Convergence-Divergence and the Implications for Community Structural Policies

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Deze bijdrage heeft tot doel een antwoord te geven op drie vragen die tegen de achtergrond van de vorming van een economische en monetaire unie (emu) in de Gemeenschap worden gesteld.
In de eerste plaats wordt onderzocht in welke mate de recente ontwikkelingen in de theorie van de internationale handel een antwoord bieden op de problematiek van de regionale convergentie (of divergentie) in een emu.
In de tweede plaats wordt nagegaan welke rol het regionaal beleid kan vervullen in de bevordering van de economische groei en van de regionale convergentie. Tenslotte gaat de aandacht naar de problematiek van de sociale cohesie in een emu. In het bijzonder wordt de stelling geanalyseerd volgens dewelke minimale sociale rechten en normen de regionale inkomensverschillen milderen.
Uit het antwoord op deze vragen leiden de auteurs een aantal aanbevelingen af voor het toekomstig regionaal en sociaal beleid in de Gemeenschap.

Introduction

In the process towards European Monetary and Economic Union (EMU), the issue of regional convergence attracts renewed interest. There is the fear that a full-fledged EMU will widen the existing regional inequality in per capita income within the European Community (EC). Likewise, unemployment problems may arise as a result of further integration of countries with structurally rigid labor markets. These concerns have already given rise to a doubling in real terms of EC structural funds devoted to regional and social policy in the period 1988-1992.

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Together with the increased financial effort, a fundamental reassessment of EC regional policy is taking place which involves three essential questions. First, there is the issue of regional convergence and divergence in an EMU. Is it reasonable to expect that progressive integration will close the regional gap in the Community or will regional divergence be the likely outcome of an EMU? What determines regional competitiveness? Which regions will suffer from integration?

A second question concerns the role of regional policy in improving resource allocation, promoting economic growth and fostering regional convergence. What are the main target areas for regional policy in an EMU? Which criteria should be used in providing regional support?

The third issue relates to the principle of social cohesion and goes beyond the objectives of resource allocation, growth and efficiency that have traditionally guided regional policy. Proponents of this broader view on regional policy (e.g. many in the European Parliament) argue that exaggerated differences in social protection across regions or countries undermine the ultimate success of European integration. They advocate active steps towards establishing minimum social rights as part of the so-called social dimension of EMU. They further plead for support for countries and regions that are hit by adverse shocks in the transition to EMU. A regional insurance fund is often mentioned as an adequate response to these region- and country-specific adjustment problems.

This paper addresses these three questions from the perspective of international trade theory. Admittedly, this point of view is selective as it abstracts from the macroeconomically oriented literature on EMU, let alone from insights offered by other developments inside and outside of economics. Yet, we believe this focus to be rewarding and interesting.Traditionally, international trade theory has made strong predictions about convergence through trade. More recently, extensions of standard trade theory and newer developments using models of imperfect competition and economic growth are coming up with fresh ideas on regional convergence and divergence in an integrated economic area.
The remainder of the paper is structured as follows. In Sections I to III we survey international trade theory in the light of the questions raised above. Section IV translates the key theoretical results in guidelines for a regional policy that targets economic growth and efficiency in lagging or declining regions. In Section IV we present some thoughts on possible new areas for regional policy in an EMU including social protection and a regional insurance fund. The paper ends with a summary of the main findings.

I. Convergence VS Divergence in Factor Proportions Trade Theory

1.1. The Role of Factor Endowments in Heckscher-Ohlin-Samuelson (HOS) Trade Theory

Traditionally, trade theory has been based on the idea of cross-country differences in factor endowments. Countries are unequal because they possess different relative amounts of productive factors needed in the production process. For instance, unskilled labor is relatively abundant in Southern European countries while the labor force in core regions of Northern Europe is on average better skilled. To concentrate solely on the role of factor endowments, HOS theory abstracts from technological or demand differences between countries as well as from distortions in factor and product markets.

The intuition behind the theory is best explained by the concept of "integrated equilibrium" (DIXIT and NORMAN, 1980). Suppose that the European Community were a fully integrated economy with perfect factor mobility. In this integrated market, no differences in factor rewards could persist. If Northern unskilled labor is scarce and therefore more expensive than in the South, migration from the Southern to the Northern countries will occur. In reverse, Northern firms will invest in the South because of the higher return on capital in areas where this production factor is scarce.
Evidently, the Community is not yet such an integrated economic area. The fundamental insight of factor proportions trade theory is that economic integration tends to restore the situation of an integrated equilibrium. This is not surprising for policy actions which enhance factor mobility. In this context, the removal of capital barriers in the EC should be mentioned. In an integrated financial area, capital moves freely to obtain the highest possible return and an equalization of capital returns becomes more likely.

Interestingly, opening up countries and regions to trade leads to similar effects. Indeed, trade is a substitute for imperfect factor mobility in HOS theory. When unskilled labor abounds in Portugal, this country is said to have a comparative advantage in products which incorporate a lot of this production factor. The country will export and specialize in these products which raises demand for unskilled labor. After some time, wages adjust towards the levels of countries where unskilled labor is better paid. One can say that Portugal is exporting the services of unskilled workers instead of exporting the workers themselves. As in the case of direct factor mobility, trade along these lines fosters the convergence of income levels observed in an integrated equilibrium.

However abstract all of this may appear, it underscores the fundamental forces that drive an integrating European Community towards closer convergence. Regional policy should not weaken or counteract these economic adjustment mechanisms.

Is a full-fledged convergence of factor rewards always obtained in HOS trade theory? An extensive theoretical literature shows that convergence is not assured when factor endowments are very unevenly distributed across countries. Recently, this idea has been taken up in a regional context leading to a factor endowments approach to regional convergence.

1.2. Regional Patterns in Factorproportions Trade Theory

The papers by DEARDORFF (1990) and DEARDORFF and
COURANT (1990) follow the HOS tradition in focussing on the role of factor endowments as a basis for trade. However, the countries are divided in regions with uneven factor endowments. The example of Italy immediately comes to mind. In contrast to Southern Italy, the Northern part of Italy is characterized by a concentration of highly skilled labor and a high level of technological expertise. In fact, regions of different EC countries are often more similar than regions within one country. Factor composition in Northern Italy looks more like Southern Germany while Southern Italy can perhaps best be compared with certain regions of Greece, Portugal or Spain.

A wide diversity of international and intra-regional trade patterns becomes feasible when considering regions within a HOS framework. A likely outcome is what DEARDORFF (1990, p. 1) labels as "cross-over" trade where countries export goods of different factor intensities to different trading partners. Northern Italy may be exporting advanced products to various countries in the EC in return for standardized products. Simultaneously, Southern Italy could be an exporter of agricultural and unskilled labor-intensive products. Due to regional differences in factor endowments, Italy is seen to export both the upper and lower range of skill-intensive goods. In general, regional comparative advantage gives rise to a complex system of interregional and intra-Community networks which may deviate significantly from the trade patterns described by standard HOS theory.

