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MONETARY UNION**

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1. INTRODUCTION

The regional problem of the European Community has since long puzzled economists and policy makers. Whereas efficiency gains have undoubtedly been realized since the creation of the EC's economic union, progress in the field of regional income distribution has been more moderate. The perspective of the future monetary union adds a new dimension to the spatial distribution issue since additional constraints are imposed on the regional price and wage behaviour.

This paper focuses on the implications of the Economic and Monetary Union (EMU) for the regional pattern of economic activity and particularly, for regional labor markets.

The paper is organized as follows. After a concise description of the regional disparities in the EC, the predictions of economic theory with respect to the convergence-divergence debate are summarized. First, we offer a concise description of the regional disparities in the EC. Next, we review the literature to assess whether EMU will foster or counteract long-term convergence within the EC. Subsequently, we analyze the adjustment to economic shocks in the EMU. Here, the constraints on regional labor market performance, implied by the EMU, are examined in detail. More specifically, attention will be paid to the degree of wage rigidity in regional labor markets. Finally, the community policies directed at the regional problem are evaluated.

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2. THE REGIONAL CONVERGENCE-DIVERGENCE DEBATE: WHERE ARE WE NOW?

Regional disparities in the EC can be approached from different points of view. Overall interregional disparities refer to some measure of income or output dispersion around the average EC-level, or to the interregional dispersion within each country. The former measure of inequality can be decomposed into the dispersion within each country and into the disparities between countries.

Measures of dispersion or inequality such as the standard deviation or the coefficient of variation of GDP per capita at the NUTS I or II level or, alternatively, the Theil coefficient, indicate that the overall interregional disparities decreased substantially from 1960 to the middle of the seventies and increased thereafter until the mid eighties (Molle, 1989). From then on, interregional disparities appear to have stabilised as the data in table 1 below suggest.

Table 1: Interregional Disparities in per Capita GDP (EC-12 NUTS II level)

	1980	1985	1988
a. Theil coefficient			
- Average 10 weakest regions	47	45	45
- Average 10 strongest regions	145	150	151
b. Weighted Coefficient of Variation	26.1	27.5	27.5

Source : Emerson et.al. (1992).

A striking observation is that, in spite of the dramatic fall of the interregional disparities in the EC during the past three decades, the overall level of dispersion remains much higher than in individual member countries or than in large federal countries such as the USA or Canada. So, the weighted coefficient of variation of GDP per capita in 1986 amounted to 25.2 % for the EC (60 regions) as compared to 16.1 % for the USA (50 states + D. of Columbia), 20.1 % for Canada (10 provinces + 1 region) and 13.7 % for Germany (11 Länder) (see Commission of the EC, 1990, p. 230).

The time path of the components of the overall interregional disparities, i.e. the across and within country disperions, suggests that most of the progress in interregional

convergence is due to the decline of the within country disparities. Barro and Sala-i-Martin (1991) observed that the decline of the dispersion of per capita GDP in the EC (73 regions), expressed relative to the mean for the respective countries, accelerated in the period 1960-1974 and continued from then on, but at a smaller rate. Their measure of dispersion, i.e. the unweighted cross-sectional standard deviation of the log of per capita GDP, declined from 0.28 in 1950 to 0.18 in 1985.

However, although regional disparities decreased in all EC-countries, the 1985-values of this measure of dispersion differs substantially between countries : e.g. 0.26 for Italy, 0.20 for Germany, 0.15 for France and 0.10 for the U.K.. The relatively unfavorable position of Italy, which also applies to Ireland, Spain, Portugal and Greece, reflects the persisting center-periphery contrast.

The continuous decline of within-country disparities in the EC during the 1950-1988 period and the increase of the overall interregional disparities from the mid-seventies to the mid-eighties, suggests that the latter are mainly due to the across-country component of dispersion.

The reversal of the equalizing trend in the period 1975-1985 has been attributed on the one hand to the adverse oil shocks that hit the national economies and on the other hand to the restrictive fiscal and monetary policies pursued by most EC-countries from 1980 on (Prud'homme, 1992). In addition, the changing patterns of migration and of private investment have favored the more prosperous regions. It should however be noted that these adverse supply and demand shocks did not lead to widening gaps within each country. Since the sensitivity of the national economies to these shocks differed, they apparently contributed to an increase of the intercountry component of the overall inter-regional disparities in the EC.

These findings give at a first sight support to the Williamson (1965) view on regional disparities, according to whom disparities tend to increase during the first stages of economic development and to decrease during the subsequent stage of sustained growth. The centrally located regions of the EC in the U.K., Germany, the Benelux, France and Northern Italy entered the second stage of development during the sixties and display a marked tendency for narrowing disparities.

An alternative view has been expressed by Barro and Sala-i-Martin (1990) who define a rate of convergence of the growth of regional per capita GDP to its steady-state level. The

latter depends on preference and technology parameters. Starting from the empirical observation that the regional growth rates of per capita GDP relative to the national rate, are negatively related to the level of per capita GDP in both in USA and in the EC, if calculated over a long span of time, the rate of convergence was estimated. It turned out to be about 2 percent for the regions in the USA and somewhat lower in the EC. These findings demonstrate the slow but persistent catching-up process of the lagging regions to the more prosperous ones, that can be temporarily disturbed by country- and region-specific shocks. Migration out of the lagging regions, characterized by low capital-labor ratios, towards the more prosperous ones where the capital-labor ratios are higher, will contribute to the convergence process. Capital mobility will lead to diminishing returns in the latter and will narrow the interregional disparities in per capita GDP levels. Along the same line of thought will the diffusion of new technologies speed up convergence. However, government policies, capital and product market imperfections and increasing returns to scale, which will be discussed in section 3.2, may result in a flow of human and physical capital from the poor to the rich regions and lead to divergence.

