IS THE MEMBERSHIP IN THE EU GOING TO INDUCE REGIONAL CONVERGENCE?

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ABSTRACT: The forthcoming Eastern Enlargement of the EU will trigger static and dynamic effects. Due to the heterogeneous regional structure of the acceding states, the effects are bound to be asymmetric. It applies in particular to relatively large and regionally diversified economies as Poland. The membership in the European Union will affect general development patterns both at the aggregate and regional level. It is also likely to induce regional convergence or divergence.

The experience of the 1990s shows that economic transformation and gradual economic integration have led to a significant rise in regional inequalities in Poland. The accession to the EU is bound to increase regional inequalities further at least in short to medium run which will constitute a major challenge for both supranational and national equalization-oriented regional policy. Furthermore, the likelihood of convergent regional development in Poland is rather questionable even in the long run.

KEYWORDS: economic integration, regional inequalities

JEL CLASSIFICATION: F15, R11, R12.

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INTRODUCTION

Since the Single European Act (SEA) the issue of economic cohesion has become one of the most prominent areas of EC/EU policy. Its general importance has been reflected in growing expenditures on structural policy in absolute and comparative terms (share in the total spending from the common budget). Art. 158 of the Treaty establishing the European Community (former Art. 130a)\(^1\) introduced by the SEA put emphasis on two aspects: economic and social cohesion.

According to Szlachta (2000), cohesion has three general dimensions. Economic cohesion reflects the scale of disparities in economic development between the Member States and their regions. Social cohesion reflects the magnitude of discrepancies in the social situation of Member States and regions. Moreover, finally, the spatial cohesion reflects the accessibility of individual Member States and regions.

As the process of economic integration in Europe progresses (deepens and widens), the significance of economic and social cohesion increases as regional disparities can negatively affect common policies. The most prominent example is the economic and monetary union (EMU) and the management of the monetary policy in a case of significant asymmetric demand/supply shock\(^2\).

The economic integration of Polish economy with the EU has advanced significantly since the outset of economic transformation and signing of the association agreement\(^3\). Looking from that perspective, the forthcoming enlargement of the EU should be perceived as a new and advanced stage of the process that is likely to cause static (short-term) as well as dynamic (long-term) effects both in the existing Member States and the acceding economies.

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\(^1\) “In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions or islands, including rural areas” (emphasis added).

\(^2\) Summary of OCA discourse in Wojnicka (2002).

\(^3\) In order to become conscious of the extent of actual level of market integration with the EU we should take into account the size and structure of Polish trade flows – the EU constitutes around 70 per cent of both Polish exports and imports. According to the statistics of the Polish Agency for Foreign Investment (PAIZ) on the inflow of FDI’s - approx. 67 per cent of the total FDI inflow to Poland (till 31 December 2000) originated from the EU.
One of the most prominent features of economic development in Poland in the 1990’s was a rise in regional inequalities. Regions showed different reaction patterns to evolving external conditions as well as to economic transformation that required significant adjustments (various impulse-response functions). Therefore an important question has to be raised: Will the accession to the European Union result in deepening or diminishing regional inequalities in Poland?

SOME THEORETICAL CONSIDERATIONS

According to the classical theory of economic integration (e.g. Viner 1950, Meade 1955), the process of economic integration will lead in the majority of cases to positive outcomes in terms of improved general welfare. In short, the positive result depends on the supremacy of welfare-improving – trade creation effects over welfare-diminishing - trade diversion effects. The classical theory, however, restricts its analysis only to trade-related aspects, which by necessity have short-term nature. More sophisticated analysis, however, should take into account long-term or dynamic effects in their temporal, sectoral and regional dimensions.

Owing to significant progress made in economic modeling (e.g. increasing returns to scale or imperfect competition), new models of economic integration try to determine and assess dynamic effects of the process. One of the most characteristic features of the new models of economic integration is the incorporation into their framework of endogenous growth dynamics as well as spatial dimension. The advancement made in these areas of economic modeling allows for improved determination and estimation of potential regional effects (e.g. specialization patterns, rise or fall in regional inequalities) and is likely to affect the convergence-divergence discourse greatly.

Probably the most prominent advancement in economic integration modeling in the 1990s could be attributed to models by Rivera-Batiz and Romer (1991), Krugman and Venables (1993) or Baldwin and Forslid (1999). Rivera-Batiz and Romer model an endogenous integration process in which R&D sector and technology transfer play a major role. Krugman and Venables concentrate on the evolution of industrial localization patterns within an integrated area. Finally, Baldwin and Forslid merge new growth and new economic geography theories to determine potential scenarios of regional economic development.
within an integrated area with emphasis put on emergence and subsequent evolution of the core as well as peripheral areas.

