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Sección PANORAMA Y DEBATES

Investigaciones Regionales

Monitoring the Lisbon Strategy's Targets

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ABSTRACT: In this paper the monitoring of the Lisbon Strategy is analysed. In order to do that, in a first stage a summary of the Lisbon Strategy is made, with an analysis of its objectives, list of structural indicators and an overall evaluation. A brief summary is made on the relaunch of the Agenda and on its consequences on the reform of the Cohesion Policy. In a second stage, we develop an analysis of the structural indicators evolution against general economic background indicators both at cross section and temporal dimensions, focusing on economic growth. In this sense, the analysis made by the Commission is complemented with a discussion about the implications that the evolution of these indicators may have on economic growth. This would provide a richer explanation on the role that these aspects are having in EU development and growth.

JEL classification: O10, O20, O52, E01, E20.

Key words: Lisbon Strategy, European Union, Indicators, Economic Growth, Economic Development.

El seguimiento de los objetivos de la Estrategia de Lisboa

RESUMEN: En este artículo se evalúa la Estrategia de Lisboa. En primer lugar, se realiza una breve descripción de la misma, analizando sus objetivos, la lista de indicadores estructurales y la evaluación general de su evolución por parte de la propia Comisión Europea. Además se hace un breve repaso del reciente relanzamiento de la agenda y de su influencia en la reforma de los Fondos de Cohesión. Posteriormente, se analiza la evolución de los indicadores estructurales versus los indicadores de situación económica general, tanto a nivel transversal como temporal, centrándonos en el crecimiento económico. De esta forma, se complementa el análisis realizado por la Comisión con una discusión en torno a las implicaciones que la evolución de dichos indicadores puede suponer en el crecimiento económico, proporcionándose una explicación más detallada del papel que dichos aspectos poseen sobre el crecimiento y desarrollo de la UE.

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Palabras Clave: Estrategia de Lisboa, Unión Europea, Indicadores, Crecimiento Económico, Desarrollo Económico.

1. Introduction

In March 2005 took place the European Council in Brussels. There was a very important interest on the intermediate revision of the Lisbon Strategy, as a result of the evident lags of several vectors of the agenda. In this paper we revisit the current position of this key political action of the European Union. Besides we develop an analysis of the Lisbon Strategy's objectives looking at the structural indicators evolution against general economic background indicators both at cross section and temporal dimensions, focusing on economic growth.

The Lisbon Strategy faces the shifts that come from globalization and from a new knowledge driven economy through the definition of a new strategic goal for Europe. From a High Level Group a revision of this strategy has been developed (*Kok Report*). Its main conclusions highlighted the slow progress of the agenda, driven mainly by «the lack of determined political action». Thus, in one of its recommendations, the report asks for measuring and comparing the respective performance of every member state, presenting an annual league table of member states.

But, how can it be done? First of all, we have to assume that the framework of the Lisbon Strategy is quite wide and requires an overall strategy that, at the same time, can be disaggregated in particular objectives and ways to achieve them. In order to measure and monitor this strategy process, a complex system of around a hundred indicators was developed, though a final Structural Indicators Table was implemented. These indicators should be a means for the Commission to draw up an annual synthesis report on progress on the basis of structural indicators to be agreed relating to five dimensions: employment, innovation, economic reform, social cohesion and environment. Additionally, the more important aspects of this Indicators System have been synthesized: from the initial 107 indicators to the final 14 indicators proposed by the same Commission. In our view, this process has followed the objective of getting the first criteria stated in the Communication from the Commission (8.10.2003): easy to read and understand. Nevertheless, the final result forgets one of the initial characteristics of the Lisbon Strategy: the multiplicity of objectives.

Taken this into account, we wonder if the structural indicators finally chosen reflect the ultimate objective of the Lisbon Strategy, which is in Commission words, «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 this sense, two approaches have been considered. The first one consisting in analysing the relationship between the main objective of the Strategy (defined as general economic background) and the rest of structural indicators, those merely try to pick up the five dimensions of the overall Strategy. The second one will

allow us to know which have been the more important forces that have contributed to the growth of the EU countries during the last ten years. Or, in other words, whether general growth of the economies has been accompanied with a similar growth on employment, knowledge and human capital, investments or social cohesion among others.

Besides, we have also looked at several recent aspects of the revision of the Structural Funds and the reform of cohesion policy for the period 2007-2013. Indeed it shares the main objectives of the Lisbon Strategy and, consequently, political objectives and political tools have to be linked. Although it is a work in progress, some key features of the revision process can be highlighted.

The paper is outlined as follows. After this introduction, section 2 describes the Lisbon Strategy with the specification of its initial objectives, an overview on the structural indicators under consideration in this strategy, an overall evaluation of its results since 2000 and also the last modifications proposed for the overall Lisbon Strategy on February and March of this year. In addition, we make a revision of the Cohesion Policy as a main delivery instrument of Lisbon. In section 3 we offer an analysis of the structural indicators evolution during the last decade against general economic background indicators both at cross section and temporal dimensions, focusing on economic growth. Finally, section 4 concludes.

2. Description of the Lisbon Strategy

2.1. Initial objectives of the Lisbon Strategy

In 2000, the Lisbon European Council decided to launch a ten year-strategy focused in reaching a leadership economic position in dynamic and competitive terms[1], based in four axes:

- ***A***. Reaching a knowledge-based economy after;
- ***B***. Modernising the European social model;
- ***C***. Developing a framework of appropriate and stability oriented macroeconomic policies;
- ***D***. Achieving sustainable development.

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

In order to work in all four lines, the European Union (EU) has established in different European Councils (Lisbon, 2000; Stockholm, 2001; Gothenburg, 2001; Barcelona, 2002; Brussels, 2003) several objectives, grouped in five dimensions:

- ***A.*** Employment.
- ***B.*** Innovation and research.

[1] We have to remark the fact that the Lisbon Strategy is extended to the New Member States of the European Union, and then all the objectives, implemented initially by the 15 Member States, are applied also to the new members.

- ***C.*** Structural economic reforms.
- ***D.*** Social cohesion.
- ***E.*** Environment.

These dimensions are quantified in a sort of structural indicators, comparable with a ten year temporal threshold of policy ciphers that allows policy makers evaluating the evolution of the overall strategy. Roughly speaking, all generic objectives have a list of specific objectives that ensure the completion of the initial concept that faces the strategy. These 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 rise the employment rate, four areas arise: improving employability and reducing skill gaps; increase adaptability through lifelong learning; increase employment in services; and reducing 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 sure e-commerce and a telecoms competitive regulatory framework is needed, together with ensuring resources in education and public services.
- ***B.3. Establishing a European Area of Research and Innovation***: The creation of a European Research Area may ensure an integrated, efficient and innovative alternative to best brains. The basic steps are: networking research together with the coordination and benchmarking of national research and promoting mobility; improve private research investment and start-ups; and ensure 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 have to offer learning and training opportunities of the knowledge society through three main components: development of local learning centres, the promotion of new basic skills, and increased transparency of qualifications. Particular targets arise: halving the proportion of 18 to 24 year olds with only secondary level; schools as multi-purpose local learning centres; a European diploma for basic IT skills; promoting mobility for the education actors; a common format for curricula vitae.
- ***C.5. Creating a friendly environment for starting up 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, an engine for job-creation in Europe (micro-enterprises).
- ***C.6. Economic reforms for a complete and fully operational internal market***: certain sectors can still complete internal market: remove barriers in services; liberalise gas, electricity, postal services and transports; update public procurement rules (that should take place on-line); simplify the regulatory environment; and generally speaking to promote competition, reducing support to individual companies or sectors, and focusing on key areas.

- ***C.7. Efficient and integrated financial markets***: more efficient financial and risk-capital markets through a set of particular policies such as enhancing the comparability of companies' financial statements or promoting the better functioning of government bond markets, among others.
- ***C.8. Coordinating macro-economic policies: fiscal consolidation, quality and sustainability of public finances***: it must be created a relationship of trust between all the actors involved in policy making, in order to have a proper understanding of each other's positions and constraints. The clear objective is to pursue fiscal consolidation and to improve the quality and sustainability of public finances. Particular policies are recommended: reduce tax pressure on labour; redirect public expenditure towards physical and human capital accumulation; and ensure long-term sustainability of public finances.
- ***D.9. Modernising social protection***: the European social model must be adapted as part of an active welfare state to ensure that work pays, to secure their long-term sustainability in the face of an ageing population, to promote social inclusion and gender equality, and to provide quality health services. It can be done through strengthen cooperation between Member States by exchanging experiences and to prepare studies on the future evolution of social protection from a long-term point of view.
- ***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: promote a better understanding of social exclusion; national promotion of inclusion, complemented at the Community level by the Structural Funds framework; develop priority actions addressed to specific target groups (minorities, the disabled, etc.).
- ***E.11. A strategy for sustainable development:*** this environmental dimension was added to the Lisbon strategy, to complete the Union's political commitment to economic and social renewal, and establishes a new approach to policy making. Several themes have special emphasis: a new approach to policy making; 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; and finally maritime safety.

2.2. Structural indicators

At the Lisbon Special European Council held in March 2000, it was determined the need to regularly discuss and assess progress made in achieving the strategic goal for the next decade, that 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 do it, the Council invited the Commission to draft an annual synthesis report (*Spring Report*) on this progress on the basis of commonly agreed structural indicators, ensuring this way the necessary coherence and standard presentation. This report and the indicators selected must be

related to four policy domains: employment, innovation and research, economic reform, and social cohesion. Besides, some general economic background indicators had to be defined to present an overall economic context in which structural reforms were taking place. In addition, from the Gothenburg European Council held in June 2001, a new domain on the environment was included in the list of structural indicators.

In order to meet the request of the European Council, since 2000 the Commission presents annually, at the end of the year, a communication named «Structural Indicators» with a set of indicators to be used in the synthesis report for the respective Spring European Council (COM-2000 594 final, COM-2001 619 final, COM-2002 551 final, COM-2003 585 final). A consensus exists about the need that the selected indicators should be: easy to read and understand policy relevant, mutually consistent, and timely available, comparable across Member States and as far as possible with other countries (mainly US), selected from reliable sources and the data requirements should not impose too large 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 to send clear, simple and focussed policy messages) and balanced (to reflect the equal importance on each one of the five domains: employment, innovation and research, economic reform, social cohesion and environment).

Taking into account the points above, the final list used for the synthesis report for the 2001, 2002 and 2003' Spring European Councils incorporated 42 structural indicators[2] (7 indicators for each domain, jointly with 7 general economic background indicators). However, the indicators proposed by the Commission can change from year to year. So, annually some of them can be replaced by new indicators in case the last were more politically relevant compared to the previous indicators, the quality of data for them was better or the previous indicator duplicated to some extent another indicator in the list. This way, new indicators are suggested to be developed in the near future. In any case, a great effort is being done by Eurostat in order to build an exhaustive data base, which is being completed every period.

However, the difficulties to provide a clear idea on progress towards the Lisbon European Council objectives (expanded at Gothenburg and refined at Stockholm and Barcelona) when using a high number of indicators lead to the Commission to reduce the list up to only 14 structural indicators in the 2004 Report from the Commission to the Spring European Council.[3] In this sense, as the Commission says in the Communication COM(2003) 585 final, «using a smaller number of indicators it is also possi-

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[2] Consisting of 107 indicators when including disaggregations and sub-indicators.