This result is not so surprising as it extends the basic intuition of standard trade theory to a regional context. Yet, the implications for the convergence debate are far-reaching. As long as factor mobility is imperfect, there is no guarantee of factor price equalization when the distribution of factor endowments is sufficiently uneven across regions and countries. In other words, regional disparities in income levels can occur in a fully integrated Community market when the availability of productive factors varies considerably across regions. There are no reasons why wage differentials between Southern and Northern Italy would disappear in an European Monetary Union (EMU).
As before however, integration fosters factor price convergence between regions with sufficiently similar factor characteristics. In this scenario, Northern Italy and other core regions in the Community will effectively become an economic area with comparable factor returns. We conclude, that even in a standard factor endowments trade approach, regional problems and a core-periphery pattern can develop.

The consequences for regional policy are straightforward. Measures which reduce the skewed factor distribution across regions enhance the likelihood that European integration stimulates regional convergence. In this view, subsidies to education and training, aimed at improving the skills of the labor force, are justified.

1.3. Endogenous Factor Endowments, Factor Mobility and Acquired Comparative Advantage

So far, regions and countries only differed in relative factor endowments. Evidently, this is an unsatisfactory description of the European landscape. Across the Community there exist marked differences in technological ability, in government policy and in the functioning of labor and product markets. In many cases, these differences matter at least as much as factor endowments in shaping the comparative advantage of nations and regions.

MARKUSEN (1983) studies the impact of each of these determinants in a model that assumes identical relative factor endowments across countries. He thus varies what is assumed constant in HOS trade theory while abstracting from any endowment basis for trade.

In doing so, Markusen considerably widens the source of comparative advantage. A technological advantage, a successful government policy or a competitive environment explain regional and national specialization in certain activities and form the basis for intra-EC trade flows. Conversely, a poorly functioning capital market, a lack of innovative activity and corresponding low labor productivity represent hurdles for regional
expansion in sectors with promising growth perspectives.

As a result, factor prices are not the same everywhere. From HOS theory, we know that export specialization drives up the price of the factors used intensively in the production process of export goods. When firms in prosperous Southern Germany invest heavily in new machinery and need a highly educated work force, capital will earn a high return and skilled labor will be well rewarded. For the same reason, the return on physical and human capital is low in regions specializing in traditional activities.

Now suppose that the EMU enhances factor mobility in the Community. Capital and skilled labor move to the regions with the higher factor returns. In our example, we will observe a concentration of knowledge and productive capital in Southern Germany. In contrast to what HOS theory tells us, the lagging regions do not experience an inflow of capital. Quite the opposite, skilled labor and capital have become scarcer.

In their turn, the factor movements reinforce the existing specialization patterns. Southern Germany uses its grown pool of capital and skilled workers to further specialize in advanced products and services. Regions in Southern Europe have more incentives than before to manufacture traditional, labor-intensive products. Existing specialization patterns are reinforced. The division in core and peripheral regions becomes sharper and factor prices are not equalized. In the Markusen framework, countries do not converge as a result of integration.

This approach also illustrates the important distinction between natural and acquired comparative advantage. Remember that in the Markusen model relative factor endowments were initially identical between countries. A region exports the technologically advanced products due to say an initial technological lead which represents the region's natural comparative advantage. In our example, Southern Germany knows how to manufacture high quality automobiles. Trade expansion and its impact on factor prices ensure that Southern Germany attracts the production factors used intensively in the production of innovative goods and services. The
region becomes relatively well endowed with these production factors which, along the lines of HOS trade theory, strengthens the competitive advantage in technological products. This last effect is an acquired comparative advantage and results from export specialization and factor mobility. By attracting engineers, managers and investment funds, Southern Germany sustains its development as a regional attraction pole.

These findings are of threefold relevance for regional policy. Once more, we find that regional convergence is no automatic result of enhanced integration. Moreover, we obtain a more complete insight in the various determinants of regional competitiveness which helps regional policy to target the causes of regional distress. On the other hand, the multidimensional character of regional comparative advantage, possibly aggravated by induced cumulative processes, illustrates the challenges facing an effective regional policy.

II. Krugman Type Increasing Returns Models

2.1. Non-Comparative Advantage Sources of Interregional Trade

In the models discussed above, comparative advantage, whether exogenously given or acquired, was the key factor in explaining interregional trade flows. It has also been stressed that even in a fully integrated economy, a spatially skewed distribution of factor endowments may hamper the equalization of factor prices.

The models referred to have been elaborated in a "spaceless" framework of perfect competition on product markets and constant returns to scale. Moreover, the specific location of production as well as agglomeration phenomena do not fit well into the competitive equilibrium models of trade, since nations and regions are treated here as points in space. In short, the analysis of the geographical dimension of product specialization calls for a framework, different from the one embedded in spaceless competitive, constant returns type of models.
A promising and productive orientation is found in the so called "new international economics" explored by KRUGMAN (1979), DIXIT and NORMAN (1980) and synthesized in HELPMAN and KRUGMAN (1985). In this approach, internal economies of scale generate the same driving force of trade as different factor endowments in the traditional comparative advantage theory. The location aspect of production is introduced through transportation costs. The interaction of transportation costs and economies of scale gives rise to patterns of regional concentration and specialization. The striking feature of this new approach is that regional divergence and convergence are both feasible outcomes of the trade and location model.

It should also be noted that this "new international trade" orientation integrates in a more general framework earlier convergence and divergence theories that have marked regional theory and policy in the past decades. The divergence views expressed by e.g. MYRDAL (1957) in development theory and by PERROUX (1959) in regional economics stressed agglomeration economies in a broad sense as the dominant factor of attraction that would on balance outweigh the labour cost advantages in the lagging regions.

In the Krugman type models, technical externalities, infrastructure and information networks that are stressed in the regional economics literature on the divergence-convergence issue, are not necessary ingredients to produce agglomeration. If added to the analysis, these factors will reinforce the tendency of firms to agglomerate and to produce center-periphery phenomena, but they do not constitute the key variables in the "new" international theory. Externalities are in this approach based on economies of scale that lead to an expansion of the size of the market.

2.2. Convergence and Divergence Reconsidered

The convergence-divergence issue has been a core element of the regional economic growth theory. Its roots originate in the basic one-
commodity neoclassical growth theory, which has been subjected to empirical tests for the U.S. in a seminal work by BORTS and STEIN (1964). In this framework, barriers to the interregional mobility of labour and capital would hamper regional convergence. Increasing returns were introduced later in a descriptive way by PERROUX (1970) in his popular growth pole theory.

The demand and supply shocks experienced by the industrialized countries in the seventies and early eighties, focussed the attention on the impact of stochastic factors in the process of interregional convergence. Indeed, after a long post-war period of sustained convergence, interregional disparities in the U.S. and in the E.C. increased during this period (BARRO and SALA-I-MARTIN, 1991). As argued by BLANCHARD (1991), regions that are favoured by, say a positive demand shock with a permanent component, will attract capital and labour. Since capital accumulation, contrary to labor, may imply increasing returns, interregional divergence will be the result. It should however be noted that neither of the approaches referred to here take account of the regional specialization pattern, based on interregional trade. This weakness has been overcome in the recent approach to interregional trade theory.