Recognizing the role neoclassical models have played in the understanding of economic integration, we should remember that they were based on a set of specific assumptions. New models of economic integration, which released some of the assumptions, lead to a conclusion that the positive outcome of economic integration is not as definite as the standard model had previously anticipated (Brodzicki 2001). As the outcome depends on many endogenous as well as exogenous factors, many complex scenarios are possible.

Furthermore, if actual heterogeneity of regional economic structures is taken into account, it seems plausible that asymmetric rather than symmetric effects of economic integration are the rule. In many scenarios, economic integration will lead to severely asymmetric outcomes in which positive effects concentrate in some regions of an integrated area (the core) while adverse consequences accumulate in others (peripheral areas). Therefore, the more heterogeneous regional structure of an economy before an integrated area is created, the greater is the possibility of asymmetric short-term and long-term effects.

The forthcoming Eastern Enlargement of the European Union is bound to cause significant asymmetric effects. It applies in particular to relatively large and regionally heterogeneous economies as Poland. It should be considered as a major challenge both to regional and general economic policies in the acceding states as well as at the supranational or community level.

**ECONOMIC INTEGRATION AND CONVERGENCE**

Does economic integration induce regional convergence? To find an answer to the problem, we have to start by defining what we mean by convergence.

The literature of the subject contains many definitions of economic/regional convergence. We can distinguish convergence in income levels as well as convergence in growth rates (e.g. Capolupo 1998). These concepts date back to the birth of neoclassical growth theory. The theory attributed to Solow (1956) and Swan predicted that homogenous economies should

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4 For example the analysis of short-term effects of NAFTA for Canadian regions by Krueger (1995) proved that the static or short-term trade effects could be highly asymmetric with some regions experiencing dominance of trade-diversion over trade creation. Hanson (1999) carried out an empirical analysis of industry localization in Mexico proving that within an integrated area significant relocation of economic activity can take place within a relatively short period of time.
converge to the same level of per capita income regardless of the initial conditions. In the framework of stringent neoclassical assumptions the growth rates of income per capita as well should converge to a steady-state determined only by the exogenous technological progress. It is important to stress that in the neoclassical framework the economic policy could affect economic growth only in the transition period to the steady-state with no impact on the long-term growth rates. Convergence, in that case, would be automatic.

It is further important to distinguish absolute (unconditional) and conditional convergence. If the neoclassical assumption of homogeneity of economic structures holds, all economies will converge to the same steady-state. We call this process absolute convergence. However, in reality, economies across states and even within individual states at the regional level differ vigorously and thus clearly the condition of similar economic structure does not apply. In that situation, economies will gradually converge to their own steady-states. We call this process conditional convergence.

Furthermore, if we observe a pattern of development in which poorer economies grow faster than the wealthier ones or in other words there is a negative relation between the growth rate of income per capita and the initial level of income, we say that there is \( \beta \)-convergence. If in turn, we observe that the dispersion of real per capita income across groups of economies falls over time we say that the \( \sigma \)-convergence occurs. According to Sala-i-Martin (1996:1329), \( \beta \)-convergence is a necessary precondition for \( \sigma \)-convergence.

The economic convergence within particular regional integration blocks can be evaluated at different levels of spatial aggregation (supranational, national or regional). We should raise here an important question - is there empirical evidence of convergence in the European Union? Many studies have been performed. However, they bring contradicting results.

In a seminal paper, Sala-i-Martin (1996) provided evidence for \( \beta \)-convergence for 90 regions in Europe (1959-1990) in Germany, UK, France, Italy and Spain using both long-run single regression methods as well as panel estimates. The author suggests that in general economies tend to converge at a relatively slow speed of about two per cent per year. Furthermore, basing on the observation that speeds of convergence were surprisingly similar across data sets, he made a policy conclusion that strongly favors augmented neoclassical
growth models\textsuperscript{5}: “public policy plays a very small role in the overall process of regional convergence” (Sala-i-Martin 1996:1342).

Neven (1995) assessed regional convergence regarding output per capita in the European Community for the period of 1975-90 using three alternative methodologies. His study of β- and σ-convergence shows that there are different patterns of convergence across sub-periods and subsets of regions. One interesting feature of the study is that the distinction between northern and southern regions of the EC/EU could be more relevant than the “standard” perception of the core-periphery divide.

Finally, a recent study by Puga (2001) utilizing a somewhat different approach (decomposition of regional income equalities with the Theil index into inequalities across states and inequalities across states within each country) suggests that despite considerable regional policy expenditures, regional income inequalities within the EU persist. The per capita income inequalities have fallen between the Member States. However, inequalities between regions within each State have risen.

The empirical studies clearly do not bring a conclusive answer to the relation between economic integration and regional convergence. According to Gawlikowska-Hueckel, there are clear signs of regional convergence in the EU in times of general prosperity – in “difficult times” the regional economies, due to differences in their underlying economic structures, react differently so that the tendency towards greater regional convergence is temporarily interrupted.

