

**Study no. 1**

**THE COMPETITIVENESS OF ROMANIAN ECONOMY:  
NECESSARY POLICY ADJUSTMENTS IN THE LIGHT  
OF LISBON AGENDA**

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## **INTRODUCTION: THE LISBON AGENDA AND THE PROBLEM OF COMPETITIVENESS**

By the end of the 1990s, the European Union (EU) was embarking on several economic initiatives among which two of them – the Stability and Growth Pact (SGP) and the Lisbon Agenda (LA) – addressed the twin issues of policy coordination and growth within an ever more integrated economic area. Although academic opinion (e.g. Murray, 2002; Collignon, 2003; Hodson, 2005; Pelkmans, 2006) share the view that the two programmes encapsulate the "economic governance" of the EU, it is nonetheless rare a case when analyses include them in the same analytical context. This paper does not diverge from the commonplace too, and discusses the competitiveness challenges for Romania against the LA prescriptions only. However, it is the purpose of this introductory section to place LA in its proper perspective and tackle its underlying rationale as an instrument to propel competitive growth within a nascent currency union.

At first sight, it would appear nonsensical to question the self-asserting decision of the 2000 European Council in Lisbon to make Europe an exemplar of competitive performance. This strategy, since then known as the "Lisbon Agenda" of a ten-year programme of economic reform, was thought to average annual economic growth of 3 per cent and create 20 million jobs by 2010. At mid-term, the 2005 European Council in Brussels judged the results as "mixed" and decided to have both SGP and LA revised. The non-official evaluations are however more drastic: the Lisbon strategy exhibits "general lack of progress" (Hodson, 2005), "failure" (Pisani-Ferry and Sapir, 2006; Wanlin, 2006b), "disappointing delivery" (Kok, 2004), and, according to Wanlin (2006a), some commentators even speak of a "ludicrously ambitious overall objective".

With the benefit of hindsight, it might be acknowledged that lucidity about lacklustre economic performance of the whole area should have left no room for mercy. Data summed up in Wanlin (2006) are suggestive: in 2005, average GDP per head in the EU-15 was 27 per cent below the US average, unchanged compared with 2000, while the EU-15 productivity growth averaged 1.4 per cent between 1995 and 2005, compared with 2.4 per cent in the US.

What lessons then for Romania, a newcomer to the EU policy-making process, with worrying competitive problems of its own and seemingly on an endless search

for economic models? To offer a background for the ensuing discussion in parts II and III, this introduction starts with a brief look at the circumstances that gave birth to the Lisbon strategy and enlarges on the problems most commonly associated with it.

The launch of the LA was preceded by an upsetting revelation: the decline of the EU competitive position vis-à-vis the US, had been a fact that overshadowed the accomplishments of the European integration for decades. Bannerman (2002) provides a series of data of irrefutable evidence: from 1990 to 2000, the EU achieved only one year of economic growth above 3 per cent, whereas, in contrast, the US economy experienced just one year in which its economy grew by *less* than 3 per cent; data on GDP per capita put the EU level at less than two-thirds that of the US, the widest gap since the 1960s. The fear of losing standards of living and technological supremacy certainly played the key role in devising the LA. It is even suggested (e.g. Bannerman, 2001) that emotional reasons like envy of the American and Japanese miracles and *Schadenfreude* at their deadlocks undoubtedly count much for the idea of what LA actually means. The level of performance of the main competitors, especially the US and Japan, thus provided a benchmark for the level of competitiveness that the EU would need to achieve if it is to become the most competitive economy in the world.

This sense of discomfort unintentionally strengthens Paul Krugman's argument in describing competitiveness as a "dangerous obsession". One of its tangible effects appears in the way the LA target areas have come to be recognized. The initial formulation was one of great ambitions: the strategy commits Member States to the goal of making the EU "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" by 2010 (European Council, 2000). There were thus defined four pillars of the strategy – "growth", "innovation", "employment" and "social cohesion", and if one translates "sustainable economic growth" into an "environmental dimension" – a decision in fact explicitly made at the 2001 European Council in Göteborg – the LA set the EU on a five-pronged competitive track.

The LA mid-term review in 2005 apparently refocused the target on a much narrower objective, the strategic goals of "growth" and "employment", but they multiplied at the Community and national levels in ten and three, respectively, distinct dimensions considered to be critical for competitiveness. The "obsessive" character of this quest for competitiveness determinants engendered a continuous redefinition of

what is "critical" and resulted in loose interpretations of what LA actually means. Table 1 gathers representations about LA targets of some of the most authoritative texts on the subject. These certainly can not be viewed as many different views on LA, but one can hardly make up a unitary programmatic vision either.

**Table 1: Target areas of the Lisbon Agenda**

|   |
|---|
| Growth ♦ Innovation ♦ Employment ♦ Social cohesion ♦ Environment<br>Document: European Council, 2000  |
| Growth ♦ Jobs<br>Document: European Council, 2005   |
| Single Market ♦ Open and competitive markets inside and outside Europe ♦ European and national regulation ♦ European infrastructure ♦ Research and Development ♦ Innovation and sustainable use of resources ♦ European industrial base ♦ Employment and social protection systems ♦ Adaptability of workers and enterprises and the flexibility of labour ♦ Human capital through better education and skills<br>Document: The Community programme |
| Macroeconomic ♦ Microeconomic ♦ Employment<br>Document: National level integrated guidelines  |
| Innovation ♦ Liberalisation ♦ Enterprise ♦ Social inclusion ♦ Sustainable development<br>Document: Centre for European Reform (Bannerman 2002)  |
| Knowledge society ♦ Internal market ♦ Business climate ♦ Labour market ♦ Environmental sustainability<br>Document: Kok Report (Kok, 2004)   |
| Information society ♦ An European area for innovation, research and development ♦ Liberalisation ♦ Building network industries (telecommunications, utilities and transportation) ♦ Efficient and integrated financial services ♦ Improving the enterprise environment ♦ Increasing social inclusion ♦ Enhancing sustainable development<br>Document: WEF (2004)  |
| Internal market for services ♦ Reduction of administrative burdens ♦ Goals on improving human capital ♦ 3% target on research and development expenditures ♦ 70% target on the employment rate.<br>Document: Gelauff and Lejour (2006)*   |

\* These authors' option was constrained by data availability for their use of quantitative techniques in assessing the LA impact.

The range of possible interpretations of LA targets raises a legitimate question: Does the LA really stand for a guideline to achieve a coherent strategy for competitiveness? Commissioned to deliver a verdict on the ongoing process, the Kok Report (Kok, 2004) fingers the main vulnerabilities of the LA when says that "Lisbon is about everything and thus about nothing. Everybody is responsible and thus no one." From good intentions to lamentable achievements, the Lisbon process rests on disputable rationales and conveys a sense of intellectually deceptive "one-size-fits-all" prescriptions which are irreconcilable with explicit accountability. The following paragraphs discuss these two explanations which prefigure theoretical and practical confusions as *structural weaknesses of the LA* that seem to validate Krugman's fears

about an "obsessive" and, for that matter, elusive quest for competitive upgrading of whole economies.

(1) *The Lisbon strategy exhibits the perennial economics problem of identifying the "right" structural reforms.*

The EU administration picked up the goal of creating a "knowledge economy" amidst a world-wide euphoria about the benefits of the "new economy" which was by that time epitomized by the .com boom. The tone watered down since and more recent documents (e.g. Commission, 2005) praise the importance of traditional manufacturing industries. Discussions with Commission officials, as they are reported by Pisany-Ferry and Sapir (2006), in fact revealed that the initial theoretical underpinning had to rely on common sense and on consensus prescriptions from international organisations, rather than on a set of *ex ante* priorities and a methodology for dealing with the complex nature of competitiveness of an economic zone. In confirmation, the Sapir Report (Sapir, 2003: p. 86) calls for "a more sustained investment in developing effective methodologies" in order to deliver a successful Lisbon strategy. Two implications become obvious: one refers to the analytical ambiguity associated with evaluating the "success stories" of countries of commending competitive performance; the other results from the difficulties in achieving an effective policy coordination required to make the EU emerge as the highest ranking bloc in international competition.

The analytical issue could certainly be avoided if the EU attempt to deal with structural economic liabilities of its member countries paid due attention to parallel international efforts. The practice of multilateral evaluation and coordination may be found in the IMF assessments on Article IV of its Agreement on judgments about structural reform of its constituents; in the OECD cross-country comparisons and country-by-country evaluation of structural reforms (e.g. OECD, 2006); and in the WTO regular Trade Policy Reviews which dedicate a substantial section on "structural" economic policies of its members.

Given that all EU countries belong to those institutional arrangements, one may reasonably ask to what extent the LA should not be regarded just as an undertaking in duplicate. What makes indeed the EU Lisbon process different from all those analytical evaluations consists of its goal of embarking at the same time on the misleading task of indicating *the right venue towards competitive upgrading* as well. From an analytical standpoint, this strategy fails on the ground that it gets the observer

confused about the existence of any critical determinant of competitiveness, be it "information technology", "employment" or whatever. If one follows two assessments (WIFO, 1999; Murray, 2003) of competitive standing of Sweden and Finland between 1999 and 2003, it is disconcerting to find out that their march from bottom to top in the competitive hierarchy of European countries in such a short period of time is explained by the mere refutation of the "ultra liberal Anglo American" economic model, that is the very one whose success the AL was supposedly conceived to emulate.

This misapprehension of competitiveness analytics notwithstanding, the EU claim that synergy is urgently needed to make competitive upgrading possible should not be dismissed. One recent account of the LA (Commission, 2006) says that Member States can not identify themselves the priorities for structural reform and is right in one sense. As usually reported in the literature (e.g. Pisany-Ferry and Sapir, 2006), the legitimacy of a supra-national stricture rests on the existence of two types of reasons to embark on policy coordination. First, *interdependence* make EU policies and national policies complement each other because of spillover effects. One of the most cited domains is "research and development", whose benefits are compounded by trans-national joint ventures, but "environment", "free movement of goods and services" or "criminal prosecution" are other typical examples. A second reason for coordination consists of the *learning effect* from which governments and civil societies benefit as a result of comparing and benchmarking their experiences against that of others. It is for that reason that the transparency and the wealth of information which are justly associated with the LA initiatives render a remarkable service to its objectives.

In a different sense, the argument of centralizing decision at the EU level fails on two premises. First, the results of scholarly work point to divergent solutions as to the suitability of all-encompassing prescriptions. The large degree of diversity among member states ranks differently the priorities relative to, for example, increasing the pension age, improving education or taxing energy consumption. The OECD experience (OECD, 2006) with assessing structural reforms reveals that countries' needs vary most significantly with their general level of development. Insofar as this logic holds, it would be for example advisable to choose different levels of R&D spending so as to maximise the *overall* EU innovation capacity and growth potential.

Second, the LA falls short of an integrative solution responding to the needs of a monetary area in its infancy. Direct confirmation comes from the separate treatment of the SGP and the LA which would normally command a unitary coordination. When large member states (France and Germany) or smaller ones (Portugal, Greece, Ireland) proved incapable to observe the SGP provisions, the 2005 revision of the pact loosened up the excessive deficit procedure for member-states which have reformed their social protection systems or invested in research and development (R&D), both key Lisbon goals. Conversely, there is no indication in the LA that its prescriptions are deemed to also serve the foreseeable imbalances of an ever greater integrated space. For example, the "Single Market" prescriptions remain ineffective as long as member countries stubbornly stick to ineffectual cultural symbols. A case in point reported by Wanlin (2006) is the patent protection for which the US companies spend \$10,000 on average; by contrast, an EU-wide patent costs \$50,000, since companies have to hire lawyers and translators to file with the various national patent offices.

*(2) The Lisbon process exhibits cumulative complexity and ambiguous accountability.*

As it seems, the analytical foundation of the LA translates into a continuous process of additions to what appears to make up the set of critical factors for competitive upgrading and hence makes increasingly obscure the role a member country should play in the process. The wide scope of the LA contributed to a sharp increase in the number of priorities for the EU economic policy. As Deroose, Hodson and Kuhlmann (2005) document, a preceding set of guidelines – the Broad Economic Policy Guidelines (BEPGs) from 1993 – contained just three general guidelines; by 2003, there were twenty-three general guidelines, four euro area specific ones and ninety-four country-specific recommendations for the period 2003-05.

It became so visible that the LA expanding complexity would lead to dispersed accountability. The problem of assigning responsibilities in the process between the Community and its Member States looks like unfinished business. Article 99 of the Treaty (of Amsterdam) calls on Member States to regard their economic policies as a matter of common concern and to coordinate them within the Council, but it falls to the individual Member State to implement these policies. The distinction is consistent with Article 98 of the Treaty, which calls on national economic policies to contribute towards "the achievement of the objectives of the Community", while at

the same time recognising the right of Member States to conduct these economic policies.

At the decisional level, these legal provisions have been transposed in a so-called "open method of coordination" (OMC) whose central elements are information exchange, peer pressure and benchmarking by delivering "in the most public manner possible" an annual league table of member state progress towards key targets. Stronger reliance on "naming, shaming and faming" was accordingly advocated (Kok, 2004). In contrast to the usual approach to decision-making, the European Commission (EC) has no legislative role in this model, and confines its role to developing a number of 'structural indicators', which benchmark EU member states against each other and against other leading economies, in order to aid the exchange of best practice.

At the policy level, the Council adopted in 2005 *The Integrated Guidelines for Growth and Jobs (2005-08)* by which it invites Member States to draw up their National Reform Programmes (NRPs) "on their own responsibility" and "geared to their own needs and specific situation." (European Council, 2005: p. 13) The integrated guidelines are defined as "a checklist of national commitments and benchmarks to monitor progress in the months and years ahead." (Commission, 2006: p. 9) They set out objectives to which all member states are expected to adhere and which should provide a basis for evaluating national programmes.

For the time being, the *Guidelines* resemble an *à la carte* menu with no constraint on the part of Member Countries to pick up or leave recommendations in a way that suits them at best. In one of the suggestive cases, the European Parliament has twice voted against Commission proposals to open port services to greater competition, in 2003 and again in January 2006 following violent protests in Strasbourg by dockers from across the EU (Wanlin 2006). In general, the governments seem to have largely ignored the *Guidelines* when drafting their NRPs. An examination of these documents (Pisany-Ferry and Sapir, 2006) shows that they usually refer only vaguely – if at all – to them, raising the suspicion that in several cases NRPs consist simply of a repackaging of existing measures.

What are the lessons of this package of good intentions and questionable execution? What could all this mean for competitive development of the Member States? It is without doubt that the LA stands for a sort of reaction, kind of attitude against ever fiercer competitive confrontations in the international marketplace. It

nevertheless delivers no recipe for reaching higher stages of competitive competence in whatsoever industry. It is about awareness rather than procedure. Following its lines prove instead useful in pointing an outline for devising policies for competitive development on two coordinates.

First, *define your priority and then benchmark the results within the framework provided by the LA*. It should be noted that the recourse to the LA should come as a consequence of the national initiatives and definition of priorities and not the other way around. The very nature of the Lisbon process implies EU involvement in policy domains that primarily belong to the responsibility of member states. A thoughtful example is provided by Bannerman (2002). He compares one initial LA target to connect all schools to the internet by 2001 with the revised target of one computer for every 15 pupils by the end of 2003 and comments: "Even when all schools are 'wired up', it will remain a challenge to ensure that every pupil in Europe is taught how to make use of new technology. A solitary PC gathering dust in the headmaster's office does nothing to create an information society."

Benchmarking should come only after defining priorities and implementing policies because understanding what happens within large economic spaces like EU, the US or Japan is not primarily linked to whatever bunch of indicators, but to a familiarity of that environment's competitive needs. In this regard, the apparent disregard for a unitary analytical treatment of competitive issues and economic imbalances of the euro zone needs revisiting in due time, especially because both the US, and Japan form more homogenous economic areas and represent for that reason sensibly less relevance in comparative perspective. The fragmented nature of EU markets whether for financial services, intellectual property, labour market or telecommunications is symptomatic for the diligence required in assessing competitive capabilities on an international scale.

Second, *define the economic rationale for reform and then find opportunities for joint ventures in the integrated space*. The governments should be aware that their LA-related reform is about programmes and priorities which should not take anyway the course suggested by the LA. A case in point is the liberalisation of the energy sector. Stimulated or not by the American example, the Commission has been struggling to increase competition in energy markets with no significant results to date. Meanwhile, an effervescent process takes place in the Northern part of the continent where two national grid companies, Statnett SF in Norway (50%) and

Affärsverket Svenska Kraftnät in Sweden (50%), have taken the lead in establishing the Nord Pool ASA - The Nordic Power Exchange – which, according to its own information, is the world's only multinational exchange for trading electric power.

If a proper rationale is to be found, the Member Countries should take then benefit from similar initiatives across the EU area. For instance, it is quite awkward to see why the full liberalisation of postal services is deemed so critical for the competitive process, whereas many barriers to the free movement of goods, services, people and capital remain still intact.

This study enlarges in the next section on the theoretical arguments and practical implications of competitiveness assessment in the light of those LA recommendations. Against this background, the section provides a critical overview of several evaluations with regards to Romania's competitive position, especially in the European context. A third section puts forward a twofold, generic suggestion for competitiveness assessment and monitoring, but with a dedicated application to the Romanian case. A first phase proposes a selection of the main themes that exhibit a direct and tangible influence on the LA objectives, together with an analytical model. The list is accompanied by a corresponding set of indicators. A second phase builds on the suggested model to reveal the competitive vulnerabilities of Romania against the EU prescriptions. This exercise eventually aims at bringing to the fore the problematic areas where national initiatives may wield influence to bridge the competitive gaps, as well as at setting the ground for feasible policy recommendations. The concluding section proposes an approach towards policy coordination in the competitiveness area based on the structure of an annual *Romania Competitiveness Report* whose guidelines draw on the analysis sketched out by this study and on the national experiences of the other EU members.