One of the striking features of the new approach to interregional trade, stressed e.g. by KRUGMAN (1990, 1991), is the large degree of indeterminacy of the results of the models in terms of the locational choice of firms and hence, of the pattern of regional specialization.

The general set of assumptions present in this type of models implies the existence of a mobile or "footloose" manufacturing sector that sells its product on a market characterized by monopolistic competition. Production technology shows increasing returns to scale. The non-manufacturing sector, i.e. agriculture, uses on the other hand a location-specific input and faces a competitive market. Its spatial pattern is assumed to be exogenously given. Labor related to the footloose sector moves interregionally because of differences in real wages.
The choice of location of the manufacturing sector will then be simultaneously determined by three parameters: the size of the economies of scale, transportation costs and the relative importance of the "footloose" sector (as measured e.g. by the share of consumption expenditure on manufactured goods).

A particular feature of this approach relates to the interaction of the location of firms and to the demand for their products. As firms concentrate, e.g. because of strongly increasing returns to scale, and mobile labor moves into the region, demand will expand which will attract more firms and lead to a "circular" process of agglomeration and regional divergence. This self-feeding process will be stronger as the initial size of the "footloose" sector increases. The determination of the specific region in which this type of process starts, will crucially depend on initial conditions such as the spatial distribution of the population.

As noted above, the existence of multiple equilibria, that are dependent on the parameters of the model, is one of the key characteristics in the approach discussed here. This implies that a small change in the key parameters may induce the self-feeding process of agglomeration. A decrease of the costs of transportation may e.g. shift the locational choice in favour of regions in which the initial demand potential was relatively small.

Changes in the key parameters may, instead of shifting the preferred location to a different type of region, reinforce the locational advantages of initial agglomerations. If e.g. technological change leads to stronger economies of scale, further reductions in transportation costs may, on balance, sustain the cumulative agglomeration process in the preferred center and accentuate divergence in this way. KRUGMAN (1990) refers to the persistence of the U.S. manufacturing belt in the Northeastern states as an example of a sustained process of agglomeration, which moved in the twentieth century independently from the initial comparative advantage factor of the available natural resources.

In the framework of an integrating economy, reductions in
interregional transaction costs in a broad sense, including transportation costs and barriers to trade, will lead to welfare gains and may induce firms to relocate. In a configuration of a high wage center and a low wage periphery, a reduction of barriers to trade which favours a relocation to the latter, has to be balanced against the economies of scale cost advantages realized in the center.

Moderate reductions of the barriers to trade will therefore accentuate the locational advantages of producing in the heart of a large market. Only if the barriers to trade are reduced beyond a critical level, manufacturing firms will move into the peripheral region which results in the U-shaped relationship between relocation and interregional transaction costs (KRUGMAN and VENABLES, 1990).

It also follows from this approach that, contrary to the predictions of the traditional comparative advantage theory, factor price equalization will not be obtained spontaneously as the barriers to trade decrease. Indeed, as the center gains in the early stages of integration, its relative wage will even increase. Consequently, the divergence caused by the relocation of firms in favour of the center will be boosted by the expansion of its home market, which will sustain the cumulative process mentioned above.

Persistent differences of income levels may therefore represent an equilibrium situation in an integrating economy, a result which does not rely on a skewed distribution of factor endowments such as skilled labor.

Finally, for relative wages to converge, a movement of manufacturing towards the periphery is required which assumes as a necessary but not sufficient condition, a substantial reduction of interregional transaction costs.

The indeterminacy of the final location pattern, which is present in the two-region model, carries over in a straightforward way to a multiple region framework. As interregional transaction costs decrease, an initial configuration consisting of a single core will gradually be transformed
into a multiple core pattern, which eventually "dissolves" and results in a dispersed location.

If the regions are part of economically independent nations, an interesting application of the Krugman model is obtained. As economic integration proceeds and barriers to trade are lowered, a "fight for the core" among existing centers in the different countries will be opened (KRUGMAN, 1990). In an aggregate view on nations, the economies of scale argument would favour the larger country that crowds out the smaller one.

If on the other hand, each nation is considered as a set of heterogeneous regions, which are at the start of the integration process, differentiated into agglomerations and their respective hinterland, an opposite result is feasible. The dominating region in the smaller country, say Northern Italy, could at sufficiently low barriers to trade and other interregional transaction costs, penetrate into the hinterland of the larger country, i.e. Southern Germany. Northern Italy could in this way gain impetus in the cumulative process of expansion, sustained by internal economies of scale.

The basic ingredients of the Krugman model can be augmented with other characteristics which add a more realistic flavour to it.

Services can e.g. be introduced as a third sector of the economy. The implications of this extension will depend on the sensitivity of the services sector to the key parameters of the Krugman model. This holds in particular for tradeable services, for which interregional transaction costs are relevant. The substantial reduction of information costs during the past decades as well as the realisation of "1992" contribute to the footloose character of e.g. the financial sector, and of consulting and insurance services. It is however doubtful whether these factors alone are powerful enough to induce an agglomerative process in the peripheral regions, e.g. because of the shortage of skilled labor and the lack of an appropriate social infrastructure.

Secondly, expectations about the opportunities offered by regions can
be added to the analysis. Such expectations may have a self-fulfilling character if they lead to the formation of a critical mass of economic activity which is necessary to sustain an agglomerative process.

KRUGMAN (1990) refers to the case where labor migrates in a "perverse" sense, i.e. from a region with high real wages into a low-wage region, because employment opportunities are expected to be better in the latter. The resulting shift of labor into the low-wage region increases its economic potential and attracts the footloose industry. In this way, a cumulative process of growth emerges which originates in the interregional movement of labor, generated by expectations. According to the migration patterns observed in the E.C., such a "perverse" movement of labor is however purely theoretical.

The general conclusion that can be drawn from the Krugman analysis, when applied to the Community, is that economic integration in virtue of the elimination of the barriers of trade offers positive perspectives for the peripherical regions. The economies of scale that are realised in the existing agglomerations may however prevent a substantial relocation towards the periphery. This indeterminacy supports regional policy measures that aim at strengthening the competitive advantage of regions in the periphery.