[3] «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.»

ble 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). In any case, it must be said that the previous years' structural indicators are maintened by Eurostat in its publicly-accessible database New Cronos and on the structural indicators website *(http://europa.eu.int/comm/eurostat/structuralindicators)*[4].

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. In this sense, 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 to the 2004 Report from the Commission to the Spring European Council

GENERAL ECONOMIC BACKGROUND

1. **Gross Domestic Product per capita in Purchasing Power Standards** (GDP pc in PPS)
   Source: EUROSTAT; National Accounts
   Availability: Coverage: all MS, all ACCs, US, Japan, Norway, Iceland. Time series: 1991-2001 (forecasts for 2002-2005; non data available for some years for ACCs).
   Overall policy objective: Standard of living, and Social and environmental welfare.
   Interpretation: Temporal comparison, expecting its increase over time and the reduction of the gap with main competitors.
2. **Labour productivity per person employed** (GDP in PPS per person employed)
   Source: EUROSTAT; National Accounts and OECD
   Availability: Coverage: all MS, all ACCs, US, Japan, Iceland and Norway.
   Time series: 1991-2001 (forecasts for 2002-2004; non data available for some years for ACCs).
   Overall policy objective: Overall efficiency of the economy.
   Interpretation: Temporal comparison, expecting its increase over time and the reduction of the gap with main competitors.

EMPLOYMENT

3. **Employment rate***
   (Employed persons aged 15-64 as a share of the total population of the same age group)
   Source: EUROSTAT; Labour Force Survey
   Availability: Coverage: all MS, all ACCs, Iceland and Norway. No comparable data for the US and Japan. Time series: 1990-2002. (non data available for some years for ACCs)
   Overall policy objective: Full employment. Combating social exclusion.
   Interpretation: Temporal comparison, expecting its increase over time. Strategic target: EU should achieve an average employment rate as closes as possible to 70% by 2010 (60% for females).
4. **Employment rate of older workers***
   (Employed persons aged 55-64 as a share of the population of the same age group)
   Source: EUROSTAT; Labour Force Survey
   Availability: Coverage: all MS, all ACCs, Iceland and Norway. No comparable data for the US and Japan. Time series: 1990-2002. (Non data available for some years for ACCs)
   Overall policy objective: Full employment. Combating social exclusion.
   Interpretation: Temporal comparison, expecting non decrease over time.

[4] This link provides information for 42 indicators and 117 sub-indicators.

INNOVATION AND RESEARCH

5. **GERD: Gross Domestic Expenditure on Research and Development**
(Gross Domestic Expenditure on R&D as a percentage of the GDP)
Source: Eurostat questionnaire
Availability: Coverage: MS (except Luxembourg), ACCs (except Malta), Iceland, Norway, Japan; USA. Time series: 1991-2001 (2002 and 2003 for some MS).
Overall policy objective: R&D effort
Interpretation: Temporal comparison, expecting its increase over time. Strategic target: Rise overall spending in the Union on R&D with the aim of approaching 3% of GDP by 2010.
6. **Youth educational attainment level***
(Percentage of the population aged 20 to 24 having completed at least upper secondary education)
Source: Eurostat; EU Labour Force Survey.
Availability: Coverage: MS, ACCs (except Turkey), Switzerland, Iceland, Norway. No data for USA and Japan. Time series: 1992-2003 (non data available for some years for ACCs)
Overall policy objective: Quality of human resources.
Interpretation: Temporal comparison, expecting an increase over time.

ECONOMIC REFORM

7. **Comparative price levels**
(Comparative price levels of final consumption by private households including indirect taxes)
Source: Eurostat; OECD
Availability: Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2001 (provisional for 2002; some years for some countries).
Overall policy objective: Product market integration. Market efficiency.
Interpretation: Temporal comparison, expecting a decrease over time.
8. **Business investment**
(Gross fixed capital formation by the private sector as a percentage of GDP)
Source: Eurostat; National Accounts
Availability: Coverage: MS, ACCs, Norway. Time series: varies from one country to the other (the longest series start in 1980).
Overall policy objective: Private investment effort
Interpretation: Temporal comparison, expecting an increase over time.

SOCIAL COHESION

9. **At-risk-poverty rate after social transfers***
(Share of persons with an equivalised disposable income below the risk-of-poverty threshold after social transfers, which is set at 60% of the national median equivalised disposable income).
Source: Eurostat; European Community Household Panel (ECHP)
Availability: Coverage: MS, ACCs. No comparable data available for US, Japan. Time series: 1994-2003 (non data available for some years for some countries)
Overall policy objective: Combating poverty and social exclusion
Interpretation: Temporal comparison, expecting a decrease over time.
10. **Dispersion of regional employment rates***
(Coefficient of variation of employment rates across regions- NUTS 2 level-within countries)
Source: Eurostat; Labour Force Survey
Availability: Coverage: MS, several ACCs. Indicator not relevant for DK, IRL and L. Time series: 1999-2002 (non data available for some years for some countries)
Overall policy objective: Cohesion
Interpretation: Temporal comparison, expecting a decrease over time.
11. **Total long-term unemployment rate***
(Long-term unemployed -12 months or more- as a percentage of total active population aged 15-64)

Source: Eurostat/Labour Force Survey
Availability: Coverage: MS, ACCs, US, Japan Iceland and Norway. Time series: 1990-2002 (non data available for some years for some countries)
Overall policy objective: Full employment. Combating social exclusion.
Interpretation: Temporal comparison, expecting a decrease over time.

ENVIRONMENT

12. Total greenhouse gas emissions
(Percentage change in emissions of 6 main greenhouses gases-CO2, CH4,N2O,HFCs,PFCs and SF6-since base year and targets according to Kyoto Protocol/EU Council Decision for 2008-2012)
Source: European Environment Agency.
Availability: Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1990-2001
Overall policy objective: Limit climate change and implement the Kyoto Protocol.
Interpretation: Temporal comparison, expecting a decrease over time. Targets according to Kyoto Protocol/EU Council Decision for 2008-2012.

13. Energy intensity of the economy
(Gross inland consumption of energy divided by GDP)
Source: Eurostat; Energy statistics
Availability: Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2001
Overall policy objective: Use energy more efficiently.
Interpretation: Temporal comparison, expecting a decrease over time

14. Transport-Volume of freight transport relative to GDP
(Index of inland freight transport volume relative to GDP, measured in tonne-km /GDP)
Source: Eurostat; Transport Statistics
Availability: Coverage: MS, ACCs, Norway, Iceland, USA, Japan. Time series: 1991-2002 (data non available for some years for some ACCs)
Overall policy objective: Decouple transport growth from economic growth.
Interpretation: Temporal comparison, expecting an increase over time.

* Indicators disaggregated by gender.

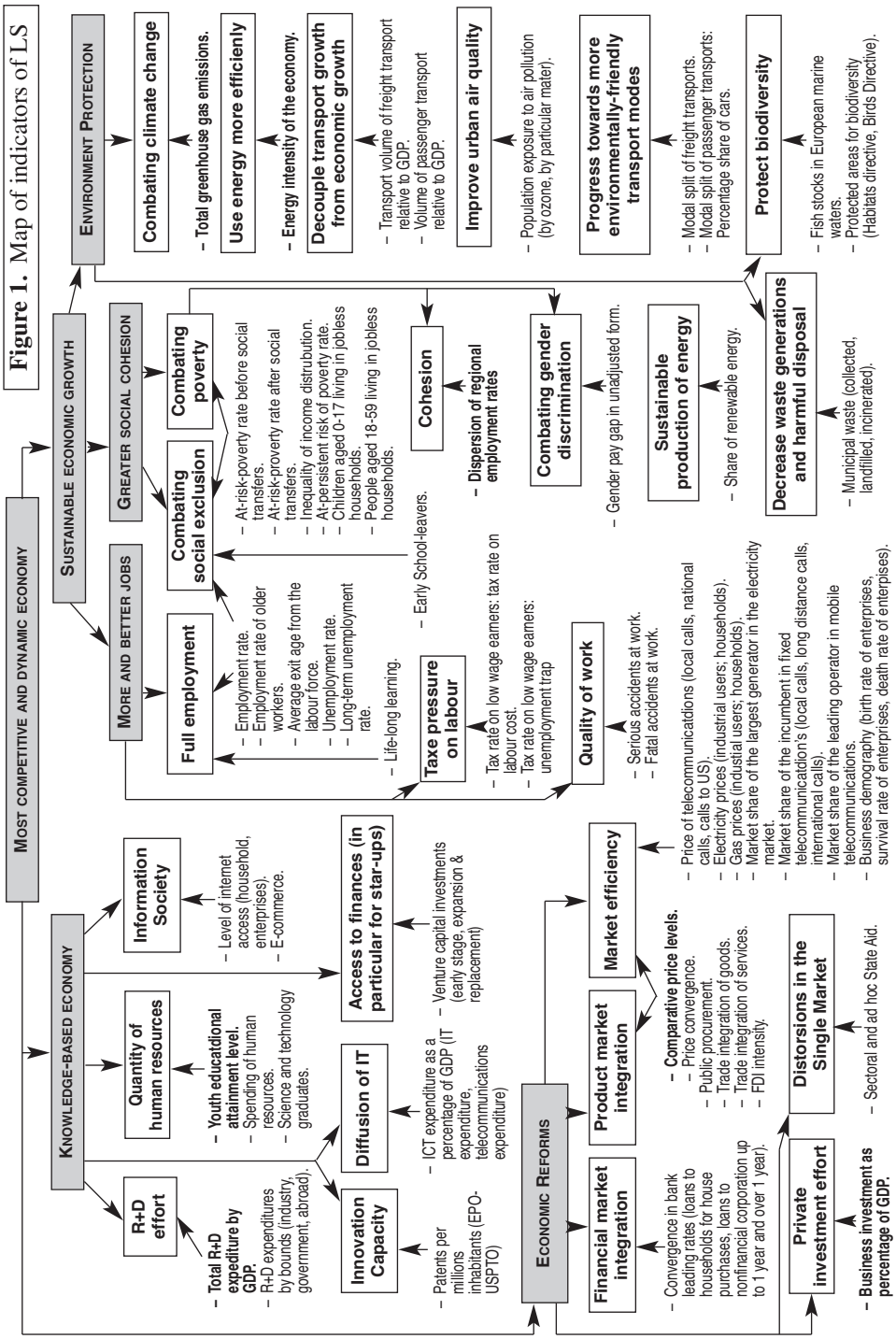
Finally, great efforts have been done by the Commission services, since 2000 up to present, to improve the quality and the presentation of the existing indicators, to integrate the acceding and candidate countries into the structural indicators (following the request from the Gothenburg European Council held in 2000) and to extent their coverage, to propose new indicators on structural issues and to developed a more detailed quality assessment procedure for the structural indicators.[5] In Figure 1 we present a chart with the five main areas of the Lisbon Strategy and the whole set of indicators in each one (structural and complementary indicators). In bold you will find the indicators that are included in the list of 14 indicators.

2.3. Overall evaluation

Implementation, albeit partially, of the reforms under the Lisbon strategy seems to be starting to bear fruit as regards the initial objectives. So, as the Commission says in the last report to the European Council (COM-2004, 29 final), the overall progress already made in four years is proof of this:

[5] 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, and country and time coverage.

