure towards physical and human capital accumulation and ensuring long-term sustainability of public finances are policies worth recommending.

**D.9. Modernising social protection.** The European social model, propagating an active welfare state, must ensure that work pays off and employment is secure in the long run when the population is ageing. The model should also promote social inclusion and gender equality and provide quality health services. Strengthened cooperation between Member States, exchange of experiences and common studies on the future long-term evolution of social protection may help in achieving the objective of modernising social protection.

**D.10. Promoting social inclusion.** The potential of the new knowledge-based society for reducing poverty also brings a risk of an ever-widening gap of social exclusion. Several steps are recommended: promoting a better understanding of social exclusion; national promotion of inclusion, complemented at the Community level by the Structural Funds framework; developing priority actions addressed to specific target groups (minorities, the disabled, etc.).

**E.11. A strategy for sustainable development.** An environmental dimension was added to the Lisbon Strategy to complete the EU's political commitment to economic and social renewal; it marks a new approach to policy making. Several environmental themes received special attention: the global dimension (Johannesburg); environmental priorities for sustainability, combating climate change (Kyoto); ensuring sustainable transport, addressing threats to public health, managing natural resources more responsibly, maintaining maritime security.



### 3.2.2. Structural indicators

The special European Council held in Lisbon in March 2000 determined the need to regularly discuss and assess progress in achieving the strategic goal for the next decade. The goal is “to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”. In order to achieve it, the Council invited the Commission to draft an annual synthesis report (*Spring Report*) on the Lisbon Strategy progress. Such progress would be measured through a set of jointly agreed structural indicators so that the necessary coherence and standard presentation is ensured. The report and the indicators selected must relate to the four policy areas: employment, innovation and research, economic reform and social cohesion. In addition, indicators describing the general economic background were defined to present an overall economic context in which structural reforms occurred. Environment became a new area on the list of structural indicators, as decided at the Gothenburg European Council held in June 2001.

In order to meet the request of the European Council, since 2000 the Commission has been presenting at the end of a year an annual communication called “Structural Indicators” containing a set of indicators to be used in the synthesis Spring Report of the European Council (COM-2000 594 final, COM-2001 619 final, COM-2002 551 final, COM-2003 585 final). A consensus on the selected indicators is that they should be easy to read and understand, policy relevant, mutually consistent and timely available. They should also be comparable across Member States and preferably with other countries (mainly US), they should be selected from reliable sources and the data requirements should not impose too large of a burden on statistical institutes and respondents. For that reason, the selected indicators are based as much as possible on information provided by the European Statistical System.

According to the Commission, the list of structural indicators should be short to guarantee sending clear, simple and focused policy messages and balanced to reflect the equal importance on each of the five areas.

Taking into account the above remarks, the final list used for the synthesis report of 2001, 2002 and 2003 Spring European Councils incorporated 42 structural indicators<sup>31</sup> (7 indicators for each area, jointly with 7 general economic background indicators). However, the indicators proposed by the Commission can change from year to year. Therefore, some of the indicators can be replaced by new ones if the older ones lose political relevance in comparison with newer ones, or if the quality of data

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<sup>31</sup> Consisting of 107 indicators when including disaggregations and sub-indicators.

increased, or if an indicator duplicated to some extent another indicator on the list. In this way, new indicators develop.

However, the difficulties to provide a clear view of progress towards the Lisbon European Council objectives (expanded at Gothenburg and refined at Stockholm and Barcelona) using a high number of indicators led the Commission to reduce the list to only 14 structural indicators in the 2004 Spring Report<sup>32</sup>. The Commission acknowledged in the Communication COM(2003) 585 final that when “using a smaller number of indicators, it is also possible to achieve a better coverage of the acceding and candidate countries and to present information on both levels and changes in performance more easily” (§7). Regardless, the previous years’ structural indicators are painstakingly maintained by Eurostat in its publicly-accessible, exhaustive database New Cronos, frequently updated, and on the structural indicators website at <http://europa.eu.int/comm/eurostat/structuralindicators><sup>33</sup>

The final list of 14 structural indicators is shown in table 1, together with information about the definition, source, availability and overall policy objective and interpretation. These indicators “*should be considered primarily as measures of progress of the countries towards the Lisbon objectives, and not so much of policy effectiveness*” (COM-2000 594 final, page 22).

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council**

<b>GENERAL ECONOMIC BACKGROUND</b>
<p><b>1. Gross Domestic Product per capita in Purchasing Power Standards (GDP per capita in PPS)</b></p> <p><b>Source:</b> EUROSTAT; National Accounts</p> <p><b>Availability:</b> Coverage: all MS, all ACCs, US, Japan, Norway, Iceland. Time series: 1991-2001 (forecasts for 2002-2005; no data available for some years for ACCs).</p> <p><b>Overall policy objective:</b> Standard of living and Social and environmental welfare.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time, the aim is to reduce the gap between the EU and its main competitors</p>

<sup>32</sup> “At the same time, and in order to enhance the quality, in particular the comparability over time, countries and regions, of statistical and analytical tools, so as to provide better analytical foundations for the design and monitoring of policies, the European Council notes the Commission's intention, in close cooperation with the European Statistical System, to report in time for the 2004 Spring European Council on how the use of structural indicators and other analytical tools for assessing progress on Lisbon strategy could be strengthened.”

<sup>33</sup> This link provides information on 42 indicators and 117 sub-indicators.

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council (continued)**

<p><b>2. Labour productivity per person employed</b> (GDP in PPS per person employed)</p> <p><b>Source:</b> EUROSTAT; National Accounts and OECD</p> <p><b>Availability:</b> Coverage: all MS, all ACCs, US, Japan, Iceland and Norway.</p> <p>Time series: 1991-2001 (forecasts for 2002-2004; no data available for some years for ACCs).</p> <p><b>Overall policy objective:</b> Overall efficiency of the economy.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time, the aim is to reduce the gap between the EU and its main competitors</p>
<p><b>EMPLOYMENT</b></p>
<p><b>3. Employment rate*</b></p> <p>(Employed persons aged 15-64 as a share of the total population of the same age group)</p> <p><b>Source:</b> EUROSTAT; Labour Force Survey</p> <p><b>Availability:</b> Coverage: all MS, all ACCs, Iceland and Norway. No comparable data for the US and Japan. Time series: 1990-2002.</p> <p>(no data available for some years for ACCs)</p> <p><b>Overall policy objective:</b> Full employment. Combating social exclusion.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time. Strategic target: EU should achieve an average employment rate as close as possible to 70% by 2010 (60% for females).</p>
<p><b>4. Employment rate of older workers*</b></p> <p>(Employed persons aged 55-64 as a share of the population of the same age group)</p> <p><b>Source:</b> EUROSTAT; Labour Force Survey</p> <p><b>Availability:</b> Coverage: all MS, all ACCs, Iceland and Norway. No comparable data for the US and Japan. Time series: 1990-2002. (No data available for some years for ACCs)</p> <p><b>Overall policy objective:</b> Full employment. Combating social exclusion.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator remains the same.</p>

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council (continued)**

<b>INNOVATION AND RESEARCH</b>	
<b>5. GERD: Gross Domestic Expenditure on Research and Development</b>	<p>(Gross Domestic Expenditure on R&amp;D as a percentage of the GDP)</p> <p><b>Source:</b> Eurostat questionnaire</p> <p><b>Availability:</b> Coverage: MS (except Luxembourg), ACCs (except Malta), Iceland, Norway, Japan; USA. Time series: 1991-2001 (2002 and 2003 for some MS).</p> <p><b>Overall policy objective:</b> R&amp;D effort</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time. Strategic target: Increase in the overall spending in the EU on R&amp;D with the aim of approaching 3% of GDP by 2010.</p>
<b>6. Youth educational attainment level*</b>	<p>(Percentage of the population aged 20 to 24 having completed at least upper secondary education)</p> <p><b>Source:</b> Eurostat; EU Labour Force Survey.</p> <p><b>Availability:</b> Coverage: MS, ACCs (except Turkey), Switzerland, Iceland, Norway. No data for USA and Japan. Time series: 1992-2003 (no data available for some years for ACCs)</p> <p><b>Overall policy objective:</b> Quality of human resources.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time</p>
<b>ECONOMIC REFORM</b>	
<b>7. Comparative price levels</b>	<p>(Comparative price levels of final consumption by private households including indirect taxes)</p> <p><b>Source:</b> Eurostat; OECD</p> <p><b>Availability:</b> Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2001 (provisional for 2002; some years for some countries).</p> <p><b>Overall policy objective:</b> Product market integration. Market efficiency.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time</p>

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council (continued)**

<p><b>8. Business investment</b></p> <p>(Gross fixed capital formation by the private sector as a percentage of GDP)</p> <p><b>Source:</b> Eurostat; National Accounts</p> <p><b>Availability:</b> Coverage: MS, ACCs, Norway. Time series: varies from one country to the other (the longest series start in 1980).</p> <p><b>Overall policy objective:</b> Private investment effort</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time.</p>
<p><b>SOCIAL COHESION</b></p>
<p><b>9. At-risk-poverty rate after social transfers*</b></p> <p>(Share of persons with a disposable income below the risk-of-poverty threshold after social transfers, which is set at 60% of the national median).</p> <p><b>Source:</b> Eurostat; European Community Household Panel (ECHP)</p> <p><b>Availability:</b> Coverage: MS, ACCs. No comparable data available for US, Japan. Time series: 1994-2003 (no data available for some years for some countries)</p> <p><b>Overall policy objective:</b> Combating poverty and social exclusion</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time.</p>
<p><b>10. Dispersion of regional employment rates*</b></p> <p>(Coefficient of variation of employment rates across regions- NUTS 2 level-within countries)</p> <p><b>Source:</b> Eurostat; Labour Force Survey</p> <p><b>Availability:</b> Coverage: MS, several ACCs. Indicator not relevant for DK, IRL and L. Time series: 1999-2002 (no data available for some years/countries)</p> <p><b>Overall policy objective:</b> Cohesion</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time.</p>