III. Regional Convergence and the New Growth Theory

3.1. Characteristics of Growth Models in Trade Theory

The latest development in trade theory addresses the relationship between trade and economic growth. A surge of recent papers integrates concepts of the new growth theory in trade models of the types discussed earlier. While many intriguing insights emerge, the current myriad of preliminary papers defies a systematic literature survey. As a first start, it is worthwhile to compare the dynamic trade approach to the static trade models considered thus far.
1. A first striking feature of the new growth models concerns the specification of technological progress and innovation. Up to recently, trade theory either treated technological progress as exogenous or ignored it altogether. In the new growth theory, firms devote resources to innovate and to expand the knowledge base. By offering the consumer a higher quality (HELPMAN and GROSSMAN, 1989a) or a wider variety of products (ROMER, 1990), successful innovation earns revenue to the innovating firm. New car models or an improvement of existing models provide a good example of this type of innovation. Alternatively, innovation can result in more technologically advanced inputs (e.g. more powerful machinery or computers) for the manufacturing production process (RIVERA-BATIZ and ROMER, 1991).

2. In many papers, innovation generates knowledge spill-overs and dynamic economies of scale for the innovating sector. In the knowledge-driven R&D specification of RIVERA-BATIZ and ROMER (1990), innovation depends on the existing stock of knowledge and on the number of scientists engaged in R&D. When a firm devotes more resources to R&D, the knowledge available to the industry as a whole expands, benefiting other firms as well. For reasons quite distinct from the Krugman-type approach of Section II, dynamic economies of scale for the industry are obtained that are external to the firm.

This idea of technologically induced increasing returns is easily reinterpreted in a regional context. When enough innovating firms are located in a region, they generate knowledge spillovers for other firms. An innovative environment is created, stimulating yet more research and triggering a cumulative process of innovative activity in the region.

3. The growth rate of the economy is determined by the rate of innovation. The merit of this approach is that the growth rate of the economy is endogenously determined by the structure of the model. Hence, this literature is well suited to address questions about the
determinants of economic growth.

4. Several papers specify *comparative advantage*. Countries and regions derive their competitive strength from a wide range of factors. HELPMAN and GROSSMAN (1989b and 1990a) follow the HOS tradition and look at the relative factor endowments of skilled and unskilled labor. Other papers by the same authors (HELMAN and GROSSMAN, 1989c and 1989d) consider differences in wage costs and labor productivity in R&D. A technological gap between countries forms the basis of comparative advantage in YOUNG (1991) among others.

5. Due to the dynamic structure of the model and the increasing returns in the production function, comparative advantage evolves over time. Wages change, labor productivity adjusts, and the technology gap becomes wider or smaller. Hence, we obtain a dynamic interaction between growth and comparative advantage which throws an interesting light on the earlier defined concept of *acquired comparative advantage*.

6. The trade and growth literature emphasizes the *interdependence* of countries and regions. Policy actions targeted at a specific region have consequences for the growth rates of other regions whose comparative advantage is affected. Those externalities need to be taken into account. Possibly, this involves a balancing of the growth bonus for some regions against the loss for others.

7. The combination of endogenous growth and comparative advantage yields insights in the convergence of *regional growth rates* rather than focusing on the convergence in regional factor incomes. More specifically, one can analyze the sources of regional economic growth. Furthermore, the relation between economic integration and regional growth can be evaluated. Finally, the scope of regional policy for stimulating growth in lagging regions can be assessed. In what follows, we address these three issues in turn.
3.2. The Role of Comparative Advantage in Regional Growth

A first message emerging from a wide set of papers is that comparative advantage is an essential principle for regional growth.

Looking at a model where comparative advantage takes the form of relative endowments of unskilled labor and human capital with the latter factor essential for R&D, HELPMAN and GROSSMAN (1989b) find that the human-capital rich country exports (imports) the R&D-intensive (unskilled labor-intensive) product at every moment in time. They remark that "What is surprising, perhaps, is that neither the diversion of resources to R&D, nor the existence of aggregate trade imbalances can upset the strong prediction of the Heckscher-Ohlin theorem at any point along the equilibrium path." Or in terms of our earlier example, Southern Germany still specializes in technologically advanced products.

Helpman and Grossman's paper on comparative advantage and long-run growth (1990a) makes a related point with a very different specification of comparative advantage. In their model, one country's labor force is more productive in designing new products. They go on to show that world growth is proportional to the share of the labor force involved in R&D in this technologically leading country. More generally, specialization based on comparative advantage optimizes overall growth.

In a way typical of the new growth approach, Helpman and Grossman extend their paper to allow for acquired comparative advantage. Instead of assuming that all countries have immediate access to technological innovations, country-specific lags in the diffusion of knowledge are built into their model. Temporarily at least, the innovating country obtains a technological advantage before competitors catch up. This feature is appealing in a regional context. There are several reasons to believe that innovations in the core regions take some time to reach the periphery. A new product developed in Southern Germany cannot instantaneously be replicated in Portugal.
With innovation lags, acquired comparative advantage is likely to reinforce natural competitive ability. In particular, regions with an extended knowledge base and with an easy access to a large market benefit from a self-reinforcing learning process and a cumulative knowledge accumulation.

These cumulative effects inevitably lead to a spatial concentration and agglomeration of R&D activities. To say it bluntly, it is unreasonable to expect every region to become a center of innovation. It is equally true though that, at the risk of being left behind, regions should position themselves optimally to benefit from the spillovers from innovative regions. This involves specialization based on regional comparative advantage.

Does such specialization guarantee convergence of lagging regions? It may not. Using a model based on learning by doing, YOUNG (1991) argues that when the initial technological gap is too wide, the lagging regions will be unable to catch up with the advanced regions. GROSSMAN and HELPMAN (1990b, p 32) find that, in some circumstances, a country that begins behind in the technology race will never be able to catch up. While specific results vary according to the features of the models, it is safe to say that convergence is no assured outcome.

This point is less worrisome than one might expect. Divergence at a high growth rate is superior to convergence at a lower common denominator. A higher growth in the core regions spills over to the periphery. Both YOUNG (1991) and HELPMAN and GROSSMAN (1990b) demonstrate that this growth bonus is attractive for lagging regions even when the gap between core and periphery widens.

For this reason, it would be a mistake to drive the technological leader away from specialization in R&D activities. In the new growth models, this reduces the expansion of new product varieties on the market with adverse effects on the overall growth rate. Any measure impeding the specialization of Southern Germany in innovative products lowers the
growth rate for the Community as a whole.

Likewise, it would be a costly mistake to ignore the comparative advantage of the lagging regions in designing a regional policy. Promoting technological innovation in a lagging agricultural region in Greece is likely to be a waste of resources. Imposing higher labor costs to increase social worker protection in a region that derives its competitive strength from lower labor costs is a risky strategy. In this context, one of the HELPMAN and GROSSMAN (1990b) results is revealing. They show that convergence is ruled out when the technologically lagging region experiences the same wage costs as the leading region.

Said otherwise, the less favored region can only overcome the technological gap by relying on lower labor costs. As development proceeds, the comparative advantage of low-wage regions will gradually move away from lower labor costs. Postwar economic history of the EC, Japan and the Newly Industrialised Countries is indeed characterized by a shift from specialization in laborintensive products towards a more sophisticated product range. This development pattern was helped by foreign direct investment and accompanied by rising labor productivity and wages.