## **ANALYSIS ON THE EVALUATIONS OF THE CAPACITY OF THE ROMANIAN ECONOMY TO FACE THE INTERNATIONAL COMPETITION**

The evaluations on national competitiveness have been carried out till now either in an extended context – the one of evaluations of a large number of economies<sup>4</sup> (World Economic Forum – Annual Reports on Competitiveness; IMD World

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<sup>4</sup>The number of economies assessed was 172 in the last WEF report, and in the case of IMD, World Competitiveness Yearbook, 60 national economies and regions were assessed.

Competitiveness Yearbook), or in the context of evaluations of the EU economies, including the new member states and the candidate states (EU Commission, EU sector competitiveness indicators; Lisbon Review; CER, The Lisbon Scorecard I...VI), or in the context of national evaluations focusing directly on the achievement degree of Lisbon's objectives, especially within the national reform programmes set in each EU country, and in the future members, like Romania and Bulgaria, as well (in the case of Romania reference is made to the GEA's Reports and to the National Reforms Programme- Lisbon Strategy 2006).

Certainly, not all the aspects included in these evaluations are entirely comparable because they do not target the same indexes. Thus, the global evaluations are based on certain aggregated competitiveness indices<sup>5</sup>, while the evaluations (*Scorecard*) refer to a value scale including certain measurable aspects of the progress of reforms in the economic, social and environmental fields, based on structural indexes, in order to place the respective country in a certain category, from E (the worst) to A (the best), as it was targeted in the GEA's evaluations<sup>6</sup>, or to place the country for a certain status - 'hero' and 'villains' – depending on the reforms' progress within the Lisbon process, in the case of CER's evaluations<sup>7</sup>. Certain assessments of the progress of the established measures are also carried out annually by the European Commission, in its reports to the Council.

Obviously, in the evaluations on global competitiveness and in the ones regarding the Lisbon Agenda, as well, there are included competitiveness factors but from a different perspective: WEF do not refer to a *benchmark*, but simply measures, according to a certain methodology, these factors' contribution and ranks the countries after their results, while the Lisbon evaluations measure the present situation with reference to certain levels of the previously established objectives (in the employment field, in the field of research and development expenditures, etc.).

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<sup>5</sup> The two competitiveness indices aggregate the input of several factors – at macro and micro level – to the productivity growth, considered the source for welfare and the most appropriate expression of competitiveness: *Growth Competitiveness Index*, including the technological endowment, public institutions functioning, the quality of macroeconomic environment; *Micro Competitiveness Index* (Business Competitiveness Index), including the companies' strategies and operations and the quality of national business environment.: World Economic Forum [http:// www.weforum.org](http://www.weforum.org)

<sup>6</sup> GEA-SOREC (March 2004), Romania – An Assessment of the Lisbon Scorecard

<sup>7</sup> See, Murray, A. (March 2004), The Lisbon Scorecard IV, *The status of economic reform in the enlarging EU*; Wanlin, A. (March 2006), The Lisbon Scorecard VI, *Will Europe's economy rise again?* CER (Centre for European Reform), [www.cer.org.uk](http://www.cer.org.uk)

Moreover, the Lisbon structural indexes were established with reference to the present conditions in the EU 15 member states in 2000, while the conditions in the new member states and surely in the future member states might be different for certain chapters, making the evaluation and the comparisons difficult to be carried out or irrelevant. To this end, the evaluations and comparisons for the latter ones, would become relevant if they are made gradually: firstly, with reference to the group they belong to based on their level, secondly, with reference to the present situation in the EU and, finally, with reference to the Lisbon objectives. The periodical evaluation on the level of indicators will also provide information about the degree of closeness towards the Lisbon targets.

The above suggests that, *even if they target the same objective, the approaches are different, the competitiveness indexes' composition is different; therefore the results of those evaluations will place the same country on very different positions, from one evaluation to another.* For example, Finland ranks 6 in 2005, according to Lisbon, and 2 according to GCI (Global Competitiveness Index). It is also worth mentioning that the experience of competitiveness evaluations proved that certain indexes need adjustments in order to better express the actual factors' contribution to the competitiveness improvement.

In the following part, it will be presented the methodology of the most recent global competitiveness evaluations and some comments based on them.

Until 2005, the countries' competitiveness has been evaluated by WEF (World Economic Forum) through 2 indices – GCI (Growth Competitiveness Index) and M/BCI Micro /Business Competitiveness Index). Although the 2006/2007 WEF Report continues to evaluate the two indexes mentioned before, it presents the competitiveness results by means of a new methodology<sup>8</sup>, which includes the complexity of factors with impact on the present competitiveness, and the productivity they express. It is also taken into account the labour efficiency, the labour market flexibility, a factor which is important for the Lisbon strategy, as well. The global competitiveness factors are gathered in 9 pillars<sup>9</sup>: Even if these competitiveness

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<sup>8</sup> Details on methodology may be found in Lopez-Carlos, and others, Cpt.1.1. "The Global Competitiveness Index: Identifying the Key Elements of Sustainable Growth", in The World Economic Forum, *Global Competitiveness Report 2006/2007*

<sup>9</sup> The 9 pillars of competitiveness: 1. Institutions; 2. Infrastructure; 3. Macro economy; 4. Health and primary education; 5. Higher education and training; 6. Market efficiency; 7. Technological readiness; 8. Business sophistication; 9. Innovation, in Lopez-Carlos and

factors are common to all countries, the main assumption is that their importance is different from one country to another, in a specific period of time, as a consequence of different development levels. Consequently, the importance of each factor in the final results is different at a certain moment, from one country to another, from one country group to another. As a result of these differences, 3 ‘competitiveness’ stages were identified, in the WEF Report<sup>10</sup>:

**Stage I:** *Factor-driven competitiveness* (unqualified or low qualified labour force; natural resources). The economy is competitive especially due to the lower prices for less complex products. In the same time, the basic, essential conditions are supposed to be present (institutions, infrastructure, macro-economic stability, health and primary education).

**Stage II:** *Efficiency-driven competitiveness* (more efficient production, higher quality products). The competitiveness conditions refer to higher education and continuing education and training, and the capacity to get benefits from the existing technologies).

**Stage III:** *Innovation-driven competitiveness* (new innovative products, complex production processes)

The importance of each of these factors, expressed by their share in the total contribution of the three competitiveness pillars, depends on the development stage of one country. Put it differently, in order to improve its competitiveness, *each country will establish its priorities based on what can contribute most to its competitiveness/productivity in that respective stage*. Placing on the first position priorities unrelated to the economic conditions of one country might be a waste of resources. There is logic specific to the stages’ sequence, and logic specific to the connections between the conditions of competitiveness. In this respect, the macro stability is a prerequisite for growth and it must be present in all cases and stages. The infrastructure cannot miss because it’s a part of the economic activity, while the primary education and the good health must be properly ensured before targeting more sophisticated conditions. Finally, even if the innovation is permanently brought into discussion as first priority, only the countries in the 3<sup>rd</sup> stage may primarily count

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others (2006), WEF, *Global Competitiveness Index*, Part.1, The Competitiveness Indexes, Chapter 1.1. “The Global Competitiveness Index: Identifying the Key Elements of Sustainable Growth”, downloaded in 8/8/2006

<sup>10</sup> In Porter (1990) we find the evolution stages based on competitiveness factors

on innovation and business sophistication because they have already benefited from the other factors' contribution<sup>11</sup>. This approach cannot be interpreted in the sense that the competitiveness improvement depends on one factor or that one factor is present only in a certain stage, but in the sense that the factors' contribution changes in each of the three stages mentioned before. The stage delimitation cannot be made in a rigid manner, because we have countries 'in transition' from one stage to another, a period of time in which some factors start to act on the support of the essential ones for the stage they are ready to leave and on the increased contribution of the essential factors of the next stage. This means that even in the less developed countries, the innovation activity cannot miss, but it might not have the highest contribution in the increase of productivity. In the same context, if the developed countries, in stage III, register some disequilibrium (budget deficit, labour market rigidities) they cause a negative influence on the competitiveness/productivity growth (for example: the present labour market rigidities in the EU, the budget deficit generated by the delay and incomplete reforms of the social model, pensions system).

Evaluations on competitiveness can also be found in the World Competitiveness Yearbook, but they use another grouping of competitiveness factors<sup>12</sup>.

In other words, the competitiveness is a complex and dynamic component, per excellence.

### **The present position of Romania based on several competitiveness evaluations**

WEF evaluations in 2005/2006 Report<sup>13</sup> place Romania on the 68<sup>th</sup> position, out of 125 countries, in 2006, dropping one position from 2005, even if there is an index improvement (from 3.67, in 2005, to 4.02, in 2006). Thus, not in *absolute terms*, but in *relative terms* the competitiveness got worse, compared to other countries; this clearly shows the exact meaning of the competitiveness evaluations -

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<sup>11</sup> See, Lopez-Carlos, p. 11

<sup>12</sup> See, IMD (International Institute for Management Development), which publishes the World Competitiveness Yearbook starting on 1989, and measures the competitiveness factors' contribution for a number of 61 national economies and regions, based on 312 different criteria, grouped in 4 competitiveness factor groups: Economic performance; Government efficiency; Business efficiency; Infrastructure

<sup>13</sup> World Economic Forum, *Global Competitiveness Report 2005-2006*

the place of one country against other countries. In this respect, the higher improvement of others' competitiveness, made Romania lose one more place in the ranking.

As far as the evolution stages of factors' contribution are concerned, the WEF evaluation shows that, for the first time, Romania *left the first stage – the factor driven one-* (cheap labour force, natural resources), a stage in which were created the basic conditions for productivity: institutions (legislative framework), infrastructure, macroeconomic stability, primary education and health, and is placed in stage II, where the main orientation is towards the efficiency strengthening. The important factors in this stage are: *Higher education* (RO: rank 50, with a score of 4.34 compared to a max. 5.66 –USA); *Market efficiency* – RO rank 76, with a score of 4.03 compared to a max. 5.69 –Hong-Kong; *Technological readiness* – RO rank 49, with a score of 3.59, compared to a max. 6.01 – Sweden).

According to these evaluations, to increase competitiveness, Romania's priorities must be the *technological endowment* and the *use of present technologies* (the development of its own technologies and technologies transfer through the well known methods - FDI, import of technologies), and *increase in education of the labour force*, including higher education, in order to prepare the appropriate conditions for innovation.

Romania must focus on *good market functioning* - labour market, capital market, on the creation of conditions for competition, for a better allocation of resources and good use of public funds.

The evaluations regarding the competitiveness sub-indexes in 2005 are as follows:

**Table 2: Indicators of competitive development stages**

| <i>Sub-indices</i>                            | <i>Romania</i> |           | <i>The highest index</i> | <i>Country ranking 1<sup>st</sup></i> |
|---|----------------|-----------|--------------------------|---------------------------------------|
|   | Index score    | Rank      |                          |                                       |
| <b>I. Basic requirements</b>                  | <b>4.9</b>     | <b>83</b> | <b>6.05</b>              | <b>Denmark</b>                        |
| 1.1. Institutions                             | 3.40           | 87        | 6.05                     | Finland                               |
| 1.2. Infrastructure                           | 3.05           | 77        | 6.51                     | Germany                               |
| 1.3. Macro economy                            | 3.94           | 97        | 6.19                     | Alger                                 |
| 1.4. Health and primary education             | 6.38           | 69        | 6.98                     | Japan                                 |
| <b>II. Factors for efficiency improvement</b> | <b>3.99</b>    | <b>55</b> | <b>5.66</b>              | <b>USA</b>                            |
| 2.1. Higher education                         | 4.34           | 50        | 6.23                     | Finland                               |

|  | <i>Romania</i> |           |             |              |
|--|----------------|-----------|-------------|--------------|
| 2.2. Market efficiency                 | 4.03           | 76        | 5.69        | Hong-Kong    |
| 2.3. Technological readiness           | 3.59           | 49        | 6.01        | Sweden       |
| <b>III. Innovation</b>                 | <b>3.52</b>    | <b>73</b> | <b>6.02</b> | <b>Japan</b> |
| 3.1. Degree of business sophistication | 3.89           | 73        | 6.26        | Germany      |
| 3.2. Innovation                        | 3.14           | 68        | 5.90        | Japan        |

Source: Adopted on data published by bthe WEF, Annual Report 2006

The competitiveness sub-indices confirm Romania's position regarding the competitiveness factors. In this respect, the basic requirements are accomplished, but, in this category, the *infrastructure* has the lowest score, but not the lowest rank – which means that this domain has a lot to develop in order to contribute to the competitiveness growth. As far as the efficiency sub-indexes are concerned, the *technological readiness* holds the lowest score, followed by the *market efficiency*. Predictably, in the third factors group, the *innovation* holds the lowest score.

The competitiveness growth highly depends on the companies' activities, on their decisions to invest, which is mainly dependent on the business environment. The elements of the business environment are included in many pillars of competitiveness, one finds them especially in the 1<sup>st</sup> pillar- institutions (property rights, burden of government regulations, business cost of terrorism, business cost of crime and violence) and in the 6<sup>th</sup> pillar – market efficiency (efficiency of legal framework, extend and effect of taxation, number of procedures required to start a business, competition, commercial barriers, labour market, and financial market). That is why the comparative assessments on the business environment appear as extremely useful for the competitiveness analysis.

In this context, the recent World Bank evaluations<sup>14</sup>, which refer to 10 indices of business environment<sup>15</sup> – the ones influencing the most the decision to invest – reveal important improvements of the business environment in Romania, placing our country as one of the 10 top reformers, and ranks Romania on the 46<sup>th</sup> position, in 2006, compared to 72, in 2005, out of 170 countries.

<sup>14</sup>World Bank Group, Doing Business, 2006, Explore Economies, <http://www.doingbusiness.org/ExploreEconomies/?economyid=158>, downloaded in 12/09/2006

<sup>15</sup> The ten indexes are: 1. Starting a business; 2. Dealing with licenses; 3. Employing workers; 4. Registering property; 5. Getting credit; 6. Protecting investors; 7. Paying taxes; 8. Trading across borders; 9. Enforcing contracts; 10. Closing a business

A similar result is revealed in the IMD's evaluations on how easy is to start a business, in which Romania ranked 44<sup>th</sup> out of 61 countries, better placed than the new EU members – Slovenia, and Poland.<sup>16</sup> The new Romania's position might be seen as an important progress if one takes into consideration that 2-3 years ago Romania, along with Bulgaria, was lagging behind regarding one of the most important business environment component, *id est* setting up a new business<sup>17</sup>.

These evaluations seem to tell that, finally, the macro stability measures induced a positive reaction of the business environment, and the positive evolutions of the business environment may lead to an increased competitiveness. In the same time, the positive evolutions of the business environment might explain, partly, the transition from stage I to stage II for the competitiveness factors.

### **The Lisbon Context: Main coordinates of the Lisbon Agenda and implementation of the competitiveness policy**

The references to the Lisbon Agenda were characterised by a sceptical note in the last years, due mainly to delays in reaching the objectives established by the European Council in March 2000<sup>18</sup>; the sceptical note was also caused by the lack of implementation or limited implementation of measures and programs related with these objectives, as well as by the short implementation period for the achievement of such an ambitious objective.

The analyses and comparisons of the evaluations reports on Lisbon Agenda implementation results lead to the following findings:

- The Lisbon Agenda has an *objective* (even if this objective can be subject to further discussions) – to transform the EU economy “in the most competitive knowledge based economy”, but it is, in the same time, a *process* that focuses the development of the European economy on factors that are at the core of the economic development not only nowadays, but as well as in the future *id est* knowledge and sustainability. It also means that this type of economic development will continue

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<sup>16</sup> IMD, World Competitiveness Factors (2006), in <http://www01.imd.ch.wcc.factors> downloaded in 12/09/2006

<sup>17</sup> Murray, 2004, The Lisbon Scorecard IV, p.74

<sup>18</sup> For more details see, Presidency Conclusions, Lisbon European Council, 23 and 24 March 2000, [Http://www.europe.eu.int/comm/off/index/en.htm](http://www.europe.eu.int/comm/off/index/en.htm)  
[http://ue.eu.int/ueDocs/cms\\_Data/docs/pressData/en/ec/00100-r1.en0.htm](http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/00100-r1.en0.htm)

even after the objective of the Lisbon Agenda will be achieved, due to the constant evolution of the conditions in which the economic development occurs and evolves.

- One can also tell that LA is a certain philosophy of the European model of economy that regards the economic development as a support of prosperity for all EU citizens, and a support of social cohesion and justice as well.

- Which are the arguments that sustain the objective of competitiveness enhancement as it was established in the Lisbon Agenda?

- The existing gaps between the EU economy and USA regarding the level of productivity - expressed by *GDP growth rate per capita* or *output/employee* or *output/working hour*. At the existing gap, one can also add the fast development of Asia (China, India) that is a serious challenge for the position held by Europe in the global economy. The causes of this situation are:

- Insufficient investments in high tech, education, R&D and especially in new products with a high rate of added value, in jobs creation, and in better jobs that should request high skills and better paid work;

- Data show a comparative lower employment of the working force: a lower rate of employment of the working age population (15-64 years old), a lower working time; a low flexibility of the labour market (reduced adaptability, insufficient attention given to acquiring new competencies, low rate of geographic and occupational mobility; moreover, the creation of jobs was made mainly in lower productivity fields.

- The European Social Model needs to adapt itself to the new demographic context characterised by a decline in the population growth rate, an increase in the life duration, demographic ageing – that are serious threats towards the existing pensions systems, health systems, etc. The model has to analyse and give appropriate solutions to the context created at EU level by population mobility and the development of information society. All those aspects that exert direct and strong influences on the actual social model are based on the assumptions that European economy has to be able to become more efficient to be able to sustain the further developments of the social model.

- Enlargement is also perceived by the EU as an important factor of the new context in which EU should be able not only to remove the gap against USA, but also to take on the *leadership* as well. This task seems to be really

affected by the enlargement, due to high discrepancies of the new members in many important indicators such as (GDP/capita; high regional discrepancies that request financing support from the Cohesion Fund; lower employment rate, high rate of unemployment, especially on long term unemployment; severe environmental problems) that are negatively influencing the EU average level of indicators.