Figure 1. Map of indicators of LS



- **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% en 2002.
- **Several key markets have been completely or partially opened up** to competition: telecommunications, rail freight, postal services, electricity and gas markets. This process makes it possible to modernise and stimulate these markets, to improve service quality and to lower costs, with no negative impact on employment.
- **The knowledge-based economy is becoming a reality**, with strong Internet take-up in 93% of schools, as well as in businesses, public administration and households, and thanks to the gradual development of the European Research Area.
- **The sustainable development approach is being taken more fully into account in policymaking.** Several Member States have embarked on reform of their pension systems/schemes to cope with the ageing of the population. Similarly, Community action is now paying increasingly greater heed to preserving our natural environment.
- Finally, the work done over the first four years has enabled some **one hundred regulations, directives and programmes** to be adopted, in different fields but all pursuing the Lisbon goals.

An analysis of the progress made highlights the relatively positive developments but also the major problems which need to be tackled urgently: the need for public finances to be viable, the unsatisfactory contribution of employment and productivity to growth, the disappointing development of the internal market and, finally, the lack of sustainability of growth.

Ensuring that public finances are viable: Budgetary and fiscal discipline has not been kept in the same way by all Member States. Thus, due to the weak economy, and also as a result of expansionary budgetary policies in some cases, the average EU deficit stood at 2.7% of GDP in 2003. It should also be noted that these policies have led to an increase in savings instead of the desired aim of boosting consumption, which has thereby reduced confidence. Furthermore, more has to be done to make national public finances viable in the medium and long term to guarantee sustainable development of our economy so as 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 down below 2% in the long term. At least half the Member States are at risk here: in 2003, the average level of government debt for the European Union is expected to rise to 64.1% of GDP, with six Member States exceeding the reference value of 60% of GDP.

Employment and productivity still insufficient for growth: Although the interim goal for 2005 will not be attained, the employment target remains valid as long as in the seven years remaining until 2010 employment picks up at a similar pace to that at the end of the 90s. Also, growth in Europe has remained low over the past three years. As a result, the relative level of GDP pc for the Union remained unchanged in

2003. The Union cannot catch up on the United States as our per capita GDP is 72% of our American partner's. The reasons for this insufficient growth are known: unlike in the United States, employment and productivity are still not contributing enough. The low growth in overall productivity in Europe 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 Union rose slightly from 5.4 per 1000 workforce in 1999 to 5.7 in 2001, this is well below the level in countries that are near or on the EU 3% R&D investment target (USA 8.1/1000; Japan 9.1/1000). Investment, both public and private, in human capital is still inadequate. But simply raising the overall level of investment in human resources will not be enough: there is a clear need to invest more effectively, that is, to identify and invest in those areas of education and training which produce the greatest returns.

Weaknesses in our internal market and competitiveness: Despite the successes of the past decade, the internal market has still not reached all its potential. There are several warning signs which need to be dealt with urgently: the Union is facing 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 is not yet fully implemented and the benefits relating to efficiency, inter-connectivity and security of supply in the Union have not yet been realised; at the same time, several strategic measures to increase our competitiveness have not got off the ground because of a lack of political will.

Growth still not sustainable enough: While some progress, particularly on the legislation front, has been made with regard to sustainable development and taking better account of the environment in Community action, the Union is still finding it difficult to capitalise on the synergy between various policies, especially environment, research and competitiveness. There is real risk of poverty increasing in several Member States, mainly due to the increase in unemployment but also to the fact that the social protection and pensions systems are not sustainable. In the environmental sphere, Member States' performance is generally inadequate. This shows a lack of awareness of the fact that growth may harm the environment and prove counter-productive in the medium and long term.

Finally, it must be said that a detailed analysis of the current situation indicates more clearly that there are still problems in all Member States and that all of them need to make a greater effort to achieve results. In sum, the revision of the Lisbon Agenda shows a moderate progress in most of the areas under consideration. Here we present one possible way of presenting a summary of the situation of each member state we suggest the use of some figures which show the position in a ranking for each country of each structural indicator in the last year available. This way, the length of the bar for one indicator shows the position of this country in the ranking of this indicator. If the bar is the longest it can be, it would imply that this country keeps the best position in this indicator, and with no bar (just in the central point) the

country would present the worst position. An additional indicator has been added (GEB1b) which refers to GDP pc growth, as a dynamic indicator of the GEB.

Figures 2 to 16 show an overview of the position of each country in each of the main 14 indicators, both in 1995 and 2001, in order to capture the relative changes of every country. As it can be observed, in 2001 there are 3 countries such as Denmark, Netherlands and Sweden which present good positions in a majority of indicators. On the opposite situation we find in 2001 Greece, Spain, Italy and Portugal with relative bad positions in most of the indicators.

Taking into consideration the relative changes of every country position between 1995 and 2001, we see how Denmark, Ireland, Netherlands, Finland and Sweden have experienced an expansion of their positions in the structural indicators rankings, while France, Germany, Italy and Austria have worsened in relative terms in the lapse of the six considered years.

Figures 2 to 16. Relative positions of each country in the structural indicators in 1995 and 2001

Figure 2-1995.

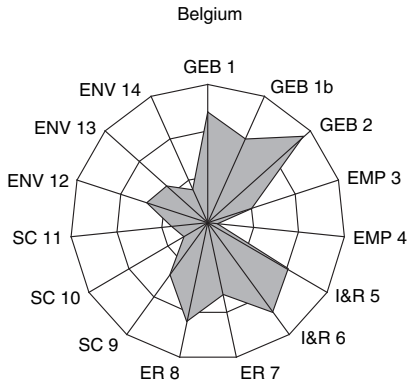


Figure 2-2001.

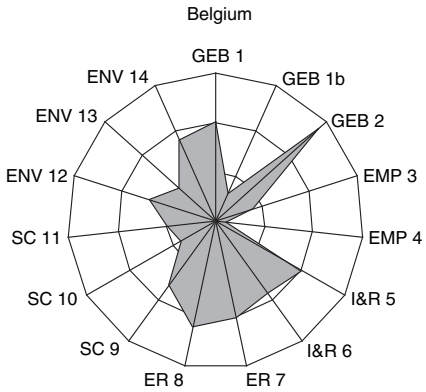


Figure 3-1995.

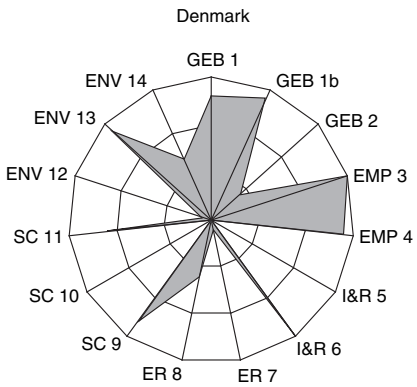


Figure 3-2001.

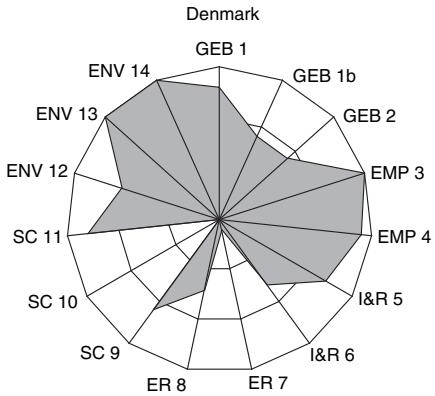
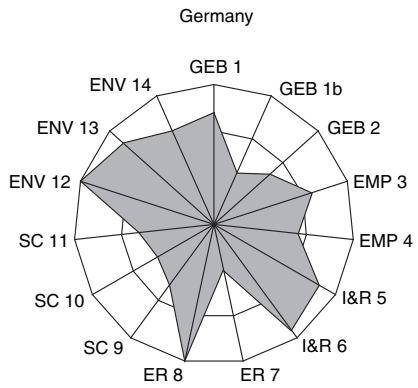


Figure 4-1995.



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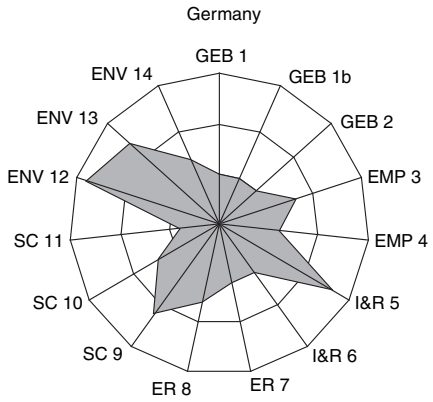

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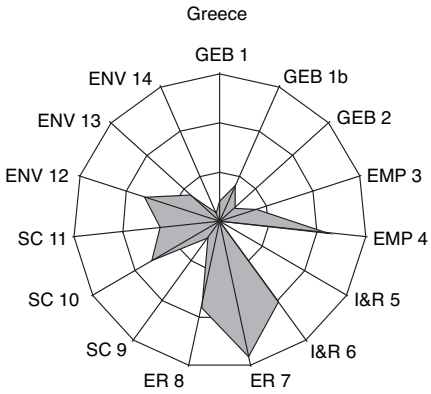

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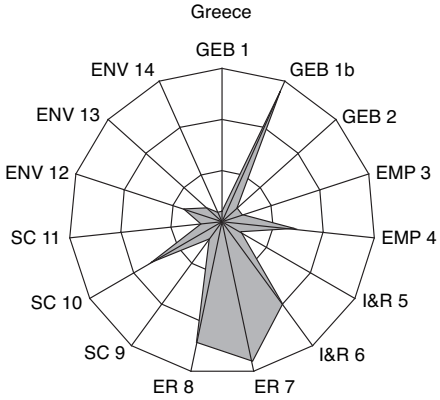

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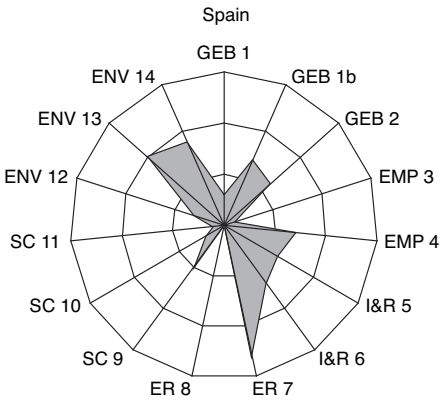

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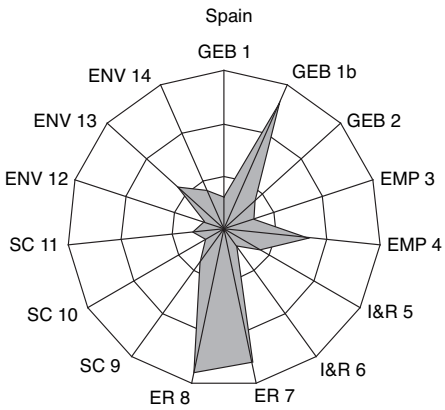

