

AccessLab

Regional Labour Market Adjustments in the Accession Candidate Countries

Workpackage No. 7

Jan Fidrmuc (ZEI)
Peter Huber (WIFO)

Drawing Conclusions and Deriving Policy Implications

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Deliverable No. 16

Jan Fidrmuc (ZEI)
Peter Huber (WIFO)

Assistance: Maria Thalhammer, Andrea Hartmann, Andrea
Grabmayer

Project Partners:

WIFO - Austrian Institute of Economic Research (Lead)
CPB - Netherlands Bureau for Economic Policy Analysis
DIW - German Institute for Economic Research
EI - Hungarian Academy of Sciences - Institute of Economics
IZA - Institut für die Zukunft der Arbeit
UCL/SSEES - University College London - School of Slavonic and East European Studies
ZEI - Centre for European Integration Studies
ZEW - Centre for European Economic Research

AccessLab

The 5th framework programme research project ACCESSLAB researches the capability of candidate countries' regions to deal with asymmetric shocks. Its goal is to provide analysts and policy makers with research results relevant to the process of enlargement. The project takes a broad and comparative view of labour market adjustments to address these issues. It examines the topic from both a macroeconomic and microeconomic viewpoint. It considers different adjustment mechanisms in depth and compares results with the European Union. It draws on a) the experiences in transition countries in the last decade, b) the experience of German integration and c) the experiences of border regions to gain insights on the likely regional labour market effects of accession of the candidate countries.

Web Page: <http://accesslab.wifo.ac.at/>

e-mail: huber@wifo.ac.at

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Regional Labour Market Developments in CEE candidate Countries and New member States: Empirical Results and Policy Implications for an enlarged Europe

**Peter Huber,*
Austrian Institute of Economic Research,
Arsenal Objekt 20,
A-1030 Wien,
Austria.**

E-mail: huber@wifo.ac.at

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Abstract

Over the past one and a half decades the new Central and Eastern European member states among the EU countries as well as the candidate countries experienced significant structural change due to the transition to a market economy and increasing integration with the world economy. One of the consequences of these changes was a substantial increase in regional disparities. Starting from a situation of an extremely equal distribution of economic activity as measured for instance by employment rates and wages during socialism, these economies developed regional disparities which parallel or even exceed those of many European economies.

This development raises a number of issues relating to the causes for regional disparities, the efficiency of labour market mechanisms such as wage flexibility, migration and new firm creation in equilibrating regional labour markets and appropriate policies to deal with the uneven development of regions. Assessing the differences and similarities in regional labour market conditions in transition countries, as well as the ability of labour markets to deal with regional disparities, is thus of primary importance from an economic point of view, because regional mismatch of workers and work opportunities may be a cause of high and persistent unemployment in some countries. Thus policies designed to enhance regional adjustment may be an important contribution to combating national unemployment. Analysing regional disparities in the new member states and the candidate countries is also important because the new member states will receive substantial structural funds transfers, which raises the issue how these funds can be used efficiently.

Furthermore, with the accession of a number of countries to the European Union (EU) in May 2004 and the envisioned further enlargement, a number of further policy issues arise. These concern in particular the use and administration of EU structural funds, the optimal timing of accession to the European Monetary Union (EMU) and the end of derogation periods for freedom of movement of labour and services in accession. Analysing regional developments in the new member states and candidate countries can provide important insights on each of these issues. For instance, analysing regional labour market adjustment mechanisms can provide insights both on the flexibility of labour markets, which is important for an assessment of the viability of monetary unions as well as on the potential impact of migration on sending and receiving regions.

Finally, high and persistent regional disparities may also have political repercussions which go far beyond narrow economic analysis. These may reach as far as the disintegration of existing countries (in particular when regional disparities are associated with ethnic or national differentials). Thus understanding the causes and potential remedies of regional disparities is also of a wider political importance.

This report summarizes the findings of the AccessLab project which focused on the adjustment capability of regional labour markets in the new EU member states and the Central and Eastern European candidate countries. We also present some data and summarize existing literature. We find that large and persistent regional labour market disparities developed in virtually all transition countries and that there is some evidence of polarisation. Differences in starting conditions and market access seem to be the major reasons for regional divergence in transition. Furthermore, regional wages are only slightly more flexible than in many EU labour markets, inter-regional migration is low and capital

seems to move towards high wage and low unemployment urban centres rather than to the most backward regions. Policy should thus take a long run perspective on the existing regional disparities, focus on removing barriers to mobility, review existing institutions for implementing regional policy and aim at a close co-ordination of regional and labour market policy instruments.

After a short description of the data and regional breakdown of the countries considered in section 2, section three presents some stylised facts concerning the development of regional labour market disparities in new member states and candidate countries and summarises the findings of the AccessLab project, concerning the causes for the marked differentiation of living conditions among regions. We show that the marked divergence of labour market conditions among regions in the new member states and candidate countries which led to large and persistent regional labour market disparities in the last one and a half decades is primarily a consequence of different starting conditions and market access among regions. In consequence – from a policy perspective – regional problems are long run and may be expected to persist over a longer time period in the future. Policies aiming at reducing regional disparities should thus take a long run view on regional development in transition countries. Much of the evidence suggests that the key problem of the most backward regions in the candidate countries consists of a combination of a lacking capability of attracting internal or external investments (and thus a failure to create new jobs) after a period of job losses paired with a regional "lock in" of the resident population, which prevents people from escaping from depressed regions.

The differences in regional labour market situation within countries, which are reviewed in sections 4, support this view. The large and persistent regional labour market disparities

which developed in virtually all new member states and candidate countries are primarily determined by differences in starting conditions and market access. Urban centres and border regions have shown better regional development, while rural peripheral and in some countries mono-industrial regions have fared worse. The regional problems of candidate countries, however, do not seem to differ dramatically from those of other EU-15 countries. As in the new EU member states the relevant comparative advantages of regions in new member states and candidate countries are moving in the direction of high human capital. In particular the substantial increases in returns to education in the new member states and candidate countries suggest that the increased demand for better educated workers exceeded the supply of such workers. As in the old EU member states education policy and strategies to implement life long learning are thus a key element in facilitating the adaptability of the workforce in new member states and candidate countries.

Furthermore, the quality of regional infrastructure, the institutions of corporate control and regional governance and the openness to foreign market (as measured by FDI and export orientation of firms) are the most important determinants of enterprise level employment growth at the regional level. Regional measures of the quality of infrastructure, corruption, firm organisation and export openness were found to be significant determinants of firm level employment growth in the candidate countries and new member states.

Aside from differences in education levels, infrastructure endowments and FDI a further important determinant of the differentiation in regional prospects in the new member states and candidate countries, structural change – which was pronouncedly more rapid than in most mature market economies in these countries in the last decade – has been a cause of regional differentiation of labour market outcomes. In section five we thus analyse the

relationship between structural change and regional development. We argue that there is little general indication that regions are becoming increasingly specialised in transition or that industries have tended to concentrate. This is important because it implies that there is little evidence of sectoral shocks becoming more asymmetric in terms of regional developments.

We, however, also present results of the AccessLab project which suggest that regional specifics (such as the above mentioned access to market potential, R&D intensity and infrastructure endowment) are more important for regional growth than sectoral specialisation. This indicates that both sectoral as well as macro-economic policies are unlikely to reduce regional imbalances in CEE labour markets, what is needed are regionally differentiated regional development strategies based on regional comparative advantages and integrated with labour market policy. In particular the results suggest that changing labour market institutions and directing policies at labour supply issues alone will not be fully effective in reducing high unemployment rates in candidate countries. Labour market institutions do not differ so dramatically between the new member states and candidate countries and EU 15 member states and the existing differences are incapable to explain differences in labour market outcomes. Furthermore, fighting the disincentives to individual adjustment which inevitably develop in low-wage environments, requires careful policies addressing labour demand-side deficiencies and transaction costs, rather than aggregate level policy such as changes in minimum wages and intervention aimed at labour supply (such as changes in replacement ratios).

This focus, however, should not mask that institutional aspects of labour market governance are still of importance. Our results suggest that relative to the early years of transition, where

the major challenge for the set of countries analysed was in developing institutions typical for the market economy, currently the challenge is with providing efficient implementation at all levels of government and the development of effective corporate governance structures as well as combating corruption. Again the results of the AccessLab project are indicative of the foci that policies to address these issues could take. They suggest that delay in industrial restructuring, poor governance at the local level and inefficient corporate governance structures are an impediment to employment growth and job creation. In particular firm level job creation depends mainly on internal firm organisation (size, ownership status and multi- vs. single plant firms) and human capital endowment of managers. Issues of corporate governance thus are important also from a labour market perspective since the incentive structure of managers has a direct impact on firm level employment behaviour. Good corporate governance also improves long run employment prospects.

Aside from this, however, strategies are needed to enhance job creation in depressed regions. Many results in the AccessLab project indicate substantial heterogeneity in regional problems in backward regions which range from lacking infrastructure over low human capital endowments to problems of mono-industrialisation. We would thus also argue that there is a need for differentiating regional policy even within countries, so that it can fit the individual needs of regions.

Again the results of the AccessLab project suggest a number of types of regions that may be "target groups" in such a policy. Agricultural peripheral regions have been shown to suffer most severely from low human capital endowments and bad infrastructure, individual industrial regions – in particular those industrialised in socialist times – suffer from ongoing

restructuring at the enterprise level and low R&D capacities and border regions at the new external border of the EU have severe problems due to lacking access to relevant.

Furthermore, some scepticism concerning the potential of aggregate policies to reduce regional disparities seems to be warranted. At least in the Hungarian minimum wage experiment depressed regions were equally or more severely hit by the hike despite the fact that some positive supply-side effects, as predicted in several theoretical models of the minimum wage, are more likely to develop under conditions characteristic of such regions. (Workers have higher probability of receiving unemployment benefits; the benefits replace a larger fraction of their lost earnings; they have better than average access to informal second jobs, are more severely constrained by fixed costs like travel-to-work expenses whereas monopsonies are also more likely to occur.) The evidence thus suggests that even in these regions the expected positive supply-side responses were more than offset by the elementary cost effect of a move to a higher minimum wage. We thus conclude that as long as the equilibrating mechanisms of the labour market work sluggishly, depressed regions face a high risk of slipping to a low equilibrium state characterised by low participation and wages, and massive reliance on social welfare. Thus a policy addressing the issues of regional demand deficiencies and investments and an improved implementation of regional policy are more likely to contribute to regional equality.