- Connected to the above, one might add the following remarks:
- The changes required by the Lisbon Agenda are extremely necessary even if the European Union would give up the present Social Model<sup>19</sup>, since the modernization is a vital factor for the prosperity of Europe.
- The global context in which the EU economy develops imposes to consider the competitors' tendencies and directions of evolution – by competitors one understands not only the US, but also the new competitors such as Asia (China and India), that brings totally new competitive conditions by comparison to USA (labour low prices, but also highly qualified workers, substantial investments in competitive research fields etc.).
- Enlargement brings into the EU development arena not only discrepancies, but also a new type of dynamism, *id est* rates of economic growth much higher than those of the “Old Europe”, attractive conditions for re-location of companies, and an educated, but cheaper working force; the new members also have important room for productivity increase, especially related with structural changes - facts that could positively impact on the EU competitiveness improvement in the global context.
- The social cohesion and sustainable development have to become competitive advantages of Europe, if one considers that social cohesion is aiming to contribute to the economic development by increasing the potential of less developed regions, by increasing the contribution of human resources and that sustainable development has as objective to fit the present and future needs of a proper use of the available resources.
- The objectives of the Lisbon Agenda could not be achieved only by establishing general directions for the EU economy, nor by programs and

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<sup>19</sup> Rasmussen (2005), p.60

measures at the national state level, but by<sup>20</sup>: “an active participation of all the society levels: from citizens to private sector, civil society, employers and employees, universities and students, firms and clients, sellers and consumers”. In other words, it should become a *bottom-up process* with appropriate measures implemented in all sectors and with the involvement of all actors – EU, member states and social partners.

The principal evaluations on the results of the Lisbon objectives are:

- Kok report that served as background for the Lisbon Strategy II;
- WEF, the Lisbon Review 2003 and 2004
- Centre for Economic Reform, Lisbon scorecard, V and VI
- Evaluation on the frame of the National Reform Programs of the member states
- EU (15/ 25)
- The policy domains that have to be targeted by the reform measures necessary to achieve the Lisbon objective are, according to Kok Report, the following:<sup>21</sup>

1. *Knowledge based society* (researchers, R&D – preconditions of innovation and productivity increase, *spill-over effect* - diffusion of the innovation effects; better financing of the universities, fiscal incentives for SME’s that are investing in research; public-private partnership, protection of intellectual property rights; Internet access and the development of an ICT based society; e-government; e-business);
2. *Internal Market* (free movements of products and services; transposition of the EU directives at the level of national member states legislation; internal market more attractive for investors);
3. *Business environment* (removing the administrative barriers, better legislative quality, facilities to create SME’s, developing a sustainable environment for business, financing opportunities – risk capital, support for entrepreneurial activities and development of the entrepreneurial culture, improving bankruptcy legislation, complete liberalising of gas and electricity market by 2007);
4. *Labour market* (strategies for LLL (*long life learning*), active ageing, partnership for economic growth and increasing employment rate);

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<sup>20</sup> Ibidem

<sup>21</sup> European Communities (2004), Kok Report, p. 6, CE-[Kok\_report\_en.pdf]

5. *Environmental sustainability* (eco-innovations; win-win opportunities; eco-industries; eco-efficiency), that is an important part of the competitiveness strategy and that could become a competitive advantage for EU).<sup>22</sup>

The five principal domains, as they were described by the Kok Report, are common for every member state. But the way in which they are to be approached could be different from a country to another, due to the heterogeneity of the EU economy<sup>23</sup>. There are level and structural discrepancies inside of the “Old Europe”, and much more at the level of the “New Europe”. The achievements as well as the difficulties that should be approached are different in the EU big countries such as France or Germany compare to small countries such as Finland and Denmark. Moreover, the references at the “euro zone” do not include, at least nowadays, all the EU countries. This reality made necessary the national strategies and programmes through which the priorities and conditions at each country level should be established in order to achieve the Lisbon objectives. A guide on three levels: macroeconomic, microeconomic and labour force was produced aiming to help the elaboration of the national reform programs<sup>24</sup>.

The new Lisbon Agenda has oriented the strategy towards economic growth and job creation - Growth and Jobs – and focuses on two major aspects, characteristic for the entire EU economy:

- Competitiveness increase could not be achieved without economic growth, sustainable economic growth; the major difficulty being the parallelism of the two processes – increasing of the competitiveness in the meantime with job creation;
- Due to the actual conditions in which the cohesion policy is developing, conditions that are dramatically changed by comparison to those in which cohesion become a European Community policy, reaching the objective of social cohesion is jeopardised if the same system of redistribution is kept alive. Even though if the redistribution is to be made (the case of regional policies), it has to transform itself in a constant support for economic development and job creation – the best and safest approach to sustain the social cohesion.

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<sup>22</sup> Ibidem, p.35

<sup>23</sup> Lisbon National Reform Programmes for Growth and Jobs 2005-08, nrp\_2005\_en.pdf, downloaded in August 2006

<sup>24</sup> European Commission, 2005, Integrated Guidelines for Growth and Jobs, <http://europa.eu.int/growthandjobs/>

As far as the mechanisms to be put in action to achieve this double objective are concerned, the answer is given by the Lisbon Strategy in terms of the general conditions that sustain nowadays the economic growth and competitiveness in developed countries with consolidated economies. This is the reason why the new and future members of the EU should develop adequate solutions to the specific problems of their national economies, based on the common general orientations. As a result, the approach of the Lisbon Agenda is made in a certain context, taking into account the national situation, the economic level of the country, the reforms that should be adopted, based on the observation that the economic achievements of the countries aren't and couldn't be at the same level, and that each country has certain priorities related to the objectives and requirements of the Lisbon Agenda<sup>25</sup>. Reforming the economies is a continuous process and this is applicable not only to economies in transition. This is the reason why, all the EU countries, independently of the level or number of years of membership experience in the EU, developed national competitiveness programs, with some specific priorities, in order to contribute to the achievement of Lisbon Agenda<sup>26</sup>.

The evaluations regarding the position of Romania towards the Lisbon objectives were made using the scorecard method that places a country in a qualitative category of results.

**Table 3: Synthesis on evaluations concern Romania towards Lisbon Agenda**

| <b>Evaluations<sup>27</sup></b>   | <b>Score</b> |
|---|--------------|
| 1. GEA Report I March 2004  |              |
| Innovation and Research   | D            |
| Liberalisation  | D+           |
| Enterprises and business environment  | D            |
| Employment and social cohesion policy   | C-           |
| Sustainable development   | C-           |
| 2. GEA Report II, November 2004: evaluate the progress made by Romania in the field of structural indicators, without according a certain score, but putting in |              |

<sup>25</sup> The following conclusions are based on the evaluation of the EU Commission on the content of national reform programs of EU countries (see, Commission of the European Communities, Annex to the Communication from the Commission to the spring European Council *Time to move up a gear*, Annex to COM (2006) final), but also on own observation and comparative analyses of the national reform programs of France, UK, Italy and Portugal. One of the most important results is the fact that one can speak of both common as well as different priorities between member states. Also, a comparison has been made in respect to the national programs of some of the new members such as: Poland, Hungary, Slovakia, Estonia, Lithuania

<sup>26</sup> Details in national programs

<sup>27</sup> The three GEA Reports

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evidence the priorities for Romania (technologic development through technological transfer, a dynamic business environment, reduced inflation, decreasing of the job destruction. In the mean time, the report made certain political recommendations based on the Romania economic context.

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3. GEA Report III, October 2005: evaluate the structural indicators based on the New Lisbon Agenda and propose measures in different domains.

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4. Other evaluations based on scorecard<sup>28</sup>: One of the most recent evaluations on *scorecard* based on structural indicators used to evaluate the Lisbon Agenda ranked Romania in the 25<sup>th</sup> position out of 27 present plus future member states,.

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Note: The GEA Report I use a scale from A (the best), to E (the worst), using structural indicators

By analysing the different evaluations that use the *scorecard*, it can be observed that all are convergent and are leading to the identification of the same major chapters with deficiencies from the Lisbon Agenda perspectives. This evaluations are in accordance with the actual position of Romania (stage II, according to WEF/2006)

### **National experiences on the programs aiming to reach the Lisbon objectives**

As was concluded by analysing the national reform programs, none of the member countries have reached the level established by quantitative indicators, but each country has a strategy for implementing measures in the domains defined by Lisbon Agenda to be essential for the increase of competitiveness. Measures were established on the previous discussed levels: macroeconomic, microeconomic and labour force.

The main findings are the following:

#### **A. At macroeconomic level**

Several EU countries, especially the big ones, are facing budgetary deficits (Germany, France and Italy), and as a logic consequence, with public debts that exceed the levels established through convergence criteria for EMU. Following the demographic ageing, the perspectives are even less favourable. Deficits are a reality also in some countries that are aiming to enter the European Monetary Union such as Hungary, Poland and Czech Republic. Due to this facts, as well as with the recommendations of the Growth and Stability Pact, especially those aspects dedicated to long term budgetary consolidation, the main measure to promote a health macroeconomic policy is for those countries financial discipline – decreasing the

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<sup>28</sup> See, The Lisbon Scorecard VI, p.9

budgetary deficit by reducing the administrative expenses, a better orientation of the expenses (investments in infrastructure, investments in human capital and R&D) – measures that could lead in the end at fiscal sustainability.

It is worth mentioning that some of the states are programming decreases in taxation level, even though they register budgetary deficits; such an example is Hungary. Very important seems to be also the budget estimation on medium and long term, the reform of the pension systems, other measures to reform the social protection systems. Some of the countries that have big budgetary problems are also participating at EMU, a fact that raises the issue of a better harmonization between the common monetary policy and fiscal policies at national level. In this frame, the establishment of some rules on the budgetary expenses seems extremely necessary:

- The pensions systems sustainability through reforming it: increase of active life duration (increasing the retirement age and discouraging the anticipate retirement) but, in perspective, this decreasing source will disappear due to the narrowing of the segment of active population, the only possibility of economic growth, by the estimation of the EU<sup>29</sup>, remaining the increase in productivity; a better correlation between pensions increase with financial contribution to pensions (ex. The system of the three pillars (PAYG) -mandatory pensions (I); mandatory funded pensions (II); supplementary pensions (III)).
- Even some of the new member states register a deficit in the current account balance (ex. Estonia<sup>30</sup>), but they do not implement special measures to reduce them, in those cases the deficit being the results of technological imports and FDI, and are considered as *catching-up* flows.

#### **B. At microeconomic level**

a). *Supporting the research and innovation*: bigger investments in research, better investments in terms of funding structure, as transfer to innovation and as source of development. As financing sources, not only the national budget should be

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<sup>29</sup> Commission of the European Communities, Annex to the Communication from the Commission to the spring European Council *Time to move up a gear*

<sup>30</sup> Republic of Estonia, Action Plan for Growth and Jobs 2005-2007, For implementation of the Lisbon Strategy, Tallin 2005, pdf, p. 7

taken into account, but also the EU financing programs<sup>31</sup>. Of great importance is considered to be the public-private partnership, attracting the private sector in financing research. The legislation in the field of state aid doesn't prohibit support of firms that are developing research facilities, many of the EU countries are applying specific measures of fiscal incentives such as tax facilities for firms that are investing in R&D (Holland, Spain, France); other countries have developed specific programmes to increase the numbers of researchers employed by enterprises or firms (Spain, Denmark, Estonia) or developed excellence research centres and education facilities (Italy).

Developing of *competitiveness poles* through public – private partnerships (France) intends to involve more the business sector in research financing. It is doubled by a better surveillance of the investments in R&D field, by developing monitoring systems for public financing in research activities, in the case of Slovakia, Spain and France. Other countries choose to better promote the research results, to better bring and sell the research results on the market (Ireland) or to reduce the patenting costs.

*b). Europe should become more attractive for investors and workers.*

Business environment as well as markets functioning is an essential component that affects the competitiveness dynamic. At the level of EU, the measures are related to completing the Internal Market (services), at liberalising energy market, railway transportation, at preparing the reforms in the postal services and to a quality enhancement of the legislative frame, through mainly simplifying it. The creation of an impact evaluating body that will assess the impact and will evaluate the administrative costs (12 countries) was stipulated by several programs. The EU countries develop specific measures such as – transposition of the internal market directives at national level (Latvia, Ireland, Estonia), monitoring procedures of the directive implementation (Ireland), fast procedures for implementing the directives (Italy, France), simplified procedures to register a firm or to develop a new business (*one-stop shops for business enquiries* - Belgium, Estonia, Finland, France, Ireland, Italy, Poland, Portugal), simplified procedures for hiring and firing, analyses of the administrative costs for enterprises (*standard cost model* - initiated by the

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<sup>31</sup> See, Seventh Framework Programme for Research, Technological Development and Demonstration activities, COM (2005) 119 of 6.4.2005; Competitiveness and Innovation Framework Programme, COM (2005)121 of 6.4.2005

Netherlands), removing the obstacles to market access for liberal profession, financial services (Ireland, the Netherlands), programs to support the internationalisation of businesses (Portugal), companies' access to capital (Czech Republic), fund to support the innovative enterprise (Czech Republic, Holland, Slovenia), fiscal measures to support the dynamic small investors (Denmark), services to support the investors such as: handbooks and guides for e-Government, on-line services for SMEs. The sequence of measures depends on the legislative implementation stage as well as on the good practices at the level of each country.

The economic development is widely dependent on the infrastructure and development. About 20 national programs have put the development and modernisation of the infrastructure among priorities, and ITC infrastructure, especially access to *broadband*, appears in all programs, based on the importance given to ITC in achieving the competitiveness objective

*c). Creation of more and better jobs*

The third pillar of the Lisbon Strategy is dedicated to full employment, human capital and productivity increase. The national authorities hold the main responsibility in this field; they have to evaluate the status of economic restructuring in the economy, the employment loss but also the need for future jobs. In the same time, the geographic and occupational mobility has to be part of the employment policy. Based on the fact that figures regarding the employment rate are relative low compare to Lisbon objectives, all the national programs of the EU countries stipulated specific measures regarding the increase on the employment rate, with a special concern for specific vulnerable groups such as women, elders and young graduates. But, productivity is directly dependent on investments in human capital. Still, there are a few measures that are referring to factors which are influencing the adaptability of the working force at different types of change such as lifelong learning strategies, adult education, a better education. In the same time, there is an insufficient promotion of the “flexi-security” measures that combine job security with a greater flexibility on the labour market.<sup>32</sup>

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<sup>32</sup> CE, Annex,...p. 31

## **COMPETITIVENESS EVALUATION AND MONITORING METHODOLOGY**

There are various definitions of the term competitiveness, the most common of which is the ability to sell a product. In practice, however, the concept has been extended from product level to be broadly applied to company, sectoral and macroeconomic levels as well.

The assessment of competitiveness at sectoral (mezzo-) and micro-economic level is made mostly from the supply side and refers to the price-competitiveness and quality- competitiveness. The price-competitiveness is determined by the balance between productivity and factor costs and is raising with scale economies, while quality- competitiveness can be obtained through niches and product differentiation. Thus, the sectoral studies combine quantitative aspects (prices, volume of export, productivity, investment) with qualitative aspects (management, brand, innovation etc.).

The approach to assess competitiveness at *country level*, however, differs substantially from that on sectoral or microeconomic levels. From the LA perspective, competitiveness refers to the ability of a country to maintain, at least in the medium run, high employment and economic growth rates which leads, in the long run, to increase in the population welfare. From this perspective, competitiveness depends mostly on the economic and institutional capacity of a country to support innovation and productivity growth.

The assessment of macroeconomic competitiveness is made through a set of indicators. Up to now, one of the most well known instruments for evaluation/monitoring of competitiveness is that used by the World Economic Forum and is related to the Porter theory. OECD proposed another set of indicators for international competitiveness assessment<sup>33</sup> and developed a model for this topic, called Interlink.

Given the complexity of the competitiveness concept, one can not speak about a common framework for evaluation, still the existing methodologies can be reduced to the following list: *surveys, utilizing composite indexes for multi-criteria analysis (including scoreboard), econometric and statistical methods (modelling)*.

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<sup>33</sup> M. Durand and Giorno, C. (1987) Indicators of international competitiveness: Conceptual aspects and evaluation. *OECD Economic Studies* 9

## **Analysis of competitiveness and monitoring the progress - methodology**

This section aims both to reveal the gaps in competitiveness between Romania and EU and to analyse its determinant factors. The methodology proposed for competitiveness evaluation and monitoring is based on multiple-criteria analysis and presupposes several steps:

1. Defining a composite index for assessing Romania's competitiveness compared to the EU average
2. Defining composite indices for each of the competitiveness determinants in order to reveal the Romania's relative position compared to the EU average
3. Evaluating the relative level of Romania's competitiveness compared to the EU average (EU15 and EU25)
4. Evaluating the relative position regarding the determinants of competitiveness

### *Defining competitiveness evaluation index*

Competitiveness concept in the context of LA relates, in the first place, to productivity and employment growth. Therefore, we propose that the composite index should have as sub-indicators: (i) productivity (GDP/employment) and (ii) employment, which are considered to be equally important, therefore the composite index is computed as simple average of these two sub-indicators.

### *Defining the competitiveness determinants' indices*

At theoretical level, the list of competitiveness determinants is a very long one. For practical and data constraints reasons, we propose to focus on the following themes, considered to be input indicators, that are influencing the competitive position of a country:

- |  |   |                                |
|--|---|--------------------------------|
| 1. Employment                            | } | Production factors             |
| 2. Capital                               |   |                                |
| 3. Research-development-innovation (RDI) |   | Technological progress         |
| 4. Business environment                  | } | Environmental/External factors |
| 5. Infrastructure                        |   |                                |
| 6. Existing industrial structure         |   |                                |

For each of the six categories above we have built composite indices, based on sub-indicators fulfilling two conditions: (i). They are relevant to the topic and (ii). data is available for both EU and Romania.

Thus, the *Labour force* index includes the following sub-indicators:

- Real unit labour cost growth
- Education expenditures (% GDP)
- Science and Technology graduates
- Long life learning (LLL)

For the *Capital* index we have used the Investments/employee indicator.