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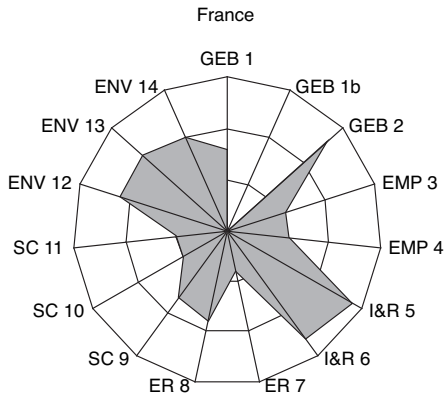

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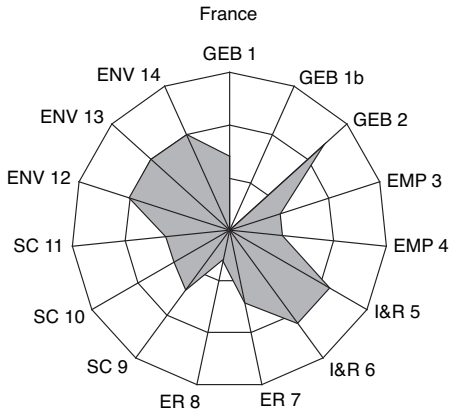

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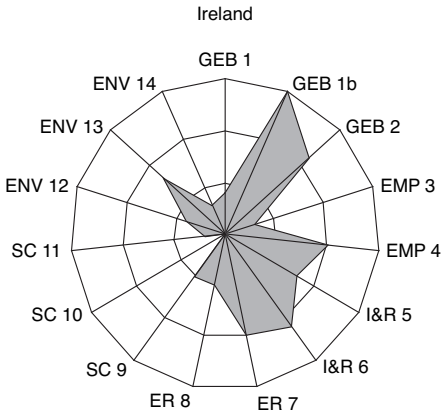

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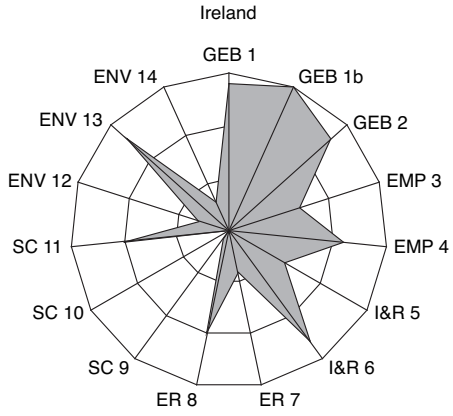

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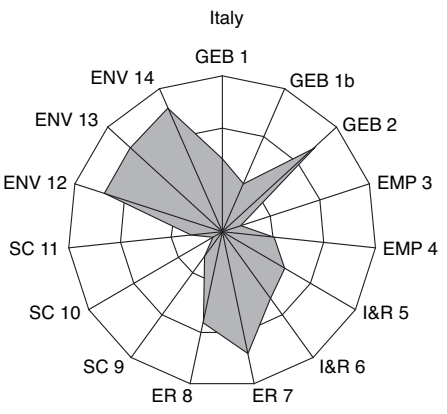

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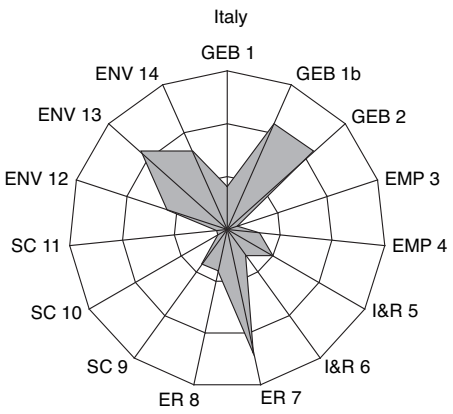

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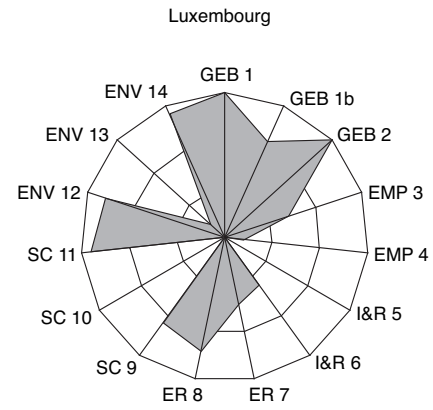

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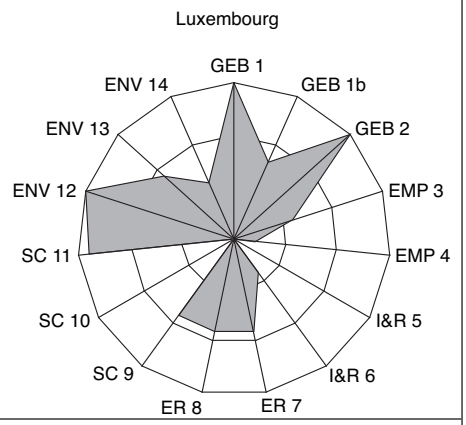

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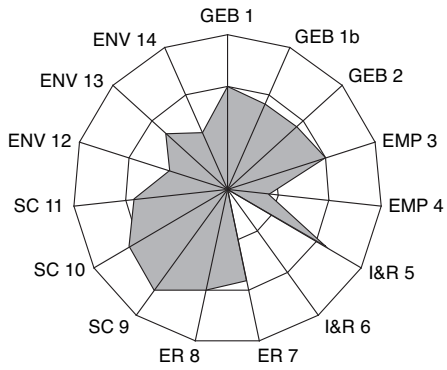

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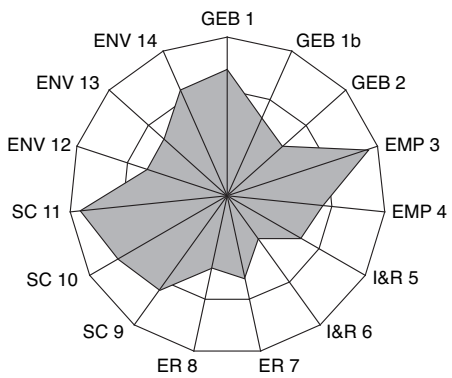

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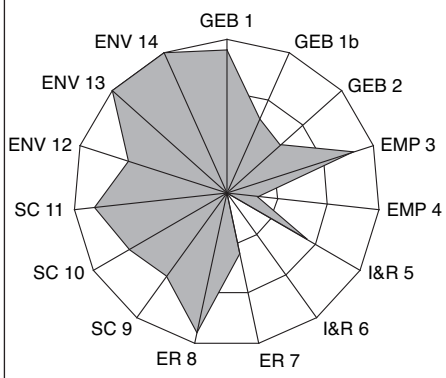

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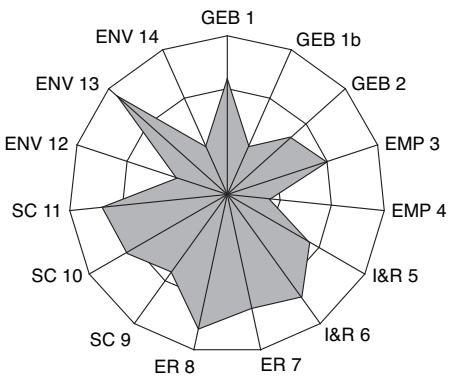

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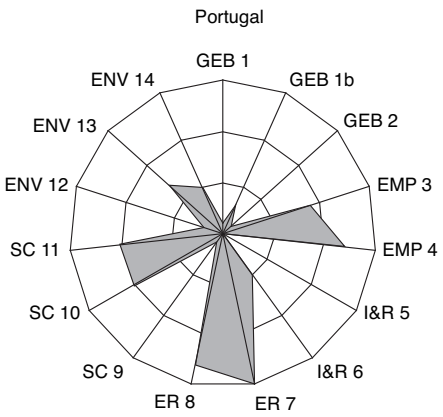

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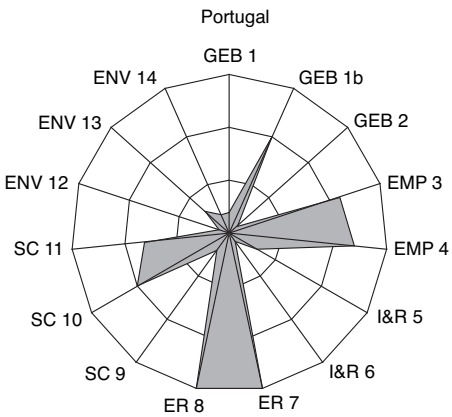

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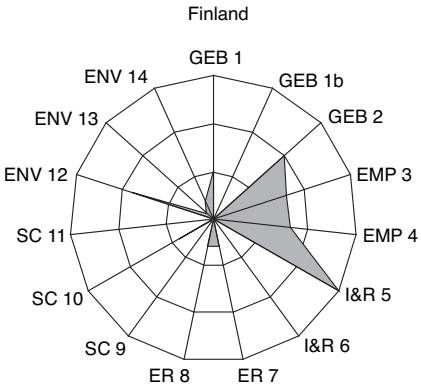

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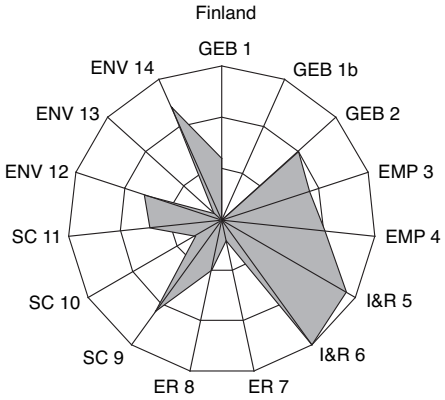
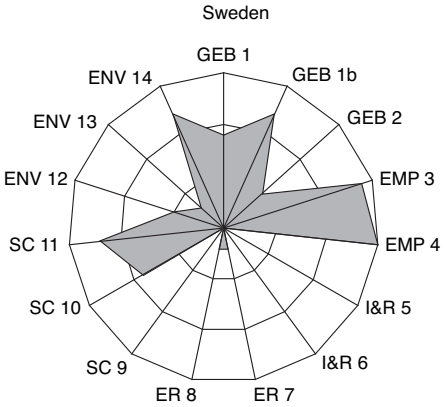


Figure 15-1995.



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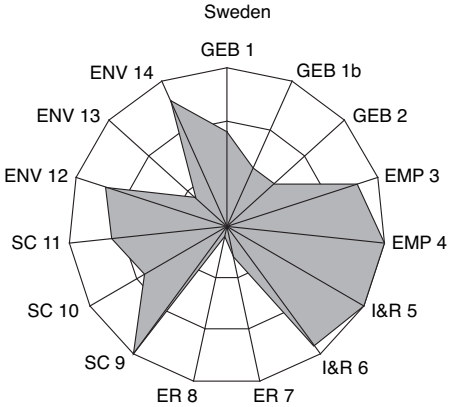

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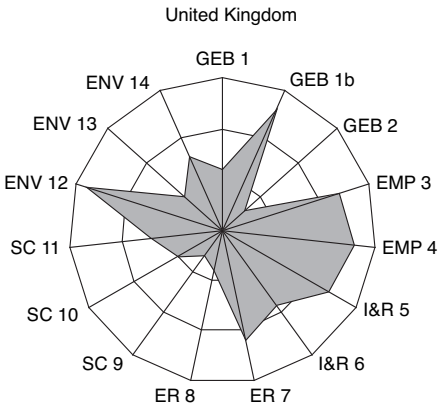
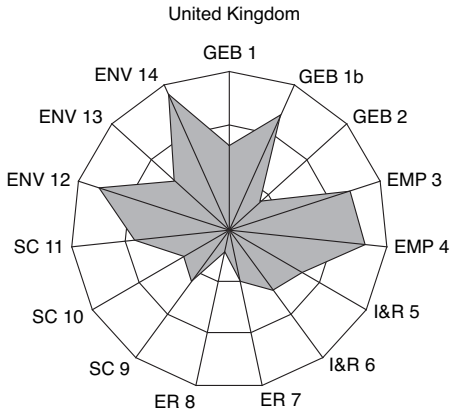


Figure 16-2001.