Given the large and persistent regional disparities in the new member states and candidate countries the question arises to what degree region specific shocks can be absorbed through the operation of labour market mechanisms in these countries. In section six we consider this issue, which was the central focus of the AccessLab project. We find that hopes for regional disparities to diminish automatically through the operation of market incentives seem to be

rather bleak. Labour mobility is low in most new member states and candidate countries, investments primarily go to regions which are already performing better and overall evidence on wage flexibility suggests that wages are only slightly more flexible in most transition economies than in EU labour markets, which are often considered sclerotic and incapable to adjust to asymmetric shocks. In general, as in many European labour markets, adjustment to regional demand shocks takes the form of changes in participation rates, while migration and capital mobility is ineffective in adjusting regional shocks.

This is important from a policy perspective because it suggests that without policy interventions, depressed regions are unlikely to recover quickly, and that the classical policy trade off of regional policy between equity and efficiency is more binding in the new member states and candidate countries than current EU member states:

In principle two strategies to address this problem are conceivable. The first is to bring "work to the workers" by mobilising investments in the regions. The results of the AccessLab project suggest that such a strategy – aside from subsidising investments in particularly backward regions – could also consist of measures directed at infrastructure, human capital and R&D development since these factors have been shown to be decisive for regional growth in the new member states and candidate countries. Such a strategy, however, has a number of unattractive features. In particular – aside from the substantial dead weight losses and inefficiencies that inevitably arise from investment subsidies, – the evidence in the AccessLab project indicate that regional problems in the candidate countries are long term and may be expected to persist over a longer time period in the future. In consequence any such strategy should not be expected to yield short term results. Experiences in the European Union suggest

that rural development as well as restructuring old industrial areas is a long term project and may yield only limited results in the short term.

An alternative to this would be to accept regional disparities as a natural outcome of market processes and to devote attention more to issues of efficiency rather than regional equity. In the end effect this would imply strengthening the existing growth poles and thus increasing regional disparities, at least initially. Clearly this would seem particularly tempting in many new member states and candidate countries since it is more compatible with the goal of aggregate (nation – wide) growth and avoids much of the inefficiencies generated by policies of providing subsidies to backward regions. While these features may seem attractive, a precondition for such a strategy to at least contribute to the goal of social (if not regional) cohesion, is sufficient inter regional mobility of the work force, since workers in depressed regions can only reap the benefits from the policy by moving to centres. In the absence of mobility, focusing policy on growth poles in all likelihood will increase labour demand in low unemployment regions, which cannot be satisfied through migrant labour from depressed regions. Thus in the current low mobility context of new member states and candidate countries, such a policy – while aggravating unemployment in the periphery – may be counterproductive by generating excess labour demand in centres – at least in the short run, Clearly a policy that takes measures to remove barriers to migration in transition economies in order to avoid the "poverty-cum-liquidity" trap (Bornhorst and Commander, 2004) in which residents of more backward regions find themselves now, is needed in new member states and candidate countries and should have a very high priority in all countries. The results in the AccessLab project suggest that such a policy should take a relatively wide view on migration barriers and would need to address housing market inefficiencies (in particular

for rental housing), capital market inefficiencies (which may be at the root of liquidity constraints in financing migration) and a range of wider institutional measures. Furthermore, policies should be targeted towards the groups of people, who have the greatest difficulties in adjusting to structural change

According to our results these target groups should be the members of ethnic minorities, lowly qualified and long term unemployed. Furthermore, gender issues should be given some priority in an attempt to retain the relatively favourable situation of women in employment and participation of the new member states and candidate countries. Given the substantial disadvantages of ethnic minorities found in the AccessLab project, we would, however, also suggest that re-integrating these groups of persons into the labour market will require integrated and long term strategies, which encompass not only active labour market policies, but also target at reducing discrimination in other fields of life as well (e.g. in education and housing).

In this respect the AccessLab project shows that minority issues are and will be a major issue in the policy debate on social cohesion in the new member states as well as in the candidate countries for some time to come. The findings, in sum, call for action in educational and regional policies as well as in the enforcement of anti-discrimination laws. The degree and nature of social exclusion demonstrated in the individual papers warns that the re-integration of the Roma (in the CEEs) as well as ethnic Russians (in the Balkans) should be given high priority in an EU committed to social cohesion. Fighting school segregation seems particularly important in order to block the inter-generational transmission of deprivation.

Our results also suggest that some policies directed at the enterprise sphere could improve the adjustment capabilities of regions and in particular increase regional job creation rates.

With the completion of the privatisation processes, the focus of technical assistance oriented on firms performance and employment growth should, however, switch to skills enhancement, since it seems to be primarily the complementarity of skills and management incentives that have the largest impact to improve corporate governance. Furthermore, since small and medium sized enterprises are important contributors to employment growth, focusing policies of skill enhancement to foster the development of SME's may add substantially to alleviating unemployment problems. In particular in depressed regions this could activate endogenous development potentials.

Finally, in section seven we focus on the potential spatial impact of enlargement both on the new member states as well as the incumbent countries of the European Union by summarising results on the incidences of previous enlargements and European integrations. We focus on the likely impacts of integration on border regions as well as the potential impacts of brain drain on sending regions. We show that, based on previous experiences with EU-enlargement and integration, fears of substantial brain drain through emigration from the new member states may seem exaggerated, but that one may expect some wage increases in the regions bordering on the EU in new member states, while effects on old member state regions can be expected to be modest. Also we present evidence which suggests that existing patterns of regional disparities will be reinforced through integration. Allowing for migration may, however, impact negatively on labour market outcomes in the receiving countries border regions, in particular when the competitiveness of these regions is low and labour markets are sclerotic, as is for instance the case in many Eastern German labour markets.

Furthermore, in a number of regions, enlargement will bring additional new challenges. Benefits of integration to border regions accrue neither immediately nor automatically.

Removing the barriers to integration through improving cross-border regional policy and increasing integration as are foreseen in the framework of objective III in the next structural funds period could potentially yield high rewards for regional development in candidate countries and new member states. In particular the foreseen policies to improve the institutions delivering cross-border regional policies could be of high relevance in this context.

Our findings, however, also imply that more eastern regions, at the new external border of the EU, – which already belong to the most deprived regions in the EU, – will fall even further behind. Given this expectation it seems that effective policies to address the problems of these regions may have to be implemented. The principle options for such a policy could be either to increase integration through exports and foreign direct investments – which have gone to more Western regions in the new member states, – or to increase endogenous development potentials in the regions. While our results indicate that the first option may be more promising in general, it seems unlikely that these easternmost regions of the EU will recover from their adjustment problems rapidly since they are far from western European markets, have a lower endowment with infrastructure and are often characterised by a number of problems typical of many rural-peripheral regions.

In summary thus many of the policy relevant results in the AccessLab project resound themes that are not too different from those discussed in the policy debate in the old EU. This suggests that addressing regional labour market problems in the new member states and candidate countries will not require a fundamental shift in the policy design of the European Union. Certain themes (such as minority issues, enhancing mobility and increasing the efficiency of regional policy), however, may receive more attention due to accession in the

future. In addition the limited experience of many new member states and candidate countries in European policy and in some cases limited capacities for implementation suggest that programs should be kept simple and easy to implement.

Furthermore, both regional as well as national development in the new member states and candidate countries will be shaped by the European Union's policy stance concerning the future path of integration followed. This influence will be particularly strongly felt in those policy fields where under the accession agreement the new or existing member states took over obligations to join the monetary union and to introduce freedom of movement of labour of services.

With respect to monetary union the new member states under the stipulations of the accession agreement are obliged to pursue the goal of joining the monetary union as soon as possible. The earliest date for this membership could be after two years of membership in ERM II, i.e. in the year 2006. Fidrmuc (2005) argues that the results of the AccessLab project as well as related literature suggest that in all likelihood the new member states of the European Union are not an optimal currency area in terms of the criteria set up in the classic contributions of the optimum currency area theory. Furthermore, he argues that new member states should follow a "wait and see strategy" for monetary integration, in order to avoid the potential risks involved in such a step.

We would argue that there are yet more reasons why the European Union should not insist on a rapid monetary integration. In particular a substantial body of research suggests that pressure on the side of the European Union to join monetary union rapidly, may lead to excessively restrictive monetary and exchange rate policies, which may come into conflict with the Unions goal of cohesion and growth. We would thus argue that in order to make

accession successful both the commission and new member states should take a realistic approach towards integration into the monetary union that takes due account of both the goal of cohesion.

With respect to the current derogation periods on the freedom of movement of labour and services the results suggest that from the point of view of the new member states the risks associated with potential brain drain should not be overrated. Freedom of movement of labour in all likelihood will not lead to the emigration of high skilled workers from the new member states to the extent that this will have detrimental aggregate effects on the sending country labour markets. This, however, does not preclude the possibility of some effects in particular demographic groups, regions and/or sectors. In particular the results of the AccessLab project suggest that the emigration of high skilled will attain quantitative significance for the young, who either are looking for a first employment and/or education. This suggests that adequate education policies and high demand for high skilled could reduce the risks of brain drain effects.

Furthermore some results of the AccessLab project indicate that the freedom of movement of labour involves some risks for regional labour markets of the old member states,- despite increased welfare, – may hold the risk of increased unemployment and reduced employment of natives in some regions. In particular these results suggest that benefits from integration are hardest to achieve in regions which are structurally weak and not competitive and where the market potential across the border is low. A number of our results suggest cases in which particular policy intervention may be necessary. In particular rural-peripheral regions are facing problems. Migration may further increase adjustment problems in these regions. A number of old EU member states regions at the border to the CEEC in particular at the

German-Polish border are characterised by such structural problems and relatively high wages which impede on their competitiveness. This indicates that these regions may have substantial labour market adjustments ahead of them. Increasing the flexibility of regional labour markets and the adaptability of the work force in these regions may be an important element in remedying the potential problems of these regions.