The components of *RDI* index are:

- Gross domestic expenditure on R&D (GERD)
- Innovation rate (patents EPO)

The value of *Business environment* index results from aggregating the following sub-indicators:

- State aid
- Venture capital investments
- Business survival

For the *Infrastructure* index we have used two structural indicators:

- Volume of freight transport
- IT expenditure

Finally, for characterizing the existing industrial *Structure*, we have chosen the ‘high-tech exports’ structural indicator.

In order to facilitate comparability, the sub-indicators have been normalised, using Euclidian norm:

$I_j = (a_j^2) / \sum(a_i^2)$ , where:

$a_j$  – the indicator value for Romania, EU-15 average, EU-25 average; ( $j=1 \div 3$ )

$a_i$  – the indicator value for each of the EU-25 country, Romania, EU-15 average, EU-25 average; ( $i=1 \div 28$ )

The composite indices are computed by the simple average<sup>34</sup> of their components.

As source of data, we have used EUROSTAT (Structural Indicators).

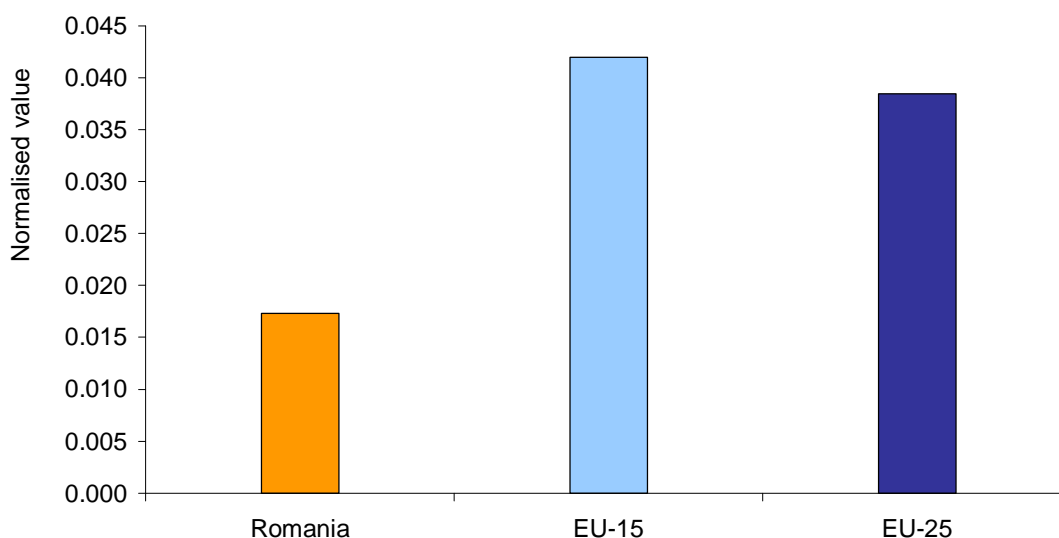
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<sup>34</sup> excepting the RDI index, for which we have applied the weighted average: Gross domestic expenditure on R&D (70%) și innovation rate (EPO patents)- 30%

## Evaluation of competitiveness gap between Romania and the EU

The composite index of competitiveness defined above (output index) shows a gap of more than 1:2 between Romania and European averages (Figure 1). This finding is not surprising, what is more important, however, is to what extent Romania makes progresses that bridge the gap, i.e. what is the dynamics of this index.

**Figure 1: Competitiveness Index**<sup>35</sup>



Source: computations based on EUROSTAT data (Structural Indicators)

Taking a look on the components (Table 4), one can notice that the biggest discrepancies were recorded for *Labour Productivity*, its normalised value for Romania is more than 7 times below that of EU-25 and more than 8 times inferior to the EU-15. Nevertheless, the developments over the period 2000-2005 were positive, Romania making considerable progress in catching-up with the European countries (from a gap of 1:15 to 1:7, compared to EU-15, and from 1:13 to 1:6 compared to EU-25, respectively). Conversely, the component *Employment rate* had a negative trend. Starting in 2000 from a similar position as the EU -15 and even from a better one compared to EU-25, the value of the indicator has decreased until 2005 below the European averages (by 25% compared to EU-15 and by 20% compared to EU-25).

<sup>35</sup> For some variables (indicators), data are available until 2005, for others until 2004. In order to keep consistency in graphical representation at both competitiveness levels and its determinants, we have taken the simple average for the last three years for which data have been available.

**Table 4: Normalised values of Competitiveness index and its components**<sup>36</sup>

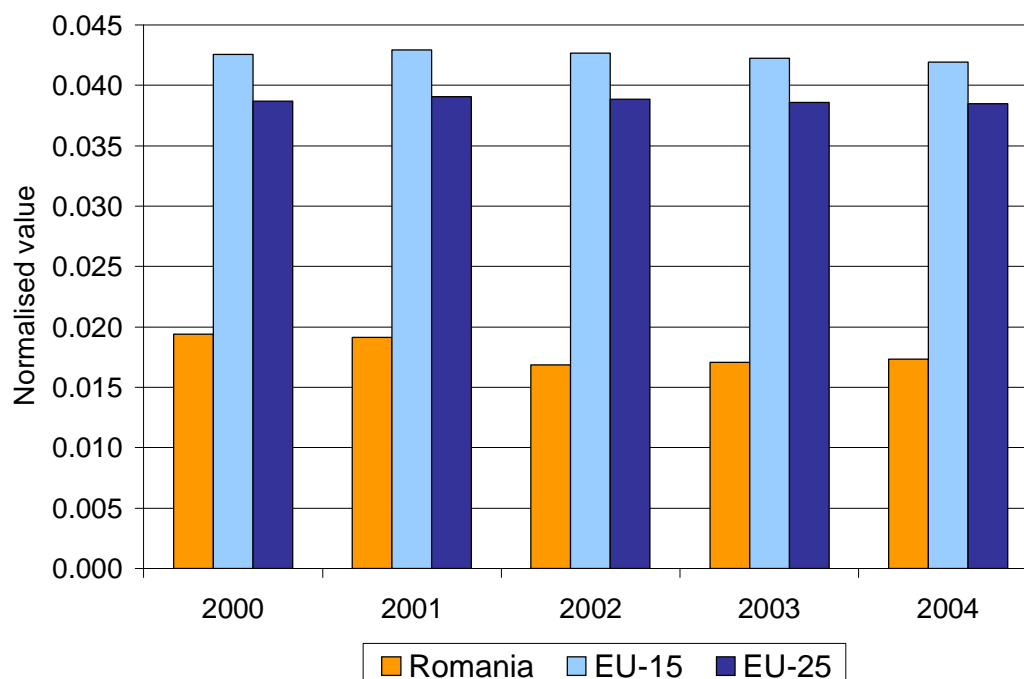
|                        | <b>Romania</b> | <b>EU-15</b> | <b>EU-25</b> |
|------------------------|----------------|--------------|--------------|
| <b>Competitiveness</b> | <b>0.017</b>   | <b>0.042</b> | <b>0.038</b> |
| - Labour productivity  | 0.006          | 0.047        | 0.042        |
| - Employment rate      | 0.029          | 0.037        | 0.035        |

Source: computations based on EUROSTAT data (Structural Indicators)

Over the period 2000-2005, the positive evolution of the component *Labour productivity* didn't counterbalance the deterioration of the *Employment rate* component, which means that overall *no progress was made in catching-up with the EU in terms of competitiveness* (Figure 2). Since the indices have been normalised, their values should be interpreted exclusively in **relative terms**. In other words, a lower value for Romania in the analysed period doesn't necessarily mean a regress, but a slower development compared to EU-25 and EU-15 respectively, which finally results in increasing the gap. Taking into account the fact that EU is also a moving target, the objective of levelling up calls for a faster pace of the progresses in Romania.

<sup>36</sup> average on the last three years for which data are available

Figure 2: Dynamics of competitiveness index



Source: computations based on EUROSTAT data (Structural Indicators)

A general view on the extended list of Structural indicators clearly reveals the gaps between Romania and EU countries. The comparison between Romania and EU can be synthesised in a table which reveals four situations:

- indicators *below the minimum* value registered among the EU-25 countries
- indicators *between the minimum and the average* value of the EU-25 countries
- indicators *between the average and the maximum* value of the EU-25 countries
- indicators *above the maximum* value of recorded among the EU-25 countries

This type of table offers a synthetic view of the Romanian's position compared with the EU from the point of view of Structural Indicators and allows a *global* assessment of the set of indicators in line with the European Commission proposal (2000) that "selected indicators should not be considered in isolation, but rather as elements of the same image".

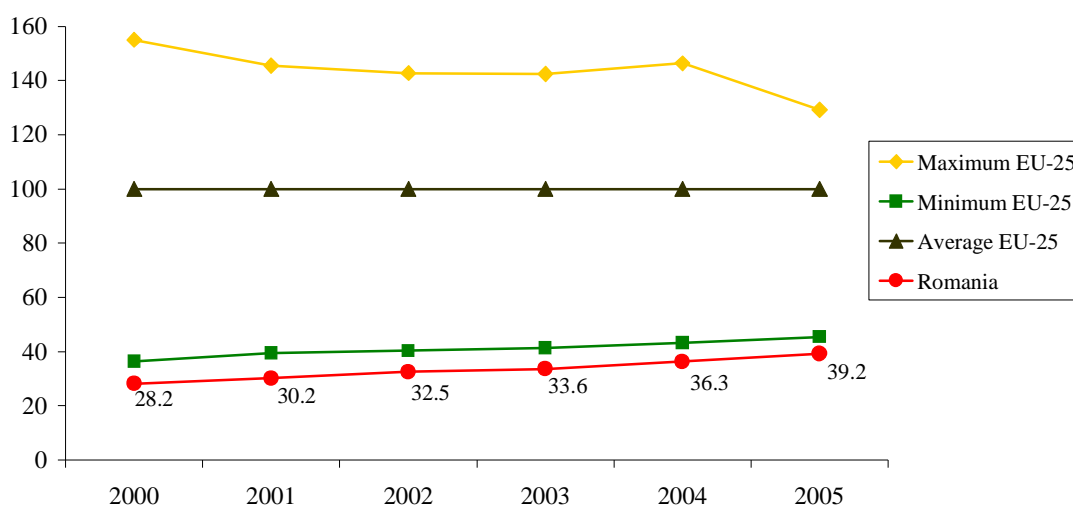
**Table 5: Comparison of "General Economic Background" Structural Indicators**

| < min EU                                     | between min EU and EU average                             | between EU average and max EU     | > max EU  |
|--|---|-----------------------------------|---|
| GDP per capita in PPS<br>Labour productivity | Employment growth (total, W, M)<br>General public deficit | Public balance<br>Real GDP growth | Inflation rate<br>Real unit labour force growth |

Source: based on EUROSTAT data (Structural Indicators)

The sole indicator that gives a positive signal is the *real GDP growth*, being situated above the EU average. This is a normal development and represents in the same time, within the debates regarding Romania's EU integration, the main element in the positive scenarios. Although the GDP growth rate is superior to that of all EU member states, the catching-up process measured in GDP per capita in PPS is still slow. Even though it's clear that the convergence needs a long period of time, sometimes growth sustainability on medium and long term becomes questionable. Ensuring a sustainable growth presupposes reducing both the productivity differentials and employment growth to European levels. Huge *labour productivity* gaps between Romania and EU still persist, the value of the indicator for Romania being below the recorded minimum among the EU-25 countries.

**Figure 3: Labour productivity per person employed (EU-25=100)**



Source: computations based on EUROSTAT data (Structural Indicators)

The *inflation* rate was seriously diminished, but it's still higher than that of any EU member country. The *public balance* stayed within the bounds of the Stability Pact, although the *cvasi-fiscal deficit* is relatively high.

In Romania *the unit labour cost growth* it's much higher than in EU countries. This is an expression of the levelling-up with EU salaries but in the same time means a gradual loss of the comparative advantage of a cheap labour force.

**Table 6: Comparison of 'Employment' Structural Indicators**

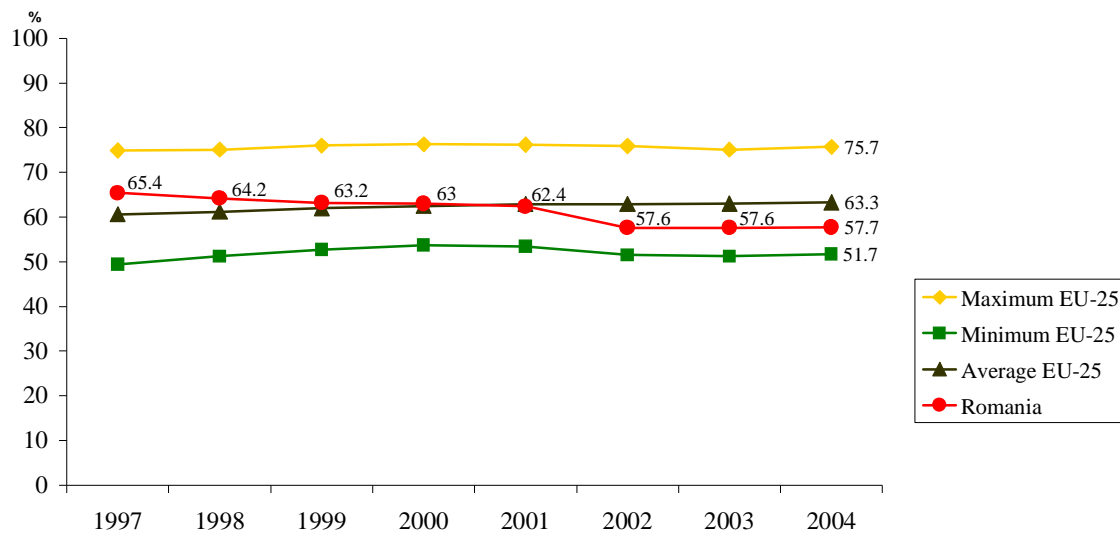
| < min EU                                   | between min EU and EU average  | between EU average and max EU   | > max EU                                   |
|--|--|---|--|
| Long-life-learning-LLL (total, Women, Men) | Employment rate (total, W, M)<br>Employment rate of older workers (total, M)<br>Average exit age from the labour force (M)<br>Tax rate on low wage earners: Unemployment trap<br>Tax rate on low wage earners: Low wage trap (single person without children, one earner couple with two children)<br>Serious accidents at work (W)<br>Unemployment rate (total, W, M) | Employment rate of older workers (W)<br>Average exit age from the labour force<br>Gender pay gap<br>Tax rate on low wage earners: Tax wedge on labour cost<br>Serious accidents at work (total, M)<br>Fatal accidents at work | Average exit age from the labour force (W) |

Source: based on EUROSTAT data (Structural Indicators)

As for the 'Employment' indicators group, the situation is far from favorable for Romania, especially if one pays attention to the fact that the value of these indicators is distorted by the employment structure, which shows an oversize of the employment in agriculture. In 2003, the share of people from rural areas<sup>37</sup> employed in agriculture was 67.3%. This situation cannot last long after the integration, the reorientation of the human potential to the other sectors – industry or services – being more than necessary.

<sup>37</sup> Which represents 46.6% from the total Romanian population

Figure 4: Employment rate (15-64 years)



Source: based on EUROSTAT data (Structural Indicators)

Less alarming data compared to EU appears for the high technology employment<sup>38</sup>. Looking at the trends and levels one can notice that the advantages of Romania in the field of innovation are related to the quality of the human resources, although this statement should be considered with caution.

The unemployment of both men and women is less of an issue in Romania than in the other European countries, both for women and men. *The unemployment rate* is rather low compared to the EU countries, due to several factors, such as the hidden unemployment in the public and agricultural sectors, the underground economy, and the great number of Romanians working abroad.

More serious situations compared to the European average have been recorded in the field of *safety at work* (serious, even fatal accidents at work, mostly those involving men).

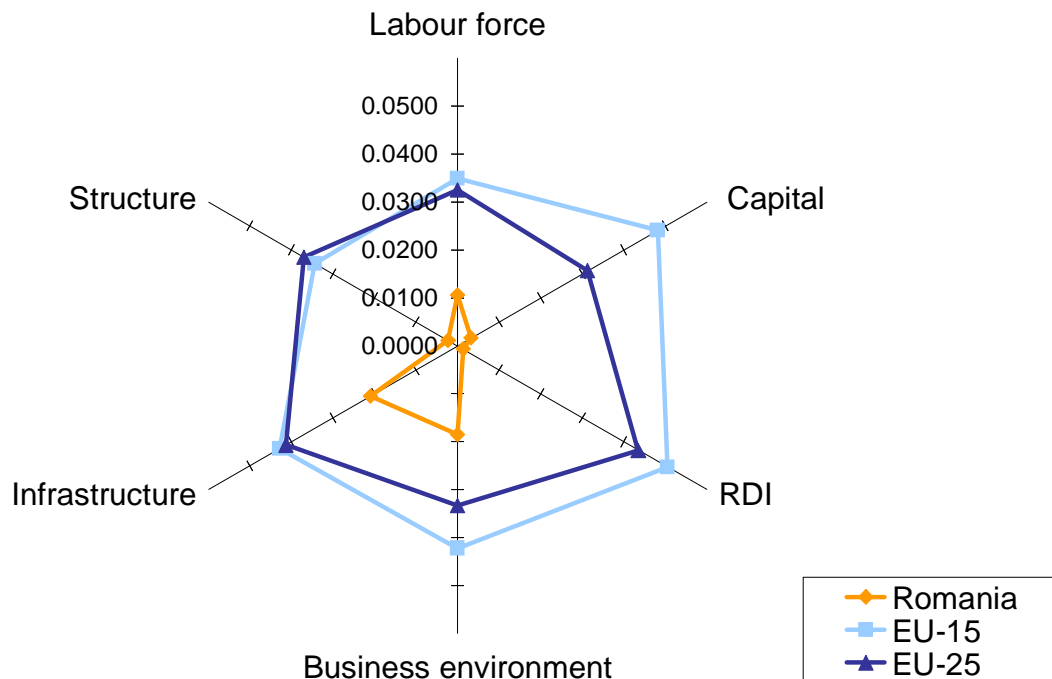
Romania faces an important challenge in relation to *life long learning* of the active population above 25 years of age, including offering training for unemployed people and helping them to adapt to the structural changes on the labour market.