2.4. The renewed Lisbon Strategy

After that internal revision of the Commission, the European Council held in Brussels in March 2004 invited the Commission to establish a High Level Group to carry out an independent review to contribute to the mid-term review. Its report, known as the «Kok Report», was made public by 1 November 2004. In its conclusions it assumed the slow progress of the strategy, and argued that it was due to «an overloaded agenda, poor coordination and conflicting priorities. Still, a key issue has been the lack of determined political action». If the report assumes that the Lisbon strategy is too broad («is about everything and thus about nothing»), at the same time it says that the ambition is needed more than ever, and that Lisbon is not over-ambitious. The point, then, is that every political actor has to assume its responsibilities, and that the European Commission must be prepared «to blame and shame those that fail as well as to fame those that succeed».

Besides the specific recommendations for every area, the Kok Report list a group of Key recommendations. Two of them are related with the process of delivery and communication. Here arises the need of measuring and comparing the respective performance of every member state, «making a better use of the 14 indicators and better communicating the results», presenting an annual league table of member states.

Among other recommendations of the Kok Report, it asks for solving the lack of commitment and political will with clear messages from the European Council and the President of the Commission. Additionally the report advises to focus on growth and employment in order to underpin social cohesion and sustainable development. This framework has to be assumed in order to read the speech from Commission President Barroso to the conference of Presidents and to the European Parliament on February the 2nd on 2005, focused on presenting a new strategy for the

EU to create more growth and jobs by means of a revitalisation of the Lisbon Strategy: «the Lisbon Strategy represents the right diagnosis and the right remedy, and there is not a credible alternative». Afterwards, when he asked for the need of a greater ownership of the objectives, he proposed, among others, a more integrated approach to macro-economic and employment policy co-ordination within an integrated Lisbon cycle.

So, on the February the 2nd on 2005, the European Commission presented its policy recommendations for the Mid-Term Review of the Lisbon agenda, clearly oriented towards fewer and achievable objectives. Concretely, and taking into account that Europe needs to raise its productivity growth and employ more people, the Commission has presented a concrete action programme focused on three main objectives:

- **Making Europe a more attractive place to invest and work** by means of, among other actions, completing the Single Market in areas which can deliver a real growth and job dividend and are of immediate relevance for consumers, ensure open and competitive markets inside and outside Europe (create a SME friendly business environment, simplify European and national regulation, ...), expand and improve European infrastructure, and improve European and national regulation to reduce the burden of administrative costs.
- **Knowledge and innovation for growth** by way of, among others, reach a 3% GDP target for R&D expenditure, promote the uptake of Information and Communication Technologies (ICT), boost European Technology Initiatives through public-private partnerships, promote energy efficient and low emission eco-innovations, creating a European Institute for Technology to attract the best minds, ideas and businesses to Europe.
- **Creating more and better jobs** by means of attract more people into employment in particular through actions to reduce youth unemployment and modernise social protection systems, increase adaptability of workers and enterprises and the flexibility of labour markets through removing obstacles to labour mobility and invest more in human capital through better education and skills by reforming the EU Structural and Cohesion Funds.

More recently, in March 2005, the European Council assumed the unequal development of the evolution of the agenda, and the need of having a new focus on the objectives of every actor of the strategy. Thus, a new approach, based on a threeyear cycle, is stated: a «strategic report» that will be made by the Commission, will be discussed at the spring European Council meeting, which will establish political guidelines. The Council will adopt a set of «integrated guidelines». On their basis Member States will draw up, on their own responsibility, «national reform programmes». Consultations on these programmes will be held with all stakeholders at regional and national level, including parliamentary bodies. Additionally, on its side, the Commission will present, as a counterpart to the national programmes, a «Community Lisbon programme» covering all action to be undertaken at Community level.

Every year the Member States will send to the Commission the reports on follow up to the Lisbon Strategy. Then, the Commission will report on the implementation of the three strands of the strategy each year. On the basis of the Commission's as-

sessment, the European Council will review progress every spring and decide on any necessary adjustments to the integrated guidelines. At the end of the third year of each cycle, all guidelines and programmes will be renewed, taking as the starting-point a strategic report by the Commission. In 2005 the cycle will begin in April, with the Commission's guidelines and Member States are asked to draw up their national reform programmes in autumn 2005.

2.5. The Cohesion Policy as a main delivery instrument of Lisbon

In order to get the previous objectives, the Cohesion Policy should contribute more to the implementation of the Lisbon goals. So, as Commissioner Hübner said, «EU cohesion policy could be the financial incentive that allows Member States and Regions to help the EU to become the most competitive knowledge-based economy and society»....Indeed Lisbon Strategy and Structural Funds share one of the main objectives, that is, the economic growth (being translated, in terms of regional policy, in promoting convergence between Member States and regions). Actually, European Structural Funds are allocated to projects in the field of employment, information technology infrastructures, research, human capital, enterprise development, social inclusion and sustainable developments.

Then, and taking into account the renewed Lisbon Strategy, on 14 July 2004, the European Commission adopted the legislative framework for the reform of cohesion policy for the period 2007-2013. This reform aims to make the next structural actions:

- more targeted on the EU's strategic priorities (Lisbon and Gothenburg agendas for a sustainable and competitive knowledge economy, European employment strategy);
- more concentrated on the least favoured regions while anticipating change in the rest of the Union;
- more decentralised with a simpler, more transparent and more efficient implementation.

Among the main innovations and simplifications proposed, it could be remarked two of them: the definition of three new priority objectives for structural actions and the reduction in the number of financial instruments for cohesion. So, instead of the current priority objectives of the Structural Funds (Objective 1: regions lagging behind in development; Objective 2: regions undergoing economic and social conversion; Objective 3: training systems and employment promotion), the Commission proposes the next three objectives:

- **Convergence objective,** defined to accelerate the economic convergence of the less-developed regions by way of, among other actions, improving conditions for growth and employment by investing in human and physical capital, innovation and the development of the knowledge society and the protection of the environment;
- **Regional competitiveness and employment objective,** focused on strengthening regional competitiveness and attractiveness by anticipating economic and social change and supporting innovation, the knowledge society, entrepreneurs-

hip, protection of the environment and risk prevention; and helping workers and companies to adapt to change and encourage the development of job markets that award priority to social inclusion;

- **European territorial cooperation objective,** concentrated in making stronger the cooperation at three levels: cross-border cooperation through joint programmes, cooperation between transnational zones, and networks for cooperation and the exchange of experiences throughout the Union.

With a total allocation of EUR 336.1 billion (approximately one third of the Community budget), the Commission proposed only three financial instruments for the cohesion (ERDF[6], ESF[7], and the Cohesion Fund) instead of the previous six: ERDF, ESF, Cohesion Fund, EAGGF[8]-Guidance, EAGGF-Guarantee, and FIFG[9].

The ERDF will contribute to the three mentioned objectives. So, regarding convergence objective, this instrument will be focused on strengthening infrastructures - transport, environment, energy, education and health-, aiding for SMEs and focusing on research and innovation. With regard to competitiveness objective, it will concentrate on innovation and the knowledge economy, the environment and risk prevention and the access to transport and telecommunication service of general economic interest. In relation to cooperation objective, the ERDF will contribute to cross-bored and transnational programmes. The ESF will concentrate on the two first objectives. So, regarding convergence objective, it will contribute to strengthen human resources to increase employment prospects, boost labour productivity and stimulate growth. In relation to competitiveness objective, ESF will focus on the ability of workers and firms to adapt to change, access to the job market, the social inclusion of the most disadvantaged and development of partnerships and networks for employment and social inclusion. Finally, the Cohesion Fund will only focus in the convergence objective.

3. Analysis of the structural indicators evolution during the last decade

As it could be seen in the previous section, the information given by the Commission on the state of the play of the different countries and the EU as a whole in order to evaluate the objectives of the Lisbon Strategy is merely based on in the evolution of the different indicators. However, in our belief, a deeper analysis consisting of the implications that the evolution of these indicators may have on economic growth could provide a richer explanation on the role that these aspects are having in EU development and growth.[10] Without trying to carry on an exhaustive analysis of the de-

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[6] European Regional Development Fund.

[7] European Social Fund.

[8] European Agricultural Guidance and Guarantee Fund.

[9] Financial Instrument for Fisheries Guidance.

[10] In this sense, some of this work is exhaustively done in several dimensions 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.

terminants of growth, in this section we analyse how growth has been accompanied by the presence of a high level or an improvement of the 14 structural indicators that synthesize the Lisbon Strategy.

3.1. Global analysis for last decade

As has already been seen, the Lisbon strategy is revisited in an annual synthesis report, in which a list of structural indicators is presented in order to reflect the European position in economic and competitive terms, and its position in each one of the proposed particular objectives.

Although we assume that the list of indicators is the result of a hard work, we also consider the need of revisiting the overall indicators strategy by computing a set of basic statistics. Thus, tables 2 and 3 summarize the cross and serial correlations of structural indicators with the general economic background indicators, which are thus considered as a sort of summary of the overall objective of the Lisbon strategy, this is, to become an economic leader. Concretely, table 2 displays the 15 Member States (MS) crossed country correlations in three different moments of time, which can be seen as different moments of the business cycle (1994, 1997 and 2001). These correlations were computed taking into account the relative size of every country. Focusing on the evolution of GDP pc, table 3 shows the serial correlations, including two leads and lags, of the general EU (15 countries) structural indicators and annual growth of GDP.

Additionally, it could be interesting to know which have been the more important forces that have contributed to the growth of the EU countries during the last ten years. Or, in other words, whether general growth of the economies has been accompanied with a similar growth on employment, knowledge and human capital, investments or social cohesion among others. In order to answer this question, and focusing exclusively on growth of GDP pc, the correlation between this variable and the evolution of the structural indicators has been analysed. So, figures 17 to 26 depict a scatter plot for growth of GDP pc during 1994-2003 (Y-axis) and growth of each one of the structural indicators during 1994-2001 (X-axis)[11, 12]. In addition, these figures include information about the cross correlation between GDP pc growth and both the growth of structural indicators and the value of these indicators at the beginning of the period.

From all these pictures, some conclusions can be drawn. First, and regarding the **Employment indicators** (employment rate and employment rate of older workers), it must to be said that they address the key aims of the Lisbon European Council, refined by the Barcelona European Council: to strengthen employment in the Union; the importance of equal employment opportunities for men and women; and the im-

[11] For most of the structural indicators, data for 2002 and 2003 are non available.

[12] There is not information available for this period for two indicators: at-risk-poverty rate alter social transfers and dispersion of regional employment rates.