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council (continued)**

<p><b>11. Total long-term unemployment rate*</b></p> <p>(Long-term unemployed -12 months or more- as a percentage of total active population aged 15-64)</p> <p><b>Source:</b> Eurostat/Labour Force Survey</p> <p><b>Availability:</b> Coverage: MS, ACCs, US, Japan Iceland and Norway. Time series: 1990-2002 (no data available for some years for some countries)</p> <p><b>Overall policy objective:</b> Full employment. Combating social exclusion.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time.</p>
<p><b>ENVIRONMENT</b></p>
<p><b>12. Total greenhouse gas emissions</b></p> <p>(Percentage change in emissions of 6 main greenhouses gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub>) since base year and targets according to Kyoto Protocol/EU Council Decision for 2008-2012)</p> <p><b>Source:</b> European Environment Agency.</p> <p><b>Availability:</b> Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1990-2001</p> <p><b>Overall policy objective:</b> Limit climate change and implement the Kyoto Protocol.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time.</p> <p>Targets according to the Kyoto Protocol/EU Council Decision for 2008-2012.</p>
<p><b>13. Energy intensity of the economy</b></p> <p>(Gross inland consumption of energy divided by GDP)</p> <p><b>Source:</b> Eurostat; Energy statistics</p> <p><b>Availability:</b> Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2001</p> <p><b>Overall policy objective:</b> Use energy more efficiently.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would decrease over time.</p>

**Table 1. List of 14 Structural Indicators used in the 2004 Report from the Commission to the Spring European Council (continued)**

<p><b>14. Transport-Volume of freight transport relative to GDP</b></p> <p>(Index of inland freight transport volume relative to GDP, measured in tonne-km /GDP)</p> <p><b>Source:</b> Eurostat; Transport Statistics</p> <p><b>Availability:</b> Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2002 (data not available for some years for some ACCs)</p> <p><b>Overall policy objective:</b> Decouple transport growth from economic growth.</p> <p><b>Interpretation:</b> Temporal comparison, it is expected that the indicator would rise over time.</p>
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\* Indicators disaggregated by gender.

Since 2000 to date the Commission has gone to great lengths to improve the quality and the presentation of the existing indicators, to integrate the acceding and candidate countries into the structural indicators framework (following the request from the Gothenburg European Council held in 2000) and to extent their coverage, as well as to propose new indicators on structural issues and to develop a more detailed quality assessment procedure for the structural indicators.<sup>34</sup> Figure 1 presents a chart with the five main areas of the Lisbon Strategy and the entire set of indicators in each one (structural and complementary indicators). The indicators included in the list of 14 indicators are in bold.

### 3.2.3. Overall evaluation

Although the Lisbon Strategy reforms are being implemented only partially, they are beginning to bring results as initially planned. The last report of the Commission to the European Council (COM-2004, 29 final) confirms the overall progress, achieved in four years since the Strategy inception:

- **More than six million jobs have been created** since 1999, boosting the total employment rate from 62.5% to 64.3% in 2002. In addition, long-term unemployment has dropped sharply in Europe, falling from 4% in 1999 to 3% in 2002.

<sup>34</sup> Eurostat has been working closely with other Commission services and with European Statistical System on a wide range of indicators in order to improve their quality, country and time coverage.





- **Several key markets have been completely or partially opened up** to competition: telecommunications, rail freight, postal services, electricity and gas markets. This process enables to modernise and stimulate these markets, improve service quality and lower costs with no negative impact on employment.
- **The knowledge-based economy is becoming a reality:** the Internet is used in 93% of schools, as well as in businesses, public administration and households. The gradual development of the European Research Area also helps the growth of knowledge-based economy.
- **The sustainable development approach is seriously considered in policymaking.** Several Member States have embarked on reforms of their pension systems and schemes to cope with the ageing of the population. Similarly, the Community action is now increasingly geared toward preserving the natural environment.
- Finally, the work done over the first four years resulted in adoption of over **one hundred regulations, directives and programmes** in different fields but all pursuing the Lisbon Strategy goals.

The progress analysis highlights the relatively positive developments but also reveals the major problems which need to be urgently addressed: weak public finances, unsatisfactory contribution of employment and productivity to growth, disappointing development of the internal market and, finally, lack of sustainability of growth.

**Viability of public finances must be ensured.** Budgetary and fiscal discipline has not been maintained on the same level in all Member States. Thus, due to weak economy and expansionary (in some cases) budgetary policies, the average EU deficit was 2.7% of GDP in 2003. It should also be noted that such policies have led to an increase in savings instead of the desired upsurge in consumption, which has thereby reduced confidence. Furthermore, more effort is needed to make national public finances viable in the medium and long-terms to guarantee sustainable development of the European economy to cope with the demographic trends. If immigration rates remain constant, the contraction of the working population coupled with the costs of ageing is likely to bring economic growth below 2% in the long-term. At least half of the Member States were at risk in 2003.

**Employment and productivity are still insufficient to increase growth.** Although the interim goal for 2005 will not be reached, the employment target remains valid under the condition that employment increases in the years remaining until 2010 at a pace similar to that at the end of the 1990s. Also, growth in Europe has remained low over the past three years. As a result, the relative level of GDP per capita for the EU remained unchanged in 2003. The EU cannot catch up to the United States because European GDP per capita is 72% of the American GDP per capita. The reasons for this

insufficient growth are known: unlike in the United States, employment and productivity are still not contributing enough to growth. The low growth Europe's overall productivity is due in particular to two main factors: the contribution of information and communication technologies (ICTs) is too low and investment is inadequate. In this respect, the European Growth Initiative and the Quick Start Programme, which have been given the green light by the European Council, are a major source of leverage to unlock investment in the infrastructure and knowledge sectors. While the number of researchers in the EU rose slightly from 5.4 per 1000 workforce in 1999 to 5.7 in 2001, these numbers are still lower than in countries which designate about 3% of their GDP to R&D (3% is the level at which the EU aims). These countries include USA with 8.1/1000 and Japan – 9.1/100. Investment in human capital, both public and private, is still inadequate. Raising the overall level of investment in human resources might not be sufficient. The need to invest more effectively is obvious: these areas of education and training which produce the greatest returns must be identified and financially supported.

**The European internal market and competitiveness are weak.** Despite successes of the past decade, the internal market has still not reached its potential. There are several warning signs requiring immediate action: the EU is experiencing a slowdown in its product market integration; the internal market is still highly fragmented in the services sector (especially in distribution and retail sales); market opening in network industries has not been fully implemented and the benefits relating to efficiency, inter-connectivity and security of the supply in the EU have not yet been applied. At the same time, several strategic measures to increase European competitiveness have not been launched because of lacking political will.

**Growth is still not sufficiently sustainable.** While the EU achieved some progress towards sustainable development and environmental protection, particularly in terms of legislation, it is still finding it difficult to capitalise on the synergy between various policies, especially environment, research and competitiveness. The risk of growing poverty is real in several Member States, mainly due to increase in unemployment but also as a result of the fact that their social protection and pensions systems are not sustainable. In terms of environment protection, Member States generally perform inadequately which is a result of ignorance that growth may harm the environment and prove counter-productive in the medium and long-terms.

Lastly, a detailed analysis shows beyond doubt that all Member States currently experience problems and that only a greater effort may result in success. In sum, the revision of the Lisbon Agenda shows a moderate progress in most of the areas under consideration.

Figures showing the ranking position of each country regarding each structural indicator (last year available) may serve as a summary of the situation of each Member State. The “span of the cobweb” for an indicator shows the position of this country in the ranking per this indicator. The greatest span indicates a best possible position, while no cobweb means that the country is in the worst position regarding this indicator. An additional indicator has been added (GEB1b) which refers to GDP per capita growth, as a dynamic indicator of the GEB.

Figures 2 to 16 (see Annex 1) show an overview of the position of each country in each of the main 14 indicators, both in 1995 and 2001 and capture the relative changes for every country. As it can be observed, there are 3 countries (Denmark, Netherlands and Sweden) which present a good standing in the majority of indicators in 2001. Greece, Spain, Italy and Portugal are in opposite situation; their positions are relatively poor for most indicators.

Taking into consideration the relative changes in the position of each country between 1995 and 2001, it is clear that Denmark, Ireland, the Netherlands, Finland and Sweden have experienced an improvement of their positions in the structural indicators rankings, while France, Germany, Italy and Austria have worsened in relative terms in the course of the six considered years.

The information about the situation of individual countries and the EU as a whole, given by the Commission in order to evaluate the objectives of the Lisbon Strategy, is based primarily on the analysis of changes in the indicators. However, in the authors’ view, a deeper analysis might lead to a conclusion that an evolution of these indicators may have an impact on economic growth and could provide a fuller explanation on their role in the EU development and growth<sup>35</sup>. Without trying to conduct an exhaustive analysis of the determinants of growth, in the following two sections the authors analyse how growth has been accompanied by the presence of a high level of or an improvement in the 14 structural indicators of the Lisbon Strategy.

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<sup>35</sup> Some of this work has been exhaustively done in several areas of the Lisbon Strategy: see chapters 2 and 3 of the volume 6 of “European Economy” (2003), Drivers of productivity growth, an economy-wide and industry-level perspective, and Education, training and growth.

### **3.3. Analysis of the structural indicators evolution in the last decade**

#### **3.3.1. Global analysis for the period of 1994-2003**

The achievements of the Lisbon Strategy are carefully examined each year in an annual synthesis report where the order of structural indicators reflects Europe's position in terms of its economy and competitiveness. The report also shows a position of each country in achieving specific objectives.

Although the authors recognize the efforts devoted to compiling the list of indicators, they encourage verification of the assumed approach by considering basic statistics. Tables 2 and 3 summarize the cross and serial correlations of structural indicators with the general economic background indicators which describe the overall objective of the Lisbon strategy, i.e. for Europe to become a world economic leader. Specifically, table 2 displays the 15 Member States (MS) cross-country correlations at three different moments of a business cycle (1994, 1997 and 2001). These correlations were computed by taking into account the relative size of every country. Focusing on the evolution of GDP per capita, table 3 shows the serial correlations including two leads and lags of the general EU (15 countries) structural indicators and annual growth of the GDP.