Furthermore, our results suggest that benefits to integration to border regions accrue neither immediately nor automatically and that increased integration will reinforce tendencies of divergence in the new member states and candidate countries. Thus some policy measures may be needed to help the transitory adjustment problems of border regions. We would argue that aside from posing institutional challenges to regional administrations, increased cross-border co-operation will also necessitate a review of national policies which impede on cross-border exchange.

In consequence in the field of migration as in issues relating to monetary union the commission should take a realistic view. On the one hand increased incentives are necessary to encourage old member states to liberalise their labour markets, on the other hand the potential risks for individual sectors, regions and groups of the population involved in a complete liberalisation should be minimised through appropriate policies at the European level.

Introduction

Over the past one and a half decades the new Central and Eastern European (CEE) member states among the EU countries as well as the candidate countries experienced significant structural change due to the transition to a market economy and increasing integration with the world economy. One of the consequences of these changes was a substantial increase in regional disparities. Starting from a situation of an extremely equal distribution of economic activity as measured for instance by employment rates and wages during socialism, these economies developed regional disparities which parallel or even exceed those of many European economies.

This development raises a number of issues relating to the causes for regional disparities, the efficiency of labour market mechanisms such as wage flexibility, migration and new firm creation in equilibrating regional labour markets and appropriate policies to deal with the uneven development of regions. Assessing the differences and similarities in regional labour market conditions in transition countries, as well as the ability of labour markets to deal with regional disparities, is thus of primary importance. From an economic point of view regional disparities may be a cause of high and persistent unemployment in some countries due to regional mismatch of workers and work opportunities. Thus policies designed to enhance regional adjustment may be an important contribution to combating national unemployment.

Furthermore, with the accession of a number of countries to the European Union (EU) in May 2004 and the envisioned further enlargement, a number of further policy issues arise. These concern in particular the use and administration of EU structural funds, the optimal timing of accession to the European Monetary Union (EMU) and the end of derogation periods for freedom of movement of labour and services in accession. Analysing regional developments in the new member states and candidate countries can provide important insights on each of these issues. For instance, analysing

regional labour market adjustment mechanisms can provide insights both on the flexibility of labour markets, which is important for an assessment of the viability of monetary unions as well as on the potential impact of migration on sending and receiving regions.

Finally, high and persistent regional disparities may also have political repercussions which go far beyond narrow economic analysis. These may reach as far as the disintegration of existing countries (in particular when regional disparities are associated with ethnic or national differentials).¹ Thus understanding the causes and potential remedies of regional disparities is thus also of a wider political importance.

This paper focuses on regional labour market developments in the new CEE member states of the European Union as well as the CEE candidate countries by summarising the findings of the AccessLab project as well as considering other contributions to the literature and presenting some data. While the set of countries covered by the AccessLab project is heterogeneous and substantial variation exists among countries, our focus is on highlighting common trends and problems, while not masking the heterogeneity among the countries considered. We focus on the extent and development of regional disparities in terms of unemployment and employment rates as well as differences in income between regions and also treat in detail the mechanisms of regional labour market adjustment in the new member states and candidate countries, which were the central focus of the AccessLab project.

After a short description of the data and regional breakdown of the countries considered in the next section, section three presents some stylised facts concerning the development of regional labour market disparities in new member states and candidate countries and summarises the findings, concerning the causes for the marked differentiation of living conditions among regions. Section four considers the regional differences in labour market situation among region types within the new

¹ For instance Fidrmuc, Horvath and Fidrmuc (1999) argue that the economic reasons for disintegration of Czechoslovakia were high regional disparities between what is now the Czech Republic and Slovakia.

member states and candidate countries as well as relative to EU (15) – member states. We suggest that large and persistent regional labour market disparities developed in virtually all new member states and candidate countries and that there is some evidence of polarisation. Furthermore, differences in starting conditions and market access seem to be the major reasons for regional divergence in transition. Urban centres and border regions have shown better regional development, while rural peripheral and in some countries mono-industrial regions have fared worse.

Section five then considers the relationship between structural change and regional development. We argue that there is little general indication that regions are becoming increasingly specialised in transition or that industries have tended to concentrate. This is important because it implies that there is little evidence of sectoral shocks becoming more asymmetric in terms of regional developments. We, however, also present results of the AccessLab project which suggest that regional specifics (such as the above mentioned access to market potential, R&D intensity and infrastructure endowment) are more important for regional growth than sectoral specialisation. This is of relevance because it indicates that both sectoral as well as macro-economic policies are unlikely to reduce regional imbalances in CEE labour markets.

Section six considers the results of the AccessLab project on the potential of labour market adjustment mechanisms to equilibrate regional disparities. We find that hopes for regional disparities to diminish automatically through the operation of market incentives seem to be rather bleak. Labour mobility is low in most new member states and candidate countries, investments primarily go to regions which are already performing better and overall evidence on wage flexibility suggests that wages are only slightly more flexible in most transition economies than in EU labour markets, which are often considered sclerotic and incapable to adjust to asymmetric shocks. In general, as in many European labour markets, adjustment to regional demand shocks takes the form of changes in participation rates, while migration is ineffective in adjusting regional shocks. Again this is important from a policy

perspective because it suggests that without policy interventions, depressed regions are unlikely to recover quickly.

Finally, in section seven we focus on the potential spatial impact of enlargement on the new member states of the European Union by summarising results on the incidences of previous enlargements and European integrations. We focus on the likely impacts of integration on border regions and consider the potential impacts of brain drain on sending regions. We show that based on previous experiences with EU-enlargement and integration fears of substantial brain drain through emigration from the new member states may seem exaggerated but that one may expect some wage increases in the regions bordering on the EU in new member states, while effects on old member state regions can be expected to be modest. Also we present evidence which suggests that existing patterns of regional disparities will be reinforced through integration.

In sum thus the evidence collected in the AccessLab project – in combination with the literature reviewed – imply that regional disparities in new member states and candidate countries in all likelihood reflect long term influences on regional development and are unlikely to disappear in the short run. Furthermore, the results also suggest that integration will reinforce existing patterns of regional differentiation. Section eight thus draws policy conclusions by arguing that in new member states and candidate countries the classical policy trade off between efficiency and equity – which characterizes much of the regional policy debate in mature market economies – is likely to be more binding. Since low internal migration rates and lacking capital mobility make it unlikely that the population in peripheral regions is going to profit from efficiency oriented policy rapidly. We also argue that in order to tackle the substantial regional labour market problems in new member states and candidate countries, a coherent but regionally differentiated regional policy will be needed and a review of the institutions delivering regional and labour market policy should be undertaken.

Data

The primary focus the AccessLab project was on regional labour market developments of the new CEE member states of European Union (EU) among the transition economies and the CEE accession candidate countries to the EU. The primary data sources for the reports were the New Cronos data base of the European Commission and the Regspec/AccessLab data base (see: Iara et al, 2004 and Iara and Traistaru, 2003) assembled for the project. This data covers the new member states of the European Union among the CEEC and two candidate countries (Bulgaria and Romania).²

These data sets provide information for different time periods and different regionalisations of the countries considered (see table 1). This causes a number of data and methodological problems which make direct comparisons of individual results across countries and or country groups as well as over time difficult. These problems relate to the differences in regional size and autonomy of regional governments, which suggest that differences between countries may be simply a result of differences in geography and the institutional situation in regions, changes in regionalisation during transition, which make intertemporal comparison difficult, and to differences in statistical methods and definitions over time and across countries, which also limit the possibility of comparison.

In particular the countries analysed differ substantially among each other in geography, regional autonomy granted to sub-national administrative bodies such as regional governments and their labour market situation. Thus wide generalisations across countries and country groups may be misleading when attempting to provide policy advice. For instance in some of the smaller countries even first tier regions may cover territories of just over 100.000 inhabitants and some of these regions (as for instance in the case of Slovenia) may not have any regional authorities. By contrast in the larger new

² In addition in workpackages 4 and 5 a number of individual data sets were used.

member states, such as Poland, regions may cover territories which exceed this population size by a factor of four. Clearly such heterogeneity will have implications for the findings since heterogeneity among regions increases as the regional break down analysed becomes smaller. For instance some of the regional disparities found in Slovenia would clearly be missed if regions were made comparable to Polish territories.

Table 1: Data Availability and regional Breakdown of countries

Country	Tier of Regions	Number of regions	Average Population per region	Time period for which data is available
Bulgaria	NUTS III	28	309,162	a) 1991 – 1998 b) 1999 – 2003
Czech Republic (before 1998) ¹⁾	okresy	77	137,773	a) 1991 – 1998
Czech Republic (after 1998)	NUTS III	14	730,314	b) 1999 – 2003
Hungary	NUTS III	20	509,385	a) 1991 – 1998 b) 1999 – 2003
Poland (before 1998)	Voivodships	49	779,248	a) 1991 – 1998
Poland (after 1998)	NUTS III	41	792,226	b) 1999 – 2003
Romania	NUTS III	41	566,017	a) 1991 – 1998 b) 1999 – 2003
Estonia	NUTS III	5	305,306	a) 1991 – 1998 b) 1999 – 2003
Latvia	NUTS III	5	470,980	b) 1999 – 2003
Lithuania	NUTS III	10	348,130	b) 1999 – 2003
Slovenia	NUTS III	12	165,784	a) 1991 – 1998 b) 1999 – 2003
Slovakia (until 1996)	okresy	38	139,646	a) 1991 – 1998
Slovakia (after 1996)	NUTS III	8	667,463	b) 1999 – 2003

Notes: a) RegSpec/AccessLab data base (see Iara et al 2004) includes indicators on wages, unemployment rates and employment as well as population b) New Cronos Database includes indicators on GDP per capita, unemployment rates and employment rates. ¹⁾ before 1996 only 76 regions, NUTS = Nomenclature of Territorial Units for Statistics.