<sup>38</sup> The indicator ‘employment level in high-tech sector’ includes the following NACE sectors: chemicals (NACE 24), machinery and equipments (NACE 29), office machinery and computers (NACE 30), electrical machinery and equipment (NACE 31), radio, TV, communications equipment (NACE 32), medical, precision and optical instruments (NACE 33), automobiles (NACE 34) and other transport equipemnt (NACE 35). Total employment includes manufacturing and services.

### Evaluation of the gaps in the competitiveness determinants

Our estimations show that there are important gaps between Romania and the EU countries in all the six competitiveness themes proposed at the beginning of this chapter: Labour force, Capital, RDI, Business environment, Infrastructure, (existing industrial) Structure. The radar graph below offers a global view on the relative position of Romania compared to EU-15 and EU-25 averages regarding the most representative determinants of the competitiveness.

**Figure 5: Main competitiveness determinants\***



\* simple average of the normalised values in the last three years for which data were available

Source: computations based on EUROSTAT data, Structural Indicators

The situation presented in the above Figure is an outcome of the divergence between the main political objectives of Romania and those of the EU. One should admit that in the context of social and economic problems specific to the transition period, the LA specific objectives were not among the priorities of the current Romanian policies. While the EU policies were focused on increasing competitiveness, through R&D and innovation, social cohesion, job creation, and environment protection in Romania the main objectives were related to economic restructuring and business environment improvement.

Romania presents the biggest gaps<sup>39</sup> for *RDI* index, 1:39 compared to the EU-15 average and 1:34 compared with EU-25), *Structure* index (15-16 times) and *Capital* index (1:15 compared with EU-15 average and 1:10 compared with EU-25 average). For the other three composite indices, the discrepancies lie between 200-300%.

**Table 7: Main determinants of competitiveness – normalised values of indices**

|  | <b>Romania</b> | <b>EU-15</b>  | <b>EU-25</b>  |
|--|----------------|---------------|---------------|
| <b>Labour force</b>                        | <b>0.0106</b>  | <b>0.0349</b> | <b>0.0324</b> |
| - Real unit labour cost growth*            | 0.0096         | 0.0383        | 0.0384        |
| - Education expenditures (%GDP)            | 0.0142         | 0.0319        | 0.0321        |
| - Science and Technology graduates         | 0.0181         | 0.0447        | 0.0386        |
| - Long life learning (LLL)                 | 0.0005         | 0.0245        | 0.0208        |
| <b>Capital</b>                             | <b>0.0033</b>  | <b>0.0481</b> | <b>0.0312</b> |
| - Investments/employee                     | 0.0033         | 0.0481        | 0.0312        |
| <b>RDI</b>                                 | <b>0.0013</b>  | <b>0.0505</b> | <b>0.0435</b> |
| - Gross domestic expenditure on R&D (GERD) | 0.0018         | 0.0462        | 0.0437        |
| - Innovation rate (patents EPO)            | 0.0000         | 0.0606        | 0.0431        |
| <b>Business environment</b>                | <b>0.0185</b>  | <b>0.0422</b> | <b>0.0333</b> |
| - State aid*                               | 0.0023         | 0.0222        | 0.0180        |
| - Venture capital investments              | 0.0014         | 0.0311        | 0.0233**      |
| - Business survival                        | 0.0516         | 0.0732**      | 0.0586        |
| <b>Infrastructure</b>                      | <b>0.0210</b>  | <b>0.0428</b> | <b>0.0413</b> |
| - Volume of freight transport              | 0.0274         | 0.0316        | 0.0310        |
| - IT expenditure                           | 0.0147         | 0.0540        | 0.0516        |
| <b>Structure</b>                           | <b>0.0023</b>  | <b>0.0344</b> | <b>0.0370</b> |
| - High-tech exports                        | 0.0023         | 0.0344        | 0.0370        |

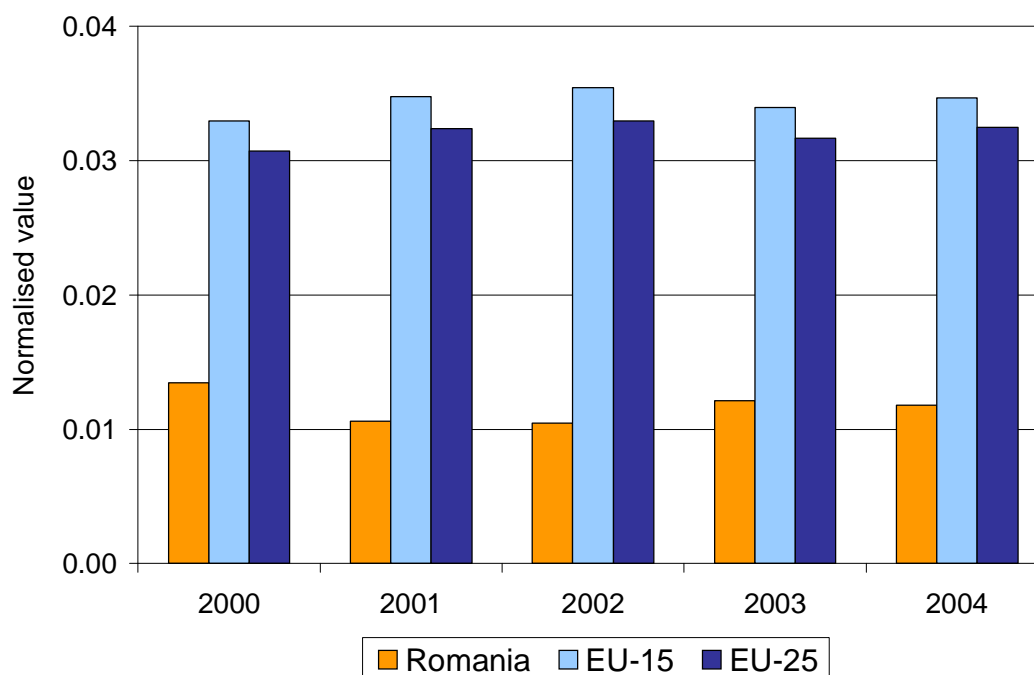
\* we have considered the inverse value of indicator, in order to interpret the increase of indicator as having a positive influence on the competitiveness, as is the case for the other indicators

\*\*because there were no data available, we have made the following hypotheses: for the indicator *Business survival* – the EU-15 value is by 25% higher than that of EU-25, and the value for *Venture capital* in EU-25 is by 25% below that of the EU-15.

Source: computations based on EUROSTAT data, Structural Indicators

<sup>39</sup> normalised value

Figure 6: ‘Labour force’ dynamics\*



\*The index is computed as simple average of normalised values of the following sub-indicators: Unit labour cost growth, Education expenditures (%GDP), Science and Technology graduates, Long life learning (LLL)

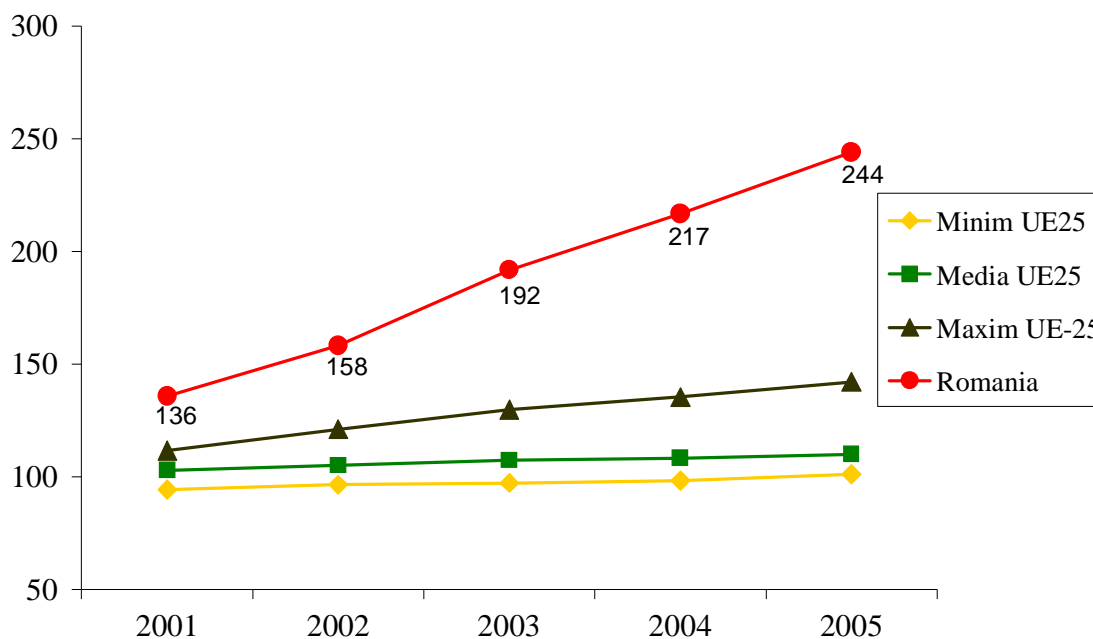
Source: computations based on EUROSTAT data, Structural Indicators

LA aims to encourage formation of a qualified and flexible labour force, putting the stress on long life learning and tertiary education. In parallel, an important objective of the Agenda is to modernize the social protection systems, knowing that some of them tend to be non-sustainable on long run and to create pressure on public finances.

We have chosen the components of ‘Labour force’ index in this context, having in mind to be able to reveal the Romania’s progresses to attain these objectives, as well as the instruments that could be used.

Romania still has low *labour costs*, situated much below the European average, but the gap is gradually closing (Figure 7) and on medium term, Romania will not be able anymore to rely on this comparative advantage.

**Figure 7: Unit labour cost growth (2000=100)**



Source: based on EUROSTAT data, Structural Indicators

In the last years, Romania's gap decrease versus European average regarding the share of *education expenses* in GDP is almost unnoticeable<sup>40</sup>.

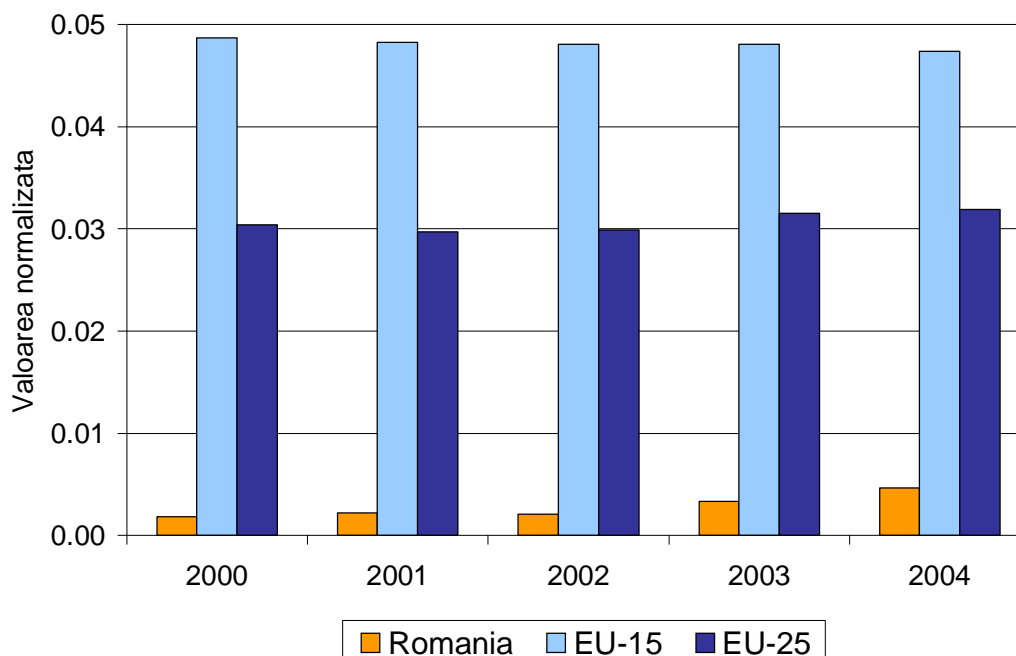
The educational supply for *the science and technology* field has a similar level and a compatible structure with the one of EU-25. Nevertheless, despite the increase over the last period, the share of students and graduates in science and technology in Romania (9.8%) is smaller than the European average (13.6% in EU-15 and 12.7 in EU-25).

*The long-life-learning (LLL)* represents a sine qua non condition for development of knowledge-based society, and it's considered to be the main factor for competitive development. The objective of the Lisbon Strategy for education and training is that 12.5% of European population aging 25-64 years to participate to LLL courses. Currently, this indicator's value for Romania is 1.6%, and the growth rate was modest in 2000-2005 period (between 0 and 20%). In order to address the Lisbon target, the Romanian Government adopted with Government Decision no. 875/July 28, 2005 the Short and Mid Term Strategy for LLL, 2005-2010, which aims the „development of a LLL system, transparent and flexible, in order to ensure the

<sup>40</sup> at least for available data, until 2003

increase of the employment, adaptability and mobility of the labour and to address the companies needs for qualified human resources”.

**Figure 8: ‘Capital’ dynamics\***



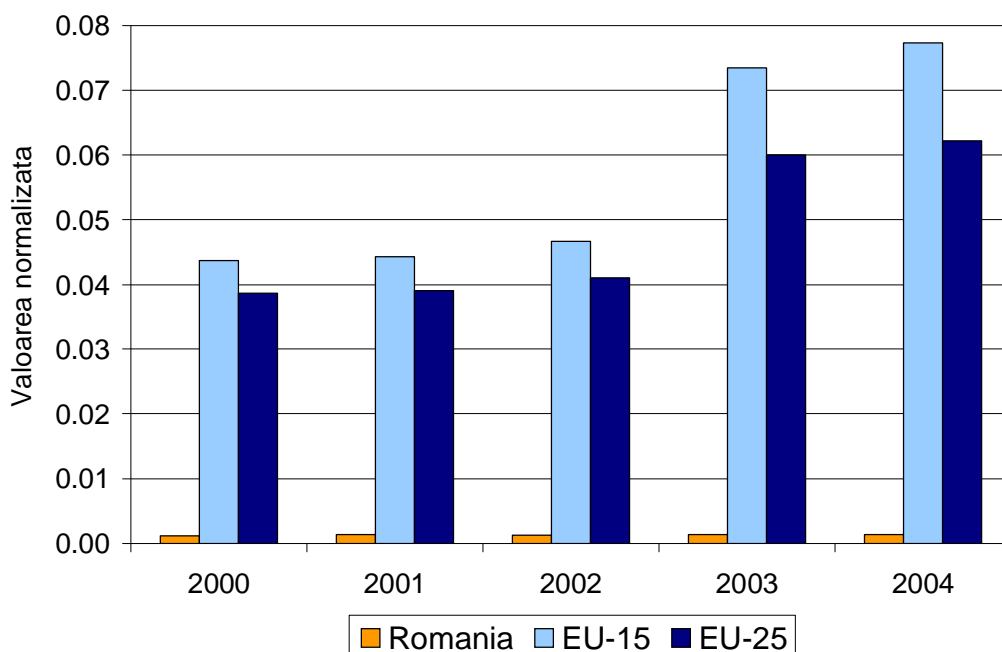
\*the normalized values of the Investments per employee in manufacturing  
Source: based on EUROSTAT data, Structural Indicators

The evolution between 2000-2004 years shows a slight increase of the investments per employee in Romania compared with EU-15 and EU-25, however the gap remains significant.

One particular aspect is that also between EU-15 and EU-25 there are significant differences, which reflect the gaps between the „old” and „new” members regarding the investment capacity.

There are expected significant evolution of the indicator for the new members, including Romania, together with the modernization and retechnologization, as well as education projects funded from Structural Funds.

Figure 9: ‘RDI’ dynamics\*



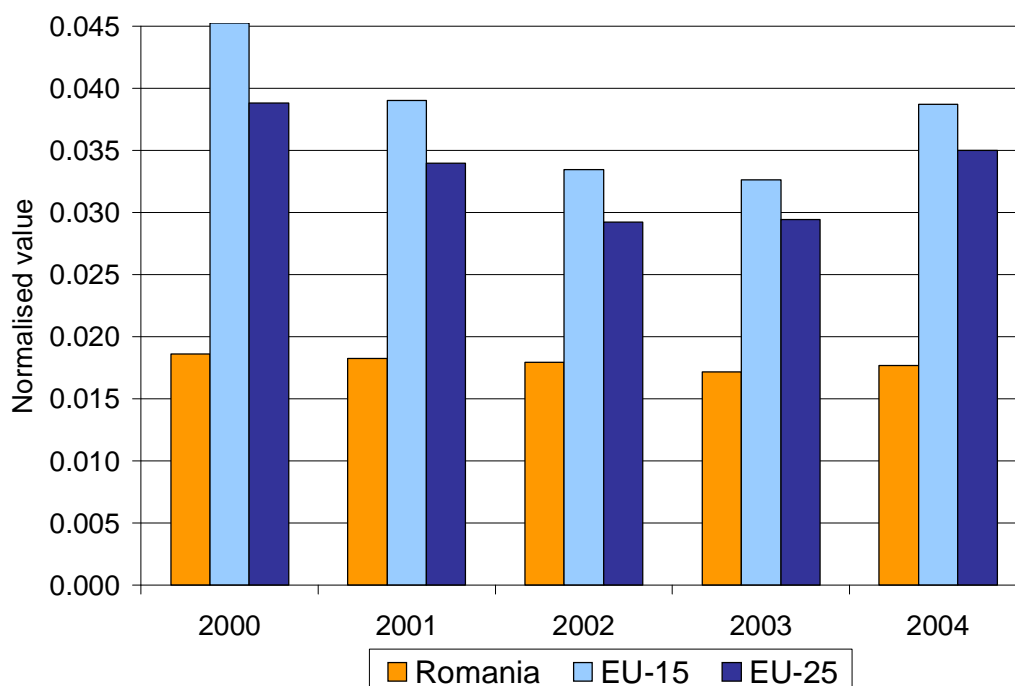
\*The index is calculated as weighted average of the normalized values of the sub-indicators: Gross domestic expenditures in R&D (70%) and Innovation Rate represented by number of EPO patents (30%)

Source: based on EUROSTAT data, Structural Indicators

Despite a slight increase of the RDI index, the gaps to the European average has deepened, especially in 2003 and 2004, when the value of indicator has increased substantially, for both old and new EU-member states.