Additionally, identifying the most important forces contributing to the EU countries growth in the last ten years could be of interest. Has the general growth of the economies been accompanied with a similar growth in employment, knowledge and human capital, investments and social cohesion? In order to answer this question, and focusing exclusively on growth of GDP per capita, the correlation between this variable and the evolution of the structural indicators has been analysed. Figures 17 to 26 (see Annex 2) depict a scatter plot for growth of GDP per capita during 1994-2003 (Y-axis) and growth of each structural indicator during 1994-2001 (X-axis)<sup>36,37</sup>. In addition, these figures include information about the cross correlation between GDP per capita growth and both the growth of structural indicators and the value of these indicators at the beginning of the period.

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<sup>36</sup> For most of the structural indicators, data for 2002 and 2003 are not available.

<sup>37</sup> There is no information available for this period for two indicators: at-risk-poverty rate alter social transfers and dispersion of regional employment rates.

**Table 2. Cross correlations between Structural Indicators and General Economic Background Indicators**

		GEB 1: Gross Domestic Product per capita in Purchasing Power Parity (GDP per capita in PPS)			GEB 2: Labour productivity per person employed (GDP in PPS per person employed)		
		1994	1997	2001	1994	1997	2001
EMP 3	3. Employment rate*	0,470	0,449	0,449	-0,366	-0,412	-0,371
EMP 4	4. Employment rate of older workers*	-0,177	-0,101	0,005	-0,710	-0,712	-0,602
I&R 5	5. GERD: Gross Domestic Expenditure on Research and Development	0,612	0,703	0,572	-0,071	0,231	0,131
I&R 6	6. Youth educational attainment level*	0,589	0,436	0,550	0,313	0,366	0,472
ER 7	7. Comparative price levels	0,724	0,757	0,777	0,428	0,346	0,232
ER 8	8. Business investment	0,266	-0,196	-0,609	-0,027	-0,393	-0,400
SC 9	9. At-risk-poverty rate after social transfers*	n.a.	-0,652	-0,496	n.a.	-0,188	-0,020
SC 10	10. Dispersion of regional employment rates*	n.a.	n.a.	-0,081	n.a.	n.a.	0,412
SC 11	11. Total long-term unemployment rate*	-0,536	-0,452	-0,402	0,189	0,323	0,264
ENV 12	12. Total greenhouse gas emissions	-0,554	-0,606	-0,613	-0,107	-0,037	-0,109
ENV 13	13. Energy intensity of the economy	-0,470	-0,419	-0,474	-0,449	-0,382	-0,322
ENV 14	14. Transport-Volume of freight transport relative to GDP	-0,541	-0,718	-0,745	-0,386	-0,488	-0,360

Note: n.a. = Non Available

The figures 17-26 suggest some conclusions. The **Employment** indicators (employment rate and employment rate of older workers), undoubtedly address key aims of the Lisbon European Council, refined by the Barcelona European Council: to strengthen employment in the EU; provide equal employment opportunities for men and women; and support the "active employment policy" for example through focussing on life-long learning.

These indicators are expected to be positively related with the General Economic Background Indicators of the European economy. Three different results emerge from the analysis (tables 2 and 3 and figures 17 and 18). First, there is a positive and lagged relation between employment and GDP growth. This clearly confirms the interpretation of the structural indicators where higher growth implies more employment in the European economy.

**Table 3. Serial correlations between Structural Indicators and annual growth of GDP during the period 1991-2003**

	Lag of structural indicators	-2	-1	+0	+1	+2
EMP 3	3. Employment rate*	-0,67	-0,36	0,10	0,52	0,71
EMP 4	4. Employment rate of older workers*	-0,67	-0,40	-0,04	0,37	0,70
I&R 5	5. GERD: Gross Domestic Expenditure on Research and Development	-0,75	-0,52	-0,35	0,14	0,55
I&R 6	6. Youth educational attainment level*	-0,96	-0,47	-0,18	-0,05	0,41
ER 7	7. Comparative price levels <sup>38</sup>	-0,44	-0,54	-0,55	-0,42	-0,42
ER 8	8. Business investment	-0,76	-0,01	0,60	0,69	0,27
SC 9	9. At-risk-poverty rate after social transfers*	0,43	-0,13	-0,32	-0,43	-0,73
SC 10	10. Dispersion of regional employment rates*	n.a.	n.a.	n.a.	n.a.	n.a.
SC 11	11. Total long-term unemployment rate*	0,59	0,61	0,17	-0,44	-0,66
ENV 12	12. Total greenhouse gas emissions	-0,25	-0,31	0,07	0,48	0,30
ENV 13	13. Energy intensity of the economy	0,14	-0,16	-0,63	-0,59	-0,50
ENV 14	14. Transport-Volume of freight transport relative to GDP	0,15	0,29	0,61	0,67	0,49

Note: n.a. = Non Available

The second result pertains to the negative correlation between employment and productivity. In the authors' opinion, this result is not intuitive from a theoretical point of view, due to the fact that an increase in productivity should result in higher growth and finally higher employment. Nevertheless, as the structural indicator of productivity is defined as *labour productivity*, the final result shows that the improvements in productivity have been obtained at the expense of a lower employment. In any case, a future list of structural indicators should contain a different measurement of overall productivity.

Third, figures 17 and 18 seem to show that growth in GDP per capita has run parallel to growth in employment, both in terms of employment rate and employment rate of older workers. This is especially evident in the case of Ireland, Spain, Netherlands and Finland (Germany is in the opposite situation). However, Greece and Luxemburg are the exceptions, given that their high growth rates of GDP per capita have not been supported by high growth rates of employment.

The **Innovation and Research** indicators (GERD and youth educational attainment level) measure Lisbon Strategy's emphasis on the transition to a knowledge-based economy through better policies for R&D, education and the information society. These key indicators clearly correspond to the new endogenous growth theories which relate knowledge stemming from research and development to permanently higher economic

<sup>38</sup> As this structural indicator was positioned at level 100 for EU15 for each period, we compute serial correlation between GDP and the inflation rate for each year.

growth rates. Such conclusion implies that investing in R&D today (detracting from other productive activities) is key to having a higher growth tomorrow. Thus, a non contemporaneous relation would be expected, although a long-term positive relation is assured with a positive lagged correlation. On the other hand, in many European countries a high proportion of R&D is developed to public research centres, such as universities. This fact implies that within the cycle, when an economy is peaking and consequently having a public finance surplus, it can dedicate more resources to R&D. On the contrary, when an economy is experiencing a trough, public finances are expected to reduce non imperative expenditure. Thus, a (lagged) relation is expected due to the needed time to prepare this kind of investments.

Table 2 shows a positive correlation between the Innovation and Research Indicators and GDP per capita and, if any, a positive correlation with productivity (especially at the end of the period). Besides, the serial correlations provide a lagged relation within structural R&D indicators and GDP growth rate. These results clearly support the idea of the positive relation between innovation and growth.

Figures 19 and 20 demonstrate that while countries such as Finland, Greece and, to a certain extent, Portugal and Spain increased Gross Domestic expenditures on R&D during the discussed period and also grew in terms of GDP per capita, Ireland presented the highest GDP per capita growth rates but a clear decrease in its expenditures on R&D (leading to a null correlation coefficient between both variables). In the case of youth educational attainment level, its growth from 1995 to 2001 is positively correlated with GDP per capita growth rate for the last ten years.

The **Economic Reforms** indicators (comparative price levels and business investment), correspond with the Lisbon European Council's emphasis on product and capital market reform. They are designed to show market integration, progress in liberalising the network industries and possible distortions in the functioning of product markets caused by public intervention.

The two structural indicators of Economic Reforms are expected to be very closely related to the long-term indicators of the General Economic Background of the European economy. In theory of market efficiency, a higher long-term efficiency will result in a lower inflation (and consequently, lower price levels) and higher GDP per capita. Additionally, higher gross fixed capital formation will result in higher production possibilities and subsequently higher GDP per capita and higher future consumption.

In a short run, one can observe opposite signs in the established correlations (tables 2 and 3). They may be due to the fact that higher economic growth can produce price level increase when production possibilities are fixed. Alternatively, higher gross fixed

capital formation can result in future (not current) GDP growths. Thus concerning price levels, data reveals that the cross country correlation is positive as regards to the General Economic Background indicators, showing how richer countries exhibit higher comparative price levels. On the contrary, the temporal correlation of the European economy shows a negative correlation between inflation<sup>39</sup> and GDP growth, reflecting a non general inflationist process of economic growth. Concerning the business investment indicator, a low but negative cross correlation with the General Economic Background indicators is visible. This fact indicates that countries with current higher or lower investment do not have a particularly higher or lower GDP per capita or productivity, respectively. Nevertheless, the temporal correlation of the overall European economy shows a positive figure (although possibly lagging one year behind), assuring that this indicator exhibits the formerly related long-term relation.

With regards to the evolution of economic reforms indicators (figures 21 and 22), it should be noted that growth in GDP per capita has been accompanied by a similar evolution in terms of growth in comparative price levels. In countries such as Ireland, Greece, Portugal and especially UK, the observed growth has been inflationary (in relative terms). In contrast, Finland and Luxembourg marked a decrease in comparative price levels during the period in question, although they experienced growth. In addition, data reveals that high growth rates in GDP per capita have been accompanied with significant high rates in business investments, especially in the case of Ireland, Finland, Greece and Spain (Germany is the only country with a decrease in business investments in the years 1994 – 2003).

**Social Cohesion** indicators (at-risk-poverty rate, dispersion of regional employment rates and total long-term unemployment rate) provide measures of the degree and persistence of poverty and income dispersion and the associated risk of exclusion in accordance with the Lisbon European Council's high priority on social cohesion.

Social Cohesion can be considered a political objective which is more related to key political objectives than to clear short run economic processes. Nevertheless, there are two different effects in this area that have to be considered. Firstly, there are different social negative processes that can be noted as a natural result of the general economic growth of European economies: non-desirable income distribution, regional concentration of economic growth or simply intergenerational substitution of the labour force, with the exclusion of a certain group within labour force which has difficulties finding employment once without a job. Secondly, it should be noticed that

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<sup>39</sup> As this structural indicator was positioned at level 100 for EU15 for each period, the authors compute serial correlation between GDP and the inflation rate for each year.



these situations, deriving either from expansions or from recessions, are in long-term destructive to the General Economic Background due to the negative influence on the social capital of a state.