A further data problem making comparisons difficult is that the regional divisions in these countries were repeatedly reformed during transition. This leads to complications in comparisons of regional disparities over time. For instance in the Slovak Republic the current Nomenclature of Territorial Units for Statistics (NUTS) II and NUTS III regions replaced the old system. The pre-existing 38 third tier regions were abolished and 76 new (NUTS IV) regions were introduced, so that data pre- and post 1996 cannot be made comparable. Furthermore, in Poland a new regionalisation – which is

incomparable to the previous voivodships – was introduced in 1998. In other cases we were able to overcome the changes in regionalisation since at least the lowest tier regions remained unchanged and comparisons can either be conducted at this lower tier level (as in the Czech Republic)³ or some data could be aggregated from lower tier level data (as in Slovenia before 1996). The most distinct break in our data is that between the data from official Eurostat sources and the privately compiled AccessLab/Regspec data set, however. While the first provides consistent information for most candidate countries and new member states from the end of the 1990's onwards at the NUTS II and III level, the second provides information from the early 1990s to the late 1990's. Since Eurostat data must be considered more reliable and comparable, we do not attempt to merge the two data sets for this report, but provide statistics from the early 1990's from the Regspec/AccessLab data base and take data from 1999 to the latest available from Eurostat.

Finally, data across countries and time is not always defined in equivalent ways and harmonisation of regional information on individual countries has progressed less far than data on the national level.⁴ Although we focus only on a very limited set of indicators this may have implications when comparing data across countries in particular to the degree that administrative data such as registered unemployment are influenced by national institutions.

While conscious of the problems associated with data, our approach to these problems in this summary report is pragmatic. Our main aim is to use data available to highlight some of the common features of regional development by which transition countries have been characterised from a "bird's eye" perspective and thus to provide a comparison against which the more detailed results of the AccessLab project will be summarised. Furthermore, since this clearly holds the danger of over generalising

³ However, even this comparison is made difficult by the introduction of an additional region in 1996 in the Czech Republic.

⁴ These caveats are most relevant for data on the early transition period, and are documented in more detail in Iara et al, 2004. We omit this description here, for reasons of brevity of the report.

heterogeneous developments, we augment this summary with literature surveys of more detailed individual country studies or cross-country comparisons in order to highlight the substantial heterogeneity, which undoubtedly exists among candidate countries and new EU member states.

Some Stylised Facts on Regional Development in Transition

Large and Increasing Regional Disparities

Despite the difficulties in comparing data across countries and time a number of similarities in regional development exist among the countries covered in the AccessLab project. In particular regional disparities in the new member states and candidate countries are large, have increased over time and have led to stable distribution of "winners" and "losers" among regions.

Indeed regional disparities in unemployment rates, employment rates and GDP per capita levels are comparable to those in many of the high unemployment countries in the EU. This is documented in Table 2 which uses the most recent data available from the EU database. Differences between the regions with the highest and the lowest unemployment rate exceeded a factor of 3 in the year 2003 in all but the smallest transition countries (Slovenia, Latvia, and Lithuania) and Romania. GDP per capital levels ranged from 70 – 80% to up to over 200% of the national average in the majority of transition economies. Finally, employment rates also indicate a substantial differentiation of regions with differences between maximum and minimum employment rates ranging from over 10 percentage points to over 25 percentage points at the NUTS III level of regional aggregation.

Table 2: Indicators of regional labour market disparities in transition economies at NUTS III level

Registered Unemployment Rate 2003

	Average	Minimum	Maximum	Coefficient of Variation	Capital City Region
Bulgaria	-	-	-	-	-
Czech Republic	7.5	4.2	14.8	0.401	4.2
Hungary	6.3	3.3	11.3	0.311	3.6
Poland	20.1	8.5	33.4	0.258	18.3
Romania ¹⁾	7.0	5.9	8.6	0.148	-
Estonia	10.6	0.4	17.4	0.322	9.0
Latvia	10.4	8.2	15.4	0.227	10.8
Lithuania	12.3	7.5	16.9	0.204	11.7
Slovenia	7.3	4.7	10.2	0.298	4.7
Slovakia	17.2	7.1	23.9	0.363	7.1

GDP per capita 2001 (In Euro)

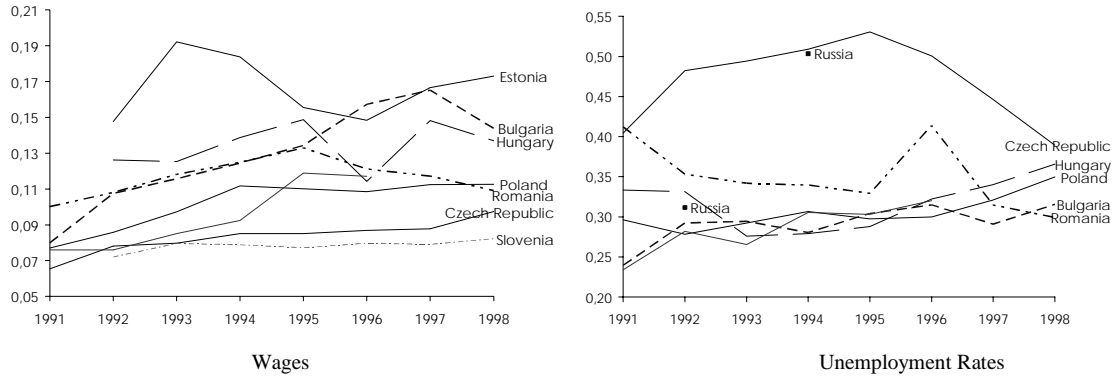
	Average	Minimum (% of average)	Maximum (% of average)	Coefficient of Variation	Capital City Region
Bulgaria	1,669.3	71.4	214.9	0.2692	214.9
Czech Republic	6,233.3	81.9	238.5	0.3875	238.5
Hungary	4,854.8	65.5	237.0	0.3656	237.0
Poland	4,843.3	67.2	229.2	0.3407	-
Romania	1,891.4	60.2	164.3	0.2292	164.3
Estonia	4,041.5	65.8	192.2	0.4657	192.2
Latvia	-	-	-	-	-
Lithuania	3,424.6	67.9	155.5	0.2417	155.5
Slovenia	9,976.0	78.2	152.5	0.1868	152.5
Slovakia	4,386.3	59.3	214.7	0.4470	214.7

Employment rate 2000 (in % of total population)

	Average	Minimum	Maximum	Coefficient of Variation	Capital City Region
Bulgaria	35.61	31.40	42.62	0.0778	42.6
Czech Republic	45.24	40.42	58.29	0.0964	58.3
Hungary	36.90	28.53	51.01	0.1507	51.0
Poland	37.67	28.67	52.27	0.1362	-
Romania	-	-	-	-	-
Estonia	39.69	35.67	48.93	0.1199	48.9
Latvia	42.66	35.66	47.14	0.0927	47.1
Lithuania	41.43	38.10	48.82	0.0710	48.8
Slovenia	-	-	-	-	-
Slovakia	37.19	30.78	57.58	0.2131	57.6

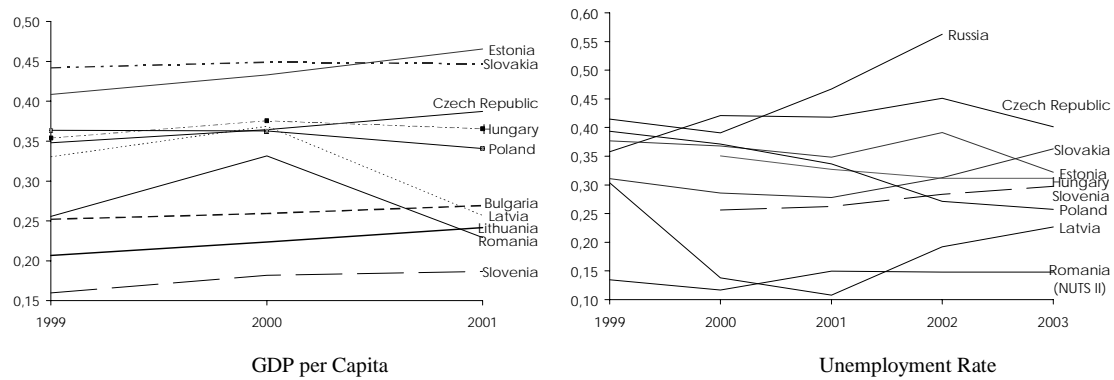
Source: Eurostat, New Cronos and Goskomstat. – ¹⁾ Nuts 2.

Figure 1: Coefficient of Variation in Wages and Registered Unemployment rates in transition countries 1991/2-1998



Source: Regspec/AccessLab data base.

Figure 2: Coefficient of Variation in GDP per capita and Unemployment rates in transition countries 1999-2001 (NUTS III)



Source: Eurostat, New Cronos and Goskomstat. – Romania at Nuts II level.

The development of these sizeable disparities is closely linked to the process of transition. In socialist times regional disparities in wage and employment rates tended to be small. For instance as shown by Huber and Palme (2001) the ratio of regions with the highest wages relative to that to the lowest ranged at about 1.3 in the Czech Republic and at around 1.2 in Slovakia in the 1980s; once market oriented reforms were undertaken regional disparities quickly increased. To illustrate this, figures 1 and 2 display the coefficient of variation in regional unemployment rates and wages for the time

period from 1992 to 1998 using the Regspec/AccessLab data set and of unemployment rates and GDP for the period from 1999 using the EU's New Cronos Data Base.⁵

As can be seen, the divergence of regions was particularly pronounced in the early transition period in terms of wage levels which, when measured by the coefficient of variation, increased by over 50% in countries such as Slovakia, Poland, the Czech Republic and Bulgaria and somewhat more modestly in Hungary, Slovenia and Estonia.⁶ The only exception is Romania, where regional wage disparities in 1991 were about the same as in 1998. Furthermore, regional disparities in per capita GDP levels are still increasing in many of the transition countries for which we have data. Romania and Latvia were the only countries which had lower GDP disparities in 2001 than in 1999. In all other countries regional disparities increased or stagnated (Hungary, Slovakia, and Poland) in the last three years (see figure 2).⁷

Divergence of regional unemployment rates by contrast was somewhat less pronounced, but once more in the majority of the countries analysed the coefficient of variation increased in the 1990 to 1998 period. The notable exceptions to this are the Czech Republic and Romania. In both these countries regional disparities in unemployment rates decreased after some oscillation. In particular in the Czech Republic this is due to the statistical effect of extremely low average unemployment rates in

⁵ We give preference to the coefficient of variation because it is a dimensionless indicator, and thus is not distorted by the scale of measurement. This is particularly important, when measuring regional disparities of nominal values, since otherwise high inflation rates and changes in unit of measurement (such as currency reforms) impact on measures of regional disparities. As a reference Figure 1 is shown for the standard deviation in the appendix, however.