If economic integration induces regional convergence, it should also induce economic growth through accumulative effects. In fact, if this is the case, potential acceleration of long-term per capita growth rates should be perceived as a major advantage of accession to the EU. Empirical studies, however, once again bring about contradicting results. According to some studies (e.g. Henrekson et al. 1996) European Integration had a significant and positive effect on economic growth. Other studies (e.g. Vanhoudt 1999\textsuperscript{6}), in contrast, state that there were no growth effects associated with the EU membership. Empirical studies are

\textsuperscript{5} Augmented neoclassical growth models in contradiction to standard neoclassical growth model define capital broadly (apart from physical capital they also take into account human capital) so that the capital share rises to 0.7 – 0.8 instead of 0.3.

\textsuperscript{6} Vanhoudt argues that due to scale effect the expanding scale of the EC/EU economy should in conformity with the principles of the endogenous growth theory increase the long-run growth rate of per capita income.
therefore inconclusive. It is important to stress once again that according to neoclassical
growth theory, economic integration, like any other change in economic policy, cannot
induce long-run growth effects (Stolpe 1998). The new growth theory, in contrast, suggests
that economic integration does affect long-term growth rates and thus “the accession of a
relatively poorer economy to the common market should bring it long-term growth
advantages” (Orłowski 1998:75).

GENERAL CONVERGENCE SCENARIOS

The hitherto experiences of the present Member States of the European Union in relation to
convergence, as Orlowski (2000:133) appropriately puts are rather “inconclusive”. Figure 1
presents the evolution of GDP per capita in PPS of selected Member States in the period
1960-2002 in relation to EU-15 average. Out of six countries, two exceeded the EU-15
average at the time of accession; the rest were relatively poorer. The most prominent
feature is a clear convergence of Ireland, which experienced accelerated growth since the
mid-80s and rather substandard performance of the rest.

Keeping in mind that the first three enlargements of the EU took place over a period of 13
years (from 1973 to 1986) and thus that both external conditions and the advancement of
the European integration process at the moment of accession differed, it would be
interesting to compare the “convergence experience” record of selected Member States
before, around and after the accession in order to draw some conclusions on possible
convergence scenarios for Poland.

Figure 2 shows the evolution of GDP per capita in PPS in relation to EU-15 average in the
selected Member States in the period -10 to +15 years from accession. The clear difference
in comparison to the Figure 1 is an apparent “smoothness” of curves in all cases. To make
the patterns of convergence more evident, we assume that at the year of accession (A) the
level of convergence to the EU-15 for each economy is equal to 100. Basing on this
assumption we recalculate the data to obtain “convergence scenarios” for the pre- and post-
accession stages (Figures 3 and 4 accordingly).

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It is evident from the Figure 3 that all six economies experienced higher convergence to EU-15 average in GDP per capita four years before the accession that at the moment of accession. The United Kingdom, Denmark, Portugal, and Greece experienced relatively violent changes in the pre-accession stage in contrast to Spain. On the whole, all acceding countries experienced a relatively similar pattern of changes. Accession to the European Community (now EU) made the picture more complex (Figure 4). Only three countries that are Portugal, Spain, and Ireland, managed in the period of 15 years after accession to improve their “convergence record” in comparison to the moment of accession. The most prominent change was in the case of Portugal with Spain and Ireland having similar experiences. None of the other three states managed to exceed the level of convergence from the moment of accession in the same period. The fall was most significant in the case of Greece.

What conclusions could we draw from this significantly biased analysis? First of all, we have to note that all scenarios are possible - both positive and negative, and that some forecast could be overoptimistic (e.g. Rada Ministrów 2000). Furthermore, both the actual “convergence scenario” and the costs-benefits analysis of the accession in short to medium run will depend mainly on two factors: the actual macroeconomic policy (see also Orłowski 1998, 2000) and external conditions (for instance occurrence of severe supply or demand shocks). In the long-run, the most prominent factor will be the adequate or inadequate policy of the national government.

**Convergence or divergence?**

As the above analysis has anticipated, there are many possible scenarios of convergence of Poland to the EU-15 (EU-25) GDP per capita average in the future. If the external conditions allow and the internal policies are adequate, Polish economy has a potential to return to the path of relatively rapid development (that is exceeding the growth rates of the wealthiest economies of the enlarged European Union by 2-2,5 percent). It would allow for a moderate speed of convergence to the EU average in the medium to long-run. However, we should take into account that due to inadequate level of preparedness to accession on the part of majority of economic agents in Poland, a post-accession shock of unknown magnitude and

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8 The Report (Rada Ministrów 2000) forecasts that the accession to the EU could rise the long-term growth rate by 0,2-1,7 per cent on annual basis dependent on the actual economic policy.
duration is feasible – it is often stressed that the potential costs of accession will concentrate in the short to medium run, while the benefits will appear in the medium to long-run. Taking that into account, we have to acknowledge the possibility of short-term divergence in the first years after accession.