The statistically significant estimate of the rate of convergence parameter in the Barro and Sala-i-Martin 1991 paper for the USA and EC regions sheds serious doubt on Williamson's inverted U-theory, particularly with respect to the phase of increasing disparities and leads to the prediction that convergence will dominate in the long run on the EC regional scene.

On prior grounds, one would also predict that as the economic integration in the EC progresses, and taking account of the liberalization of capital markets in the eighties and of the gradual steps into the direction of a monetary union, an institutional set-up is created which is favourable to interregional mobility of capital and labour. As a matter of fact, economic conditions are then created that are similar to those prevailing in large federations such as the USA or Canada, in which interregional convergence is much more outspoken as compared to the actual situation in the EC.

From this perspective, the question arises whether convergence will accelerate or not. But even if the answer to this question is positive from a long-run perspective, asymmetric country and/or regional shocks may hamper the convergence process.

In our opinion, a crucial and often overlooked constraint on the interregional convergence process in an EMU relates to labor market characteristics, in particular to the flexibility of wages, in response to asymmetric region- and/or country-specific shocks. It is

therefore relevant to focus on the role of regional labor market performance in the framework of the EMU. Before, current views on the divergence-convergence issue will be summarized in a nutshell.

3. CONVERGENCE VS DIVERGENCE FROM A THEORETICAL PERSPECTIVE

3.1. Economic Integration and Convergence

There is a long-lasting debate in economics on whether integration between countries leads to convergence or divergence. Traditionally, the convergence school builds on the *factorproportions theory* in international trade theory. This theory views cross-country differences in factor endowments as the main reason for factor income differentials. Countries are unequal because they possess different relative amounts of productive factors needed in the production process. These differences give rise to divergent factor and goods prices which are eliminated by the process of trade integration.

The intuition behind the convergence result 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 although it is moving into that direction. The fundamental insight of factorproportions trade theory is that economic integration tends to restore the situation of an integrated equilibrium. There are two reasons for this result.

Firstly, economic integration enhances factor mobility. In this context, the removal of capital barriers in the EC is of important. In an integrated financial area, capital moves freely to obtain the highest possible return and an equalization of capital returns becomes more likely. The case for labor mobility is less clear in the Community. It is

well-known that the degree of labor mobility is small in most EC countries. Mutual recognition of educational degrees and policy actions aimed at promoting the flow of persons may change this but we do not expect labor mobility to become anywhere comparable to the US situation soon.

Secondly, trade integration between countries and regions leads to similar effects as factor mobility. Indeed, trade is a substitute for imperfect factor mobility in the factorproportions 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 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.

The idea that trade specialization based on comparative advantage leads to convergence remains valid in a surprising number of trade models. Economies of scale in production, monopoly or oligopoly power and product differentiation can be readily integrated in the factorproportions framework. Melvin (1989) extends the principle to endowment-based trade in services. Even in growth models with endogenous innovation relative factor endowments matter. 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 (1989) 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."

Convergence along these lines requires that trade between countries and regions with different factor endowments will expand in the years to come. At this stage, there appears to be room for trade expansion of this type between the peripheral countries (Portugal, Greece, Spain and to a lesser extent Ireland). If EMU helps to achieve this through exchange rate stabilization and the removal of nontariff trade barriers, it will help to close the gap between the lower and higher income regions within the Community.

Recent *international trade models of multinational corporations* point to the role of direct investment in fostering convergence within an integrated area. In these models, multinationals are a vehicle for transacting services across borders. In the work by Helpman and Krugman (1985, chapters 12 and 13) and Grossman and Helpman (1991, chapter 7) multinational corporations lead to specialization based on comparative advantage in circumstances where trade alone would not have achieved convergence. This is due to the fact that different stages of the production process can be separated. EC multinationals move the assembly process to the peripheral regions in order to exploit lower labor costs. The headquarters and research departments remain located in the core regions to take advantage of the availability of highly skilled professionals and advanced technology. As in factorproportions theory, regional specialization takes place based on relative factor abundance.

The recently developed *new growth literature* (Grossman and Helpman (1991) views integration as contributing to higher economic growth. 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. 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. .

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.

3.2. Economic Integration and Divergence

Opposing the "convergence school", there is a well-established line of thinking that relates economic integration to increased divergence. This divergence view goes back to earlier work in development theory by Myrdal (1957) and in regional economics by Perroux (1957). Here, we review some of the recent contributions to the divergence hypothesis.

Markusen (1983) studies trade in a model that assumes identical relative factor endowments across countries. He thus varies what is assumed constant in factorproportions 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 factorproportions 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 factorproportions 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 equalised. In the Markusen framework, countries do not converge as a result of integration.

Krugman (1991) analyzes agglomeration effects in a regional context. He develops a multi-region framework with increasing returns to scale, mobile labor and a "footloose" manufacturing sector. The choice of location of the manufacturing sector is simultaneously determined by the size of the economies of scale, transport 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 labour moves into the region, demand will expand which will attract more firms and lead to a "circular" process of agglomeration and regional divergence. 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.

In the framework of an integrating economy, reductions in interregional transaction costs in a broad sense, including transportation costs and barriers to trade, 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. Integration

economies may therefore be characterized by persistent and even increasing differences of income levels.

What do we learn from the convergence-divergence debate for the creation of EMU in the Community ? Basically, convergence among EC regions is not an assured outcome of further integration and should not be taken for granted. Even if regional convergence occurs, it will not necessarily be homogeneous across regions. An overall trend of increasing convergence could well go together with worsening prospects for specific regions. Moreover, convergence is a long-run outcome and takes time. Economic and Monetary union is supposed to be achieved within the next decade or so. For this reason, regional aspects of the transition to EMU become important. To be more precise, one wants to avoid that the move to EMU would be undermined by a steep increase in unemployment rates of specific regions and/or countries. This requires a sufficient degree of regional flexibility to changing economic conditions. It is to this issue of flexibility that we turn now.