As the reader will have noticed, the importance of natural and acquired comparative advantage is a general theme not limited to the growth models surveyed here. Provided that the source of regional comparative advantage is carefully assessed and regularly reevaluated, the rate of economic expansion with a strategy based on comparative advantage can be high.

A regional policy at the Community level should therefore start with a careful assessment of current and prospective regional strengths and weaknesses in relation to other regions and countries. A classification of regions based on relative GDP, rural underdevelopment and industrial decline serves as a first step only in this evaluation. The regions that according to these indicators perform poorly can in a second step be evaluated in terms of the provision of public goods, such as the available
physical and social infrastructure in a general sense, and of the skill level of the labour force. In this way, a regional profile emerges that may call for a horizontal or broadly oriented regional policy, as will be argued further on. It should be noted that this approach contrasts with a predominantly sectoral dimension of a regional assessment which would lead to sector specific regional policy measures.

This does not mean that economic development will automatically result from a strategy based on comparative advantage. Uncertainty about trade policy and global economic conditions makes a careful assessment of regional economic strength difficult and risky to some extent. In particular, it can be argued that specialization in unskilled labor-intensive products by some Southern European regions is likely to be hampered by fierce competition when EC markets open up to the exports from Eastern European and less developed countries. Likewise, the attraction of neighboring higher wage EC regions for an increasingly mobile labor force may quickly erode the labor cost advantage of low-wage regions without matching gains in labor productivity.

While this is true, we do not see a reasonable alternative. The East-German experience clearly illustrates the very high financial costs and unemployment problems of a "forced development strategy", building a completely renewed economic system from scratch while simultaneously attempting rapid convergence in labor income. Even if such strategy were desirable for lagging EC regions, which we doubt seriously, its cost would far exceed the combined budgets of national and Community regional policies.

3.3. Economic Integration as a Source of Regional Growth

The success of a regional policy in raising the growth rates of lagging regions is affected by the on-going process of European integration. On the whole, the new growth literature views integration as contributing to higher economic growth in less favored regions. From the work by RIVERA-BATIZ and ROMER (1990, 1991), and by HELPMAN and
GROSSMAN (1990b, 1990c), one can derive three reasons why this is so.

First, there is a market size or scale effect. The harmonization of standards and the removal of non-tariff barriers within the Community should facilitate access to the large markets of the core regions. With increasing returns to scale in production, this can initiate a self-reinforcing process of regional development.

Secondly, the link between economic integration and the transfer of technology should be considered. As stressed earlier, technological lags form one important reason why regions get and stay behind. Economic integration stimulates the flow of ideas towards the periphery. The regional-specific knowledge base of leading regions is more swiftly shared by all regions. Firms from less favored regions build up experience and technological know-how from their trade contacts with advanced regions. Direct investment in the periphery introduces new organizational methods and production techniques in less developed areas. The role of this technological transfer should not be underestimated. After the second world war, a combination of trade expansion and US direct investment spurred the economic development of what are now the core countries of the Community.

A third and last redundancy effect is also related to research, innovation and organization. Redundancy occurs when markets are segmented and means that the same idea, design, specialized input or skill is "discovered" several times. In the European context, there are various plausible reasons for redundancy to occur. Different technical, health and safety standards impede that the same concept is applied to all markets. Regional underdevelopment enhances the risk that resources are devoted to developing what already exists elsewhere. The creation of an internal market within Europe and closer economic ties between EC countries help to eliminate such waste of economic resources.
3.4. Regional Policy and Economic Growth

The previous analysis paints an optimistic picture of how economic integration benefits regional growth. It does not deny the role regional policy can play in raising the growth rates of less developed regions. On the contrary, the literature pays ample attention to the growth effects of various economic policy actions. In these policy experiments the mutual interdependence of countries and regions is a key feature. Policy actions targeted at specific regions often generate externalities for other regions. A successful policy maximizes the positive spillover effects and minimizes the negative externalities. What is the scope for a regional policy that (i) takes into account regional interdependence and (ii) exploits current and prospective regional comparative advantage?

1. Measures which raise the overall productivity of production factors in the Community benefit the less favored regions with no or minimal adverse growth effects for other regions. HELPMAN and GROSSMAN (1990a, p 807) show that an equiproportionate once-and-for-all increase in labor productivity of the two countries in their model accelerates long-run growth. This growth effect can be powerful because of the dynamic scale economies in the production process characteristic for the new growth literature.

2. An efficient diffusion of ideas, technology and innovation benefits the growth prospects of lagging regions. Convergence within the Community becomes more likely when all regions have access to the stock of knowledge available in the EC's innovating regions.

3. The desirability of sector- or product-specific "strategic" regional subsidies is more questionable. Depending on the characteristics of the sector and region involved, a strategic regional policy may hamper or favor economic growth of other regions. This point emerges clearly from the work on endogenous product cycles (HELPMAN and GROSSMAN, 1989c and 1989d).
In this literature, the product cycle is modeled as an endogenous process of innovation and imitation. Firms devote resources to R&D in order to upgrade existing products or develop new ones. This allows them to expand their market share at the expense of their competitors. However, innovators face the risk that their product is imitated and replaced by a cheaper version. Imitation takes place by firms that devote resources to learning the existing production processes.

A distinction is made between a Northern and a Southern region. The Northern region enjoys an advantage in innovation but faces higher labor costs. As a result, Northern firms concentrate on innovative activities. Conversely, labor costs and labor productivity in R&D are lower in the South. When the differential in labor costs and/or innovative ability is sufficiently large (the wide-gap case), Southern firms imitate Northern products and sell them at a cheaper price. In the alternative narrow-gap case, Southern firms choose between innovation and imitation depending on Southern labor productivity and wage costs.

This framework is used to analyze the impact of economic policy on innovation, imitation, economic growth and relative wages. For the analysis here, the most interesting experiment concerns the role of subsidies to imitation and learning in the South. Those subsidies are a strategic policy instrument because they target learning in the production process of a specific sector. The effects of this policy vary sharply in the wide- and narrow-gap cases.

In the wide-gap scenario, the subsidy to imitation enhances the share of products manufactured in the South and raises the Southern relative wage in the long run. At the same time, the innovation incentive for Northern firms is strengthened by the faster imitation in the South because innovation allows Northern firms to protect their market share. A virtuous cycle of imitation and innovation ensues raising productivity and growth rates in the North and the South.

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1 In allowing for innovation in the South we follow HELPMAN and GROSSMAN (1989d). The terminology "wide-gap" versus "narrow-gap" is adopted from HELPMAN and GROSSMAN (1989c).
In the narrow-gap scenario, this desirable outcome is no longer guaranteed. The subsidy to learning still favors imitation in the South but the innovation in the North and the overall growth rate may be reduced. There is a possible tension between the learning processes of the Northern and Southern region.

This economic intuition for the sharply contrasting results in the wide- and narrow-gap cases is not explained in detail and it is unclear whether the results would survive in a more general model. If so, it would imply that negative growth externalities of regional policy for other regions are less likely when the structural characteristics of the regions are markedly different.