Romania is much behind the European countries on both components of the RDI index. It is not surprising that *the innovation rate* (calculated as number of applications to European Patents Office for each thousand of people) to be significantly smaller for Romania compared with European average. It is expected, at least that in the first stage, the gap related to *Gross expenditure on R&D* (RDI expenditures as share in GDP), to decrease with a higher pace. This is already captured by recent political decisions, however the positive effects will not follow immediately.

Figure 10: ‘Business environment’ dynamics\*



\*The index is calculated as arithmetic average of normalized values of the sub-indicators: State aid; Venture capital and Business survival

Source: based on EUROSTAT data, Structural Indicators

Romania has relatively high *state aid* as share in GDP compared with the EU member countries. However, the values of this indicator are on a decreasing trend. By the EU accession it will occur significant changes in state aid policy, the most important being transferring the authorization competency related to state aid from national to Community level<sup>41</sup>. Thus, for this sub-indicator it is expected a fairly rapid levelling with the EU average values.

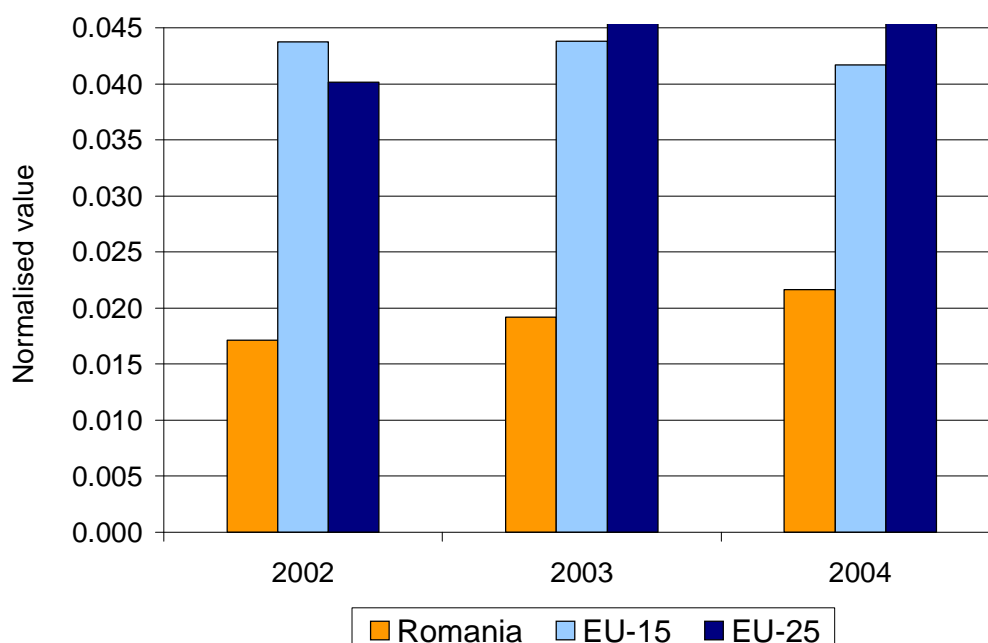
Compared with EU countries, Romania did not have a dynamic evolution of *venture capital* investments towards the innovative industrial sectors. In fact, the venture capital funds are still almost inexistent in Romania. In most of the cases, the Investment Funds operating in Romania focused on low risk businesses, which were in expanding stage, targeting market leadership. The latest Governmental strategies aim to fix this situation, particularly the Strategy for Research & Development and Innovation.

Romania registered significant progress in 2005 vs. 2002, as per the conclusions of Business Environment and Enterprise Performance Survey ran by

<sup>41</sup> The State aid is part of competitiveness policy, this field being within the exclusive competency of European Union, cf. art. 3(1) paragraph.g) of CE Treaty.

World Bank (BEEPS)<sup>42</sup>. The factors with the most significant increase, which reflected in overall enhance of the business environment, were the macroeconomic stability, the taxes level and the better access to financing due the significant bank sector expansion. The report mentions as well the persistency of some issues such as: the labour market regulations, the custom taxes and commercial regulations, the fiscal administration and transport infrastructure. These factors are still perceived by companies as obstacles in business environment development and consequently must be considered as reform priorities by the Government.

**Figure11: ‘Infrastructure’ dynamics\***



\*The index is calculated as arithmetic average of the following sub-indicators’ normalized values: Expenditure on IT and Transport freight (tons-km/GDP) (1995=100)  
Source: based on EUROSTAT data, Structural Indicators

One of the most important indicators of informational society, *Expenditure on IT* (as share in GDP), is much below the EU-25 average. The market structure shows that Romania has not entered the mature stage of the informational society development, moreover has not evolved from the first implementation stage<sup>43</sup> - namely the one related to ensuring basic communication networks. Nevertheless the rapid growths of the broadband connections in 2005 and 2006 are favourable premises

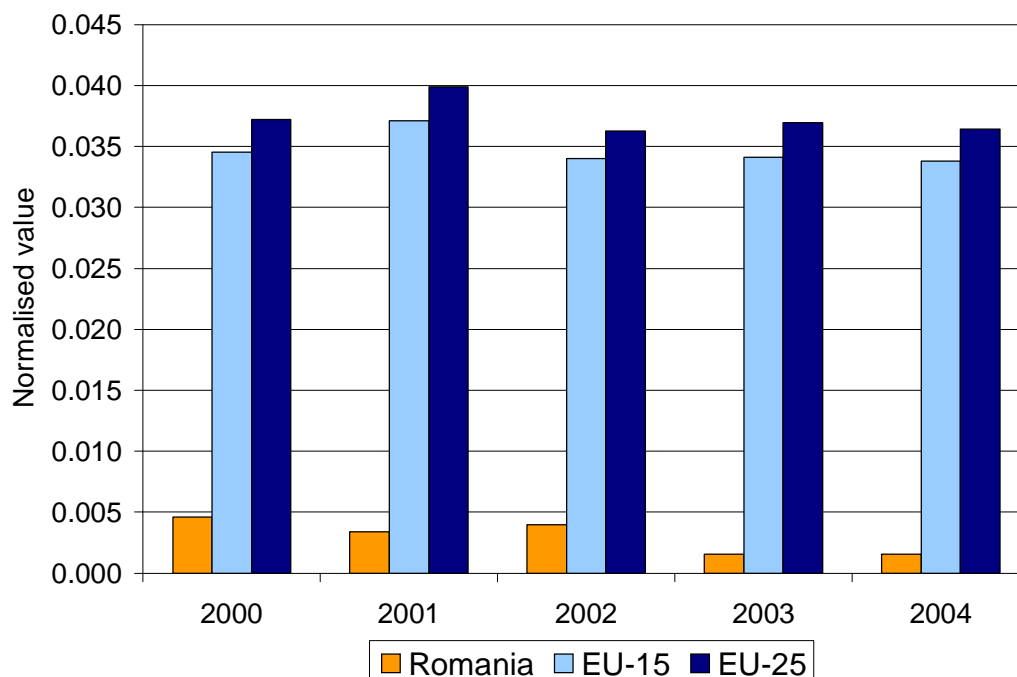
<sup>42</sup> EBRD-World Bank (2005), “Business Environment and Enterprise Performance Survey (BEEPS)”

<sup>43</sup> on the consumption side, there are considered three levels of developemnt of information society: implementation of technology, e-services development and e-inclusion

for gap reduction in this area vs. EU in the next period. Romania holds the last place among the European countries regarding the information society, as is stated in the E-Readiness report<sup>44</sup>. This report emphasizes as well that Romania’s progress, although impressive in numbers, is not enough. The EIU evaluations point out for 2006 that Romania holds the 49-th position out of 68 countries (with 4.44 points out of 10), two positions down vs. previous year.

As it is general knowledge the low *transport infrastructure* development in Romania, it is expected the increase significantly the indicator ‘Transport Freight’. The value of the latter was in 2000 at 70% of the 1995 level and only in 2004 succeeded to reach and even slightly overpass the 1995 value. Obviously, the growths are far from sufficient.

**Figure 12: ‘Structure’ dynamics**



Source: based on EUROSTAT data, Structural Indicators

As indicator for existent industrial *Structure* it was considered the “high-tech products weight in exports”. The value of this indicator decreased between 2000-2004 for EU-15 and EU-20 by about 16%, but for Romania, where the indicator’s values were circa 3 times smaller than European average at the starting point of the period, the decrease was significant (from 7.5% in 2000 to 3.8% in 2004), ending up with a 1:5 gap vs. European average. This evolution translates in an involution as well on the

<sup>44</sup> E-readiness 2006, The Economist Intelligence Unit (EIU)

*relative* situation of Romania compared both with EU-5 and EU-25, visible in the Figure 12 above.

Romania must not rely in its competitiveness on the low labour cost, but on increasing the added value of the products, respectively on shifting the production (and subsequently the exports) towards more sophisticated products, which incorporates high technology.

## **CONCLUDING NOTES ON THE COMPETITIVENESS AGENDA**

Romania has to integrate the Lisbon Agenda (LA) through a sustaining process focused on national priorities relative to the competitive development within the larger context of European integration. For a practical agenda, this imperative implies reaching a twofold target of counteracting the challenges of both international competition – the LA original domain, and production and consumption of an economic *and* monetary union – the Stability and Growth Pact (SGP) concentration area. The distinction is noteworthy if one considers, first, that the debatable rationale underlying the Lisbon process is intellectually questionable because of the conflicting nature of its "one-size-fits-all" prescriptions and loose accountability. The LA structural weaknesses considerably limit the economic policy intervention on competitive upgrading of the whole economy for two specific reasons, namely (1) the Lisbon strategy exhibits the recurrent problem of identifying the "right" structural reforms, and (2) the Lisbon process remains exposes in-built cumulative complexity and ambiguous rules of commitment. Second, the economic functioning in an area of free movement of factors and of common currency has to withstand particular competitiveness challenges. The capacity to react is based on such diverse economic mechanisms as absorption of macroeconomic shocks, productive impact of macroeconomic policy, and particular cultural attitudes in production and consumption (propensity to invest and save).

It is for these two determinants that any adjustment endeavour towards the LA requirements should inherently embrace a broader perspective. This study attempts to guide this process along the LA baselines. It puts forth theoretical arguments and considers practical implications for competitiveness evaluation as they arise from the estimates on Romania's competitive positioning, especially in the European context. This discussion accordingly emphasizes a set of two directions for a future

competitiveness agenda, so that their underlying rationale may set the ground of a possible series of annual *Competitiveness Reports*.

*I Monitoring the Lisbon process* by developing a methodology to analyse competitiveness based on a thematic selection according to the AL objectives. Next comes *monitoring the European experiences* by elaborating and updating the National Programme for Reforms with reference to the best practice. It is an exercise that lies at the core of the LA recommendations and makes possible justification of future policies. This exercise finally aims to bring into spotlight the problematical areas that take priority in defining national initiatives to bridge the gaps, as well as to make recommendations for the required adjustments. The analytical view on the indicators reveals a set of main conclusions which should support the policy initiatives in the framework of the Lisbon process:

- The **composite index of competitiveness** defined as output index shows a gap of more than 1:2 between Romania and the European averages.

Taking a look on the components, the biggest discrepancies appear for *Labour Productivity*, its normalised value for Romania is 7-9 times below the European average. Nevertheless, the developments over the period 2000-2005 were positive, Romania recovering half of the gap. Conversely, the component *Employment rate* had a negative trend, the positive evolution of the component *Labour productivity* didn't counterbalance the deterioration of the *Employment rate* component, which means that overall *no progress was made in catching-up with the EU in terms of competitiveness*.

- The decreasing value for Romania in the analysed period doesn't mean necessarily a step behind, but a slower development compared with EU-25, respectively EU-15, which means finally increasing the gap.

- Analysing the **competitiveness determinants**, our estimations show that there are important gaps between Romania and the EU countries in all the six competitiveness themes proposed at the beginning of this chapter: Labour force, Capital, RDI, Business environment, Infrastructure, (existing industrial) Structure.

- Romania presents the biggest gaps for *RDI* index, 1:39 compared to the EU-15 average and 1:34 compared with EU-25), *Structure* index (15-16 times) and *Capital* index (1:15 compared with EU-15 average and 1:10 compared with EU-25

average). For the other three composite indices, the discrepancies lie between 200-300%.

- Once the gaps in the competitiveness determinants have been highlighted by the set of indicators, the next step was to see what are the political instruments that could act for improving the values of these indicators. Table 8 presents the link between the gaps in the competitiveness determinants and their corresponding public policies, as well as the expected spillover effects from the private sector.

- One should admit that in the context of social and economic problems specific to the transition period, the LA specific objectives were not among the priorities of the current Romanian policies. While the EU policies were focused on increasing competitiveness, through R&D and innovation, social cohesion, job creation, and environment protection in Romania the main objectives were related to economic restructuring and business environment improvement.

- Future policies should focus more on (i) infrastructure development, as a sine qua non condition of economic development, (ii) a more active role of the public-private partnership in valorising the R&D activities and increasing of the absorption rate of the Structural Funds, (iii) human resource development through long life learning as well as through TVET and tertiary education in S&T development, (iv) RDI sector development through fiscal incentives and in general through a better coordination of sectoral and horizontal policies.

**Table 8: Possible supporting public policies and spillover effects expected in the private sector**

| COMPETITIVENESS DETERMINANTS               | GAP*      | SUPPORTING PUBLIC POLICIES   | SPILLOVER EFFECTS EXPECTED IN THE PRIVATE SECTOR  |
|--|-----------|--|---|
| <b>Labour force</b>                        | <b>3</b>  |  |   |
| - Real unit labor cost growth*             | 1/4       | reducing the share of contributions in total labour force costs, within the limits that do not produce fiscal disequilibria  | levelling-up of the net wages, under the pressure of the very likely disequilibria on the labour market related to increasing emigration after the EU integration   |
| - Education expenditures (%GDP)            | 2         | increasing public expenditures for improving the quality of state own education system   | increasing the private supply for tertiary education, due to the higher competition from a public education system stimulate at high standards  |
| - Science and Technology graduates         | 2         | increasing the number of students in S&T education and developing TVET (technical and vocational education and training)   | increasing the number of students in S&T education and TVET   |
| - Long life learning (LLL)                 | 46        | diversification and developing the courses organised by the Labour Force Agency, including ensuring a high absorption rate for Structural Funds projects within the Operational Programme designed for Human Resource Development starting from 2007 | co financing of the education programmes funded through Structural Funds  |
| <b>Capital</b>                             | <b>10</b> |  |   |
| - Investments/employee                     | 10        |  | increasing the investment capacity correlated to the private sector growth  |
| <b>RDI</b>                                 | <b>34</b> |  |   |
| - Gross domestic expenditure on R&D (GERD) | 24        | boosting the PPP (public-private partnership)<br><br>increasing the public expenditures yo attain the 1% LA objective  | delocalisation towards Romania of the R&D departments of the multinational companies.<br>increasing the private expenditures on R&D, although the 2% objective we consider that is too ambitious , at least in the medium run |
| - Innovation rate (patents EPO)            | 18069     | Innovation Programme stated in the National Programme for RDI- 2   | co -financing by min 50%  |
| <b>Business environment</b>                | <b>2</b>  |  |   |
| - State aid*                               | 1/8       | releasing state aid that are compatible with EU legislation, for instance fiscal incentives  |   |

|                               |           |  |   |
|-------------------------------|-----------|--|---|
| - Venture capital investments | 17        | for RDI activities<br>stimulating the technological transfer   | increasing the technological transfer through financing or co-financing of the Structural Funds projects via European Investment Fund–JEREMIE Program (a special programme for 2007-2013 SF financing)      |
| - Business survival           | 1         | stability of the legislation   | setting-up of a larger number of companies, which will make more difficult the business survival (due to the increase of competition determined by the existence of a larger number of firms on the market) |
| <b>Infrastructure</b>         | <b>2</b>  |  |   |
| - Volume of freight transport | 1         | increasing public investments in infrastructure (NSRF)<br>Note: despite a similar increase of this indicator with the EU average, the gap in infrastructure development is enormous, that's why we consider that developing infrastructure should be the main priority of the government | increasing the private investments in infrastructure (especially for co-financing the Structural Funds projects)  |
| - IT expenditure              | 4         | modernizing the public administration  | increasing the broadband connexions for private companies and households  |
| <b>Structure</b>              | <b>16</b> |  |   |
| - High-tech exports           | 16        | stimulating the technological transfer and investments in high technologies through the RDI policy   | shifting of the private companies towards activities with higher value added  |

\*) the gaps are computed dividing the normalised value of the EU-25 to the normalised value for Romania for each of the indicator/sub-indicator

The analyse of the reform programs in the EU, especially at the level of new member countries, shows the existence of great similarities of situations between Romania and some of those countries (mostly with Poland, with the exceptions of some indicators). The specific needs of the present development status of Romania could be found, more or less, between the objectives of the Lisbon Strategy. This is the reason why to orient the reform process in Romania in accordance with Lisbon Agenda and design the priorities in accordance with the context and status of Romania is a must in order to avoid the deepening of the gaps already existing. It is also an important step to be taken in order to put the bases of the Romania's economic future.

The content of the National Reform Plan (NRP), examined from the perspective described before, allows concluding that the analyses and objectives presented are trying to combine the requests of the Lisbon Agenda with the characteristics of the economic reform, without generating incompatibilities. In this way, it is designed a working frame for the complexity of the reform process at the level of Romania, process that have to cover great variety of fields and aspects. As a matter of fact, the National Reform Plan (NRP) will be implemented through the National Development Plan (NDP).