4. REGIONAL ADJUSTMENT IN THE EMU

4.1. Introduction

Whereas in the previous section the long-run aspects of the convergence-divergence issue were discussed, this section focuses on the regional adjustment processes that take place when regions are hit by demand or supply shocks. The impact of permanent or temporary shocks on the interregional disparities is most relevant, as can be illustrated by the increasing divergence in the EC during the second half of the seventies and the early eighties when adverse supply and demand shocks occurred.

The question to be answered is then : what are the additional constraints imposed by the EMU on regional adjustment processes resulting from demand or supply shocks ? Or, put differently, will the regions of the EC have to bear additional costs of adjustment to shocks in the EMU and if so, will these costs widen the interregional disparities ?

In order to answer this question, the regional adjustment processes that take place within a country following nationwide or region-specific shocks will be analyzed first.

Secondly, the additional constraints on regional adjustment that may arise in an EMU will be discussed.

4.2. Regional Adjustment in the Nationwide EMU

Regions within the same country are part of the nationwide EMU, which in addition coincides with the national or federal fiscal jurisdiction. In this EMU, the regions are linked by an overall and one-to-one fixed exchange rate system. Labor, physical and financial capital and goods face no institutional obstacles to interregional mobility.

In this setting, regional adjustment to nationwide symmetric or region-specific asymmetric demand or supply shocks can be analyzed along the lines of Mundell (1961) and Ingram (1973).

Suppose first that a nationwide negative demand or supply shock occurs. The difference between these shocks is that a demand shock has a permanent impact on the price level, whereas a supply shock affects both price and output levels permanently. However, if nominal wages are insensitive to unemployment, a demand shock will affect output in a permanent way.

Assume e.g. that as a consequence of a restrictive budgetary policy or of declining export markets, real aggregate demand decreases nationwide. As a result, the price level will decline and unemployment will increase in all regions. If some degree of downward nominal wage flexibility exists, output will eventually be restored at its original long-run equilibrium level. Under these rather restrictive assumptions, the demand shock will leave the existing interregional disparities unaffected. A similar reasoning holds for a symmetric adverse supply shock with the exception that the reduction of output and the increase of unemployment may differ regionally according to the price elasticity of regional demand for output.

Two underlying crucial assumptions need to be examined more closely.

- 1) First, the assumed symmetry of the impact of the demand-supply shocks is highly improbable if regional product specialization is the rule. In this case, as pointed out by Kenen (1969), relative output prices will behave differently if shocks occur. As a consequence, the divergence of regional per capita output levels and unemployment rates will in general increase.

Empirical research on the degree of specialization in the EC reveals that intra-industry trade, in particular for the manufacturing sector, is the dominating feature (Emerson et al., 1992, p. 142-144). Except for Portugal and Greece, the share of intra-industry trade in intra-Community trade has been estimated to vary between 57 % and 83 % in 1987. Since intra-industry trade is characterized by economies of scale and product differentiation, increasing market integration is expected to result in intra-industry specialization. Hence, the prediction is that sector-specific shocks in the EC of 1993 and thereafter will be of a more symmetric type with respect to the different countries. However, this prediction has been contested by the new trade theory, which was discussed in section 3, according to which the completion of the internal market may imply greater regional specialization and therefore lead to an increasing asymmetry in the demand disturbances (see e.g. Krugman, 1991).

Unfortunately, there is no available evidence on the symmetry-asymmetry issue, on the basis of an analysis of the historical demand disturbances at the *regional* level.

As for demand shocks at the country level, Bayoumi and Eichengreen (1992) find some evidence that they are more correlated across the EC "core" countries (Germany, France, Belgium, the Netherlands, Luxembourg and Denmark) as compared to the EC "periphery" (the UK, Italy, Spain, Portugal, Ireland and Greece). This finding suggests that, as far as demand shocks resulting from the market are concerned, intra-industry specialization is more outspoken in the EC "core" countries as compared to the "periphery". The same conclusion holds for supply shocks that apparently have hit the EC "periphery" in a more asymmetric way.

The conclusion that can be drawn from the available empirical evidence is that demand and supply shocks will in the near future lead to an increasing divergence between the EC "core" and "periphery". The tendency towards divergence will however be weakened if the lagging regions in the "periphery" are able to participate in the ongoing process of product differentiation and to attract investment in the sectors that

actually are characterized by an intense intra-industry trade (such as tobacco, office machinery, motor vehicles, petroleum and chemical products, metal products ...).

- 2) A second reason for asymmetric impacts of demand-supply shocks is related to regional differences in labor market performance. These differences cover a wide range of labor market characteristics such as : the sensitivity of nominal wages to unemployment (i.e. nominal wage flexibility) and to inflation (i.e. real wage rigidity) and the level of wage bargaining (centralized vs. decentralized). Since the inflation sensitivity of wages as well as the wage bargaining features are to a large extent determined at the national level, i.e. by a nationwide institutional setting, one may narrow the scope of the analysis to regional differences in nominal wage flexibility as defined above.

Nominal wage flexibility may display a regional dimension because of regional differences in the vacancy-unemployment relationship, in search behaviour, in union power ... Assume then e.g. a symmetric adverse supply shock that raises input prices or lowers labour productivity as was the case during negative the oil shocks in the seventies. As a consequence, output levels will fall in all regions and unemployment will increase. The competitive position of regions that display a relatively low degree of downward nominal wage flexibility deteriorate vis-à-vis the other regions. Lacking the exchange instrument, the fall in output and the increase of the unemployment level will be more severe as nominal wages are downward rigid. Moreover, the short-run stagflationary impact of the shock may have long-run effects if the emerging pockets of unemployment lead to a decline in human capital of the unemployed.