The cross correlation analysis (table 2) suggests that, generally speaking, countries with lower GDP per capita or (to a lesser extent) minor labour productivity display a higher risk of exclusion, dispersion of regional employment rates and total long-term unemployment rate. In global European terms (table 3), these indicators are negatively correlated with GDP growth<sup>40</sup>, exhibiting the expected long-term relation sign (greater current growth, greater social cohesion in the future). Besides, this positive correlation appears with one and two years lead, which can be explained by the cyclical process of the European economy (current problems are expected to be solved in a two-year period).

It should be noted that non availability of data for at-risk-poverty rate and dispersion of regional employment rates during the 1990 prevents computing the correlation between growth of GDP per capita and growth of these two variables. In the case of evolution in total long-term unemployment rate (figure 23), a negative correlation with the GDP per capita growth rate can be observed. Countries with high increases in GDP per capita (such as Ireland, Finland, Luxembourg and Spain) experienced high diminishes in long-term unemployment rates. Greece is an exception because it grew in terms of GDP per capita but achieved worse results in long-term unemployment.

The **Environment** indicators (total greenhouse gas emissions, energy intensity of the economy and transport-volume of freight transport relative to GDP) are a response to the Gothenburg European Council Conclusions and they measure climate change, achievements in sustainable transport, threats to public health and managing natural resources.

As in the case of the Social Cohesion objective, the Environmental objective exhibits a more politically focused profile. Its relation to processes described by the general economic background indicators should be considered very long-term. Thus, even opposite signs in crossed and temporal correlations should be expected compared with the political objectives and expectations of these indicators.

Table 2 also shows that in most cases countries with lower GDP per capita and lower productivity exhibit a generally poorer behaviour in environmental indicators. In addition, countries with higher annual GDP growth show a positive correlation with all three environment structural indicators (see table 3). This last point is especially

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<sup>40</sup> Temporal correlation with dispersion of regional employment rates could not be computed due to lack of complete data.

remarkable when considering the volume of freight transport relative to GDP indicator, and (although with lower absolute figures) also with the total greenhouse gas emissions indicator. On the contrary, the temporal correlation of the energy intensity of the economy presents a negative sign with GDP growth.

Moreover, it seems from figures 24, 25 and 26 that growth in GDP per capita during the 1990 was accompanied with a relative deterioration of sustainability, judged by the positive correlation between this variable and both the growth of total greenhouse gas emissions and the transport-volume of freight transport relative to GDP (especially in the case of Ireland, Greece and Spain). Regardless, it seems that the improvements in terms of GDP per capita have not involved a general increase in energy intensity (reflecting a more efficient use of energy). In contrast, countries such as Ireland, Finland and Luxemburg which have high growth rates of GDP per capita, decreased their consumption of energy (the opposite of Portugal, Spain and Austria).

Overall, GDP per capita growth of EU15 countries during the 1990 has been positively correlated with factors considered solid pillars of economic growth: growth of human capital (especially in terms of total employment, also for older workers) and business investments. In addition, this growth has not caused worsening in social cohesion, at least as related to the increase of long-term unemployment. On the other hand, growth in GDP per capita has been accompanied with relative growth in prices, while it does not seem to be very sustainable since it has lead to a general increase in the greenhouse gases emissions (with the negative consequences in terms of potential impact on climate change) and in the general degree of congestion and pollution (as a consequence of rising volumes of traffic and a certain decoupling of freight transport growth from real GDP growth).

Finally, it must be noted that some countries which exhibited growth in terms of GDP per capita during the last ten years definitely caught up. At the beginning of the period these countries had relatively low employment rates (Spain, Ireland and Greece), low levels of expenditures on R&D (Greece, Spain, Portugal and Ireland), youth educational attainment levels (Portugal, Luxemburg and Spain), business investments (Ireland, Greece and Finland) or high levels of long-term unemployment levels (Ireland and Spain).

### **3.3.2 The state of play: Evolution during the period of 1999-2003**

Focusing on the years 1999-2003, it is worth to analyze the evolution of the EU15 countries as regards the different dimensions considered by the Lisbon Strategy. Annex

3 depicts the relation between growth of GDP per capita and growth of the structural indicators during this period. In addition, the figures include information about the cross correlation between GDP per capita growth and both the growth of structural indicators and the value of these indicators at the beginning of the period.

Figures in Annex 3 enable some conclusions.

- I. It is clear that countries which started from lower values of employment rate have experienced the highest growth rates. This is the case of Spain and Italy, which have successfully maintained relatively rapid job creation during the period in question (contrary in Denmark and Germany). In addition, these high employment growth rates have been translated into remarkable GDP per capita growth rates. However, countries such as Ireland, Greece, Finland and Luxemburg showed the highest GDP per capita growth rates but have their employment rate growth near to the EU15 average.
- II. Countries which grew more (less) in terms of employment rate of older workers, also grew more (less) in terms of GDP per capita.
- III. High growth rates during 1999-2001 in Gross Domestic Expenditures on R&D have not necessarily led to a similarly high GDP per capita growth rates. This is the case of UK, Sweden, Portugal and Belgium (with outstanding increases of GERD but relatively low GDP per capita growth rates). Besides, although some countries which started from worse positions in GERD have significantly increased this variable (Portugal, Spain and Italy), other countries decreased their GERD (Greece and Ireland).
- IV. It seems that high increases of youth educational attainments during 1999-2002 have not been necessarily translated into great GDP per capita growth rates (Denmark, Portugal, Belgium and Italy). In contrast, countries as Luxembourg, Finland and Spain, with null or even negative growth rate of this R&D indicator, have showed the highest GDP per capita growth rates.
- V. Concerning the changes in the economic reforms indicators, growth in GDP per capita has not been accompanied with a similar evolution in terms of growth in comparative price levels during the considered period. However, there are some differences between EU15 members. Countries such as Greece have showed relatively high increments of GDP per capita but improving their comparative price levels, while the opposite is found in the case of Ireland.

VI. High growth rates in GDP per capita during the investigated period are parallel with significant high rates in business investments, especially in the case of Greece and Spain (showing in 1999 relatively high levels of this indicator). However, the opposite is found in the case of Portugal, Germany and the Netherlands, which have decreased their business investments through 1999-2002 (showing comparatively low GDP per capita growth rates).

VII. In some cases elevated GDP per capita growth rates have not considered worsening in social cohesion. Greece has shown one of the highest GDP per capita growth rates when it has considerably reduced its at-risk-poverty rate, dispersion of regional employment rate and long-term unemployment rate. Spain is a similar case: it displayed worse comparative conditions in 1999. Other countries such as Finland, Luxembourg and in particular Ireland increased their GDP per capita although social cohesion suffered. Finland raised its dispersion of regional employment rate, Luxembourg increased its long-term unemployment and Ireland worsened in terms of at-risk poverty rate (which is particularly interesting given that Ireland showed high values of this indicator in 1999). It is worth noting that long-term unemployment rate has presented the best evolution in comparison with the others social indicators (only Luxembourg presented a positive growth during 1999-2002).

Finally, growth in GDP per capita during the years 1999-2003 has been accompanied with a relative deterioration of sustainability in terms of total greenhouse gas emission, making it more difficult to achieve the Kyoto Protocol objectives. This is the case of Ireland, Greece, Finland and Spain, where the levels of this indicator were high in 1999. Besides, there has been a certain decoupling of freight transport growth from real GDP per capita growth during the period (in Spain, Luxembourg and Ireland, while other countries such as Greece and Finland have decreased the ratio of transport-volume of freight transport relative to GDP). However, the opposite situation is detected in the changes in energy intensity; all EU15 countries which grew, in particular Ireland, reduced their consumption of energy (Austria is the exception).

### **3.4. Conclusions**

In 2000, the Lisbon European Council launched a ten year-strategy which aimed to place the EU in a leading position in a dynamic and competitive economic development. The implementation of Lisbon Strategy policies were designed to result

in a sustainable and non-inflationary growth with low unemployment rates and more sustainability of public finances. At the subsequent meetings of the European Council the EU established several objectives, which were grouped in five blocks: employment, innovation and research, structural economic reforms, social cohesion, and environment.

The European Council invited the Commission to draft an annual synthesis report (Spring Report) in order to assess and evaluate the progress in reaching the desired goal. The Report records the progress using structural indicators and thus ensures comparability, appropriate coherence and standard presentation. To meet the request of the European Council, the Commission has been presenting at the end of each year since 2000 a communication called "Structural Indicators" with a set of indicators to be used in the synthesis report for the spring meeting of the Council. Although the list of indicators developed by the Commission involves more than a hundred indicators, recently (2004) the Commission reduced this list to 14 indicators, related to the five main areas of the Lisbon Strategy and to the general economic background.

Implementation of the reforms under the Lisbon Strategy, albeit partial, seems to be starting to bear fruit. As the Commission stated in the last report to the European Council, the overall progress already made in the four years constitutes a proof that i) more than six million jobs have been created since 1999 and the long-term unemployment has dropped sharply; ii) several key markets have been completely or partially opened up to competition; iii) the knowledge-based economy is becoming a reality, with increasing Internet use in schools, businesses, public administration and households and as a result of the development of the European Research Area; iv) the sustainable development approach is more fully taken into account in policymaking; and, v) about one hundred regulations, directives and programmes have been adopted in different fields but all pursuing the Lisbon goals.

An analysis of the achieved progress highlights the relatively positive developments but also the major problems which need to be urgently confronted. The problems are: i) poor viability of public finances; ii) the unsatisfactory contribution of employment and productivity to growth; iii) the disappointing development of the internal market; and, iv) the lack of sustainability of growth (especially in terms of environmental protection). A detailed analysis of the current situation clearly indicates that there are still problems in all Member States and that all of them need to make a greater effort to achieve better results.

However, the revision of the Lisbon Strategy shows a moderate progress in most of the areas under consideration. After analysing the ranking position of each country as regards to each structural indicator in the last year available, the authors have

observed that for 2001 three countries: Denmark, the Netherlands and Sweden present good positions in a majority of indicators. Greece, Spain, Italy and Portugal were in the opposite situation, with relatively poor positions in most of the indicators. Taking into consideration the relative changes of every country position between 1995 and 2001, Denmark, Ireland, the Netherlands, Finland and Sweden have experienced an improvement of their positioning in the structural indicators rankings, while France, Germany, Italy and Austria have worsened in relative terms in the lapse of the six considered years.