However, if the title and intentions are maintained as in the NRP, the findings generally connected to the evaluation of the Romania's situation using *Scorecard* and structural indicators have to be better put in evidence in the programmatic frame, even trough references at the a *Guideline* that also was used by other countries in the elaboration of the national programs, with responsibilities and deadlines on different types of measures.

Following the objectives of the New Lisbon Strategy, PNR refers to measures and programmes in the innovation – research field, but many of the proposals are too general, with no specific support mechanism to encourage and stimulate enterprises from the ones allowed by the competition legislation (The enterprises will be supported? how? Facilitate their activities: In what manner?). The innovation activity could be enhanced by stimulating the enterprises and SMEs to develop research and innovation activities. As measures could be applied the following: allocate some fiscal stimuli (certain tax cuttings or exemptions, for a certain period of time for the income resulting from the research outputs, stimuli for the companies hiring researchers in the companies' filed of interest, etc.); stimulating the enterprises to participate at EU research programs, tax exemption on income for the researchers participating in these programs. The results of the research that is financed by public funds, even if the allocated budget is not sufficient, should be supervised in all the cases, no matter what the research field is – technical, economic, social. With the exception of

the fundamental research, a part of the project financing should be conditionally allocated based on the achievement of the project aim and results that should be applicable. Specific measures are needed in order to stimulate private sector to take part in the research projects' financing.

The NRP establishes some objectives that should be achieved in the employment field as well as regarding labour market flexibility. Very important is the aspect referring to the need to maintain a low level of work taxation that could contribute to increase the legal employment, to increase the budget income, and also to increase the employment rate. NRP includes measures for entrepreneurship promoting - a domain that is heavily underdeveloped in Romania, despite the measures took in the last years to simplify and enhance the business environment and business conditions.

As far as the stimuli for work are concerned and in order not to undermine the budgetary equilibrium, one should take into consideration the following option, as other EU countries did - to increase the tax on consumption, even a differentiated taxation in order not to penalize the low income earners; so, the higher taxation should apply to luxury products, real estate business, etc.

Romania is beginning to have the same demographic problems as other EU countries. In order to prevent disequilibrium on the labour market and in order to correct the effects of early retirement and of migration, measures that encourage an increase of the active life should be implemented. As well as measures to facilitate an early entrance on the labour market such as: increase of educational offers at distance, through developing virtual universities, a more flexible educational offer, in accordance with the identified needs at the level of labour market, the development of special offers for labour market reinsertion, diversification of specializations, including the master level.

The NRP also refers to the promotion of entrepreneurial culture, which is very weakly developed in the case of Romania, in spite of better business environment during the last years. The entrepreneurial culture should be promoted at both high school (by adopting a more applied curriculum) and at university level in all the domains that are related with business environment. Another important measure could be the creation at the level of Universities of business centres, such as Business Incubators. A package of measures to attract the Romanian immigrants to develop businesses in Romania could be created, measures that could aim to offer training programs on business developments, information on investment opportunities, facilities to transfer money in Romania, and providing even fiscal incentives.

Taking into account the role of the regions in the development of each country, specific programs and specific measures to increase productivity and competitiveness of the regions from Lisbon perspectives are needed.

The Lisbon Agenda should be seen as a long term program that proposes a continuous adjustment to structural changes.

**II Competitive industrial and economic development** understood as an encompassing process that includes a synergic coordination of all relevant policies. It is proposed a comparative view on European policy evolutions against the national programmatic priorities.

Despite the direct connection that links the LA message with the emergence of the knowledge economy, the introductory section of this study underscores the vital role of the traditional industrial activity, i.e. manufacturing, for the European competitive development. It takes little to argue that Romania does not escape this conclusion, and the statistical evidence is supporting. While the industrial sector is credited with a share of 27% of GDP, it however provides 98% of Romanian FOB exports and is a contributing factor to employment with approx. 23% of working population of the national economy. Manufacturing is a main component of the industrial sector, accounting for 83% in turnover and 85% in employment, and attracts more than a third of foreign direct investments<sup>45</sup>.

By consequence, the industrial development is viewed as a necessary complement to the competitive adjustment policies in the Lisbon spirit. These days, the competitiveness policy in Romania is a result of disparate, if meritorious efforts illustrated through an assortment of guidelines in principal exposed by: the National Development Plan (NDP); the National Strategic Reference Framework (NSRF); the Industrial Policy Strategy (IPS); the National Export Strategy (NES); the National Strategy for Research, Development, and Innovation 2007-2013 (NSRDI) (ongoing project). It is worth mentioning how close the industrial policy follows the European priorities (see **Table 8** below), and even at the Community level one may notice a duplication of the LA main themes. In the case of Romania, the focus is still attached to several topical areas of the transition period, such as "privatization and restructuring" or "investment promotion". The NSRF is by and large justified on similar grounds. For these reasons, it is not the planning level that needs significant adjustments; designing specific policies to implement these provisions alongside with the framework in which this process takes place are instead the key elements for competitive adjustment.

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<sup>45</sup> Datele se referă la 2004 și au fost preluate din PND, pp. 45-46.

**Table 9: Policy areas for industrial policy**

| <i>Community level</i>   | <i>Romania</i>   |
|--|--|
| <ul style="list-style-type: none"> <li>• Ensuring an open and competitive Single Market</li> <li>• Knowledge, such as research, innovation, and skills</li> <li>• Better regulation</li> <li>• Ensuring synergies between competitiveness, energy and environmental policies</li> <li>• Ensuring full and fair participation in global markets</li> <li>• Facilitating social and economic cohesion</li> </ul> | <ul style="list-style-type: none"> <li>• Foundation of a stable and predictable business environment</li> <li>• Support for research-development-innovation and infrastructure to assess product compliance</li> <li>• Competition policy</li> <li>• Sectoral assistance</li> <li>• Direct investments promotion</li> <li>• Support for SMES development</li> <li>• Export assistance</li> <li>• Support for privatization and restructuring</li> <li>• Environmental policy and sustainable waste management</li> <li>• Human resources policy and social cohesion</li> </ul> |

Source: Commission (2005, p. 6) and "Hotărâre" nr. 1172 of 29 September 2005

The European Union envisions policy actions at sectoral level according to an original grouping on homogeneous categories that reveal industry priorities as they emerge from the particular nature of competition. One thus gets four categories of industrial sectors (see **Table A1**). A description of sector composition, together with an Action Plan at the Community level with a view to upgrading the competitive performance through horizontal and sectoral initiatives are further depicted in **Table A2**. An interim appraisal of the Plan is planned for 2007 when the reform objectives are due to include emerging priorities, such as the environmental technologies.

As for Romania, the discourse on competitiveness determinants is still in its infancy and the overlapping with the community initiatives is just about to get more substance. For example, if the IPS asserts that the industrial policy continues to focus on the consolidation and support of the underlying factors of competitiveness like human capital, research, innovation, and entrepreneurship ("Hotărâre" 2005), the NDP (p. 38) takes on the same issue by advancing three sets of factors, namely technology, institutional framework, and macroeconomic environment. The annexed tables put forth in a comparative view the details on the corresponding action plan in Romania (**Table A3**) with regard to the guidelines for industrial policy in the near future. Three major conclusions emerge, as follows<sup>46</sup>:

<sup>46</sup> While researching for this study, the Romanian Government made circulate a renewed Action Plan of industrial policy, namely "Hotărâre Privind aprobarea Planului de acțiune pentru implementarea Politicii industriale a României aferent perioadei 2007 – 2008", Project, manuscript, 20.09.2006. That material contains two noteworthy additions: first, it introduces several initiatives that are referred to the objectives of the operational programmes for the EU structural funds, and, second, it includes a passing note on the EU Action Plan, which is presented in Table A2. On the whole, that project leaves unchanged the substance of the conclusions and implications as they are suggested by this study.

- The scope of initiatives is narrow, the more so one may notice an overwhelming load on some areas in parallel with a lack of it in most sectors. In some cases, the substance of the proposed actions is diluted by a naïve approach to the challenges ahead, as for instance the goal of "specializing production companies" in the plastics industry. It is documented that the existing "action plans" are weakened by massive industry non-involvement due to either institutional frailty or a history of unsatisfactory public-private partnerships<sup>47</sup>.
- The initiatives are spread in a somewhat arbitrary manner over the whole set of programmes. This finding points to a lack of coordination or cooperative work in respect to the decision-making process in the competitiveness field. For example, setting-up a Competitiveness Centre is a proposal advanced by the professional association of the electronics industry<sup>48</sup>, whereas the Ministry of Economy and Commerce targets a similar objective. Moreover, the latter initiative – deadline 2006 – seemingly ignores the existence within its own structures of a Centre for Competitiveness and Industrial Productivity (CCPI), an associated member, for that matter, to the European Association of National Productivity Centres (EANPC)<sup>49</sup>.
- It is just a small group of industries (information technology, electronics, automotives, furniture and textiles) for which there are strong horizontal sectoral proposals, such as standard harmonization, skills development, intellectual property rights and counterfeiting, environmental protection. However, for all remaining cases, the initiatives are put forward to apparently no one's attention and, hence, elicit the plausible supposition that their corresponding resources are administered or allocated in a heavily arbitrary manner.

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<sup>47</sup> This is for instance the experience of making a National Export Strategy (NES) [<http://www.dce.gov.ro/SNE/>] within the Ministry of Economy and Commerce at the General Department of Export Promotion. The final output includes those sectoral strategies (Ecological products, Audio visual, Handicraft co-operative, Electronics and electrical engineering industry, IT, Plastics industry, Furniture industry, Glassware and fine ceramics, Rural tourism, Tire industry, Car and car parts manufacturing industry, Metallurgy, Textiles clothing and leather, Wine and vine) for which there is a manifest teamwork willingness on behalf of the industry representatives. Additionally, the NES also takes on horizontal themes (Trade information, Competency development, Trade Facilitation, R&D and Innovation, Quality management) but remains vague about its accountability.

<sup>48</sup> The Romanian Employers' Association of Electronics, Electrical engineering, Information technology and communications, documentation available at

[http://www.dce.gov.ro/SNE/Electronics\\_and\\_electrical\\_eng\\_industries.htm](http://www.dce.gov.ro/SNE/Electronics_and_electrical_eng_industries.htm) [9.11.2006]

<sup>49</sup> Information available at <http://www.hr-romania.ro/index.php?m=3&c=54&a=1219> [9 Nov. 2006]

## **Implications and policy recommendations**

### *(1) The coordination of initiatives by means of a Council on Competitiveness*

Coming forward to the European initiatives should give rise to a continuously national policy-making process. These days, it seems punctuated, sporadic as evidenced in several instances. In one case, the NSRF diligently integrates the European recommendations<sup>50</sup>, but only marginally finds the governmental strategy for economic competitiveness upgrading on the existing package of national programmes. One of them gets mentioned (NSRDI), while other two, of a sectoral ("the National Development Strategy for ITC – Horizon 2025") and horizontal ("the Development Strategy of SMES 2004-2008") nature are singularly added (NSFR, p. 73). Another case shows how the reflection process "Manufuture" (manufacturing for the future), initiated in December 2003 by the representatives of the European industries to produce recommendations about the lasting impact of research on the European production, is integrated at national level<sup>51</sup> in obvious neglect of the current policy problems and integration challenges, conspicuously arising among them the LA horizon, for example.

The solution may indeed be compatible with an institutional construction, although not entirely new, of a Council to study Romania's competitiveness standing and whose objective would be to coalesce all indigenous efforts. For reasons this study all along emphasized, preference should be given to the Irish institutional framework with its National Competitiveness Council (NCC) set up in May 1997. Two justifications stand out. On the one hand, the Irish initiative preceded the LA and came out of legitimate needs of the national industry. On the other hand, the recommendations on policy actions required to enhance Ireland's competitive position mould well on the way this material sets forth its own suggestions. The policy agenda is annually presented in a two-volume report ("Annual Competitiveness Report"), whose first part is dedicated to benchmarking Ireland's performance, a collection of statistical indicators of Ireland's competitiveness performance in relation to 16 other economies and the OECD and EU averages. Volume two uses this information along with the latest research to outline the main challenges to Ireland's competitiveness and the policy responses required to meet them.<sup>52</sup> In other words, the

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<sup>50</sup> Barcelona European Council, 2002 ("Mai multă cercetare în Europa– Obiectiv 3% din PIB", COM (2002), "Liniile directoare integrate pentru dezvoltare și locuri de muncă pentru 2005 – 2008" and "Liniile directoare strategice ale UE pentru politici de coeziune pentru sprijinirea dezvoltării și a angajării 2007-2013." (CSNR, p. 72).

<sup>51</sup> <http://www.manufuture.ro/docnat.htm>

<sup>52</sup> <http://www.forfas.ie/ncc/>

working agenda of the Centre would comply with the arguments advanced along the lines of this section on implications for a competitiveness agenda in Romania. It goes without saying that the institution of Mr/Mrs Lisbon is to be hosted within this context

*(2) Making R&D a productive input*

All programmatic documents commit the authorities to the objective of allocating the necessary resources for research to the tune of 3% of GDP. A problematic issue is how to achieve 2% for the private sector, which is supposed that together with the public contribution of 1% to eventually reach the recommended target of 3%. It is without doubt that this objective should be preserved in itself, but higher significance ought to be ascribed to simply recording an annual progress towards that end and making sure that necessary prerequisites are simply in place. The economic rationale would ascertain the wasteful use of resources when contributing for research is taken instead for a mean. It is the more so striking that industries characterized by in-built fixed (sunk) costs for R&D like bio-technology, pharmaceuticals, aerospace do not appear in the industrial policy actions. The somewhat unilateral emphasis on the IT industry reminds of the development of the heavy industry in communism: it was about an important branch, deemed strategic for overall development, but which nevertheless left behind unfulfilled capabilities, industrial, managerial, and competitive. According to data from professional associations<sup>53</sup>, the information technology sector accounts for ca. 1.5% of total exports, which makes the case of distorted comparative advantages still more evident.

The total amount of annual R&D expenditures generally hovered a relatively stable level, which however has not exceed 0.40% of GDP, out of which the public funds for research and development normally contributed for 55% of total disbursements (PND, p. 63). Two remarks are worth mentioning as to the productive impact of R&D expenditures. First, if it takes into account that the R&D activities are supported mostly by the public infrastructure (over 60%) (PND, p. 43) this means that the private sector proves relatively more effective given their equal participation, or even more as the 1999-2001 period witnesses, in making use of them. One may infer from the annexed tables that there are few inspiring examples except for the five industries, but their case is indeed a model, at the planning level at least. To exemplify, the investments projects that are planned by the electronics and electrical engineering industry of approximately 350-400 million EUR between 2005 and 2010 directed towards technological upgrades, environmental protection, products R&D and technological

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<sup>53</sup> <http://www.dce.gov.ro/SNE/IT.htm> [9 nov. 2006]

transfer would be supported in proportion of approximately 80% from the economic agents' own funds. This is the very meaning of the suggested implication: the efforts are important in themselves, for their continuity and for an ever greater involvement of productive sectors. These are the premises to raise the R&D GDP share on an annual basis, though the latent benefits still wait for being turned to better account.

Second, it should nevertheless be mentioned that a great part of the planned R&D projects only aims at a kind of technological catching-up under circumstances of five-to-ten year outdated endowments for most industries (PND, p. 43). The case indeed looks unpromising for breakthrough developments. In this respect, a R&D strategy is much in need in order to resolve any possible conflict as to the intended destinations, especially when those are made possible through public financing. Do the long exported goods of other countries stand for a vital technological threshold? The answer to such questions is to also elucidate the competitive nature of R&D spending.

### *(3) Conceptual clarifications on industrial development trends*

There are at least three major precepts – the nature of competition, formation of industrial agglomerations, and the use of high technology – against which the strategic documents for competitive development should prove a stronger ability for conceptual clarifications. Those are still based on vulnerable rationales in the position documents in Romania. One explanation could be that the Community background papers provide a wealth of details and hence invite to a taken-for-granted attitude.

The issue of competition is important because it offers the vision of a similar strategic approach over a wide range of industrial sectors. The EU practice deserves again mentioning. It attempts to find practical solutions through group evaluations of individual sectors and appraisal of competitive challenges for 27 broad community industries. It is an endeavour that calls for the representation of various interest groups from specific sectors, as well as of Member States with a view to underscoring to what extent their particular performance is or could be supported by measures of industrial policy.

The other two tendencies which are often invoked i.e. industrial clusters and technology level make any policy problematic when seen as a sine-qua-non prerequisite condition for competitive development. It is so overlooked that they do not by all means warrant success. The clusters may also lead to institutional and innovative sclerosis, whilst technology makes competitive upgrading and added value possible over a virtually endless range of activities.

In summary, these guidelines and policy clarifications, together with the methodology worked out in this study, may form the setting for an integrative initiative to meet the requirement of policy coordination on the lines set forth by the recommendations of the Lisbon Agenda and the needs of competitive development in Romania.