Whether interregional disparities increase or not, will depend in a crucial way on the wage flexibility of the lagging regions. On prior grounds, there is no reason why nominal wages would be more rigid in the lagging regions as compared to the prosperous ones. On the contrary, unions may be less organized in the lagging regions, in particular if they have a dominant agricultural sector.

However, an important factor of nominal wage rigidity at the regional level may result from interregional spill-over effects in wage bargaining. If wage increases in the more prosperous regions spill over to the lagging regions, the link between the regional wage level and regional labor productivity will be distorted and symmetric shocks will enhance interregional disparities. From this point of view, wage bargaining at the nationwide sectoral level is less favourable to the convergence of regional disparities as compared to regionally decentralized wage bargaining (Calmfors and Drifill, 1988).

Adverse asymmetric shocks that hit the lagging regions will increase the interregional gaps depending on the degree of regional wage flexibility and the kind of shock. The probability of asymmetric shocks increases as the lagging regions are less specialized in intra-industry trade. The available evidence points in this direction, as has been mentioned above. Therefore, the performance of regional labour markets as well as the pattern of product specialization play a key role in the convergence-divergence issue.

4.3. Regional Adjustment in the European EMU

The regional adjustment processes sketched above are typical for a pre-EMU stage since the regions within the national economies are part of the nationwide EMU. The question remains to what extent regional adjustment to shocks will be modified in the future EMU at an EC-scale.

First, it should be noted that the observed cross-country asymmetry of shocks in the "EC-periphery" suggests that these countries have engaged less in intra-industry trade. In particular, intra-industry trade is less developed in the low per capita income countries such as Portugal and Greece (Emerson et al., 1992, p. 222). To the extent that this finding may be projected at the regional level of the "EC-periphery", the regions of the peripheral countries will be more vulnerable to EC-wide shocks, such as the present slowdown of EC-growth. An important corollary may then be inferred from the theory of optimum currency areas (see e.g. Mundell, 1961). In an EC-wide monetary union, the "periphery" would lack the exchange rate instrument to cope with asymmetric shocks.

Hence, an EC-wide fixed exchange rate system would put an excessive burden of adjustment on the "periphery" and would therefore be less efficient as compared to autonomous national exchange rate policies. A "two-speed" monetary integration would therefore be more preferable from the point of view of the "periphery". Alternatively, an EC-wide monetary union would impose an excessive burden on the "core" countries in the form of additional transfers to the "periphery".

Analogously, region-specific shocks in the "periphery" as a consequence of e.g. regional product specialization, cannot be coped with by national monetary policies in an EC-wide monetary union. In addition to the existing national transfer programs, e.g. in the form

of unemployment compensation, the lagging regions would have to draw on transfers from the "core"-countries in order to maintain their relative income position.

The vulnerability of the lagging regions to shocks is moreover enhanced by their unfavorable initial conditions. These conditions refer to the endowment with human, physical and financial capital, with physical and social infrastructure and to attitudes of policy-makers and economic agents towards innovation. In addition, the fiscal stance of countries such as Greece, Italy and Ireland remains highly unstable. These "distortions" need to be remedied for at the same time as the shocks resulting from the internal market have to be absorbed.

Mobility of labor and both physical and financial capital, either as a substitute or complement of trade have been called for as a way out to alleviate the regional costs of adjustment to the EMU and to enhance the convergence of factor prices (Mundell, 1961; Markusen, 1983).

With regard to labor mobility, the available evidence shows that the migration rate in the EC as a percentage of the US-migration rate, declined from 50 % in the seventies to 25 % in the first half of the 1980s (Emerson et al., 1992, p. 151). Cultural and language barriers impede EC-labor mobility to the extent that region-specific shocks will not be absorbed even if all institutional barriers to mobility would be removed in the internal market.

As for the mobility of capital, the removal of the exchange rate risk in the EMU and the ongoing liberalization of capital flows would undoubtedly contribute to a more efficient allocation of capital inside the Community, which would favor the lagging regions. However, country-specific risks associated with the expected budgetary problems of some countries such as Italy, Greece and Ireland, may persist and hinder the flow of private investment to the the lagging regions inside these countries.

Some important policy conclusions can be derived from the above analysis. First, in view of the pattern of specialization of the lagging regions in the "EC" periphery and of the resulting asymmetry of the shocks, an EC- wide EMU would be less preferable from an efficiency point of view as compared to a "two speed" EMU.

Second, even if some of the "periphery" countries would form a separate monetary union or maintain their monetary autonomy, their unfavorable initial economic conditions at

the eve of the realization of the internal market require specific Community regional policies. These policies should aim at the improvement of their endowment with human, physical and financial capital and with infrastructure in a broad sense. In addition, a Community system of transfers that alleviate region-specific shocks should be designed in order to prevent a widening of the of the interregional disparities. In this way, the social cohesion of the Community will be fostered.

Third, since the internal market and the progress towards stable exchange rates will accentuate regional comparative advantage, the flexibility of regional wages should be increased. This can be achieved by decentralized wage contracts in which region- and firm-specific labor productivity acts as a wage norm. Obviously, a uniform EC-minimum wage would harm the competitive position of the lagging regions.

4.4. A Framework for the Testing of Regional Wage Flexibility

In order to test for the flexibility of regional wages in the EC, the following simple framework may be useful. Assume that the growth rate of the regional wage level w is determined by the growth rate of nominal labor productivity q , by the regional unemployment rate u and by the expected growth rate of consumer prices p_c^e :

$$w = a_0 + a_1 q + a_2 u + a_3 p_c^e \quad (1)$$

with $a_1, a_3 > 0$ and $a_2 < 0$.