IV. Towards a Policy on Regional Development in the EMU

Thus far, we focused on what trade theory tells us about regional convergence, economic integration and regional growth. In the remainder of the paper, we will derive some policy prescriptions from the previous discussion. This exercise is tentative because the relation between theory and policy is not always unequivocal. Rather, our effort should be interpreted as a broad reflection on how international trade theory can be helpful for designing a consistent regional policy in an integrating Europe.

The discussion is structured as follows. In this section, we turn to the issue of regional economic development. We ask which policy measures are likely to promote economic growth and efficiency in lagging or declining regions and are therefore conducive to economic convergence in the current build-up to an EMU. In Section V later on, we will consider efforts to enhance social cohesion within the Community in the light of the theoretical framework developed earlier.

Turning to the issue of regional development and economic efficiency, we view two questions as predominantly relevant. First, one wonders whether regional convergence will automatically result from further
progress on the road to EMU and, if not, which regions should be eligible for regional support. A second question relates to the type of activities that should be targeted by regional policy. In what follows, we discuss these questions in turn.

4.1. The Selection of Regions Eligible for Regional Policy

The theoretical part of this paper advances the fundamental message that, as a result of EMU, the Community could very well be confronted with an overall situation of increased convergence but with specific regions falling further and further behind.

1. Economic convergence results from the fact economic integration fosters regional convergence of income levels and raises growth rates. When the structural characteristics of regions are not too far apart, specialization on the basis of comparative advantage contributes to the convergence of factor prices. Reduction of transaction costs and non-tariff barriers, exchange rate stability and credible macroeconomic management provide incentives for industries to relocate towards peripheral regions with lower labor costs. Likewise, the weakening of national boundaries opens new market opportunities for the periphery with potentially beneficial agglomeration effects. In addition, integration stimulates regional economic growth by enlarging the size of the market, facilitating the transfer of technology and eliminating redundancy in the development or imitation of ideas, products and organizational methods.

All of these reasons should caution against overestimating the size of the regional problem in an EMU. Rather, eligibility for regional support should be restricted and revised regularly. In lagging regions with close links to expanding areas, the benefits of EMU should be assessed before decisions on regional aid are made. As mentioned earlier, this requires a wider set of decision criteria than levels of GDP per capita and unemployment rates.
In this context, it is hopeful to note that EC regional policy is increasingly being targeted towards a smaller set of regions and that clear priorities are assigned to regions according to their needs.

2. In spite of the forces working towards convergence, regional problems are not likely to disappear automatically. Lagging regions will not easily catch up when the technological gap between regions is too wide, when factor endowments are very unevenly distributed or when the combination of structural rigidities and high labor costs prevents the region from using its competitive strengths. Agglomeration effects resulting from a combination of increasing returns to scale and transport costs provide substantial barriers opposing a more evenly spread pattern of economic activity. Dynamic economies of scale and acquired comparative advantage can trigger cumulative processes leading to widening regional divergence. Under these circumstances, economic integration may reinforce the existing problems of some regions rather than establishing convergence.

Based on these considerations, there is case for a distinction between objective 1 and objective 2 regions. The former include less developed regions with lagging relative GDP. Expanding regions with low GDP would not automatically fall under this definition. Objective 2 regions would consist of former core regions that are suffering from a cumulative process of economic regress.

4.2. Functional Structure of Regional Policy

The overview of trade theory gives a quite comprehensive picture of the activities which regional policy should target. It accentuates the role of regional comparative advantage for determining the optimal regional policy.

1. On various instances, we advocated policy actions which raise the overall productivity of production factors. Such measures address key determinants of weak regional performance and, due to their often
horizontal nature, minimize the risk of competitive distortions between regions.

An important application of this principle involves subsidies to basic infrastructure aimed at improving communications and transport as well as guaranteeing an adequate supply of energy. This type of regional policy is most important for objective 1 regions that often lack a fully developed infrastructure.

Here is clearly a role for regional policy that is well recognized in the Community. In the period 1989-1993, an average of 58% of ERDF resources and 33% of Structural Funds resources is devoted to improving basic infrastructure. The cohesion fund established at the recent Maastricht Summit provides additional financing for projects related to trans-European networks (telecoms, transport and energy networks) as well to environmental issues. This emphasis on infrastructure reflects a long-lasting concern of EC regional policy which is apparently well justified. Firms in lagging regions, when asked to evaluate 37 determinants of regional competitiveness, rank the supply and cost of energy as well as transport networks among the top ten priorities for improvement (see Commission of the European Communities, 1990a).

In a similar vein, subsidies to human resources, education and training reduce the unequal regional distribution of skills across the Community. This recommendation is valid for Objective 1 and 2 regions alike. Indeed, an adequate supply of qualified labor is seen as a top priority by firms in both lagging regions and regions facing industrial decline.

2. Another target area for regional policy concerns technology and innovation. Here, we do not advocate measures aimed at developing innovative products in lagging regions. Except perhaps for a limited number of exceptions, these regions do not possess a comparative advantage in this type of activity. Rather we plead for an efficient transfer of technology, management and organizational skills.
In this area, regional policy has a role to play which is increasingly being recognized by the Community. Recently, the regional fund approved a transfer program of know-how from the most developed regions in France and Germany to lagging regions in Ireland, Portugal, Greece, Spain, East Germany and Southern Italy. We believe that such initiatives could be expanded.

This type of regional policy provides an excellent example of the more general principle of maximizing spillovers and complementarity. A part of regional underdevelopment is often explained by insufficient integration with the advanced and growing economic areas. Measures aimed at stimulating such integration generate synergies which are beneficial for more and less developed regions alike.

3. We are much more critical where sector-specific measures such as sectoral wage or interest and investment subsidies are concerned. As noted earlier, there are theoretical reasons to believe that policy measures of this kind may hurt other developing regions or regions in industrial decline. More than general measures, sector-specific policy instruments carry the potential of distorting regional competition.

Sector-specific subsidies also go against the efforts of EC competition policy to preserve fair competition and to control national subsidy policies. It would be senseless to replace national subsidies to a nurtured industry by EC subsidization. Likewise, the Community should be cautious that structural funds are not used by member states to create artificial investment conditions or to subsidize specific sectors or activities. The recent allegation that the Social Fund was used by some member states to attract direct investment indicates that concern for the strict application of this principle is warranted.

V. Regional Policy and Social Cohesion in an EMU

In this section, we question whether efforts to mitigate regional
differences should go further than promoting allocative efficiency and growth in lagging or declining regions. Many within the Community strongly believe this to be the case, arguing that pronounced regional differences threaten the stability of an EMU. To reinforce social cohesion they advocate the creation of a special insurance fund aimed at helping regions to cope with negative region-specific shocks in the transition towards a full-fledged EMU. In the same vein, there is the so-called social dimension of EMU. The Commission has proposed several directives establishing minimum social rights for all workers within the EC. The underlying philosophy is that, in the absence of comparable real income levels throughout the Community, minimum social rights enhance regional convergence in the social domain.