⁶ For the candidate countries and the new member states of the EU Boeri and Scarpetta, (1996) were among the first to document the large increase in regional labour market disparities Smith (1998), Gorzelak (1996), Petrakos (1996), Römisch (2002), present further evidence on these countries for unemployment, wages, GDP per Capita.

⁷ Differences in the magnitude of the coefficient of variation should not be over interpreted since these depend strongly on the number and size of regions in a country and may thus reflect the differences in geography and regionalisation.

the beginning of transition on the coefficient of variation. Furthermore, in those countries where unemployment rate disparities have increased in the last decade this process has almost come to a stop and increases have been modest in all countries but Slovakia.

Regional unemployment is also positively correlated with regional non-participation (in all countries but Lithuania and Romania), indicating that at least some of the labour force is discouraged from searching for employment (see EBRD, 2003). This suggests that the actual amount of labour which could become available on markets when unemployment rates reduce could be underestimated by only focusing on unemployment rates and thus that disparities in the degree of under – utilization of labour are even higher than implied by the registered unemployment data reported in Table 2.

In summary divergence was the general tendency during the early transition period, magnitudes and timing of this divergence process differed among countries. In particular in some of the early starters to market oriented reforms such as Hungary or Slovenia divergence proceeded somewhat more slowly. Furthermore, divergence in general was more pronounced in income indicators such as wages than in regional unemployment and has preceded less slowly in many of the more advanced transition economies in recent years.

At the same time the ranking of regions in the spectrum of the distribution has remained relatively stable. Thus regional disparities in wage and unemployment rate levels have been highly persistent throughout transition. Regions showing better performance at the outset have also tended to perform better in later phases. Correlation coefficients between different indicators of regions' labour market conditions (see: table 3) are high and significant in almost all countries. Again there are, however, some important exceptions. In particular in Bulgaria and Romania, which may be considered countries, which were slightly slower in their reform process, there were some important changes in

the regional distribution of unemployment rates in particular in early transition. In Estonia similar observations apply to wage levels.⁸

Table 3: Correlation of unemployment rates, wages and Participation rates in the regions of transition countries

1992 – 1998

Correlation	Registered Unemployment Rate	Participation Rate ^{a)}	Wages
	1992-1998	1992-1998	1992-1998
Bulgaria (NUTS II)	0.46	-	0.89
Czech Republic (okres)	0.65	-	0.84
Hungary (NUTS III)	0.90	0.86	0.91
Poland (old voivodships)	0.90	0.85	0.95
Romania (NUTS II)	0.42	0.96	0.78
Estonia (NUTS II)*1995-98	0.97	0.98	0.46
Latvia (NUTS III)		-	-
Lithuania (NUTS III)		-	-
Slovenia (NUTS III)		-	-
Slovakia (okres)	0.80	0.68	0.93

Source: Regspec/AccessLab, Goskomstat a) in % of total population.

Post 1999^{b)}

	Registered Unemployment rate	Participation Rate ^{a)}	GDP per capita
	1999-2003	1999-2000	1999-2001
Bulgaria	-	0.898	0.912
Czech Republic	0.853	0.971	0.999
Hungary	0.773 ¹⁾	0.994	0.975
Poland	0.837	0.995	0.990
Romania	0.103 ²⁾	-	0.843
Estonia	0.977	0.976	0.999
Latvia	0.915 ³⁾	0.967	-
Lithuania	0.031	0.900	0.991
Slovenia	0.806	-	0.987
Slovakia	0.947	0.991	0.999

Source: Eurostat, New Cronos. – ¹⁾ 2000/2003. ²⁾ Nuts 2. ³⁾ 2002/2003. a) In % of total population. b) all at NUTS III level, c) Oblast level.

This suggests that first of all the increasing regional disparities among regions are rooted in factors and deficits lying in the period prior to transition, and second that regional disparities may be of a long run

⁸ In Huber (2003 in workpackage 2) we show that these coefficients of correlation are slightly lower in the candidate countries than in EU15 member states, which suggests smaller persistence than in Western Europe. Correlation coefficients for employment growth by contrast are in general insignificant for both candidate countries and European member states.

nature rather than a transitory phenomenon. Recent econometric evidence by Römisch (2002) for EU accession candidate countries and new member states and Profit (1999) for the Czech Republic supports this hypothesis. They find that divergence has been accompanied by an increased polarisation of regions. The distribution of regional unemployment rates and GDP per capita has become increasingly bi-modal with two distinct groups arising: One characterised by high unemployment and relatively low income levels and another with low unemployment and high income levels. This suggests that even though some of the divergence process may be transitory in the long run regions may become clustered into distinct groups of prosperity: one covering a relatively small group of well to do regions and another large group of relatively poor regions.

Table 4: Resident Population and Employment Share by Unemployment Rate Categories

	less than 4.9%	5.0% to 9.9%	10.0% to 14.9%	15.0% to 19.9%	more than 20%
Share of Population living in regions in..					
Candidate Countries	6.1	15.6	44.7	23.5	10.1
EU Regions	24.7	41.6	20.6	6.4	6.6
Total	21.4	36.9	25.0	9.5	7.3
Share of Employment working in regions in..					
Candidate Countries	6.9	17.3	44.9	22.3	8.6
EU Regions	27.9	43.0	19.3	5.6	4.2
Total	24.3	38.6	23.6	8.4	5.0

Source: *Gacs and Huber (2003)* Notes: Data excluding Romania, Source Cronos.

These results are detailed in Gacs and Huber, (2003 in workpackage 2 of the AccessLab project). Their results indicate that in general, candidate countries' regions have higher unemployment rates, long-term unemployment and youth unemployment than EU member states but perform better than the EU's average labour market in some respects. In particular, they have slightly higher participation rates and significantly lower gender differences in both participation and unemployment than the EU average. Also in most of the candidate countries analysed in this paper regional disparities are of about similar or larger magnitudes as in the old EU member states, which suggests that these countries have converged to typical European nations with respect to regional disparities.

Furthermore, Gacs and Huber (2003) show that in comparison to old EU member states there is a more pronounced tendency of polarisation in candidate countries and new member states and that enlargement leads to an increase in the share of population living in high unemployment regions in the EU. Around 78% of the population (and around 75% of the workforce) of the candidate countries and new member states lived in regions which had average unemployment rates exceeding 10% in the period 1998 – 2001, and around one third of both the population and the workforce lived in regions with an average unemployment rate in excess of 15% (see table 4). In EU member states by contrast only around 13% of the population lived in regions where average unemployment rates (from 1998 to 2001) exceeded 15% and less than 10% worked in such regions. Integration of the candidate countries (excluding Romania) would thus have increased the share of population living in such high unemployment regions by around 8.8 percentage points.

Thus enlargement will lead to an increase in the number of regions that must be considered regions with a high long run (or "natural") unemployment rate in the European Union. Given the experience of high persistence in regional labour market conditions in most European countries it seems unlikely that the problems of high unemployment regions will diminish rapidly.

Differentiation of Regional Prospects

Differences in starting conditions and access to market potential are the most important causes for divergence

Given the evidence of divergence in transition, the high share of high unemployment regions and the indication that labour market disparities are of a long run nature, the question arises what have been the causes for the differentiation of regional growth processes. A substantial body of research (see, e.g., Barjak and Heimpold, 1999; Gorzelak, 1996, for Poland; Smith, 1998, and Bucek, 1999, for Slovakia; Totev, 2000, for Bulgaria; Fazekas, 1996 for Hungary, Scarpetta and Huber, 1995; as well as EPRC, 2001, for the CEE 10) has gone into the search for these causes. This research in analogy to the literature on national development during transition has focused on three potential candidates for differentiation of regional fortunes in transition.

1. Starting conditions have been repeatedly named as determinants of regional welfare: Regional developments in transition can only be understood in the context of the legacies of the former socialist system. For instance Smith (1998) in his account of regional disparities in socialist Slovakia shows that regions, which turned out with worse performance, were usually industrialised in the socialist era. He argues that regional policy in the socialist era, (which put more emphasis on the goal of regional equalisation and bringing work to the workers than is the case in most market economies,) paired with the tendency of socialist industrial policy to generate large enterprises, led to a situation where new production locations were developed mostly as a site for a plant of much larger firms. In consequence newly established plants in peripheral regions experiencing socialist industrialisation (as Smith 1998 terms this pattern) tended to serve low skill assembly and production, only. Many did not have research and development, design or even “sales” functions (Smith, 1998). These enterprises were often controlled entirely from centres of large firms in large cities and unsurprisingly were also the first to experience economic problems

in transition. This was aggravated by the fact that often only one such large enterprise served one community or even region. In a similar vein Dostal and Hampl (1994) document that 51% of all Czech firms had their central office in Prague in the 1960s, that the vast majority of export firms (that is firms, which had the permission to export and import from western market economies) was located in Prague and in the 1980s almost 60% of the R&D departments resided in the capital.

2. Integration into the world economy has also undoubtedly been an important driving force not only of macro-economic but also of regional development in transition. This factor impacting on regional development is, however, closely linked to differences in starting conditions. In general regions with better starting conditions were also more capable to succeed in the more competitive international markets. Substantial evidence (see Crozet and Koenig-Soubeyran, 2004 for Romania, Bosco and Resimini, 2002 for a selection of transition economies, Spindrova, 2002 on Bulgaria) suggests that in particular the new EU member states and candidate countries regions with better market access to western economies experienced higher population growth, lower unemployment rates and lower reductions in employment as well as higher GDP growth rates in particular in early transition. Border regions have profited from purchasing power inflows, foreign direct investments and higher trade exposure. Capital cities have often attracted FDI as well as profited from increased purchasing power and the substantial economic potential (in terms of R&D resources, infrastructure and company headquarters).

Furthermore, the process of regional differentiation seems to have been closely associated with the impulse given from foreign direct investments. A number of studies (Dostal, 1999, for the Czech Republic, Fazekas, 2000 for Hungary) document the strong correlation between regional unemployment, employment and GDP growth and the inflow of foreign direct investment.