Furthermore, the growth rate of the regional output price p equals, assuming a constant rate of non-wage labor costs, the growth rate of wages minus the growth rate of nominal labor productivity plus the percentage change of the mark-up m :

$$p = w - q + m \quad (2)$$

from which it follows that :

$$m = p - w + q \quad (3)$$

A constant mark-up ($m=0$), which implies a constant rate of profitability or a status-quo of the regional competitive position, requires therefore that :

$$p - w + q = 0 \quad (4)$$

On substituting (1) in (4), one obtains :

$$p - a_0 + (1-a_1)q - a_2 u - a_3 p_c^e = 0 \quad (5)$$

Among the alternative combinations of values for parameters and variables that satisfy the "equilibrium" condition (5), the following are interesting from an economic point of view : $a_0 = 0$ and $a_3 = 1$, i.e. no autonomous non-regional determinants of real wage increases and :

$$(1 - a_1) q - a_2 u = 0 \quad (6)$$

Condition (6) implies that $0 < a_1 < 1$ and that furthermore $a_1 = 1$ violates eq. (6) unless $a_2 = 0$. The latter may be feasible if nominal productivity increases and the regional unemployment rate move perfectly together.

An important condition for the maintenance of the regional competitive position is $a_0 = 0$, i.e. the absence of non-regional factors in regional wage formation if the sensitivity of regional wages to inflation is perfect in the long run. National spill-over effects to regional wages will therefore disturb the competitiveness of the region. This implies that e.g. regional productivity shocks should be fully reflected in regional wages. However, the national unemployment rate may have an impact on regional wages to the extent that regional and national shocks that affect unemployment are correlated.

In order to test for the flexibility of regional wages, an equation of the type (1), completed with national variables will be tested empirically for the EC-regions.

4.5. Empirical Evidence on Regional Labor Market Flexibility

The empirical evidence on national labor market flexibility is surveyed in Commission of the European Communities (1990a, chapter 6). Labor markets are less flexible in the EC than in the U.S. and Japan. Among EC countries substantial differences exist in the real and nominal wage response to rising unemployment. Member countries of the European Monetary System show a higher and increasing labor cost elasticity w.r.t changes in the unemployment rate. This may indicate that the loss of the exchange rate instrument is (partially) compensated by enhanced labor market flexibility.

While stimulating, this research focuses entirely on national labor markets and does not address regional dispersion within EC member states. Undoubtedly, regional and national developments are closely correlated. Based on EC regional data for 88 regions, we find correlation coefficients ranging around 0.5 between national and regional changes in unemployment and real labor productivity. Yet, correlation coefficients of this magnitude also suggest that there are non negligible region-specific developments. More, national shocks may have very different regional consequences. To evaluate the degree of regional flexibility, the national labor market studies must therefore be supplemented by an empirical assessment of regional wage adjustments.

For this purpose, we estimated in joint work with Hilde Heens a cross-sectional regional wage equation for the EC-NUTS 1 regions, covering the period 1983-1984. We regressed regional growth in per capita labor income on (i) regional and national unemployment rates of the year before (ii) regional and national changes in the unemployment rate (iii) the growth rate of regional and national average real labor productivity as approximated by percentage changes in regional domestic product per capita (iv) current and lagged national inflation rates (measured by changes in the consumer price index)¹. The regression equation for nominal regional wage growth is specified as follows :

$$w_{ij} = a_0 + a_1 q_{ij} + a_2 u_{ij} + a_3 U_{ij-1} + a_4 q_j + a_5 u_j + a_6 U_{j-1} + a_7 P_j + a_8 P_{j-1} + e_{ij} \quad (7)$$

i : regional index (i = 1, 2, ..., 88)

j : country index (j = 1, 2, ..., 5). The countries covered data : (West) Germany, the Netherlands, Italy, Spain and the UK.

1 There are no data for regional inflation rates.

Furthermore :

- w_{ij} : regional growth rate in per capita labor income
 q_{ij} : growth rate of regional average real labor productivity
 u_{ij} : regional growth of unemployment
 U_{ij} : regional unemployment rate
 q_j : growth rate of national average real labor productivity
 u_j : national growth of unemployment
 p_j : national inflation rate
 e_{ij} : error term

The equation has been estimated using OLS. The results for the regression coefficients are found in Table 2. A star denotes that the coefficients are significant at the 95% significance level. An R^2 of 0.867 was attained. We did other regressions in order to correct for possible multi-collinearity. The results turned out to be very robust.

Table 2 : Parameter Estimates of the Regional Wage Equation

Variable	Parameter Estimate	t-statistic
constant	-0.0325	-0.046
q_{ij}	0.3843*	3.993
u_{ij}	0.3439	1.519
U_{ij-1}	-0.0758	-1.362
q_j	-0.3135	-1.359
u_j	-1.5646*	-2.935
U_{j-1}	0.1406	1.783
p_j	0.4151*	2.404
p_{j-1}	0.5860*	5.024

While preliminary, our regression analysis brings forth several indications that *European Monetary Union can be realized without a significant widening of the regional gap.*

First, we find that regional wages respond to an increase in the national unemployment rate. A one percent increase in the national unemployment rate lowers regional wage growth by 1.6%. This means that at least part of the regional impact of a nationwide increase in unemployment will be mitigated by regional wage moderation. As noted earlier, such a rise in the overall unemployment rate can be triggered by an adverse country-specific shock that in a monetary union cannot be reversed by a devaluation.

Secondly, the growth of regional real labor productivity matters considerably for the evolution of nominal wages. A one percent increase in this variable adds nearly 0.4% to nominal regional growth in labor income. Conversely, trends in national labor productivity do not significantly affect regional wage growth. We conclude that regional labor markets respond to region-specific developments in productivity. Regions with worsening productivity performance react by wage moderation. This helps to avoid part of the induced unemployment problems although we still expect regional unemployment to rise in response to declining labor productivity. As the estimated coefficient is less than one, regional unit labor costs - defined as labor income adjusted for productivity - increase when labor productivity declines. This adversely affects regional competitiveness.