5.1. The Creation of a Social Insurance Fund

The irrevocably fixing of the exchange rate in an EMU means the loss of an adjustment mechanism to negative adverse country-specific shocks. While the importance of such shocks and the effectiveness of the exchange rate instrument are open to debate (see Commission of the European Communities, 1990c, chapter 6), it is felt that a regional insurance fund should be created as an additional means of facilitating regional adjustment. Countries and regions would be allowed to draw on this fund to absorb negative shocks.

The term regional insurance fund suggests a crucial distinction between insurance and regional redistribution.

Suppose that the fund is designed in the first place as an insurance mechanism. This implies that countries and/or regions contribute to a fund that pays in case of occurrence of specific negative shocks. There can be no objection to a joint initiative which eliminates risk provided that the normal conditions for an insurance fund are fulfilled. This implies that the criteria for intervention by the fund are specified in advance. In this respect, a waterproof definition of negative country- or region-specific shocks may turn out to be an intricate task. In addition, contributions
should match expenditures in order to avoid long-term losses. In principle, the participating members that are exposed to more risk should also pay higher premia. This condition is controversial as it may require a higher contribution for lower income countries. To the extent that this principle is judged unacceptable, one moves away from insurance towards regional policy.

How far should one go in the direction of *regional redistribution*? One can take the view that the richer countries should pay the whole or a major part of the contributions to the fund. One expects that this would lead to the well-known insurance problems of adverse selection and moral hazard. Moreover, the rationale for a separate fund becomes questionable. Why not expand the existing structural funds if the primary objective is to assist lagging regions by means of contributions by prospering regions?

For these reasons, we plead for maintaining an observable link between premia and claims if the creation of a separate regional insurance fund is judged desirable. Furthermore, the regional distribution through this fund should be conditional. Perhaps, an IMF-type quota system could be considered. On the one hand, intra-EC solidarity would be maintained by linking the contributions of member states to the fund to their relative GDP. Richer member states would pay more. On the other hand, the amount of unconditional claims on the fund would be limited by the countries’ contributions. Additional support to a country would need approval by other countries and could be made conditional on the adoption of a structural adjustment program.

5.2. Social Protection and Regional Convergence in an EMU

We now turn to the likely effects of the EMU's *social dimension* on regional convergence in the EC. So far, the social dimension has primarily taken the form of directives specifying minimum requirements for health and safety requirements on the job, maternity leave, part-time work, weekly rest periods and holidays. Restrictions on maximum weekly working time, the specification of a minimum wage and minimum
income, and rules for the social treatment of non-resident EC labor are also envisioned. The Maastricht Summit of December 1991 establishes the legal basis of these recent proposals for all EC countries except the United Kingdom. Moreover, trade unions and employer organizations are urged to negotiate collective agreements on a European scale with the understanding that the Community will not regulate issues that are covered in such agreements.

These initiatives fall outside of what is considered as EC regional policy. Yet, their potential impact on regional convergence is undeniable. On the positive side, social minimum requirements protect workers in less favored regions against social abuse. While usually not viewed from this angle, this is a means of fostering regional equality in social protection rather than in growth rates, income and employment levels.

On the negative side, social minimum rights may be in conflict with the traditional objectives of regional policy. A higher degree of social protection is borne by employer contributions and hence raise labor costs in countries that do not meet EC social requirements. As a result, economic growth is hampered and unemployment problems are aggravated. Social protection is acquired at the expense of lower growth, rising unemployment and falling income levels.

We believe this to be a serious problem for regional policy. Countries and regions with limited social protection are usually characterised by low per capita GDP levels. Part of their comparative advantage lies in lower labor costs which compensate for lower productivity. Through increased labor costs, an excessive concern for social protection may lead to a widening regional gap in GDP and labor market performance.

This argument should be taken seriously. Figures reported by the Commission of the European Communities (1990b, p 77) show that, while labor costs in Greece, Spain, Portugal and Ireland are well below the EC average, this is not the case when labor costs are corrected for productivity differentials. This suggests that the room for raising social protection in the EC's peripheral regions without adverse competitive
effects is small.

In addition, recent research by ABRAHAM (1991) indicates that the impact of raising social protection on production and employment is far from negligible. Based on a simple model of imperfect competition, Abraham computes the effects of a 1% reduction in manufacturing working time in the twelve EC countries on value added and employment in manufacturing, GDP, aggregate employment and labor income in manufacturing (see Table 1). Based on working time data for 1984, Table 2 reports the outcome of harmonizing manufacturing working time of all EC countries to the EC average.

In both tables a distinction is made between labor income rigidity, defined as a downward rigidity of nominal labor income, and labor market clearing. Labor income rigidity is likely to be observed in the short run and will persist as a longer run phenomenon in structurally rigid labor markets. The scenario of labor market clearing corresponds to the longer run outcome in flexibly responding labor markets. The product market integration is assumed to be quite high in both cases. All results should be treated with the necessary caution as they depend on specific parameters of the model. In spite of this caveats, some interesting findings emerge.

Table 1 reveals that a small reduction (1%) in manufacturing working time significantly decreases manufacturing value added and employment when labor income is rigid. The effects on GDP are comparable to the direct efficiency gains from the EMU as estimated by the Commission of the European Communities (1990c). They are not irrelevant when noted that the benefits from the entire 1992 market liberalization program are estimated to range from 2.5% to 6.5% of GDP (Commission of the European Communities, 1988).

Table 2 points to the dramatic consequences of a full harmonization of working time within the Community. The peripheral countries and the United Kingdom would suffer from a substantial decline in GDP and from a serious increase in unemployment. On the hand, Belgium and to a
### TABLE 1: Effects of a 1% reduction in manufacturing working time (% changes)

<table>
<thead>
<tr>
<th></th>
<th>Case 1: nominal labor rigidity</th>
<th>Case 2: labor market clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value Added Manufacturing (1)</td>
<td>GDP (2)</td>
</tr>
<tr>
<td>1) Core Countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>-5.7</td>
<td>-1.3</td>
</tr>
<tr>
<td>Denmark</td>
<td>-5.7</td>
<td>-1.0</td>
</tr>
<tr>
<td>Germany</td>
<td>-5.4</td>
<td>-1.7</td>
</tr>
<tr>
<td>France</td>
<td>-5.2</td>
<td>-1.1</td>
</tr>
<tr>
<td>Italy</td>
<td>-6.4</td>
<td>-1.5</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>-5.7</td>
<td>-1.4</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>-5.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-5.3</td>
<td>-1.1</td>
</tr>
<tr>
<td>2) Peripheral Countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>-6.5</td>
<td>-1.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>-5.5</td>
<td>-1.3</td>
</tr>
<tr>
<td>Portugal</td>
<td>-5.8</td>
<td>-1.6</td>
</tr>
<tr>
<td>Spain</td>
<td>-6.4</td>
<td>-1.5</td>
</tr>
</tbody>
</table>

*Source: own computations*
lesser extent Germany, France, Luxembourg and the Netherlands would benefit from an important increase in GDP. Without any doubt, the existing core-periphery pattern would be strengthened.