3. The impact of transition policies such as stabilisation, trade liberalisation and banking reform by contrast has been less intensively researched, since in many of the smaller new member states and

candidate countries most reforms have been conducted on a national rather than a regional scale. The results available, however, suggest that the link between the speed of privatisation and net job creation may be ambiguous. The reason for this is that in regions with more rapid privatisation, job destruction in old formerly state-owned enterprises was faster. This led to higher employment losses. At the same time, however, job creation in new enterprises in these regions was higher. This led to employment gains. Depending on which of these tendencies – higher job creation in new enterprises or higher job destruction in state owned firms – prevailed, regions with more rapid privatisation experienced higher or lower employment declines in transition (see Faggio and Konings, 2003; and Duffy and Walsh, 2002). In consequence for most of the new member states and candidate countries correlations between privatisation and employment growth are ambiguous. Scarpetta (1995) finds ambiguous results concerning the impact of the private sector share on unemployment levels, while Fazekas (1996) finds that an index of entrepreneurial capacity⁹ in a region reduces unemployment. Finally, Sibley and Walsh (2002) find that in Poland regions deemed to be further advanced in transition are also regions with higher internal regional disparities.

Furthermore, great care has to be taken in interpreting the causality of these results, since to the degree that political decision makers will privatise enterprises with good growth prospects first, a positive correlation between regional employment growth and fast privatisation may arise because high employment growth facilitates privatisation and not because privatisation helps employment growth.¹⁰

⁹ This index is constructed from objective indicators of entrepreneurial activity as well as from more subjective indicators on attitudes of the population.

¹⁰ It should be noted that similar arguments apply to the association between FDI and employment growth. To the degree that foreign firms are more likely to invest in prosperous firms a positive correlation between FDI and employment growth will be found even if FDI's are not causal to creating new jobs.

The results of the AccessLab project reconfirm the important role of market access in shaping regional growth experiences in candidate countries and new member states post transition. In workpackage 6 Egger, Huber and Pfaffermayr (2004) document a positive association between the rise of regional disparities and growth in foreign trade volumes. In general in countries where foreign trade grew more rapidly regional disparities also increased faster. Iara (2004) finds that aside from sectoral specialisation the export orientation of a region was the most important determinant of regional GDP per capita growth in Hungary in the period 1995 – 2000. This is important because together with the results of the literature, these results suggest that increased integration will lead to increasing rather than reduced regional disparities in the candidate countries and new member states.

Furthermore, results on enterprise behaviour in workpackage 5 of the AccessLab project highlight the importance of regional structural characteristics as well as institutional differences such as governance structure and corruption in determining the performance of enterprises in the new member states and candidate countries. They show that:

1. The dominant position of the capital cities is also reflected in enterprise level adjustment processes. According to Aidis and Mickiewicz (2004) location in capital city has a positive effect on employment growth in particular for SMEs. This is consistent with the general pattern of regional heterogeneity and with capital cities playing a role of outliers with high growth rates in the economic development of the new EU member states, due to the political, economic and administrative centralisation inherited from the command economy system and is consistent with earlier findings (see also: Mickiewicz and Bell, 2000).
2. The vicinity to a high demand potential plays an important role in firm level employment growth in candidate countries and new member states. This conclusion is reached in a number of contributions to workpackage five of the AccessLab project. Links to foreign markets, (i.e. exporting) play an important role supporting employment creation in SMEs (see Aidis and

Mickiewicz, 2004). Furthermore, for Romania Telegdy (2004) shows that the link between employment dynamics and the impact of the distance from the Western border (i.e. with Hungary), which may be seen as a measure of distance from the key foreign market, has a highly significant positive impact on firm level employment and wage growth. Furthermore, closeness to the Western markets implies higher responsiveness of employment to wages and there is evidence that regional growth is directly correlated to the employment behaviour of firms: better regional performance implies more employment growth on firm level, regardless of own characteristics.

3. The quality of regional infrastructure is an important determinant of enterprise level employment growth. Regional measures of the quality of infrastructure were found to be significant determinants of firm level employment growth in the contribution by Mickiewicz, Gerry and Bishop (2004). Firms in regions with better infrastructure create more employment at least in Poland.
4. The corporate control characteristics of enterprises are important determinants of the restructuring efforts of firms and thus have a direct impact on regional labour market conditions and on wage and employment dynamics of industrial firms. State firms behave differently than privatised and *de novo* firms. In addition, the characteristics of managers affect performance of large companies in the new EU member states. This is found in the various contributions of Fidrmuc and Fidrmuc (2004, 2004a and 2004b) for the Czech Republic and Slovakia. In particular their contributions suggest that the appointment of new managers has important effects on firm performance. In particular it is not the ownership change and a new set of incentives alone that affect the pattern of adjustment in industrial companies, but a complementarity of these with the new managers endowed with human capital, which matter for firm results. This is important because it suggests that with the completion of the privatisation processes, the focus of technical assistance oriented on firms performance and employment growth should switch to skills enhancement, since it seems

to be primarily the complementarity of skills and management incentives that have the largest impact to improve corporate governance.

5. Also, the quality of the institutional environment matters: corruption, both on the level of national administration and on the level of regional administration is detrimental to employment growth. The conclusion of workpackage 5 is that differences in labour market institutions between the new and old EU member states cannot explain high unemployment rates in new member states (see: Ederveen and Thissen, 2004). By contrast three more factors affecting subsequent unemployment growth are important. These are (1) the delay in industrial restructuring (like in both Poland and Slovakia), (2) increase in labour force (in particular Poland) and (3) poor governance at the local level (see: Aidis and Mickiewicz 2004). In particular this last result underlines the importance of good governance and most of all implementation of policies at all levels of government.
6. Finally, it seems that fighting the disincentives to individual adjustment that inevitably develop in low-wage environments requires careful policies addressing demand-side deficiencies and transaction costs, rather than aggregate level policy intervention aimed at labour supply. This is evidenced by Kertesi and Köllö's (2004) study in workpackage 4 of the AccessLab project on the natural experiment of doubling the minimum wage in Hungary 2001-2002, which was a straightforward attempt to break low equilibrium by widening the gap between wages and benefits. In extension of this result one could expect that other more macro oriented policies directed at increasing search incentives for the unemployed (such as reductions in unemployment benefit entitlements) are also unlikely to contribute to reducing high unemployment in particular in regions with low labour demand. Kertesi and Köllö (2004) find that although total employment seems to have been only marginally affected, minimum wage increases in Hungary significantly increased labour costs, reduced employment in the small firm sector, and adversely influenced the job retention and job finding probabilities of low-wage workers. Furthermore, higher minimum

wages also seem to be an inefficient instrument in reducing regional disparities. Depressed regions were equally or more severely hit, suggesting that the demand-side reactions dominated everywhere. While this suggests that higher minimum wages are unlikely to yield substantial improvements in terms of unemployment, they may contribute to higher labour force participation in some cases. Hazans (2004) in workpackage 4 of the AccessLab project finds some evidence that increasing minimum wages led to higher participation and reduced the share of discouraged workers in the workforce in Lithuania. In Estonia by contrast increased participation is only found for teenagers and young males.

Capital cities and border regions have shown better performance, rural-peripheral regions have faced considerable problems

Furthermore, one of the robust findings in the AccessLab project – as well as in the research on regional development of transition economies in general – is the privileged role of urban agglomerations (in particular capital cities) in regional development. This can be illustrated for a subset of member states and candidate countries (Hungary, Czech Republic, Poland, Romania and Bulgaria) by employing a taxonomy of the candidate countries regions' developed by Scarpetta and Huber (1995) which has been widely used in regional labour market analysis in candidate countries (see: Burda and Profit, 1996, Boeri and Scarpetta, 1996, Boeri and Terrell, 2002). This divides the regional units of the countries analysed into industrial, agricultural, urban (which also have the highest share of service sector employment) and diverse regions (the latter can also be interpreted as peripheral regions).¹¹ Table 5 (taken from Gacs and Huber, 2003a) reports the average participation rates and unemployment rates relative to the national average in 1992 and 1998 in the respective regions of the candidate countries. A value larger than one indicates that the average region of this type has shown a value higher than the national average, while a value smaller than one indicates a

¹¹ These regions usually similarly to urban centres have a diverse economic structure, but are characterised by substantially worse endowment with infrastructure and human capital.

lower value than the national average. Urban regions – which account for a little over one-eighth of the regions, but a higher share of population – have shown substantially smaller unemployment rates and slightly higher participation rates throughout transition. This finding is broadly consistent with the results of related literature: for instance Rutkowski and Przybyla (2002) show that a high share of service industries is associated with higher regional hiring rates in Poland.

Table 5: Regional Indicators relative to National Average by region Types

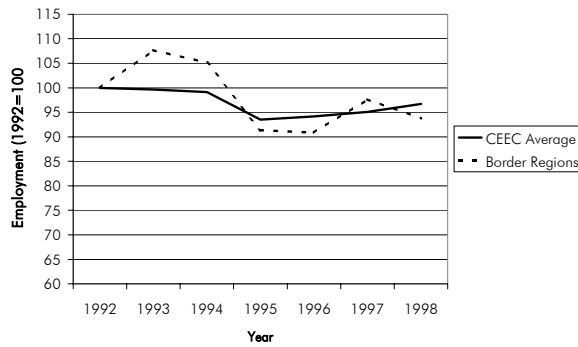
	Participation Rates (In % of total population)		Registered Unemployment Rates		Number of Regions
	1992	1998	1992	1998	
Agricultural Regions	0.90 (0.16)	0.95 (0.14)	0.93 (0.27)	1.03 (0.39)	71
Industrial Regions	0.97 (0.14)	0.98 (0.12)	0.99 (0.39)	1.11 (0.38)	61
Urban Regions	1.10 (0.30)	1.04 (0.19)	0.67 (0.31)	0.73 (0.33)	26
Other Regions	0.96 (0.10)	0.96 (0.09)	1.20 (0.30)	1.18 (0.29)	56

Note: Table reports unweighted averages (standard deviations) of variables normalised by national averages for candidate countries' and new member states' regions only (i.e. Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia). Values in brackets are standard deviations. Source: *Gacs and Huber (2003a)*.