Thirdly, national inflation and nominal wage growth are related. Not surprisingly, we find national inflation to be highly significant in explaining the wage evolution. The degree of regional wage indexation to current and past inflation is respectively 41 % and 59 % which implies that full indexation takes place within two years. This means that surprise inflation can only in the very short run induce real wage moderation. Hence, a depreciation of the exchange rate will only alleviate regional problems when it is accompanied by a strict anti-inflationary policy. If this is not politically feasible, the exchange rate does not constitute a valuable policy instrument for addressing regional problems. Under these circumstances, the fixing of exchange rates in a EMU would have no notable impact on regional problems.

By contrast, our regression results also point to *serious obstacles for a smooth regional convergence in EMU*. Most importantly, changes in the regional unemployment rate exert no statistically significant impact on regional wage growth. As a result, adverse region-specific shocks or the region-specific component of adverse national shocks will lead to unemployment without mitigating wage adjustments. Likewise, wage gains will insufficiently offset the competitive advantage of expanding regions with declining unemployment rate. All of this is reinforced by the fact that levels of national and regional

unemployment do not influence wage growth. There seems to be no tendency for high unemployment regions and countries to be characterised by wage moderation.

These findings are worrisome in the light of Krugman-type agglomeration scenarios. Suppose that the move to fixed exchange rates and fully integrated capital and goods markets initially favors employment in certain regions while causing unemployment of other regions. In the absence of sufficient wage flexibility to regional employment conditions, this initial situation risks to develop in a sustained process ending in a structural divergence between prosperous and lagging regions. In this case, policy initiatives by the Community seem justified.

5. THE COMMUNITY POLICY APPROACH TOWARDS REGIONAL CONVERGENCE

In this section, we discuss Community policies aimed at fostering convergence within the Community². First, we shortly discuss regional policy. Subsequently, we focus on proposals for the creation of a Community-wide stabilization fund that insures against country-specific shocks. Finally, we turn to the EC's social dimension which attempts to eliminate social inequalities across member states.

5.1. Regional policy

Throughout the years, the EC has developed a comprehensive system of redistribution. In addition to the national schemes, the EC Structural Funds, consisting of the European Regional Development Fund, the European Social Fund and the Guidance section of the Agricultural fund, are an instrument of Community redistribution. Structural funds have been doubled in real terms in the last five years and are to attain around 0.3 % of GDP or between 25 to 30 % of the EC budget by 1993. Moreover, the Maastricht agreement foresees the creation of a so-called Cohesion Fund of ECU 2.5 billion which will finance environmental projects and trans-European transport networks in the lower income member states.

² This part of the paper is based on Abraham and Van Rompuy (1992), Abraham (1991), Abraham (1992a) and Abraham (1992b).

The redistributing impact of the Structural Funds on less developed regions in Greece, Spain, Portugal and Italy should not be underestimated. Evidence, quoted in Vanheukelen (1992, p 79), suggests that net transfers to the four poorest regions as a percentage of regional GDP are quite similar to what the pre-unification German *Finanzausgleich* achieved. The effectiveness of the Structural Funds in closing income differentials is less than in the German system but this is primarily due to the larger income gap in the Community.

5.2.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. Proponents of a Community insurance fund argue that countries that face negative shock have the right to expect support from other EC countries. To support this argument the role of regional stabilization mechanisms in existing federal states is emphasized. Using regional data, Sachs and Sala-i-Martin (1990) conclude that the U.S fiscal system offsets about a third of a decline in regional personal incomes relative to the national average. In other words, when incomes in one region fall by 1\$ relative to income in the nation as a whole, the fall in tax payments by that region to Washington, D.C. plus inward transfers from other regions via the expenditure side of the government budget is about 33 cents. Disposable income therefore falls by only 67 cents. With the same data but different econometric methods, Von Hagen (1991) disputes this finding and puts the regional stabilization in the US on less than 10% of the decline in regional income. Goodhart and Smith (1992) find that about 20 % of a loss of primary income in a U.S. state is offset through automatic stabilizers. Finally, Pisany-Ferry et al. (1992) perform simulations with a stylized Neo-Keynesian model and arrive at 17 % of regional stabilization in the U.S.

Evidence for individual EC member states reveals an even higher degree of regional stabilization. Goodhart and Smith (1992) put regional stabilization in the U.K at 34 %. Moesen (1992, p 32) documents the substantial nationally organized transfers from the Flemish to the French-speaking (Walloon) part of Belgium. Pisany-Ferry et al. (1992) simulate that 37 % of a decline in French regional income is compensated by centrally organized redistribution. Their findings for Germany are comparable. According to this study, the difference between the U.S and the EC countries is explained by the absence of a national unemployment insurance system in the U.S. In effect, unemployment insurance and social security contributions play an important role in regional

stabilization. In Germany, interregional grants as part of the *Finanzausgleich* scheme are another influential mechanism of both regional stabilization and redistribution.

In spite of this, the Community at its current stage nor the proposed EMU represent existing federal states where the stabilization function is concerned. National stabilization schemes provide a cushion against temporary or structural set-backs for regions within one country but do not offer insurance against country-specific shocks. Even if the budget proposals of the Delors II package go through, the EC budget is too small to stimulate (restrain) the economy of countries that face a recession (unsustainable boom). Important automatic stabilizers at the national level such as unemployment insurance and social security are not and will not be organized at the Community level in the near future.

Paradoxically, the transition towards monetary union may reduce the stabilization mechanisms currently in place in individual member states. In fact, the blueprint for EMU follows the Delors Report (1989) and chooses for fiscal discipline rather than fiscal stabilization. Budgetary convergence criteria are introduced that are aimed at imposing sufficient fiscal discipline on potential participants in the future EMU. The budget deficit is restricted to 3 % of GDP and the public debt ratio cannot exceed 60 % of GDP. Once EMU is established, an "excessive deficits procedure" applies for countries that do not respect the fiscal criteria. To meet the fiscal standards, countries with precarious budgetary conditions may be forced to cut expenditures even when economic conditions require an active stabilization policy.