Is the membership in the European Union going to induce regional convergence in Poland? Basing on the experiences of past enlargements, eclectic approach to the findings of both theoretical as well as empirical research and knowledge of regional development considerations in Poland we have to acknowledge that there is no clear-cut answer to this problem. However, it seems that the path of regional development in Poland will be divergent at least in the short to medium run. This is based on the following factors:

- regional inequalities in Poland are both persistent (the regional development patterns show features of path-dependency) and significant (see Table 1, Maps 1 and 2);
- economic transformation of the 1990’s which was accelerated by the catalytic influence of gradual economic integration with the EU resulted in a clear rise in regional inequalities in Poland – the evolution of standard deviation of (log) regional income per capita in the period contradicts the σ-convergence and point clearly to σ-divergence (see Figure 6);
- the actual costs of membership will clearly have an asymmetric distribution in space – this applies in particular to the areas which are bound to be most costly – introduction of the Common Agricultural Policy and introduction of stringent environmental protection standards (for instance the present structure of employment in NUTS-2 regions (see Figure 5) clearly demonstrates that the most vulnerable to the introduction of the CAP are the Eastern regions of Poland which in general are underdeveloped and presently suffer from structural unemployment) – the costs are therefore likely to be significantly biased towards the underdeveloped regions,
- the benefits of the integration are likely to have an asymmetric regional distribution as well – it is likely that the distribution could be similar (e.g. regional distribution of the FDIs inflow) to the pattern observed in the second part of the 1990s;
- it seems that the actual introduction of common regional policy in Poland is likely to encounter significant problems at least in the short to medium run due to the limited
absorptive capacity of regions and bureaucratic bottlenecks (the absorptive capacity is liable to improve with time following the “learning-curve”-like pattern).

**CONCLUSIONS**

The European regional and structural policies have an explicit aim of reducing regional inequalities. However, despite significant regional policy expenditures from the common budget, the regional inequalities in the European Union have increased and not decreased in many respects (Puga 2001). In contrast to the enlargement of 1995, the forthcoming Eastern enlargement will constitute a major and in many terms an unprecedented challenge to the regional policy of the European Union. The new union will not only be relatively poorer regarding an average income per capita, but regional inequalities within its vast borders will escalate. The heterogeneous economic structure will directly or indirectly influence all common policies. Furthermore, the scenarios of the self-reinforcing core-periphery divide as anticipated by some models of economic integration may become the prime concern in the EU.

The accession to the EU is bound to cause regionally asymmetric effects. It applies especially to regionally heterogeneous economies. Economic integration is bound to increase existing regional inequalities in Poland that were accentuated in the 1990s by a parallel process of economic transformation and integration. Regional inequalities will increase at least in short to medium run. In the long term, several scenarios are possible depending on many exogenous and endogenous factors.

According to some authors (e.g. Bergs 2001), the equalization-oriented regional policy could have adverse effects regarding lost competitiveness and reduced growth rates. Therefore, effects of the introduction of common regional policy in the CEECs should be reviewed some years after accession to improve its effectiveness.
REFERENCES


Figure 1 GDP per capita in PPS (EU-15=100) in selected MS in the period 1960-2002

Source: Based on EC(2001).
Figure 2 GDP per capita in PPS (EU-15=100) in selected MS in the pre- and post-accession period in selected MS

Source: Based on EC(2001).
Figure 3 Pre-accession convergence scenarios (the level of convergence to EU-15 GDP per capita in PPS level at the moment of accession = 100)

Source: Based on EC (2001).

Figure 4 Post-accession convergence scenarios (the level of convergence to EU-15 GDP per capita in PPS level at the moment of accession = 100)

Source: Based on EC (2001).
Table 1 GDP per capita in PPS as a percentage of EU-15 average

<table>
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<th>Voivodships</th>
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<th>1998</th>
<th>1999</th>
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<td>43,8</td>
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Source: Own calculations based on GUS and European Commission; *EC 2002 data – “Rzeczpospolita” Nr 29/2002 from 04.02.02.

Figure 5 Employment structure in Polish regions in 1999

Source: Own calculation based on GUS.
Figure 6 Standard deviation of (log) GDP per capita of Polish voivodships in the period 1995-1999

Source: Own calculation based on GUS (2001).
Map 1 GDP per capita in PPS as a percentage of EU-15 average in 1999

Source: Own calculations based on GUS (2001).
Map 2 GDP per capita in PPS as a percentage of EU-25 average

Source: Based on Table 1.