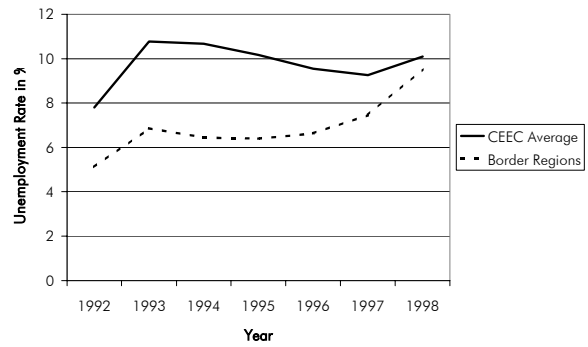
By contrast, peripheral agricultural regions have gone through difficult times during transition. In part this can be explained by falling agricultural income in the transition countries which was caused by adjustment to world market prices of both inputs and outputs, leading to higher input and lower output prices. The European Commission (2001) for instance finds that poverty rates are particularly high in rural areas of the EU member countries. Aside from high unemployment rates agricultural regions and particularly "other diverse regions" are, however, characterised by below average participation rates (see Table 5), suggesting that in these regions discrepancy between the officially measured unemployment and the actual underutilisation of labour may be particularly concentrated.

Figure 3: Evolution of employment, unemployment rates and labour force participation in EU border regions and the CEE average, 1992-1998

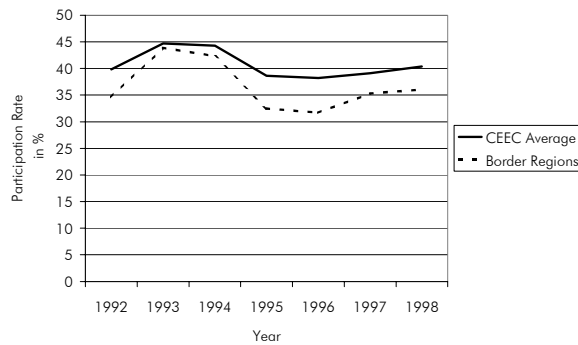
Employment



Unemployment Rate



Participation Rate



Note: Figure reports unweighted averages (standard deviations) of variables normalised by national averages for candidate countries' border and non border regions only (border regions are regions bordering to the EU). Source: Gacs and Huber (2003a).

In part this finding may be traced to the lower quality of infrastructure found in agricultural and peripheral regions and to lower levels of human capital endowments. Mickiewicz, Gerry and Bishop (2004) in workpackage 5 of the AccessLab project show that firms in regions with better infrastructure create more employment at least in Poland and evidence also suggests that in particular regions with bad infrastructure and human capital endowments face particular problems with the outflow of unemployed to employment. Again this is consistent with other results in the literature: Rutkowski and Przybyla, 2002 find that regional hiring rates are strongly correlated with both infrastructure measures such as the number of telephone lines as well as human capital measures, although only human capital

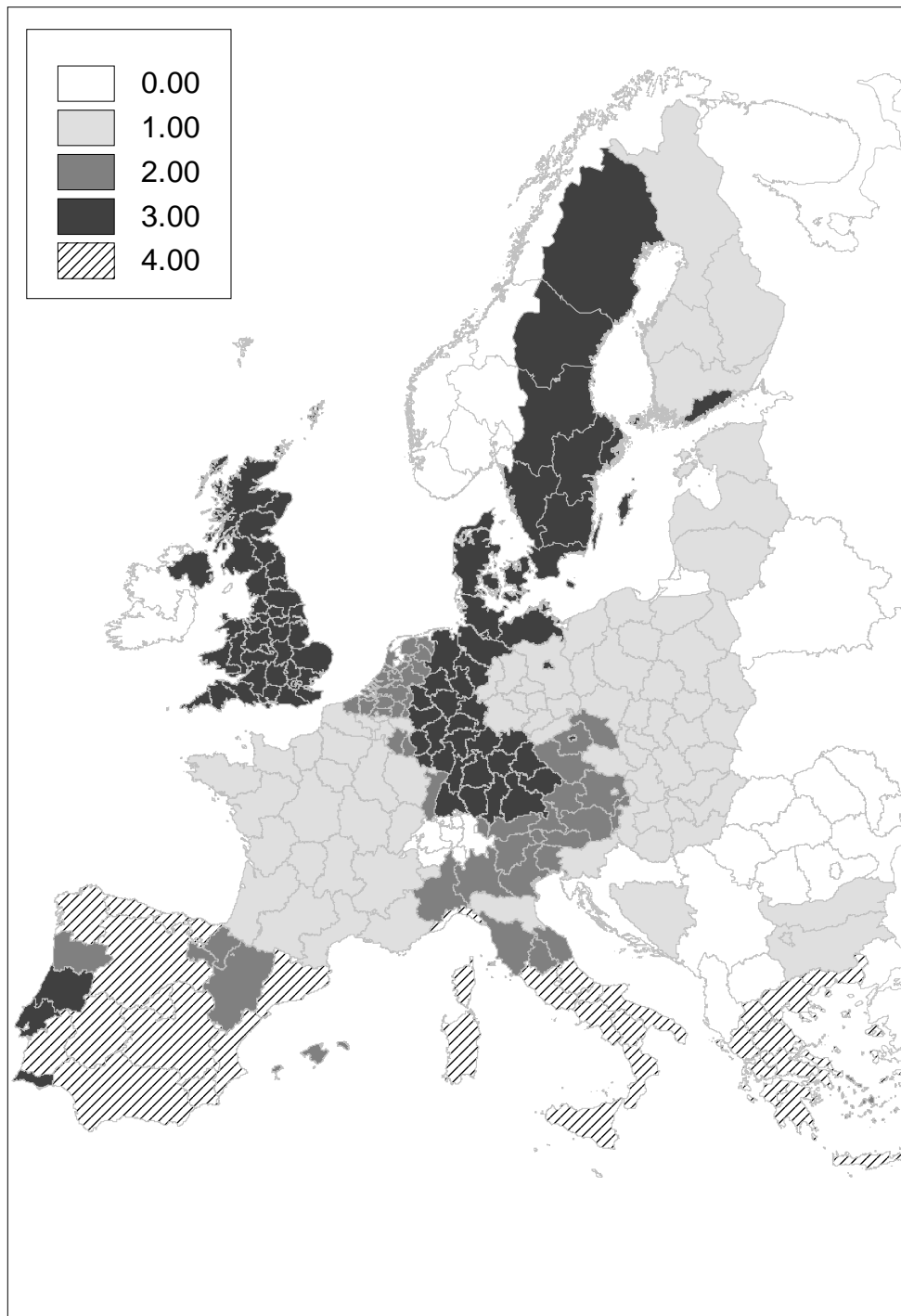
measures have a significant impact on hiring rates in a regression analysis.

Labour market problems in CEE regions are comparable to EU countries

Finally regional heterogeneity in labour market problems in the new member states and candidate countries parallels that of the EU. In Gacs and Huber (2003) we collected information on 45 NUTS II regions of 9 candidate countries for the years 1998 to 2001 and the 184 NUTS II regions of the 15 current EU member states for the same time period. We use the indicators used by the European commission to evaluate the labour market situation in EU member states, (the employment rate (in percent of total working age population), the gender difference in employment rates (as the ratio of male employment to female employment rates) and the employment share of the elderly (employment of those older than 55 relative to total employment) on the "employment" side. On the "unemployment" side we focused on overall unemployment, gender difference in unemployment rates, long-term unemployment (relative to total unemployment) and the unemployment rate of the young (relative to total labour force) as well as the participation rate and gender differences in participation rate to perform a cluster analysis dividing both EU and candidate countries' regions into four groups.¹² Our findings suggest that new member states and candidate countries are not characterised by completely different regional labour market problems from those of the old EU member states.

¹² Cluster analysis is a method from the "tool box" of explorative data analysis which allows to form groups according to the criterion of greatest similarity in a the set of indicators: To conduct this analysis for each indicator we subtracted the mean across regions and divided by the standard deviation for each observation (i.e. we formed Z-values such that $z_i = \frac{x_i - \mu_x}{\sigma_x}$ with μ_x the (unweighted) mean of the indicator and σ_x its standard deviation across all European regions). Furthermore, we used squared Euclidean distances and average within group linkage to define groups. To decide on the number of clusters reported we look at the distance between the two merged clusters. We decided for 4 groups in order to avoid an excessive amount of groups.

Figure 4: Group Membership



Note: Group 0 implies the respective region was not considered, Source: Gacs and Huber (2003)

Table 6: Group Means and Summary Statistics on Cluster Membership of European labour Market Clusters

	Group 1	Group 2	Group 3	Group 4
Unemployment rate	12.97	4.82	6.09	14.57
Youth Unemployment	8.46	3.86	4.71	10.28
Long Term Unemployment	45.69	35.56	36.91	51.57
Employment Rate	58.64	65.60	69.23	52.82
Employment Rate of the elder	7.57	7.48	11.91	11.83
Gender differences in employment rate	0.82	0.70	0.81	0.55
Gender differences in unemployment rate	0.84	0.55	1.12	0.47
	Number of regions from			
New Member States ^{a)} and Candidate Countries ^{b)}	41	3	1	0
EU-Regions	38	37	71	38
of this Southern Europe	2	15	4	37
Total	81	55	76	75
	Share of Population living in Clusters from...			
Candidate Countries	93.92	4.62	1.46	0.00
EU-Regions	23.55	17.04	39.06	20.36
Total	36.28	14.79	32.25	16.68

Notes: a) Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, b) Bulgaria, Source: *Gacs and Huber* (2003).

The group where most of the candidate countries regions can be found is group one, which is characterised by relatively high overall unemployment rates, slightly below average employment rates and low employment of the elderly as well as low gender differences in both unemployment and employment. Aside from regions of the new member states and candidate countries in Poland and Eastern Hungary this group draws substantial membership from 38 EU regions, which are mostly located France, Germany and Belgium. Thus these regions rather than southern European labour markets are the most comparable to new member states and candidate countries regions.