In the view of the authors, the overall indicators methodology needs to be revised after computing a set of basic statistics. Thus, the authors presented the cross and serial correlations of structural indicators with the general economic background indicators. Additionally, the authors raised the question whether general growth of the economies had been accompanied by a similar growth in employment, knowledge and human capital, investments or social cohesion.

The authors conclude that, in general terms, GDP per capita growth of EU15 countries during the 1990s was positively correlated with growth in terms of human capital (especially, employment) and business investments. In addition, this growth has not resulted in worsening of social cohesion, at least not as related to long-term unemployment. However, growth in GDP per capita has been accompanied with relative growth in prices and low sustainability. Some countries exhibited higher growth in terms of GDP per capita during the last ten years and noted relatively weak results in other areas at the beginning of the period (these areas were: employment rates, education attainment levels, business investments and long term unemployment). They have now managed to close the gap.

Unexpected results were noted in shaping of correlation measures between innovation and research and economic growth. What can be observed is that most of these correlations show low values, although intuitively and according to the newer growth theories it could have been expected to have high correlations among these indicators and growth. Positive correlation was observed in only few cases in the value of indicators and not in their level. Such correlation could indicate that the effort toward intensified patenting or improved level of education is more important than the initial values of these categories. What is even more surprising is the fact that there were no positive correlations between the economic growth and the intensification of spending on human resources, gross domestic expenditure on R&D and venture capital.

These results suggest that the methodology of structural indicators should be reconsidered. Having such outcomes in mind, the authors decided to build composite indicators describing the knowledge-based economy, using a double strategy for reducing the multidimensionality<sup>41</sup>.

The authors finally decided to use two indicators: weighed up Education indicators on one hand (“Science and technology graduates” and “Youth education attainment level”) and the Innovation indicators (“Spending on human resources”, “Gross domestic expenditure on R&D”, “Patents EPO and Patents USPTO”, and “Venture capital investments”) on the other. Basing on these assumptions, the convergence equation was again calculated against growth of Innovation and Research indicators, now with the use of a composite measurement. A positive influence of both Education and Innovation on GDP per capita growth was found, although without an overall convergence process among the countries.

Finally, it should be mentioned that the authors have observed certain deficiencies in the statistical information provided by Eurostat. Besides the lack of a long time span for some variables, inconsistencies have been detected after a revision of the information of the structural indicators. Undoubtedly, these problems with data may be affecting the results provided in this paper.

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<sup>41</sup> In order to build the composite measurement, the authors followed a double strategy for reducing the multidimensionality. They looked at a set of composite measurements based on principal components or on cluster analysis procedures. Further, they used a structural index methodology, picking up all the information belonging to the variables considered. After choosing the list of final variables, they have computed the principal component analysis. The two first principal components consider 64% of the total variance of the 13 indicators. The second strategy computed indices of two composite measurements of innovation and research and considered the *ad hoc* separation of the indicators, grouping Education indicators against Innovation indicators.

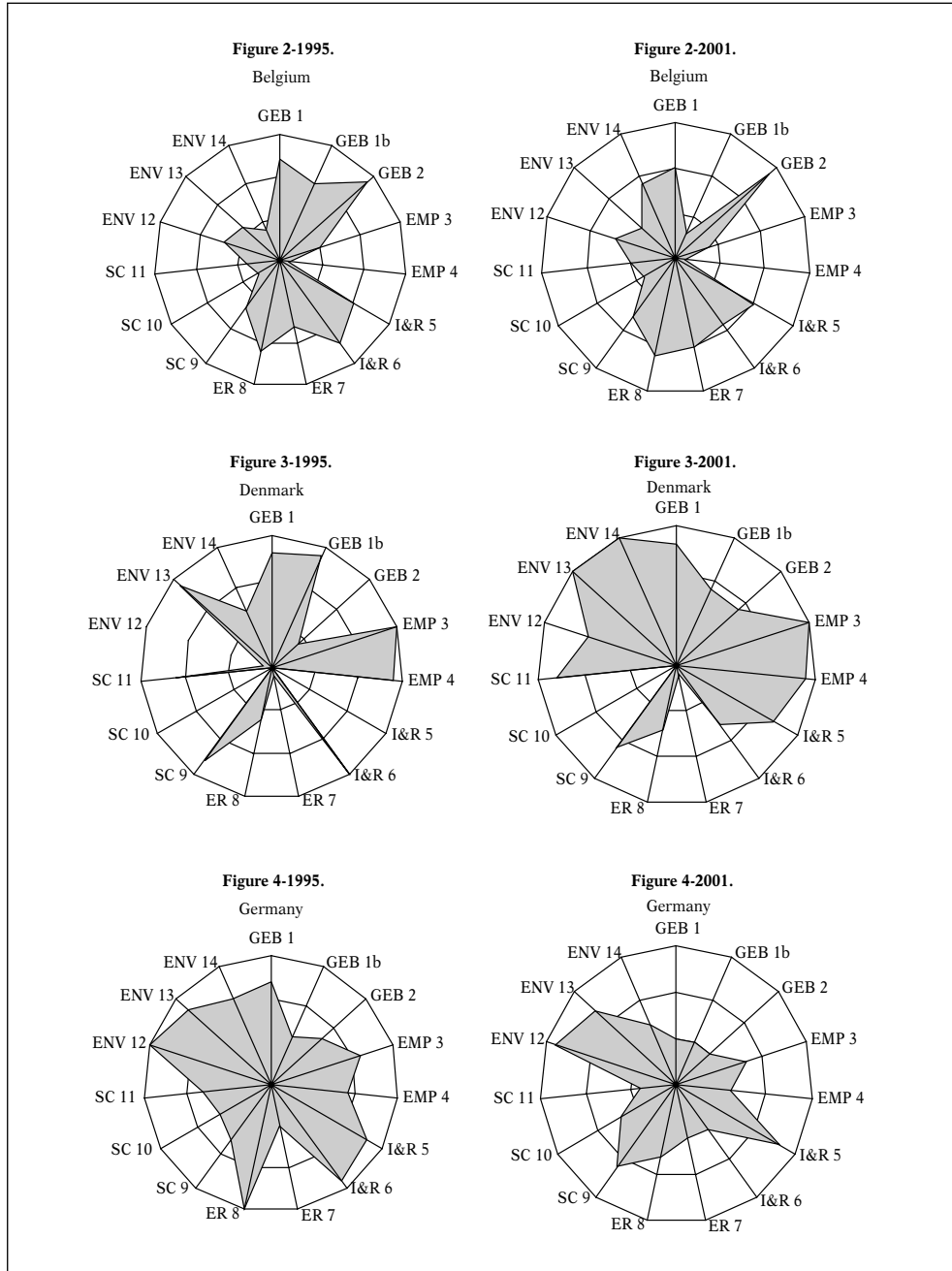
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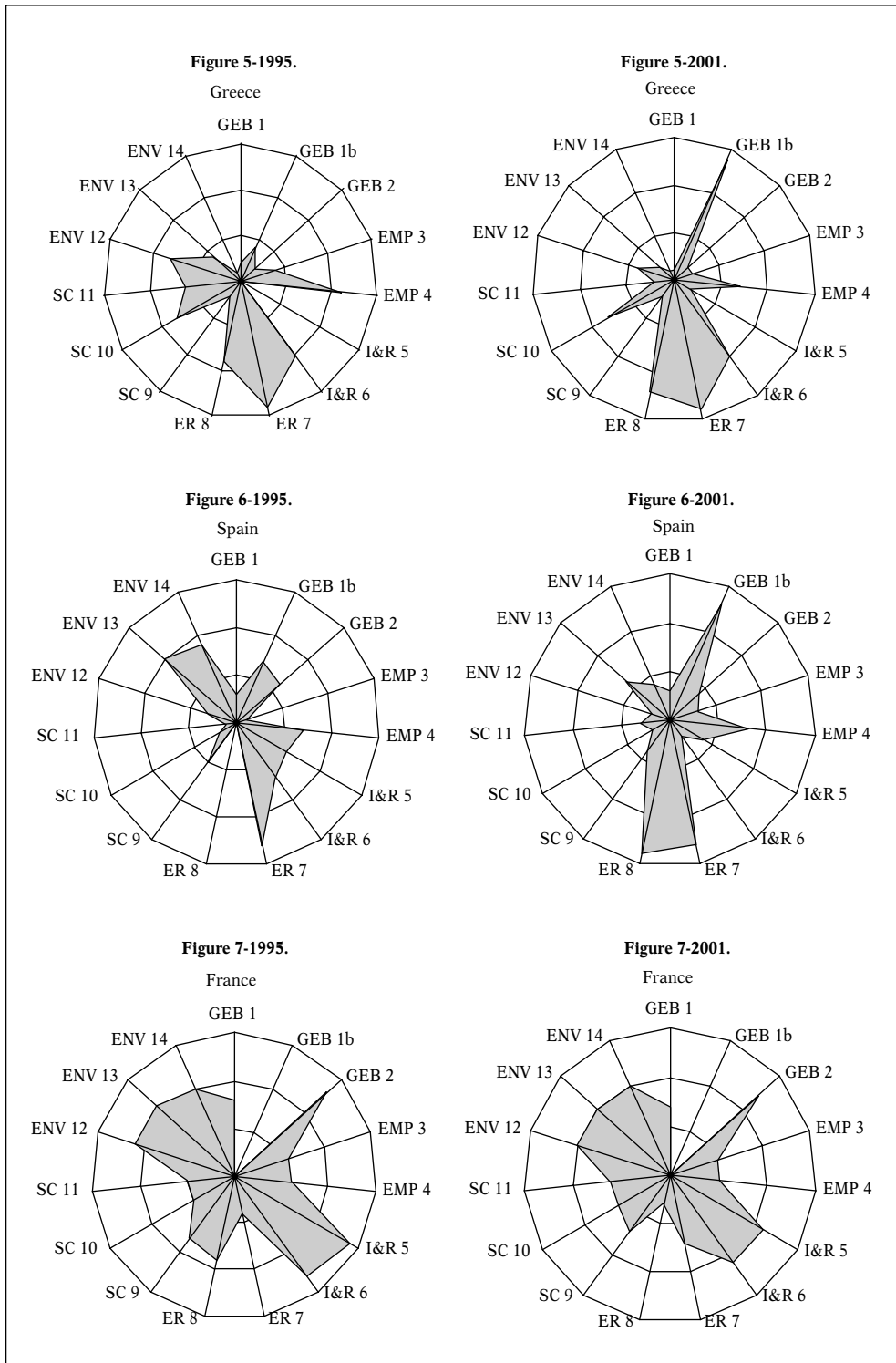
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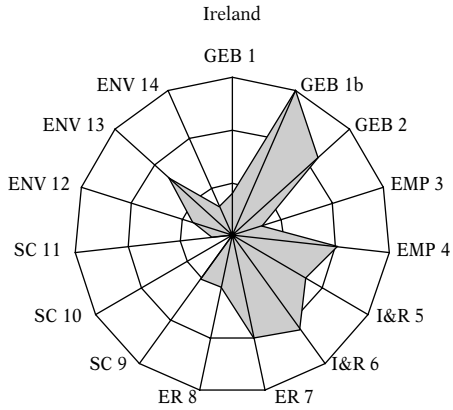
**Annex**