It is not clear whether the lack of a Community-wide stabilization mechanism and the fiscal restraint imposed by EMU are sufficient to justify a comprehensive insurance system against country-specific shocks. Such system is proposed by Van Der Ploeg (1991, p 144) who pleads for a European Federal Transfer Scheme (EFTS). In practice, this scheme would operate by transferring income from individuals of one nation to individuals of another nation and replace, to a certain extent, the national unemployment compensation schemes. This EFTS could be financed by a Community-wide tax. It would be budgetary neutral and intertemporally balanced. For now, the chances of such EFTS are slim since member states are not prepared to accept and the Commission is not planning a Community-wide unemployment insurance system. The feasibility of a EFTS is moreover doubtful in view of moral hazard and adverse selection problems. For these reasons, attention has shifted towards less ambitious schemes. The opinions about their feasibility are divided.

Italianer and Vanheukelen (1992) take a positive view. They simulate the effects of a Community stabilization scheme based on asymmetric shocks in unemployment. A member state receives a transfer if the yearly change in the unemployment rate is positive and greater than the average for its Community partners. Each percentage point difference with respect to the Community average implies a monthly payment of one twelfth of 1 % of the member state's GDP. The system is capped by the fact that relative unemployment changes above 2 % are not compensated. With this system an average of 19 % of the shocks in the member states GDP would be stabilized. If implemented between 1984 and 1991, it would have cost 0.23 % of 1990 Community GDP. The size of the transfers would have varied from year to year and no apparent link between relative prosperity and the size of transfer payments would have existed. The authors further discuss a limited stabilization scheme which introduces thresholds for eligibility and acts more as an insurance scheme. This system costs about 0.21 % of Community GDP and achieves a maximum degree of stabilization of 25 %.

Méltz and Vori (1992) are less optimistic. They focus on a EC insurance scheme based on deviations from national reference levels. An EC member state draws from the insurance fund if its unemployment rate or income per capita deviates more from the national reference level than the weighted average of deviations in all EC countries. Based on this criterion, they find a considerable amount of insurable risk in income but not in unemployment shocks. Even the income risk is highly correlated across countries which reduces the interest of income insurance for most countries. Méltz and Vori conclude that redistribution is likely to be a more important issue in the EC than stabilization.

5.3. 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. The Maastricht Treaty creates the legal basis for the recently proposed far-reaching EC directives on working hours, working conditions, part-time work and maternity leave. All those directives have in common that they specify social minimum conditions that have to be satisfied in all EC countries except the United Kingdom which reserves the right to "opt out" of the social dimension.

Most often, the social dimension is defended by pointing to the need for cohesion in a federal Europe. In this view, social minimum norms help to eliminate social inequalities across member states and therefore solidifies European Union. This cohesion argument

for social regulation is supplemented by an economic motivation relying on the subsidiarity principle. Allegedly, countries with lower social protection benefit from an "unfair" labor cost advantage. In its turn, this distortion of competition provokes the socially advanced countries into a competitive lowering of social standards. Minimum norms for social protection are supposed to prevent all this.

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 (1991,1992a) indicates that the impact of raising social protection on production and employment is far from negligible. Abraham considers the impact of various EC social directives which reduce yearly working time in countries with longer working hours. Improvements in social protection thus take the form of reductions in yearly working time. Based on a simple model of imperfect competition, two experiments are analyzed. First, a one percent reduction is applied to the countries with a yearly working time above the EC average (Portugal, Greece, Spain,

Ireland and the United Kingdom) This corresponds to a situation where the EC social norms do not cause major adjustments in social protection in the less protected countries. The second experiment concerns the opposite extreme of a full harmonization to the 1988 EC average of manufacturing yearly working time in the socially lagging countries (with the exception of Spain where comparable data were not available).

For each experiment a distinction is made between a mildly competitive and a very competitive setting in EC product markets. The degree of competition is captured by, σ , the perceived price elasticity of firm demand with $\sigma = 2$ being the mildly and $\sigma = 6.5$ being the very competitive case. Finally, two assumptions about the labor market are made. Table 3 shows the computations for the case where labor income is rigid and does not adjust to changes in employment and production levels. Table 4 presents the results for a clearing labor market where wage flexibility guarantees full employment.

Table 3 points to strong competitive effects of the proposed EC social regulation when labor market rigidities prevent wage moderation. Even in mildly competitive markets, the peripheral countries would suffer manufacturing production cutbacks of approximately 0.6 % in Portugal and Ireland to 0.76 % and more in the United Kingdom, Greece and Spain for every percent reduction in yearly working time. Manufacturing production and employment losses are much more pronounced in very competitive markets and range from 0.93 % to 1.72 % for a one percent reduction in working time. A full harmonization of working time would have dramatic consequences for the manufacturing sector of the countries involved. In very competitive markets, manufacturing output losses in Portugal, Ireland and the United Kingdom would exceed 10 % but also in the mildly competitive case manufacturing output drops by 3.3 % to 6.3 %. Note further that with full harmonization the impact on GDP and aggregate employment cannot be considered negligible any longer.

Table 4 underscores once again the importance of labor market flexibility. Because of wage moderation, part of the production losses are avoided. The contrast between rigid and flexible labor markets is particularly striking in the very competitive case where the absence of labor income adjustments approximately doubles the losses in manufactured output and GDP due to EC social harmonization. In turn, the smaller output reductions in the labor market clearing case are achieved at the cost of a decline in labor income per worker of at least 0.22 % in the mildly competitive case and at least 0.48 % for every percent improvement in social protection.