Table 2. Crossed correlations between Structural Indicators and General Economic Background Indicators

		GEB 1: Gross Domestic Product per capita in Purchasing Power Parity (GDP pc 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.

portance of an «Active Employment policy» such as focussing on life-long learning. These indicators are expected to be positively related with the General Economic Background of the European economy. Here, three different results are seen from the analysis (tables 2 and 3 and figures 17 and 18). First, we see a positive and lagged relation between employment and GDP growth. This clearly confirms the interpretation of the structural indicators: higher growth implies more employment in the European economy.

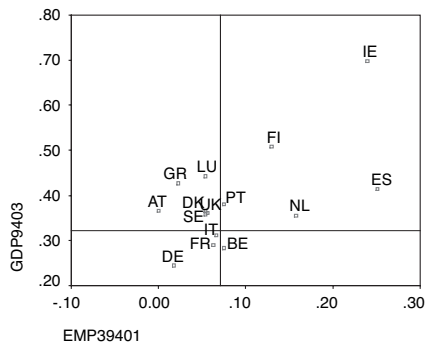
The second result has to do with the negative correlation between employment and productivity. In our opinion, this result is not intuitive from a theoretical point of view, due to the fact that an increase in productivity should result in higher growth and finally higher employment. Nevertheless, as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

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 [13]	–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

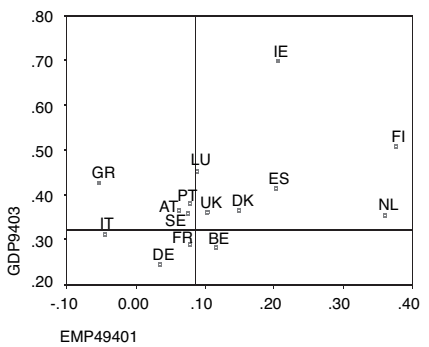
Note: n.a. = Non Available.

Figure 17. GDP pc growth (1994-2003) and Employment rate growth (1994-2001).



growth correlation: 0.626
correlation with indicator in 1994: 0.153

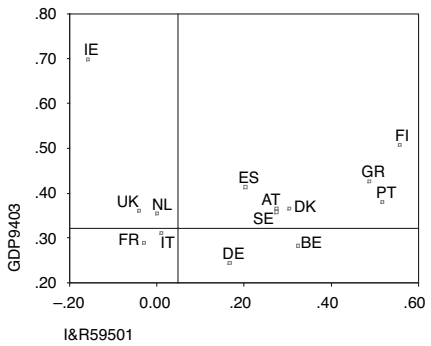
Figure 18. GDP pc growth (1994-2003) and Employment rate of older workers growth (1994-2001).



growth correlation: 0.478
correlation with indicator in 1994: 0.394

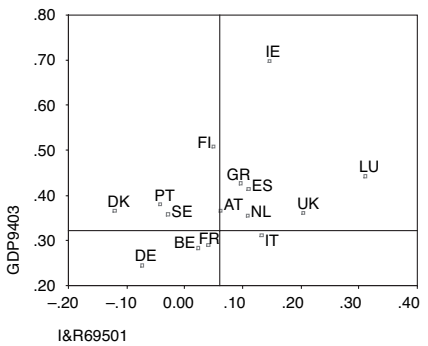
[13] As this structural indicator was stated at level 100 for EU15 for each period, we compute serial correlation between GDP and the inflation rate for each year.

Figure 19. GDP pc growth (1994-2003) and GERD growth (1995-2001).



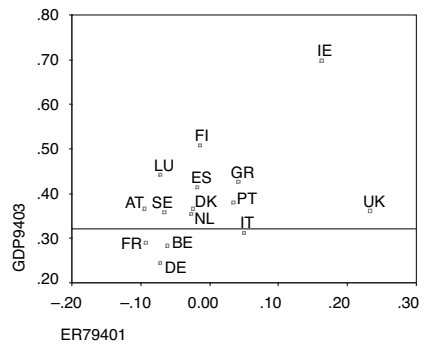
growth correlation: 0.178
correlation with indicator in 1995: -0.242

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



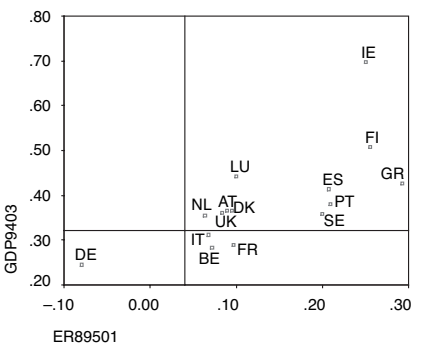
growth correlation: 0.517
correlation with indicator in 1995: -0.038

Figure 21. GDP pc growth (1994-2003) and Comparative price levels growth (1994-2001).



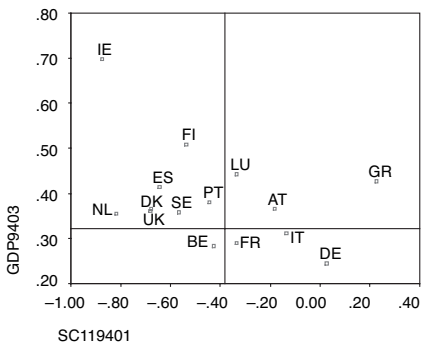
growth correlation : 0.388
correlation with indicator in 1994: –0.018

Figure 22. GDP pc growth (1994-2003) and Business investment growth (1995-2001).



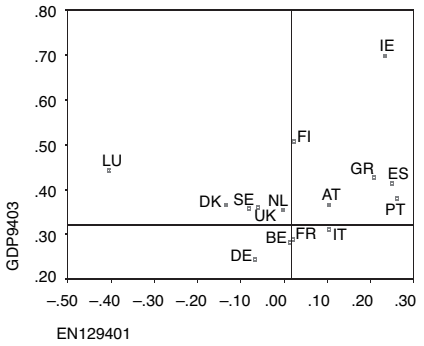
growth correlation : 0.768
correlation with indicator in 1995: 0.047

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



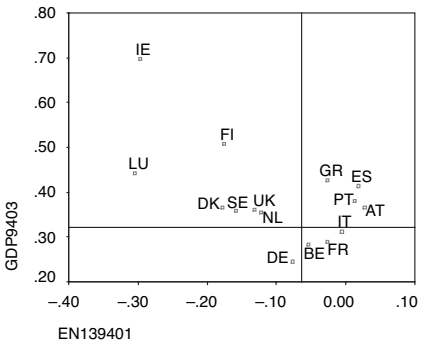
growth correlation: –0.611
correlation with indicator in 1994: 0.490

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



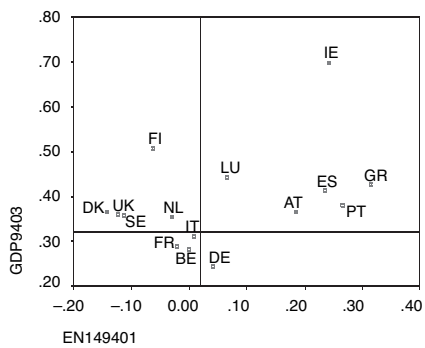
growth correlation: 0.506
correlation with indicator in 1994: 0.718

Figure 25. GDP pc growth (1994-2003) and Energy intensity growth (1994-2001).



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

Figure 26. GDP pc 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

Third, from figures 17 and 18, it seems that growth in GDP pc has run parallel with growth in the 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 pc have been not supported by high growth rates of the employment.

With regards to **Innovation and Research** indicators (GERD and youth educational attainment level), they measure Lisbon's emphasis on the transition to a knowledge-based economy through better policies for R&D, education and the information society. These key indicators are clearly related with new endogenous growth theories that relate knowledge coming from research and development with permanently higher economic growth rates. This implies that investing today in R&D (detracting from other productive activities) is the key point to have a higher growth tomorrow. Thus, a non contemporaneous relation would be expected, although the long term positive relation is assured with a positive lagged correlation. On the other hand, we cannot forget that 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 having a peak, 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) procyclical relation is expected due to the needed time to prepare this kind of investments.

What we finally see in table 2 is a positive correlation between both 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 procyclical relation within structural R&D indicators and GDP growth rate. These results clearly enforce the idea of the positive relation between innovation and growth.

From figures 19 and 20, it can be seen that while countries as Finland, Greece or, to a certain extent, Portugal and Spain increased Gross Domestic expenditures on R&D during the period and also grew in terms of GDP pc, Ireland presented the highest GDP pc 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 during 1995 to 2001 is positively correlated with GDP pc growth rate for the last ten years.

As for **Economic Reforms** indicators (comparative price levels and business investment), they would respond to the Lisbon European Council's emphasis on product and capital market reform. They should look 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 with long term indicators of the General Economic Background of the European economy. Thus, what theory says about market efficiency is that in long term higher efficiency will result in a lower inflation (and consequently, lower price levels) and higher GDP per capita. Additionally, higher gross fixed capital formation will end in higher production possibilities and then higher GDP per capita and higher future consumption.

Nevertheless, in short run terms, we can observe, from tables 2 and 3, opposite signs in computed correlations, due to the fact that, for instance, with fixed production possibilities, a higher economic growth can produce a price level increase, or, alternatively, a higher gross fixed capital formation can result in future (not current) GDP growths. So, concerning price levels, what we finally find in data is that the crossed country correlation is positively related with 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[14] and GDP growth, reflecting a non general inflationist process of economic growth. Concerning the business investment indicator, we see a low but negative crossed correlation with the General Economic Background indicators. This fact shows us how countries with current higher or lower investment are not countries with a particularly higher or lower GDP per capita or productivity respectively. Nevertheless, the temporal correlation of the overall European economy shows a positive (and maybe lagged one year) figure, 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 could be noticed that growth in GDP pc has been accompanied with a similar evolution in terms of growth in comparative price levels. So, in countries as Ireland, Greece, Portugal and, especially, in UK, the observed growth has been inflationary (in relative terms). On the contrary, Finland or Luxembourg grew but with a decreased on their comparative price levels during the period. In addition, data reveals that high growth rates in GDP pc during the period have been accompanied with significant high rates in business investments, specially in the case of Ireland, Finland, Greece or Spain (Germany is the only country that decreases its business investments during these years).

Concerning **Social Cohesion** indicators (at-risk-poverty rate, dispersion of regional employment rates and total long-term unemployment rate), they should 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 as a political objective that could be more related with key political objectives than with clear short run economic processes. Nevertheless, there are two different situations that have to be considered. Firstly, there are different social negative processes that can be accounted as a natural result of the general economic growth of our economies: non-desirable income distribution, regional concentration of economic growth or simply intergenerational substitution of the labour force, with the expulsion of a group of labour force that hardly finds a job again. And secondly, we have to see that these situations, coming either from expansions or from recessions, are in long term pernicious to the General Economic Background, due to the bad influence in the social capital of a nation.

From the cross correlation analysis (table 2), it seems that, generally speaking, countries with lower GDP pc or, to a lower extent, minor labour productivity display a higher risk of exclusion, dispersion of regional employment rates and total long-

[14] As this structural indicator was stated at level 100 for EU15 for each period, we compute serial correlation between GDP and the inflation rate for each year.

term unemployment rate. In global European terms (table 3), these indicators are negatively related with GDP growth[15], 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 lapse).