**Annex 1: Relative positions of each country in the structural indicators in 2001**

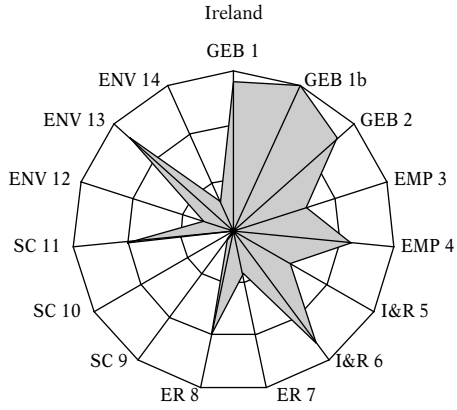




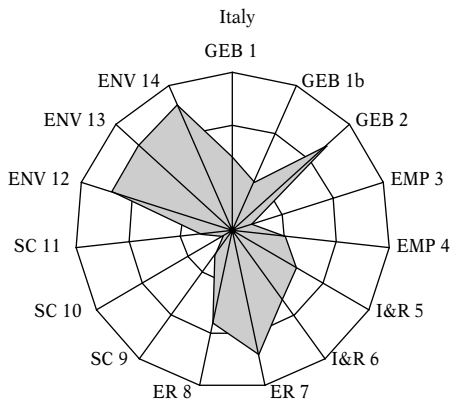
**Figure 8-1995.**



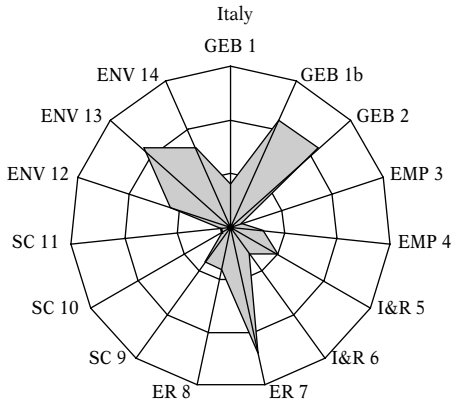
**Figure 8-2001.**



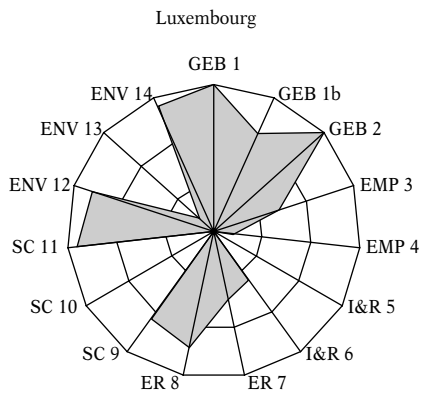
**Figure 9-1995.**



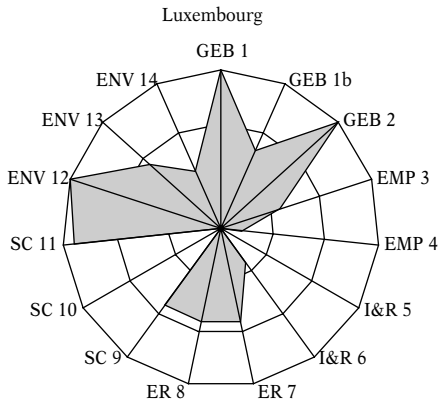
**Figure 9-2001.**



**Figure 10-1995.**



**Figure 10-2001.**



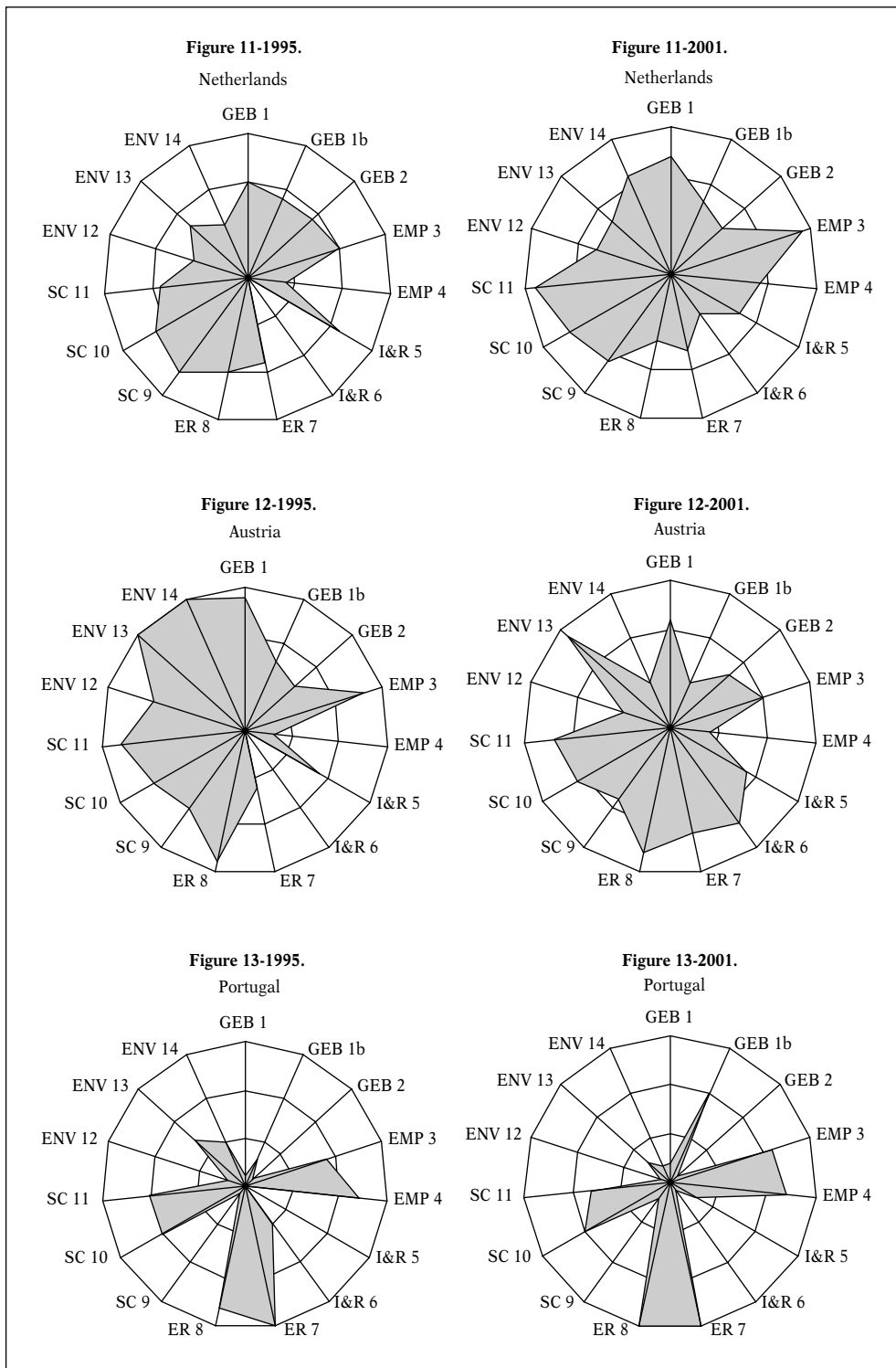


Figure 14-1995.

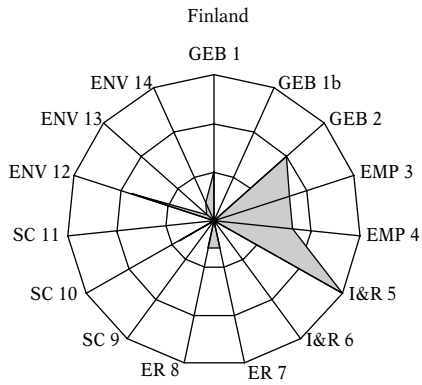


Figure 14-2001.

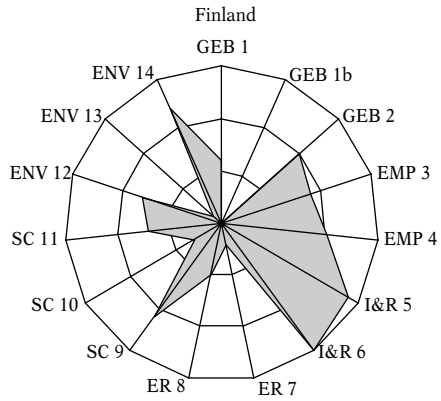


Figure 15-1995.

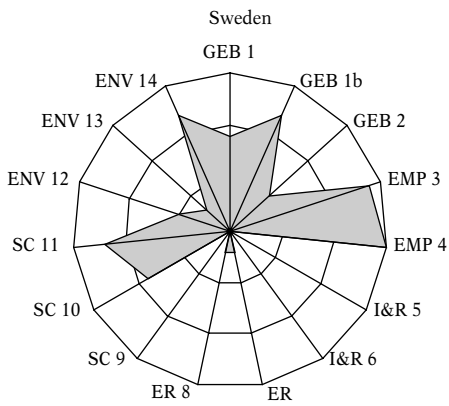


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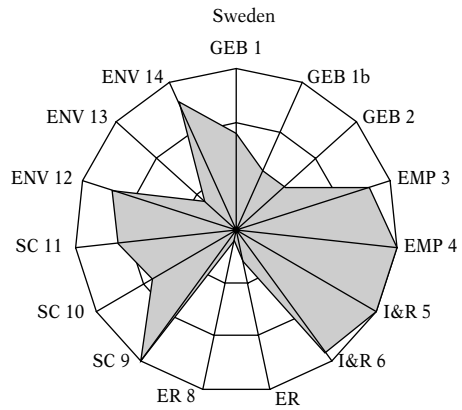


Figure 16-1995.