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**ANNEX**

**Table A1** Manufacturing sectors in the European Union, clustered according to the nature of competition

| <i>Clusters of industrial sectors</i> | <i>Competitive challenges</i>   |
|---------------------------------------|---|
| Food and life sciences industries     | These industries make up one fifth of EU manufacturing value-added and are characterized by medium to high growth rates. The main cluster of challenges for this group relates to knowledge and better regulation. As highly innovative industries, key knowledge challenges are R&D, protection of intellectual property rights, and the financing of innovation for highly innovative SMEs.   |
| Machine and systems industries        | This cluster accounts for about one third of EU manufacturing value-added and is characterized by medium to high growth rates with high rates of R&D spending. The challenges for these sectors therefore mainly relate to innovation, intellectual property protection, and ensuring the availability of high skilled personnel.   |
| Fashion and design industries         | This cluster makes up just 8% of manufacturing value-added, but has experienced low or negative output growth and relatively low R&D spending over recent years. Successful structural adjustment is the key challenge for these industries. Improving innovation, IPR protection, and skills are essential to be able to continue to improve the quality and product-diversity of their output.  |
| Basic and intermediate industries     | This cluster accounts for some 40% of EU manufacturing value-added. As suppliers of key inputs for the rest of industry, these industries can be an important source of innovation for other sectors. Growth rates in this sector have been medium to low, with the exception of the strongly performing chemicals and rubber industries. These industries are largely energy-intensive and hence the main cluster of challenges relates to energy and the environment. |

Source: Compiled from Commission (2005, pp. 7-8)

**Table A2** An outline of work for industrial policy in manufacturing industries – the European Union

| <i>Manufacturing sectors</i>             | <i>Sectoral actions</i>  | <i>Horizontal actions</i>                                       |
|--|--|---|
| <b>FOOD AND LIFE SCIENCES INDUSTRIES</b> |  |   |
| Food, drink & tobacco                    | Launch of a Study on the competitiveness of the Food processing industry ♦ European Technology Platform on Food for Life ♦ Communication on the competitiveness strategy for the food industry accompanied by an Action Plan   | Restructuring<br>Simplification of legislation<br>Market access |
| Cosmetics                                | Implementing actions of the 7th amendment (Directive 2003/15/EC) of the Cosmetics Directive ♦ Continuation of international regulatory dialogue in Cosmetics Harmonisation and International Cooperation meetings  | Market access   |
| Pharmaceutics                            | <i>Pharmaceutical Forum</i> ♦ European Technology Platform and potential Joint Technology Initiative on Innovative medicines   | IPR and counterfeiting<br>Market access                         |
| Bio-technology                           | Mid-term review of the strategy "Life sciences and biotechnology – A strategy for Europe" started in 2002 ♦ Comprehensive cost-benefit analysis of economic, social and environmental effects of biotechnology ♦ Innovation Panel on Biotechnology ♦ European Technology Platform on Plants for the Future ♦ European Technology Platform on Sustainable Chemistry | IPR and counterfeiting<br>Simplification of legislation         |
| Medical devices                          | Review of directive 93/42/EEC concerning medical devices ♦ Active participation within the Global Harmonization Task Force   |   |
| <b>MACHINE AND SYSTEMS INDUSTRIES</b>    |  |   |
| ICT                                      | <i>Task Force on ICT Competitiveness</i> ♦ Analysis of the competitiveness, strengths and weaknesses of the of ICT sector ♦ European Technology Platform and potential Joint Technology Initiative on nanoelectronics  | Skills  |

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| <i>Manufacturing sectors</i> | <i>Sectoral actions</i>  | <i>Horizontal actions</i>   |
|------------------------------|--|---|
|                              | <p>◆ European Technology Platform and potential Joint Technology Initiative on "Embedded Computing Systems" ◆ European Technology Platform on mobile wireless communications ◆ European Technology Platform on new electronic media ◆ Innovation Panel for ICT ◆ Review the ICT standardisation policy of the Commission</p> |   |
| Mechanical engineering       | <p>Dialogue on mechanical engineering ◆ Study/competitiveness analysis (EU-10, including electrical engineering) ◆ European Technology Platform on advanced engineering materials ◆ European Technology Platform Manufacture</p>   | <p>IPR and counterfeiting<br/>Skills<br/>Market access</p>        |
| Electrical engineering       | <p>Study/competitiveness analysis (EU-10)</p>  | <p>IPR and counterfeiting<br/>Skills<br/>Market access</p>        |
| Automotives                  | <p>Cars 21 HLG ◆ Innovation Panel for Automotives Restructuring ◆ European Technology Platform on Road Transport ◆ European Technology Platform and potential Joint Technology Initiative "Hydrogen and Fuel Cells"</p>  | <p>IPR and counterfeiting<br/>Restructuring<br/>Market access</p> |
| Shipbuilding                 | <p>HLG LeaderSHIP 2015 ◆ European Technology Platform on Shipbuilding (Waterborne) ◆ Discussions on access to finance (within Commission and with EIB) ◆ OECD negotiations/possible bilaterals with China</p>  | <p>IPR and counterfeiting<br/>Restructuring<br/>Skills</p>        |
| Defence industry             | <p><i>High Level Group</i> ◆ Internal Market: measures on</p>  |   |

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| <i>Manufacturing sectors</i>         | <i>Sectoral actions</i>   | <i>Horizontal actions</i>  |
|--------------------------------------|---|--|
|                                      | transfers, procurement and standardisation ♦ Mapping of defence related industries  |  |
| Aerospace                            | European Space Programme ♦ Global Monitoring for Environment and Safety (GMES) initiative as the Community's contribution to the European Space Programme ♦ European Technology Platform and potential Joint Technology Initiative on aeronautics, air transport and air traffic management ♦ Potential Joint Technology Initiative "GMES" ♦ Follow-up of Boeing-Airbus WTO dispute |  |
| <b>FASHION AND DESIGN INDUSTRIES</b> |   |  |
| Textiles & clothing                  | Follow-up Textiles High Level Group ♦ European Technology Platform on Textiles ♦ Innovation Panel for Textiles ♦ Study on competitiveness, economic situation, and location of production in textiles and clothing, footwear, leather, and furniture industries   | IPR and counterfeiting<br>Skills<br>Market access<br>Restructuring |
| Leather and leather goods            | Discussions with social partners on structural adjustment ♦ Reduce/eliminate trade barriers for access to raw materials ♦ Study on competitiveness, economic situation, and location of production in textiles and clothing, footwear, leather, and furniture industries  | IPR and counterfeiting<br>Skills<br>Market access<br>Restructuring |
| Footwear                             | Discussions with social partners on structural adjustment ♦ Study on competitiveness, economic  | IPR and counterfeiting<br>Skills                                   |

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| <i>Manufacturing sectors</i>             | <i>Sectoral actions</i>  | <i>Horizontal actions</i>   |
|--|--|---|
|  | situation, and location of production in textiles and clothing, footwear, leather, and furniture industries  | Market access<br>Restructuring  |
| Furniture                                | Discussions with social partners on structural adjustment ♦ European Technology Platform on forest products ♦ Study on competitiveness, economic situation, and location of production in textiles and clothing, footwear, leather, and furniture industries | IPR and counterfeiting<br>Skills<br>Market access<br>Restructuring            |
| <b>BASIC AND INTERMEDIATE INDUSTRIES</b> |  |   |
| Non-energy extractive industry           | In depth assessment of the competitiveness of the sector/ External evaluation of the Communication on promoting sustainable development in the non-energy extractive industry ♦ European Technology Platform on Sustainable Mineral Resources                | High level group on the competitiveness, energy and the environment<br>Skills |
| Steel                                    | Communication on the impact of raw materials and energy supply on the competitiveness of the European metals industry ♦ European technology platform on steel (ESTEP) ♦ Remove obstacles to access to raw materials  | High level group on the competitiveness, energy and the environment<br>Skills |
| Non-ferrous metals                       | Communication on the impact of raw materials and energy supply on the competitiveness of the European metals industry ♦ Remove obstacles to access to raw materials  | High level group on the competitiveness, energy and the environment<br>Skills |
| Cement and lime                          | Competitiveness analysis   | High level group on the competitiveness, energy and the                       |

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| <i>Manufacturing sectors</i>         | <i>Sectoral actions</i>   | <i>Horizontal actions</i>  |
|--------------------------------------|---|--|
|                                      |   | environment  |
| Ceramics                             | Continuation of working group set up in 2004 on the future of glass and ceramics industries ♦ Staff working paper on competitiveness  | High level group on the competitiveness, energy and the environment<br>Market access<br>IPR and counterfeiting |
| Chemicals and rubber                 | HLG on the competitiveness of the chemical sector ♦ European Technology Platform on Sustainable Chemistry   | High level group on the competitiveness, energy and the environment  |
| Glass                                | Staff working paper on competitiveness ♦ Continuation of working group set up in 2004 on the future of glass and ceramics industries  | High level group on the competitiveness, energy and the environment<br>Market access<br>IPR and counterfeiting |
| Construction & construction products | Simplification of Construction Products Directive ♦ European Technology platform on construction ♦ Competitiveness assessment with stakeholders   | Simplification of legislation<br>Skills  |
| Wood & products of wood              | Initiative against illegal logging (EU FLEGT action plan) ♦ European Technology platform on the forest sector ♦ Rationalisation of technical standards regarding wood products                  | High level group on the competitiveness, energy and the environment<br>Skills                                  |
| Pulp, paper & paper products         | Communication on Forest-based Industries ♦ Remove obstacles to wood supply in various policies: biodiversity, bio energy, forestry strategy ♦ European Technology platform on the forest sector | High level group on the competitiveness, energy and the environment  |
| Printing & publishing                | Launch of a study on delocalisation   | High level group on the competitiveness, energy and the environment  |

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| <i>Manufacturing sectors</i> | <i>Sectoral actions</i> | <i>Horizontal actions</i> |
|------------------------------|-------------------------|---------------------------|
|                              |                         | Restructuring<br>Skills   |

Source: Adapted from Commission of the European Communities, "Communication from the Commission. Implementing the Community Lisbon Programme: A Policy Framework to Strengthen EU Manufacturing - Towards a More Integrated Approach for Industrial Policy", COM (2005) 474 Final, Brussels, 5.10.2005, pp. 14-16

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**Table A3** An outline of work for industrial policy in manufacturing industries – Romania

| <i>Manufacturing sectors</i>             | <i>Sectoral actions</i>  | <i>Horizontal actions</i>   |
|--|--|---|
| <b>FOOD AND LIFE SCIENCES INDUSTRIES</b> |  | Action plan for development of Romanian business environment in 2005-2006 ♦ Impact studies of the economic effect of regulations on SMES ♦ Appraisal of R&D national programmes ♦ National R&D plan for 2006-2010 ♦ Development of infrastructure for innovation and technological transfer ♦ R&D programme to achieve the goal of 3% of GDP accounted for research in 2010 ♦ Increasing public spending for R&D to 1% of GDP until 2007 ♦ Study of professional industrial design ♦ Promotion of competition culture in both private and public environment ♦ "Advocacy" relative to sectoral administrative bodies ♦ Programme for competitive upgrading of industrial products ♦ Programme for updating the sectoral strategies together with the employers and professional associations ♦ Setting up a Competitiveness Council and a Productivity Centre ♦ |
| Food, drink & tobacco                    | R&D Project "support for agricultural services" ♦ R&D Project "up-date for informatics and knowledge systems in agriculture" ♦ IBRD Project "Rehabilitation and reform of the irrigations systems" ♦ Support for acquisition of new tractors, machinery and agricultural equipment ♦ Projects for processing technical plants ♦ Increase of wine producers participation at international level competitions ♦ Bucharest International Wine Contest ♦ Technical assistance programs for professional training of wine specialists ♦ SAPARD funds for vineyard re-plantation ♦ Association of wine with tourism trips ♦ Promoting domestic varieties on the world market ♦ Promoting the Romanian ecological products to export |   |
| Cosmetics                                |  |   |
| Pharmaceutics                            |  |   |
|  |  |   |

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| <i>Manufacturing sectors</i>          | <i>Sectoral actions</i> | <i>Horizontal actions</i>   |
|---------------------------------------|-------------------------|---|
| Bio-technology                        |                         | Support for developing industrial parks ♦ Twinning programme for strengthening industrial policy coordination and structural funds management to increase economic competitiveness ♦ Strengthening the absorption capacity of Romanian firms for the European |
| Medical devices                       |                         |   |
| <b>MACHINE AND SYSTEMS INDUSTRIES</b> |                         |   |

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| <i>Manufacturing sectors</i> | <i>Sectoral actions</i>   | <i>Horizontal actions</i> |
|------------------------------|---|---------------------------|
| ICT                          | <p>The World Bank Project "Knowledge Based Economy"</p> <ul style="list-style-type: none"> <li>◆ Increasing absorption capacity of structural funds in the field of the information society ◆</li> <li>Community programmes ◆ Setting-up a Supervising and Administration Authority for e-signature ◆ Setting-up the centre for investigations and security incidents CERIS ◆ Law on data e-archive ◆ Law on e-billing ◆</li> <li>Extending the informatics system for electronic distribution of road transportation licences ◆ Extending the Public Procurement System ◆ Extending on-line services for business environment ◆ Participation to international fairs and expositions abroad ◆ Economic missions abroad ◆ Romanian commercial representations abroad ◆ Market and product studies ◆</li> <li>Editing and distribution of informative bulletins concerning the export offer ◆ Connections with similar associations abroad and businessmen community ◆</li> <li>A portal called "Information Public System and Foreign Trade Knowledge" ◆ Skills development ◆ Promoting a national IT brand ◆ Close partnership with the university environment ◆ Law harmonization in the competition field ◆ Developing a forecasting service for telecommunications ◆ Developing R&amp;D capacities for 3G mobile telecommunications ◆ Structural dialogue with other businesses (textiles, furniture, rural tourism, automobile, etc.)</li> </ul> |                           |

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| <i>Manufacturing sectors</i> | <i>Sectoral actions</i>  | <i>Horizontal actions</i> |
|------------------------------|--|---------------------------|
| Mechanical engineering       |  |                           |
| Electrical engineering       | <p>Efficiency amelioration of electrical energy distribution infrastructure with indigenous products ♦ Investments programs of approximately 350-400 million EUR between 2005 and 2010 directed towards technological upgrades, environmental protection, products R&amp;D and technological transfer ♦ Production development of electronic modules used in personal computers, mobile phones, TV-sets, alarm systems, photographic equipment ♦ Development of a domestic assembly industry based on these modules ♦ Manufacturing of new products incorporating advanced techniques (fiscal cash registers, automated tax collecting systems, digital tachometers for road transport vehicles, machines and special electrical equipments for industrial and domestic outfitting ♦ Creation of technological and industrial parks ♦ Development of the quality insurance infrastructure ♦ Legislative harmonization with the EU directives ♦ Encouraging occupation in after-sell services ♦ Creation of a Competitiveness Centre of the Industry ♦ Rationalization of energetic and raw materials use at the level of the economic agents ♦ New abilities and work skills</p> |                           |

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| <i>Manufacturing sectors</i>         | <i>Sectoral actions</i>  | <i>Horizontal actions</i> |
|--------------------------------------|--|---------------------------|
| Automotives                          | Skills ♦ Marketing activities ♦ Developing and modernizing production capacities ♦ Attracting local and foreign capital ♦ Increasing the role of employers', professional associations ♦ Improving work and living conditions ♦ Creation of necessary institutional infrastructure ♦ Implementing quality management systems ♦ Opening trade offices ♦ Stimulating innovation and technological transfer |                           |
| Shipbuilding                         |  |                           |
| Defence industry                     | Speeding up the privatizations process   |                           |
| Aerospace                            |  |                           |
| <b>FASHION AND DESIGN INDUSTRIES</b> |  |                           |

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| <i>Manufacturing sectors</i> | <i>Sectoral actions</i>  | <i>Horizontal actions</i> |
|------------------------------|--|---------------------------|
| Textiles & clothing          | <p>Project for "Competitiveness upgrading in textiles, footwear, clothing through promotion of the concept of decent work" ♦ Pilot project on "Competitiveness upgrading in clothing industry ♦ Launching a Procurement Guide for clothing industry ♦ Accreditation of eko-tex labs ♦ Promotion and consolidation of 2 clusters in the textile industry ♦ Increasing domestic supply of raw material ♦ Coordinating raw material distribution ♦ Increasing direct exports ♦ Establishment of a fashion &amp; design centre and support further of e-commerce initiatives ♦ Improving efficiency within the existing value chain (storage, documentation and transport logistics) ♦ Implementing environmental management system ♦ Harmonization of standards</p> |                           |
| Leather and leather goods    |  |                           |
| Footwear                     |  |                           |
| Furniture                    | <p>Participation at international expos and trade shows ♦ Information on the trend of furniture exports ♦ Setting up foreign trade missions ♦ Stimulation mechanisms (budgetary, financial-banking, fiscal, currency, measures) ♦ Developing export crediting/guaranteeing with EXIMBANK ♦ Combating counterfeiting and tax fraud ♦ Strengthening the role of professional associations in monitoring imports</p>  |                           |

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| <i>Manufacturing sectors</i>             | <i>Sectoral actions</i>   | <i>Horizontal actions</i> |
|--|---|---------------------------|
| <b>BASIC AND INTERMEDIATE INDUSTRIES</b> |   |                           |
| Non-energy extractive industry           | Monitoring oil and processed oil minimum inventories  |                           |
| Steel                                    | Restructuring of industry companies   |                           |
| Non-ferrous metals                       | Transforming the recycling sector into an industrial recycling sector ♦ Upgrading scrap iron preparation sectors ♦ Bringing into trade flow unconventional recyclable products ♦ State financial support for ecological projects ♦ Long-term financing schemes for scrap iron ♦ Eliminating customs taxes on raw materials and materials that are not manufactured inside the country ♦ Eliminating customs taxes for technological installations to upgrade metallurgy processes ♦ Implementing quality management ♦ Subsidizing R&D for environmental protection activities |                           |
| Cement and lime                          |   |                           |
| Ceramics                                 |   |                           |
| Chemicals and rubber                     | Developing the raw materials basis for plastics and tires in the country ♦ Specializing production companies ♦ Cooperation between large companies and SMEs ♦ Generic promotion of tire industry products at global level   |                           |

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| <i>Manufacturing sectors</i>         | <i>Sectoral actions</i>  | <i>Horizontal actions</i> |
|--------------------------------------|--|---------------------------|
| Glass                                | Export annual growth of 10% ♦ Environment protection ♦ To use products achieved in our country and to import only those which are not natural raw materials, or which are not manufactured in our country (kaolin, special refractory bricks, colouring agents, etc) |                           |
| Construction & construction products | Reengineering of processing technologies of asbestos components  |                           |
| Wood & products of wood              |  |                           |
| Pulp, paper & paper products         | IBRD Project "Forest development" ♦  |                           |
| Printing & publishing                |  |                           |

Source: Adapted from the documentary papers of the Strategy for Industrial Policy (Guvernul României, "Hotărâre", 2005) and the National Strategy for Export (<http://www.dce.gov.ro/SNE>)