It should be noted that the non availability of data for at-risk-poverty rate and dispersion of regional employment rates during the nineties, prevents us from computing the correlation between growth of GDP pc 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 pc growth rate can be observed, showing that countries with high increases in terms of GDP pc experimented also high diminishes in long-term unemployment rates (as, for instance, Ireland, Finland, Luxembourg and Spain). The opposite was detected in the case of Greece (which grew in terms of GDP pc but got worse in its long-term unemployment).

With respect to **Environment** indicators (total greenhouse gas emissions, energy intensity of the economy and transport-volume of freight transport relative to GDP), they would respond to the Gothenburg European Council Conclusions and they should measure concepts such as climate change, sustainable transport, threats to public health and managing natural resources.

As happened with the Social Cohesion objective, the Environmental objective exhibits a more politically focused profile, based on very long term relations with what can be summarized by GEB indicators. Thus, we could even expect opposite signs in crossed and temporal correlations compared with the political objectives and expectations of these indicators.

What we finally see from table 2 is that, roughly speaking, poorer countries (lower GDP per capita and lower productivity) exhibit a general worse 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 remarkable in what relates the transport-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.

Besides, from figures 24, 25 and 26, it seems that growth in GDP pc during the nineties was accompanied with a relatively 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 or Spain). Despite of this, it seems that the improvements in terms of GDP pc have not involved a general increase in energy intensity (reflecting a more efficient use of energy). On the contrary, countries as Ireland, Finland or Luxemburg, with high growth rates of GDP pc, decreased their consumption of energy (the opposite of Portugal, Spain or Austria).

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[15] Temporal correlation with dispersion of regional employment rates could not be computed due to the lack of complete data.

So, in general terms, GDP pc growth of EU15 countries during the nineties has been positively correlated with growth in terms of human capital and, especially, employment (total and for older workers) and business investments, that is, factors that reveal themselves as solid forces of economic growth. In addition, this growth has not implied a worsening in social cohesion, at least, on the lines of evolution of long-term unemployment. On the contrary, this growth in GDP pc has been accompanied with relative growth in prices, and it seems quite low 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 decouple of freight transport growth from real GDP growth).

Finally, it must be said that some countries that grew more in terms of GDP pc during the last ten years showed, at the beginning of the period, relatively low employment rates (Spain, Ireland and Greece), low levels of expenditures on R&D (Greece, Spain, Portugal or Ireland), youth educational attainment levels (Portugal, Luxemburg and Spain) and business investments (Ireland, Greece or Finland) or high levels of long-term unemployment levels (Ireland or Spain), reflecting a clear catch up process.

3.2. Evolution during the period 1999-2003

Focusing now only on the four last years (1999-2003), it is worth analysing the evolution of the EU15 countries on the different dimensions considered by the Lisbon Strategy. So, figures in Annex 1 depicts the relation between growth of GDP pc and growth of the structural indicators during this period. In addition, these figures include information about the cross correlation between GDP pc growth and both the growth of structural indicators and the value of these indicators at the beginning of the period.

From these figures, some conclusions could be drawn. First, it can be seen that those countries that started from lower values of employment rate have experimented the highest growth rates. This is the case of Spain and Italy, which have successfully maintained relatively rapid job creation during this period (the opposite is found in the case of Denmark or Germany). In addition, these high employment growth rates have translated into remarkable GDP pc growth rates. However, countries as Ireland, Greece, Finland or Luxemburg, showed the highest GDP pc growth rates but with employment rate growth near to the EU15 average.

Second, and in general terms, countries that grew more (less) in terms of employment rate of older workers, also grew more (less) in terms of GDP pc.

Third, it can be seen that high growth rates during 1999-2001 in Gross Domestic expenditures on R&D have not obligatory lead to a similarly high GDP pc growth rates. This is the case of UK, Sweden, Portugal or Belgium (with outstanding increases of GERD but relatively low GDP pc growth rates). Besides, although some countries, that started from worst positions in GERD, have significantly increased this variable (Portugal, Spain or Italy), other countries decreased their GERD (as Greece or Ireland).

Fourth, it seems that high rises of youth educational attainments during 1999-2002 have not been necessarily translated into great GDP pc growth rates (Denmark, Portugal,

Belgium or Italy). On the contrary, countries as Luxembourg, Finland or Spain, with null or even negative growth rate of this R&D indicator, have showed the highest GDP pc growth rates.

Fifth, and concerning the evolution of economic reforms indicators, it could be noticed that growth in GDP pc has not been accompanied with a rather similar evolution in terms of growth in comparative price levels during the last years. However, there are some differences between EU15 members. So, countries as Greece have showed relatively high increments of GDP pc but improving their comparative price levels, while the opposite is found in the case of Ireland.

Sixth, it seems that high growth rates in GDP pc during the period have gone with significant high rates in business investments, especially in the case of Greece or Spain (showing in 1999 relatively high levels of this indicator). However, the opposite is found in the case of Portugal, Germany or Netherlands, which have decreased their business investments through 1999-2002 (showing comparatively low GDP pc growth rates).

Seventh, it must be said that in some cases elevated GDP pc growth rates have not supposed a worsening in social cohesion. So, Greece has shown one of the highest GDP pc growth rates but it has achieved reducing considerably its at-risk-poverty rate, its dispersion of regional employment rate or its long-term unemployment rate. A similar situation is detected for Spain, which jointly with Greece, displayed worse comparative conditions in 1999. Other countries as Finland, Luxembourg or in particular Ireland increased their GDP pc but with some costs in terms of social cohesion. So, Finland raised its dispersion of regional employment rate, Luxembourg increased its long-term unemployment and Ireland got worse in terms of at-risk poverty rate (especially preoccupant given that Ireland showed high values of this indicator in 1999). Finally, 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 pc during the last four years has been accompanied with a relatively deterioration of sustainability in terms of total greenhouse gas emission, making more difficult to achieve the Kyoto Protocol. This is the case of Ireland, Greece, Finland or Spain, countries that showed high levels of this indicator in 1999. Besides, there has been a certain decoupling of freight transport growth from real GDP pc growth during the period (for instance, in Spain, Luxembourg and Ireland, while other countries as Greece or Finland have decreased the ratio of transport-volume of freight transport relative to GDP). However, the opposite situation is detected in the evolution of energy intensity, due to all the EU15 members, in particular Ireland, which grew but reducing their consumption of energy (Austria is the exception).

4. Conclusions

In this paper the monitoring of the Lisbon Strategy is analysed. In order to do that, in a first stage a summary of the Lisbon Strategy is made, with an analysis of its objectives, list of structural indicators (linked to the targets pursued in the LS) and an overall eva-

luation. In addition, the revision of the relaunched Lisbon Strategy and the Cohesion Policy made this year has been commented.

In a second stage, we develop an analysis of the structural indicators evolution against general economic background indicators both at cross section and temporal dimensions, focusing on economic growth. Related to this point, we would like to stress the fact that the annual reports of the Commission only review the evolution of the different indicators, without a deeper analysis. In our opinion, this analysis can be complemented with a discussion about the implications that the evolution of these indicators may have on economic growth. This would provide a richer explanation on the role that these aspects are having in EU development and growth.

Finally, we have observed certain deficiencies in the statistical information provided by the Eurostat. Besides the lack of a long time span for some variables, some 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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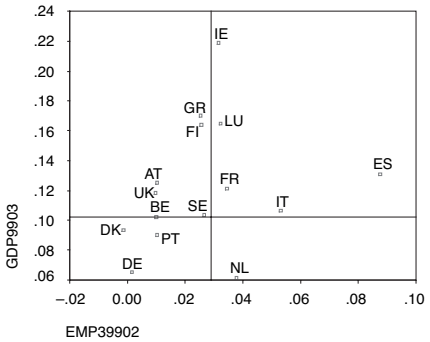
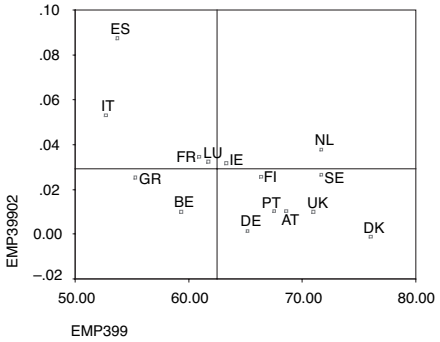
Annex I. Growth of GDP and structural indicators: 1999-2003

Figure 1. GDP pc growth (1999-2003) and Employment rate growth (1999-2002).



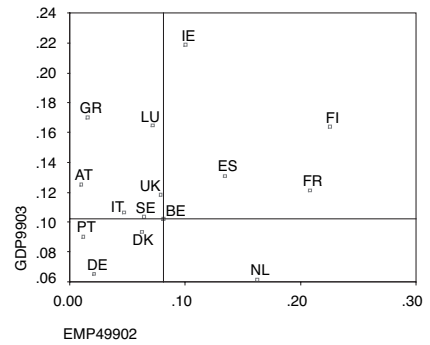
growth correlation: 0.452
correlation with indicator in 1999: –0.309

Figure 2. Employment rate in 1999 and its growth during 1999-2002.



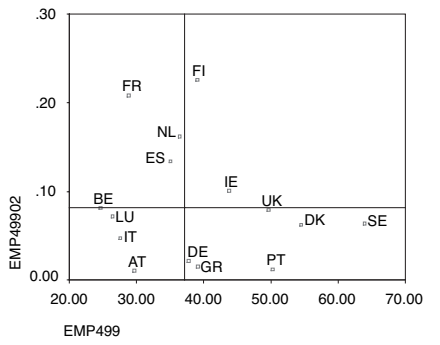
correlation: –0.751

Figure 3. GDP pc growth (1999-2003) and Employment rate of older workers growth (1999-2002).



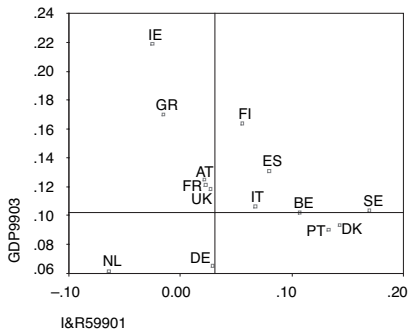
growth correlation: 0.412
correlation with indicator in 1999: –0.022

Figure 4. Employment rate of older workers in 1999 and its growth during 1999-2002.



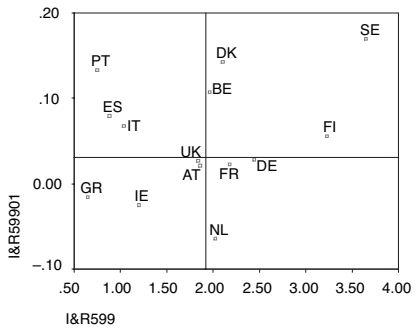
correlation: –0.275

Figure 5. GDP pc growth (1999-2003) and GERD growth (1999-2001).



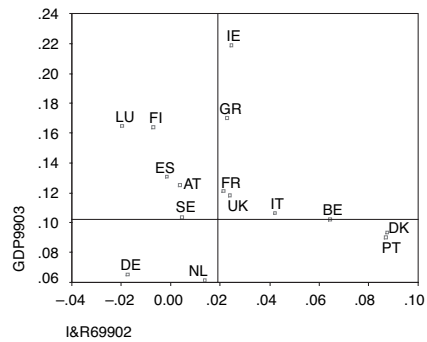
growth correlation: 0.072
correlation with indicator in 1999: –0.442

Figure 6. GERD in 1999 and its growth during 1999-2001.