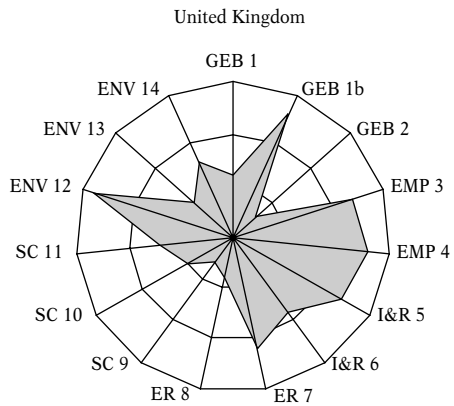
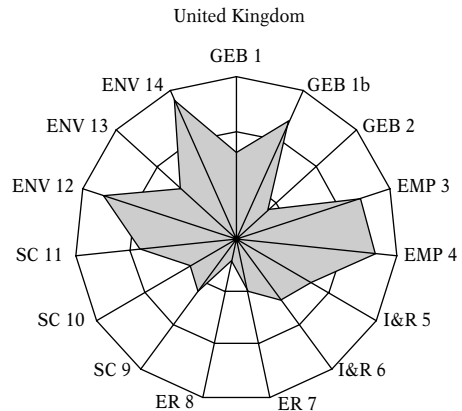
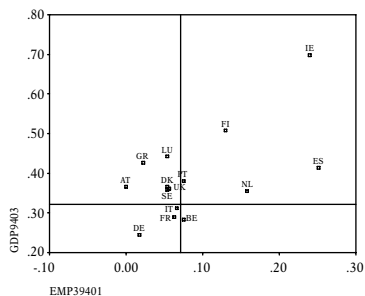


Figure 16-2001.



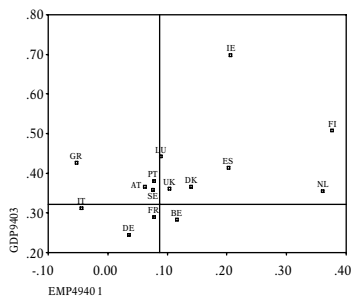
## Annex 2. Growth of GDP per capita and structural indicators: 1994-2003

**Figure 17 GDP per capita growth (1994-2003) and Employment rate growth (1994-2001).**



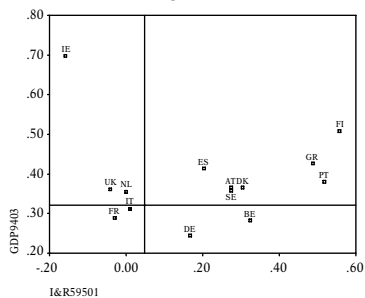
growth correlation: 0.626  
correlation with indicator in 1994: 0.153

**Figure 18 GDP per capita growth (1994-2003) and Employment rate of older workers growth (1994-2001).**



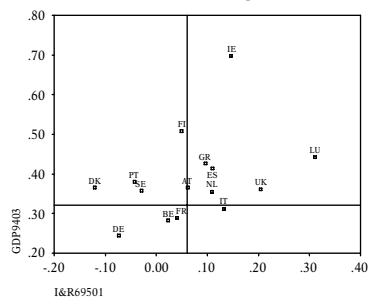
growth correlation: 0.478  
correlation with indicator in 1994: 0.394

**Figure 19 GDP per capita growth (1994-2003) and GERD growth (1995-2001).**



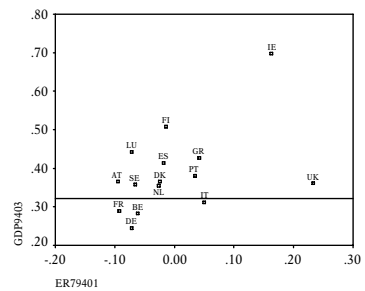
growth correlation: 0.178  
correlation with indicator in 1995: -0.242

**Figure 20 GDP per capita growth (1994-2003) and Youth educational attainment level growth (1995-2001).**



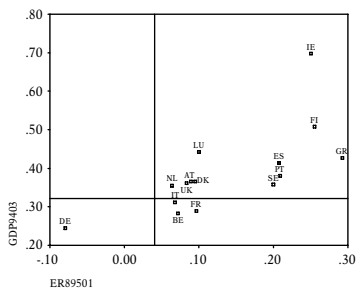
growth correlation: 0.517  
correlation with indicator in 1995: -0.038

**Figure 21 GDP per capita growth (1994-2003) and Comparative price levels growth (1994-2001).**



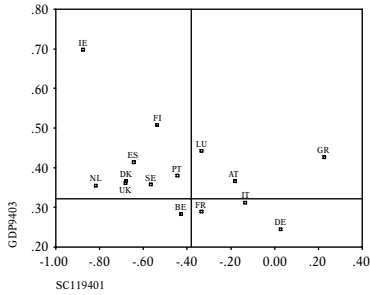
growth correlation: 0.388  
correlation with indicator in 1994: -0.018

**Figure 22 GDP per capita growth (1994-2003) and Business investment growth (1995-2001).**



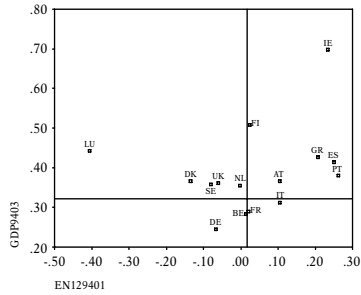
growth correlation: 0.768  
correlation with indicator in 1995: 0.047

**Figure 23 GDP per capita growth (1994-2003) and long-term unemployment rate growth (1994-2001).**



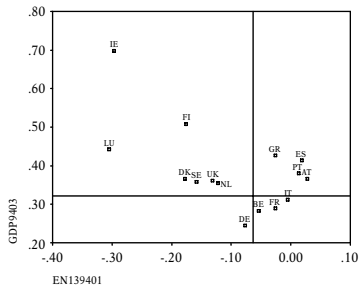
growth correlation: -0.611  
correlation with indicator in 1994: 0.490

**Figure 24 GDP per capita growth (1994-2003) and total greenhouse gas emissions growth (1994-2001).**



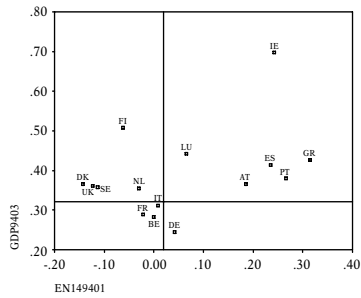
growth correlation: 0.506  
correlation with indicator in 1994: 0.718

**Figure 25 GDP per capita growth (1994-2003) and Energy intensity growth (1994-2001).**



growth correlation: -0.210  
correlation with indicator in 1994: 0.714

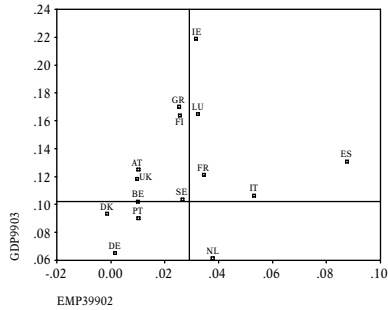
**Figure 26 GDP per capita growth (1994-2003) and Transport -volume of freight transport relative to GDP growth (1994-2001).**



growth correlation: 0.295  
correlation with indicator in 1994: 0.584

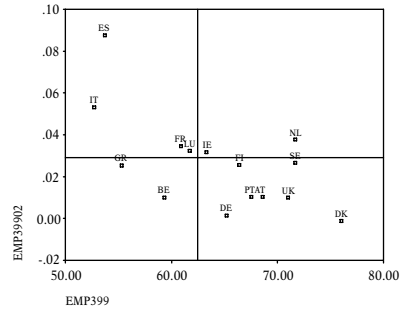
### Annex 3. Growth of GDP per capita and structural indicators: 1999-2003

**Figure 27 GDP per capita growth (1999-2003) and Employment rate growth (1999-2002).**



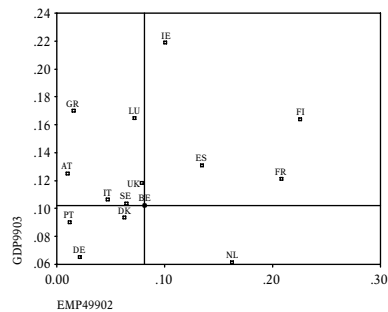
growth correlation: 0.452  
correlation with indicator in 1999: -0.309

**Figure 28 Employment rate in 1999 and its growth during 1999-2002.**



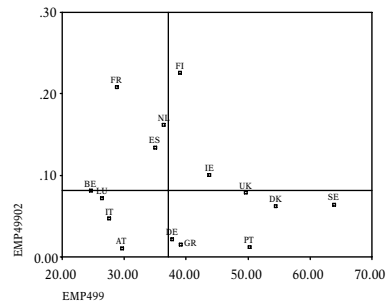
correlation: -0.751

**Figure 29 GDP per capita growth (1999-2003) and Employment rate of older workers growth (1999-2002).**



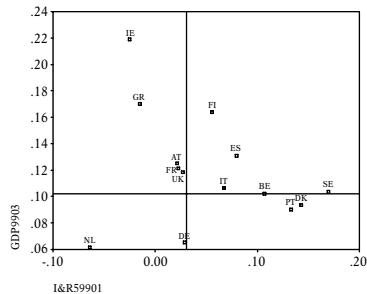
growth correlation: 0.412  
correlation with indicator in 1999: -0.022