Tables 1 and 2 also illustrate the importance of labor market flexibility in an EMU. Losses in manufacturing valued added and GDP are much smaller when labor income adjusts to clear labor markets. This underlines the theoretical result by MARKUSEN (1983) and others that labor market distortions are not conducive to a smooth convergence among member states in an EMU.

**TABLE 2**: Effects of a harmonization of yearly working time in manufacturing to the EC average (% changes)

<table>
<thead>
<tr>
<th>Case 1 : Nominal Labor Income Rigidity</th>
<th>Case 2 : Labor Market Clearing GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (1)</td>
<td>Aggregate Employment (2)</td>
</tr>
<tr>
<td><strong>1) Core Countries</strong></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>14.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.2</td>
</tr>
<tr>
<td>Germany</td>
<td>5.8</td>
</tr>
<tr>
<td>France</td>
<td>5.1</td>
</tr>
<tr>
<td>Italy</td>
<td>2.9</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>4.5</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-7.8</td>
</tr>
<tr>
<td><strong>2) Peripheral Countries</strong></td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>-3.9</td>
</tr>
<tr>
<td>Ireland</td>
<td>-13.1</td>
</tr>
<tr>
<td>Portugal</td>
<td>-16.1</td>
</tr>
</tbody>
</table>


In sum, there are reasons to believe that enhancing regional convergence in the Community through raising social protection stands in conflict with the objective of closing the gap in per capita GDP levels. This conflict is sharper when structural rigidities impede flexible labor market adjustments in peripheral regions.

Regional policy-makers should be aware of this trade-off between regional convergence in GDP and social protection. They should carefully
assess the impact on regional development of the initiatives related to the EMU's social dimension. Ultimately they face a fundamental choice between two strategies towards regional convergence. In the first strategy, allocative efficiency, comparative advantage and economic growth are seen as the main priority. In this view, social protection in the less favored regions will be raised as a result of regional development and economic growth. In the alternative strategy, regional convergence in the social domain is considered as the primary objective even when this entails further divergence of real income levels.

Based on the thoughts developed in this paper, we tend to favor the first strategy. This does not mean that we deny the importance of social protection. As argued elsewhere (VAN ROMPUY, ABRAHAM and HEREMANS, 1991) we nevertheless believe that social considerations are best included as a part of the regular policy evaluations by the Commission of the individual member states. This is a far more flexible approach than the specification of uniform social minimum requirements. After a careful review of their economic strength, strongly performing economies can then be asked to raise the level of social protection if they do not do so automatically. At the same time, this procedure avoids that social norms are imposed on countries with a weak competitive position.

Conclusion

In the introduction to this paper, we identified three issues which we believed to be essential for the future direction of regional policy in an EMU. At the end of this work, we summarize the answers obtained on each of these questions.

First we consider the likelihood of regional convergence in the future EMU. An evaluation of this issue requires an assessment of the forces determining regional competitiveness. We furthermore need to know how continuing economic integration affects regional convergence. What do we learn from this paper?
Regional competitive strength is linked to the international trade concept of comparative advantage. Regional comparative (dis)advantage comes from many sources including relative factor endowments, low labor costs, technological ability and high labor productivity. It is influenced by government policy and the functioning of labor and product markets.

Comparative advantage can be natural and/or acquired. Acquired comparative (dis)advantage is caused by cumulative processes reinforcing initial regional strengths or weaknesses. It explains the rapid development and decline of some regions. It holds the promise of a quick convergence of regions but also renders possible a scenario of widening regional gaps within the Community.

Economic integration fosters regional convergence of income levels and raises growth rates under well-defined conditions. When the structural characteristics of regions are not too far apart, specialization on the basis of comparative advantage contributes to the convergence of factor prices. Integration stimulates regional economic growth by enlarging the size of the market, facilitating the transfer of technology and eliminating redundancy in the development or imitation of ideas, products and organizational methods.

Nevertheless, continued economic integration does not necessarily lead to regional convergence. Lagging regions will not easily catch up when factor endowments are very unevenly distributed or when the combination of structural rigidities and high labor costs prevents the region from using its competitive strengths. Nor is convergence to be expected when economies of scale generate agglomeration effects or when the technological gap between regions is too wide. Under these circumstances, economic integration may reinforce the existing problems of some regions rather than establishing convergence.

Summarizing, an overall trend of increased convergence could well go together with worsening prospects for specific regions. Regional policy then has an important role to play in optimizing resource allocation,
improving economic efficiency and raising growth rates of regions that struggle with structural adjustment problems. How this can be achieved is the second important question of this paper.

To be successful, a regional policy must start from a profound evaluation of regional comparative advantage. It is unwise to develop activities that require competitive assets a region does not possess. It is a mistake to impose a policy which prevents a region from developing its regional potential. In this assessment of regional strength, the inherent dynamic nature of comparative advantage should be taken into account. Competitive abilities are altered by the development process itself. For this reason, the design of a regional policy should be based on an evaluation of current and future strengths. It should also include a clear positioning of the region with respect to other regions as well as an evaluation of the externalities arising from the policy.

From this list, it is evident that no uniform prescription will apply to all regions. There is a clear distinction between insufficiently developed (objective 1) regions and declining (objective 2) regions. Even within each category, there exists a wide variation of regions facing different economic difficulties.

In spite of this variety, we identified several target areas for regional policy. Education and training raise the skills of the labor force and boost labor productivity. Regional production factors become more productive when infrastructure and communication are improved. An improvement of transport networks encourages localization in underdeveloped areas due to lower transport costs. An efficient transfer of technology and ideas facilitates access to the knowledge base generated by innovating regions.

Based on the theories surveyed here, we plead for general rather than sector-specific regional policy instruments. A regional policy targeted at specific sectors carries an undeniable danger of competitive distortions at the expense of other regions.

Will these measures be sufficient for a Community-wide convergence
of income levels? Perhaps not. But they limit the chance that regions are shut out from the growth bonus and efficiency gains to be expected from an integrated Europe.

As a third and last topic of this paper, we explored new areas for regional policy. We are rather cautious where minimum conditions for social protection are concerned. We worry that such norms will hamper growth, economic efficiency and employment in lagging regions and thus collide with what we view as the primary objectives of regional policy. Instead, we favor an ex-post approach with improvements in social protection based on the observed economic performance of the less favored regions.

If a regional insurance fund against adverse country- or region-specific shocks is to be created, the idea of insurance should be maintained in one form or another. This does not necessarily mean that contributions are strictly proportional to the incurred risk. But we question a unrestricted access to a fund that is entirely financed by more prosperous member states. A quota system comparable to the IMF would be one possible alternative to find a balance between insurance and regional redistribution.

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