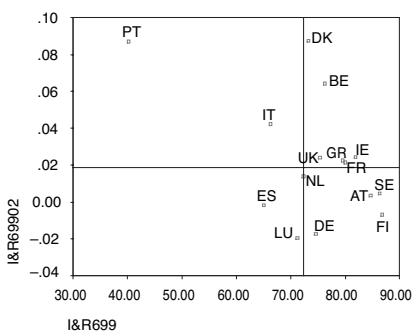
correlation: –0.144

Figure 7. GDP pc growth (1999-2003) and Youth educational attainment level growth (1999-2002).



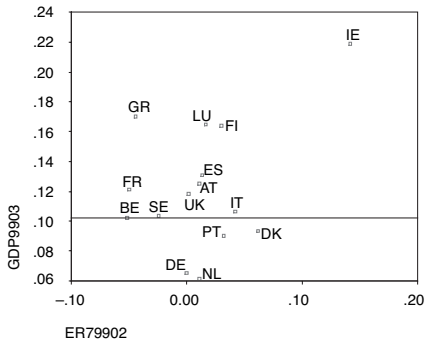
growth correlation: 0.300
correlation with indicator in 1999: 0.156

Figure 8. Youth educational attainment level in 1999 and its growth during 1999-2002.



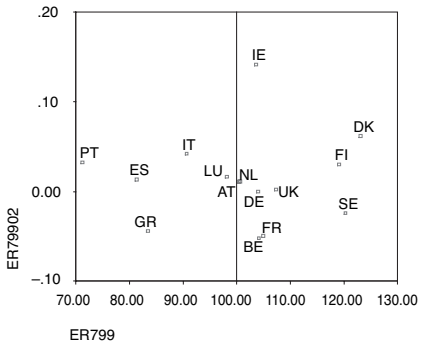
correlation: –0.395

Figure 9. GDP pc growth (1999-2003) and Comparative price levels growth (1999-2002).



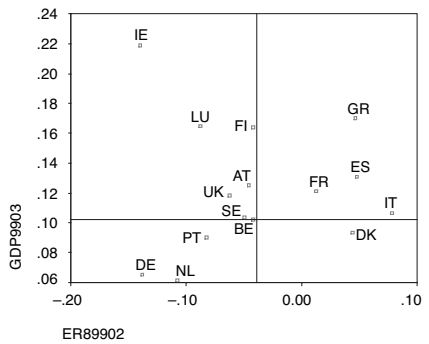
growth correlation: –0.006
correlation with indicator in 1999: –0.203

Figure 10. Comparative price levels in 1999 and its growth during 1999-2002.



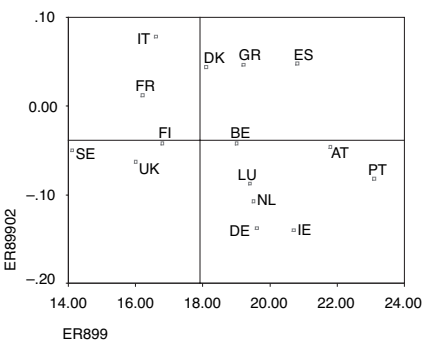
correlation: –0.299

Figure 11. GDP pc growth (1999-2003) and Business investment growth (1999-2002).



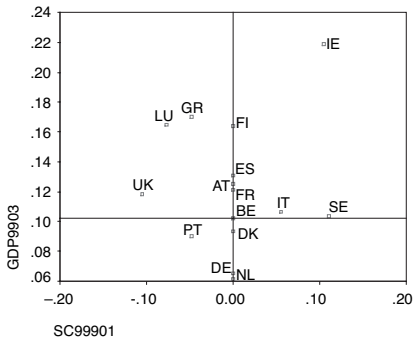
growth correlation: 0.585
correlation with indicator in 1999: –0.220

Figure 12. Business investment in 1999 and its growth during 1999-2002.



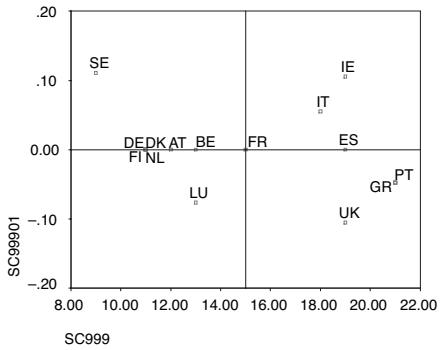
correlation: –0.310

Figure 13. GDP pc growth (1999-2003) and At-risk-poverty rate after social transfers growth (1999-2001).



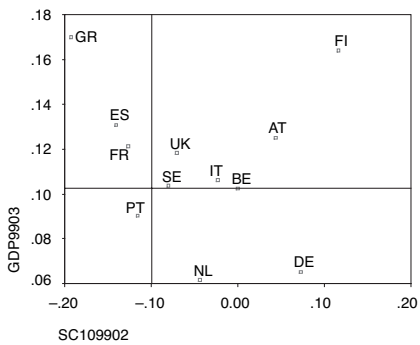
growth correlation: –0.106
correlation with indicator in 1999: 0.659

Figure 14. At-risk-poverty rate after social transfers in 1999 and its growth during 1999-2001.



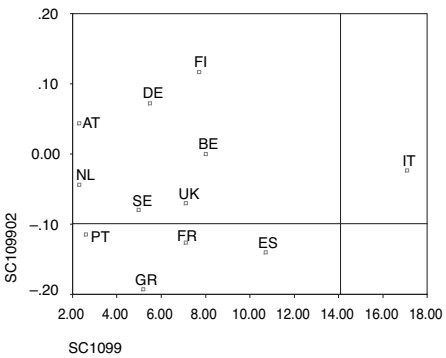
correlation: –0.342

Figure 15. GDP pc growth (1999-2003) and Dispersion of regional employment rates growth (1999-2002).



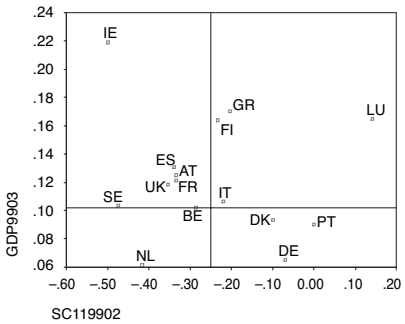
growth correlation: –0.652
correlation with indicator in 1999: 0.175

Figure 16. Dispersion of regional employment rates in 1999 and its growth during 1999-2002.



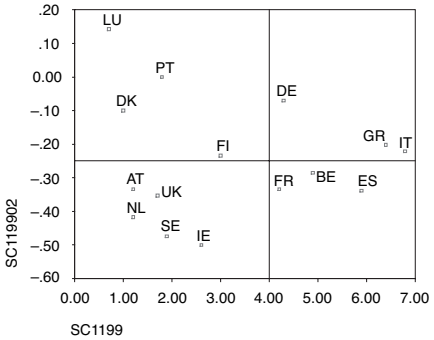
correlation: –0.116

Figure 17. GDP pc growt (1999-03) and long-term unemployment rate growth (1999-2002).



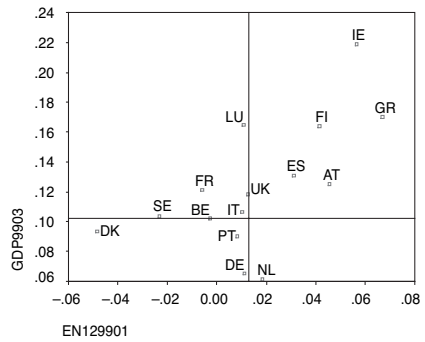
growth correlation: –0.589
correlation with indicator in 1999: 0.106

Figure 18. Total long-term unemployment rate in 1999 and its growth during 1999-2002.



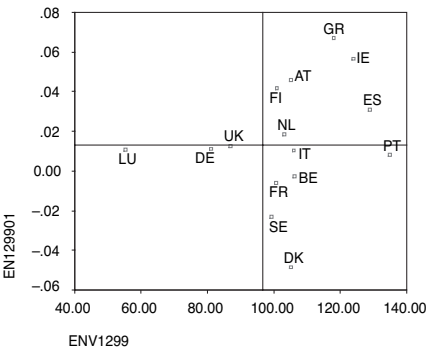
correlation: 0.251

Figure 19. GDP pc growth (1999-2003) and Total greenhouse gas emissions growth (1999-2001).



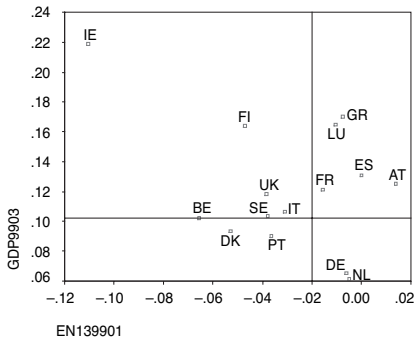
growth correlation: 0.393
correlation with indicator in 1999: 0.548

Figure 20. Total greenhouse gas emissions in 1999 and its growth during 1999-2001.



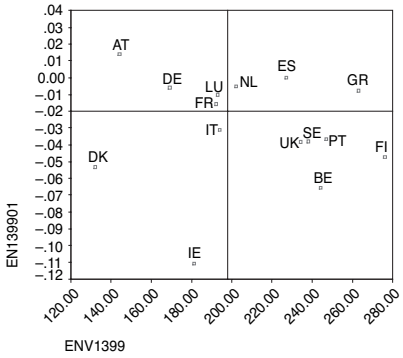
correlation: 0.322

Figure 21. GDP pc growth (1999-2003) and Energy intensity growth (1999-2001).



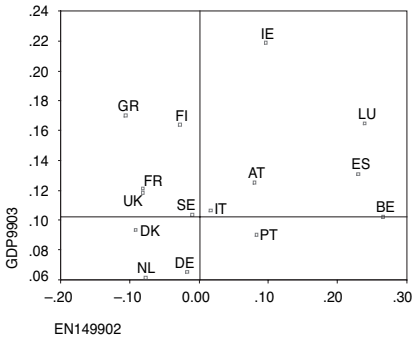
growth correlation: –0.337
correlation with indicator in 1999: 0.556

Figure 22. Energy intensity in 1999 and its growth during 1999-2001.



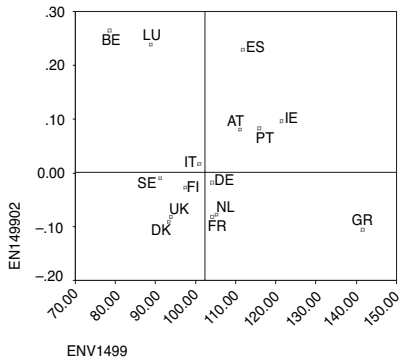
correlation: –0.363

Figure 23. GDP pc growth (1999-2003) and Transport-volume of freight transport relative to GDP growth (1999-2001).



growth correlation: 0.145
correlation with indicator in 1999: 0.281

Figure 24. Transport-volume of freight transport relative to GDP in 1999 and its growth during 1999-2002.



correlation: 0.075