**Figure 30 Employment rate of older workers in 1999 and its growth during 1999-2002.**



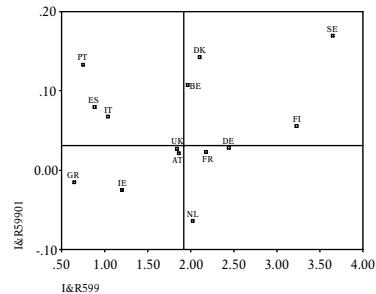
correlation: -0.275

**Figure 31 GDP per capita growth (1999-2003) and GERD growth (1999-2001).**



growth correlation: 0.072  
correlation with indicator in 1999: -0.442

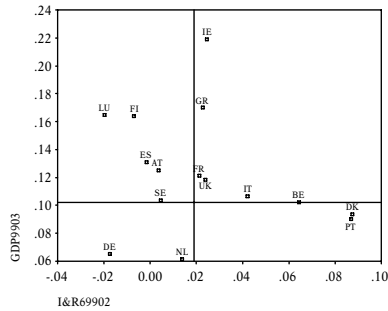
**Figure 32 GERD in 1999 and its growth during 1999-2001.**



correlation: -0.144

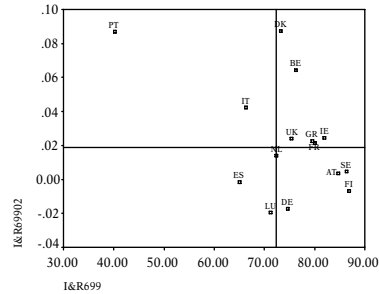


**Figure 33 GDP per capita growth (1999-2003) and Youth educational attainment level growth (1999-2002).**



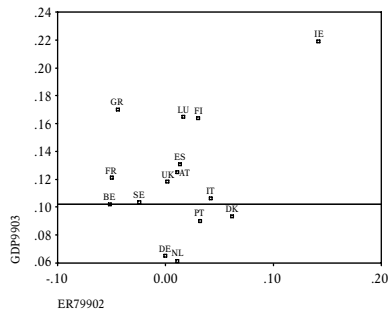
growth correlation: 0.300  
correlation with indicator in 1999: 0.156

**Figure 34 Youth educational attainment level in 1999 and its growth during 1999-2002.**



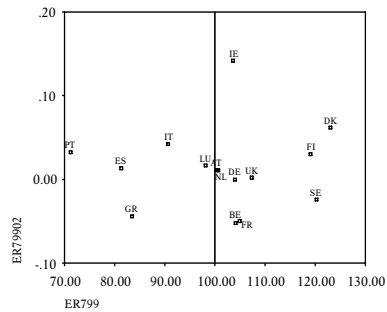
correlation: -0.395

**Figure 35 GDP per capita growth (1999-2003) and Comparative price levels growth (1999-2002).**



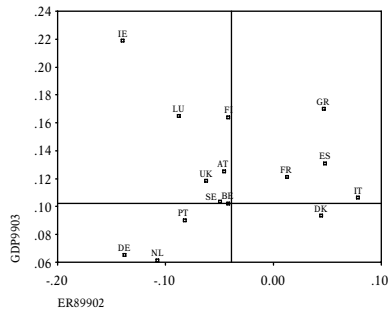
growth correlation: -0.006  
correlation with indicator in 1999: -0.203

**Figure 36 Comparative price levels in 1999 and its growth during 1999-2002.**



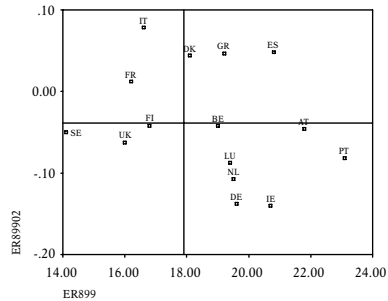
correlation: -0.299

**Figure 37 GDP per capita growth (1999-2003) and Business investment growth (1999-2002).**



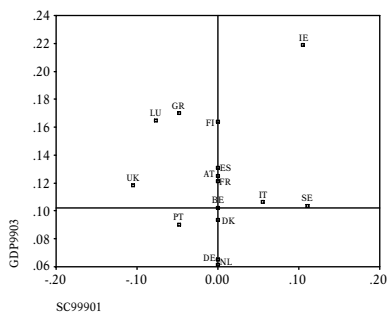
growth correlation: 0.585  
correlation with indicator in 1999: -0.220

**Figure 38 Business investment in 1999 and its growth during 1999-2002.**



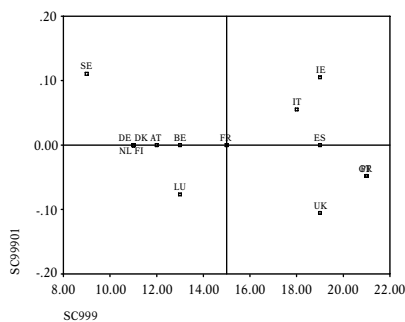
correlation: -0.310

**Figure 39 GDP per capita growth (1999-2003) and At-risk-poverty rate after social transfers growth (1999-2001).**



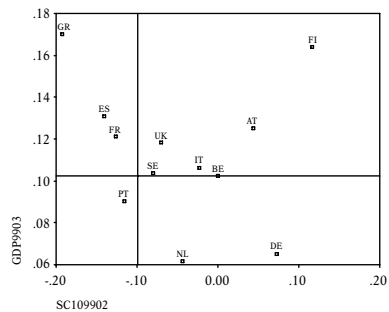
growth correlation: -0.106  
correlation with indicator in 1999: 0.659

**Figure 40 At-risk-poverty rate after social transfers in 1999 and its growth during 1999-2001.**



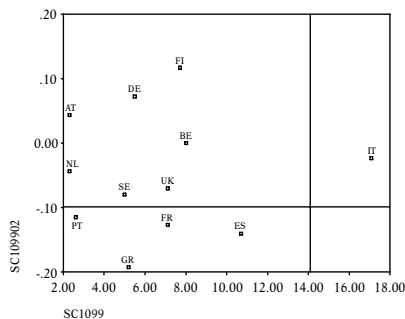
correlation: -0.342

**Figure 41 GDP per capita growth (1999-2003) and Dispersion of regional employment rates growth (1999-2002).**



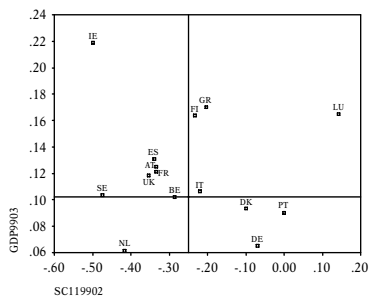
growth correlation: -0.652  
correlation with indicator in 1999: 0.175

**Figure 42 Dispersion of regional employment rates in 1999 and its growth during 1999-2002.**



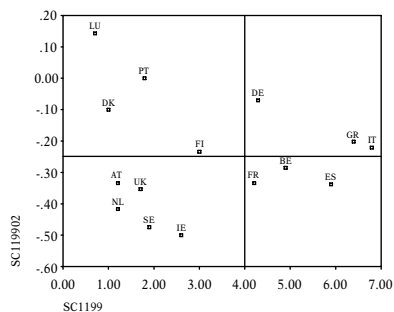
correlation: -0.116

**Figure 43 GDP per capita growth (1999-2003) and long-term unemployment rate growth (1999-2002).**



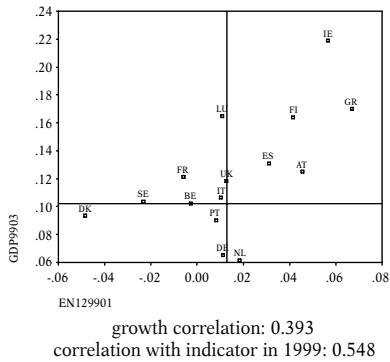
growth correlation: -0.589  
correlation with indicator in 1999: 0.106

**Figure 44 Total long-term unemployment rate in 1999 and its growth during 1999-2002.**

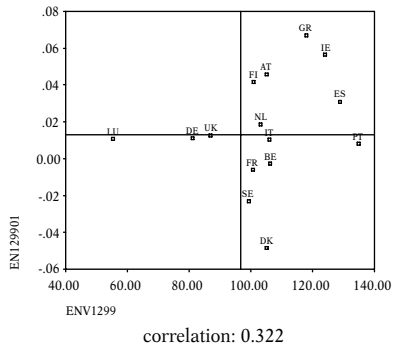


correlation: 0.251

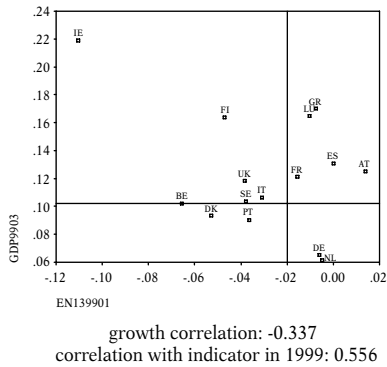
**Figure 45 GDP per capita growth (1999-2003) and Total greenhouse gas emissions growth (1999-2001).**



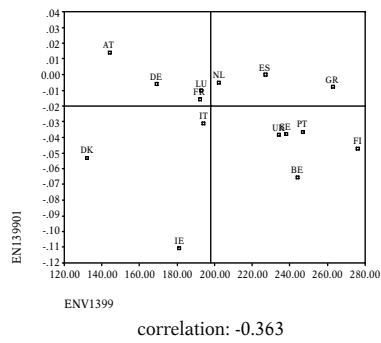
**Figure 46 Total greenhouse gas emissions in 1999 and its growth during 1999-2001.**



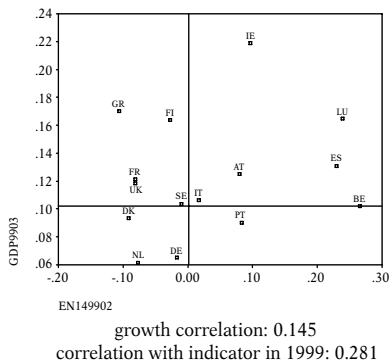
**Figure 47 GDP per capita growth (1999-2003) and Energy intensity growth (1999-2001).**



**Figure 48 Energy intensity in 1999 and its growth during 1999-2001.**



**Figure 49 GDP per capita growth (1999-2003) and Transport-volume of freight transport relative to GDP growth (1999-2001)**



**Figure 50 Transport-volume of freight transport relative to GDP in 1999 and its growth during 1999-2002.**