Table 3: The effects of reductions in manufacturing working time with nominal labor income rigidity (% changes)

	Case 1 : $\sigma = 2$				Case 2 : $\sigma = 6.5$			
	Production in manufac- turing (1)	GDP (2)	Employment in manu- facturing (3)	Aggregate employment (4)	Production in manufac- turing (5)	GDP (6)	Employment in manufac- turing (7)	Aggregate employment (8)
1. Reduction in yearly working time by 1 %								
Greece	-0.89	-0.14	-0.45	-0.08	-1.72	-0.26	-1.45	-0.27
Ireland	-0.60	-0.14	-0.30	-0.06	-1.15	-0.26	-0.97	-0.19
Portugal	-0.57	-0.15	-0.29	-0.07	-1.10	-0.30	-0.93	-0.23
Spain	-0.81	-0.19	-0.41	-0.09	-1.56	-0.37	-1.32	-0.30
United Kingdom	-0.76	-0.17	-0.38	-0.09	-1.46	-0.34	-1.24	-0.28
2. Harmonization of yearly working time to EC average for 1988								
Greece	-3.35	-0.52	-1.68	-0.31	-6.44	-0.99	-5.45	-1.00
Ireland	-6.31	-1.45	-3.15	-0.61	-12.11	-2.79	-10.25	-1.99
Portugal	-5.69	-1.54	-2.85	-0.71	-10.93	-2.95	-9.25	-2.29
United Kingdom	-6.35	-1.46	-3.17	-0.72	-12.19	-2.80	-10.32	-2.34

Source : Own computations.

Table 4: The effects of reductions in manufacturing working time with labor market clearing (% changes)

	Case 1 : $\sigma = 2$			Case 2 : $\sigma = 6.5$		
	Production in manufacturing (1)	GDP (2)	Labor income in manufacturing (3)	Production in manufacturing (4)	GDP (5)	Labor income in manufacturing (6)
1. Reduction in yearly working time by 1 %						
Greece	-0.62	-0.10	-0.31	-0.70	-0.11	-0.59
Ireland	-0.46	-0.11	-0.23	-0.58	-0.13	-0.49
Portugal	-0.44	-0.12	-0.22	-0.57	-0.15	-0.48
Spain	-0.58	-0.14	-0.29	-0.67	-0.16	-0.57
United Kingdom	-0.55	-0.13	-0.28	-0.65	-0.15	-0.55
2. Harmonization of yearly working time to EC average for 1988						
Greece	-2.32	-0.36	-1.16	-2.63	-0.40	-2.22
Ireland	-4.86	-1.12	-2.43	-6.14	-1.41	-5.20
Portugal	-4.43	-1.20	-2.21	-5.67	-1.53	-4.80
United Kingdom	-4.60	-1.06	-2.30	-5.46	-1.25	-4.62

Source : Own computations.

Summarizing, we find that the EC social dimension tends to reinforce the existing core-periphery pattern within the Community, the more as the United Kingdom is likely to opt out. Said otherwise, the social gap is closed at the expense of a widening regional gap.

6. CONCLUDING REMARKS

The convergence-divergence issue in the prospective European monetary union has been approached in this paper both from a long and medium run point of view. In doing so, we distinguished between an across- and a within-country component of regional dispersion within the Community. We provided evidence that both aspects of the regional problem are more pronounced in the peripheral countries of the EC.

As for the long run perspective, it has been shown that according to the predictions of the new trade theory, convergence is not an assured result of the ongoing process of integration in the EC. Even if convergence takes place, agglomeration effects may widen the gap between prospering and lagging regions.

For a smooth transition of the regions to a full fledged EMU, countries and region must cope flexibly with adverse economic shocks. The loss of the exchange rate instrument and national monetary sovereignty may aggravate regional dispersion across countries because the European Community is not a optimum currency area. The peripheral countries in particular, are facing asymmetric shocks and start from more vulnerable initial conditions. In addition, EMU may also aggravate the regional dispersion within member countries where country-specific shocks lead to uneven regional adjustment. This will be the case when exchange rate adjustments were frequently used to absorb such shocks unless regional labour market flexibility is sufficiently high. We present empirical evidence on regional wage flexibility which points to a partial adjustment of regional wage growth to national and regional developments.

In a last of the paper, we shortly reviewed the various Community policies dealing with regional problems in EMU. The EC's regional policy primarily takes the form of a regional redistribution towards the poorer regions in the EC and has been expanded in the last years. A regional insurance fund against adverse country-specific shocks is being discussed but no actual proposals are likely to be put on the table soon. Finally, we

pointed to a potential conflict between increased social protection that fosters social cohesion and interregional convergence in income levels. Unless regional labour market flexibility increases, EC-wide and uniform social regulation will deteriorate the competitive position of the lagging regions and lead to larger regional disparities.

The convergence-divergence issue in the prospective European monetary union has been approached in this paper both from a long and medium run point of view.

As for the long run perspective, it has been shown that according to the predictions of the new trade theory, convergence is not an assured result of the ongoing process of integration in the EC.

In the medium term, a smooth transition of the regions to a full fledged EMU requires a sufficient degree of regional flexibility. Particularly, regional labor market flexibility is required in order to absorb region-specific shocks. Empirical evidence indicates that national and regional unemployment do not exert any significant impact on wage moderation. The insensitivity of regional wages to unemployment increasing shocks will therefore impede regional convergence.

It has also been shown that even if monetary integration proceeds in a two-speed fashion, Community regional policy instruments need to be strengthened in order to prevent divergence in view of the adverse shocks that may affect the lagging regions as a consequence of the completion of the internal market.

Finally, the potential conflict between increased social protection that favors the social cohesion and interregional convergence has been demonstrated. Unless regional labor market flexibility increases, EC-wide and uniform social regulation will deteriorate the competitive position of the lagging regions and lead to larger regional disparities.

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