Further groups where new member state and candidate countries' regions are represented are groups two and three. Three Czech regions are grouped into group two. This comprises the low unemployment rate regions in Central and Northern Europe (Austria, Northern Italy, Netherlands, and Belgium) as well as a few low unemployment southern European regions. Furthermore, this group has employment rates only slightly above average as well as low employment rates of the elder. Prague (the capital city of the Czech Republic) is grouped into group three, which otherwise may be considered a cluster of the northern labour markets of Sweden, Denmark and Great Britain as well as

Germany. This group is characterised by only slightly higher unemployment rates as cluster two, but substantially higher employment rates (in particular for the elder) and lower gender differences.

In consequence our analysis suggests that southern European labour markets, which have often been viewed as the most comparable to candidate countries on account of their high unemployment may not be the best comparison group from a wider labour market perspective. The southern European regions of Italy, Spain and Greece are put in altogether different groups than the candidate countries, when looking at the larger labour market situation. Most of the southern European regions end up in cluster four. This is characterised by even higher unemployment rates as in the candidate countries, and substantially higher rates of youth and long term unemployment as well as lower participation and employment population rates and extremely high gender differences.

Structural Change and Sectoral Specialisation

Structural change at the regional level was high in border regions

Aside from divergence and polarisation tendencies, transition has also been associated with substantial structural change in the composition of employment in the last decade. Boeri and Terrel (2002) for instance report that the private sector employment share in Central and Eastern European candidate countries increased to 67.7% from virtually zero and that the share of services in total employment increased by 10.1 percentage points from 1989 to 1998. Mickiewicz (2001) finds that the employment share of industry has decreased in virtually all transition countries but that there have been two distinct forms of sectoral restructuring, which he terms the vertical path, where de-industrialisation has been associated with an increasing share for the agricultural sector, and the horizontal path, where service sector activity has replaced industrial activity. The vertical path has been followed by countries such as Romania, Russia and Ukraine, while the horizontal path characterises many of the more advanced transition economies such as those of the Vysegrad-4 as well as Estonia and Croatia. Recently, Raiser, Schaffer and Schuchhardt (2004) find similar results but suggest that the pace of structural change in

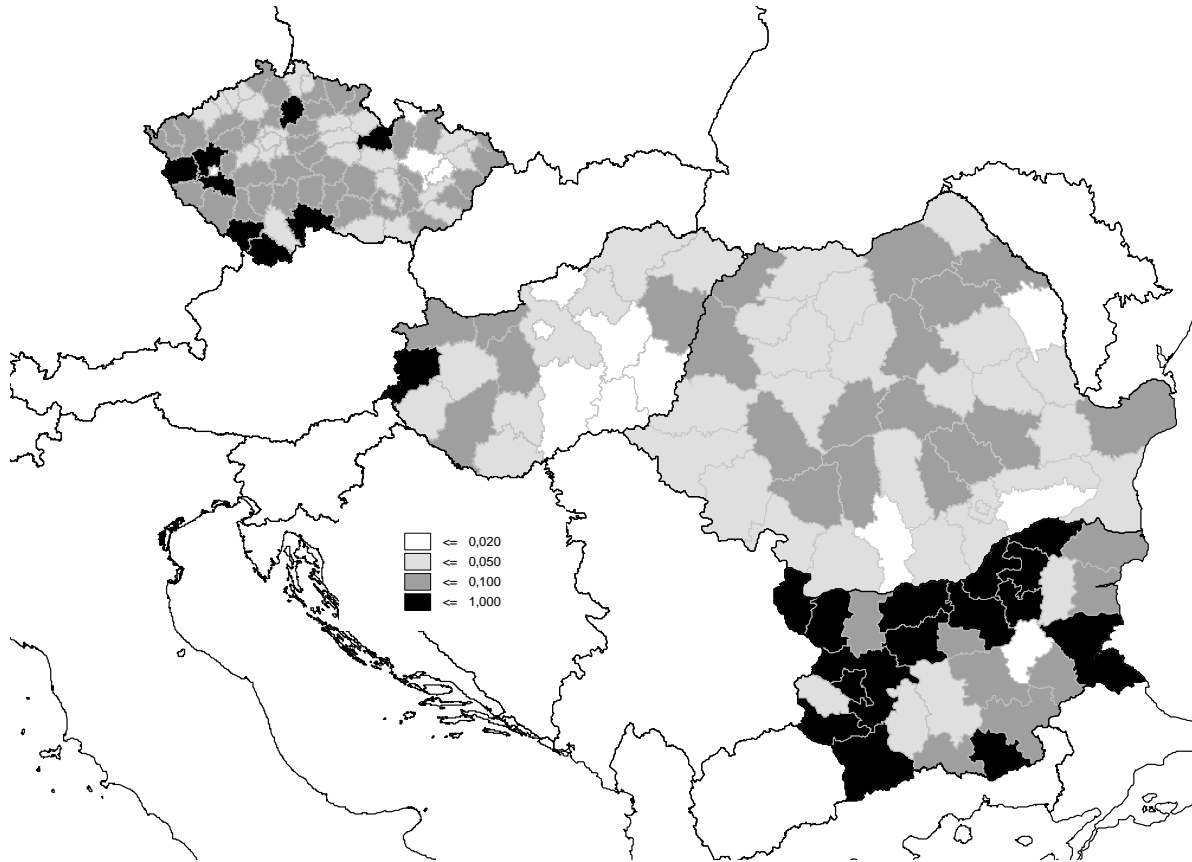
the transition economies has slowed down in the later transition period. Finally, Mickiewicz and Zalewska (2002) find that the determination with which of these paths is followed seems to have been strongly determined by the institutional reform path taken by the respective country. Econometric evidence suggests that indicators developed by the EBRD concerning the extent of structural reforms are important in predicting structural change in the candidate countries. In particular, successful restructuring at micro level (resulting from ownership changes and implementation of efficient corporate governance systems) seems to co-vary strongly with 'efficient' sectoral restructuring at the macro level. This opens the question to what degree structural change at the regional level is related to regional disparities in the new member states and candidate countries.

In figure 5 we use data on sectoral employment shares from 1992 to 1998 in a limited number of transition economies (Czech Republic, Hungary, Romania and Bulgaria) to document that structural change has varied substantially across regions in early transition by plotting the structural turbulence indicator¹³. As can be seen in this figure sectoral employment shares shifted most dramatically in regions closer to the west in both Hungary and the Czech Republic, while in both Romania and Bulgaria a more even dispersion of such structural change emerged. Thus border regions – which also experienced better development in these countries – also seem to have experienced higher structural change in the countries closest to the EU. By contrast, capital cities in all countries range in the lower part of the distribution, suggesting that these regions – although also having higher growth rates – did not experience so much structural change.¹⁴

¹³ This is defined as half the sum of changes in sectoral (agriculture, industry and services) shares between 1992 and 1998 in the region i.e. as $s_j = 1/2 \sum_i abs(s_{ijt} - s_{ijt-1})$ with s_{ijt} the share of sector i in region j at time t . It takes on values between 0 (no changes in shares) and 1 (complete change from one sector to another). It can be interpreted as the minimum number of employees changing sector of employment within a given time period.

¹⁴ This result is primarily due to differences in starting conditions: As administrative centres capital cities already before transition were characterised by relatively large service shares and low industrialisation. This limited the

Figure 5: Regional – Sectoral Structural Change between 1992 and 1998



Source: Regspec/AccessLab, see Footnote 11, for definition of measurement of structural change.

These stylised facts are of particular interest for two reasons: First, during the last two decades there has been a growing academic and policy interest in the spatial impact of economic integration, related to a general concern that structural change accompanying economic integration is likely to result in increasing regional specialisation and concentration of industrial activity, which in turn may cause increased regional disparities and may make regions vulnerable to asymmetric shocks. In such a case, industry-wide demand shocks may become region-specific shocks and short-term adjustment costs

scope for structural change in these areas. Clearly, focusing on narrower industrial categories may also reveal higher structural change in large agglomerations.

may be high if firms are closed or relocated.¹⁵ Second, the substantial changes in sectoral employment shares in the time period considered raise the issue, to what degree sectoral specialisation determines regional development and to what degree genuinely regional factors are of importance

Regional specialisation has ambiguous effects on regional labour market development

While the primary concern of the AccessLab project was with the latter question, the literature on changes in regional specialisation and concentration seems to suggest relatively few common stylised facts concerning the relationship between regional specialisation and growth. Traistaru, Nijkamp and Resmini (2002) investigate patterns of regional specialisation and geographic concentration of manufacturing industries and their determinants in new member states and candidate countries using regional manufacturing employment data for the period 1990-1999. The overall finding, however, as well as the existing country studies in their collective volume (see: Spindrova, 2002, Redei, 2002, Traistaru and Pauna, 2002, Damijan and Kostevc 2002, Fainshtein and Lubenets, 2002) suggest few common features. Regional specialisation has increased in Bulgaria and Romania, decreased in Estonia and has not significantly changed in Hungary and Slovenia.

Furthermore, patterns are also relatively heterogeneous concerning the development of border regions. Regions bordering the EU are found to be less specialised than the national average in Estonia, Hungary and Slovenia while they are more specialised in Bulgaria. Regions bordering other accession countries are found more specialised in Estonia and Hungary, while in Bulgaria and Romania these regions are less specialised. Regions bordering other countries (non EU, non accession countries) have become more specialised with the exception of Romania. Non border regions are less specialised in Bulgaria and Hungary and more specialised in Romania and Slovenia. High regional specialisation

¹⁵This point has been forcefully made in the literature by so called "new economic geography" models such as in Fujita, Krugman and Venables (1998).

may however be associated with bad economic performance. Diversified regions perform better according to the results in Traistaru, Nijkamp and Longhi (2002).

There is, however, a stronger link between regional characteristics and location of industries. Again Traistaru, Nijkamp and Longhi (2002) find that industries with high economies of scale, high technological standards and high wages are concentrated, while industries with low technological standards and low wages are dispersed. The results of the econometric estimation of determinants of manufacturing location suggest that regional location patterns broadly follow the expectations of economic theory and that both factor endowments and geographical proximity to industrial centres explain the economic geography of manufacturing in new member states and candidate countries. Labour intensive industries tend to locate in regions with labour abundance, while regions endowed with researchers attract research intensive industries. Industries with large economies of scale tend to locate in regions close to industrial centres (the capital cities in Bulgaria, Romania and Hungary; European markets in the cases of Estonia, Hungary and Romania).

Regional differences are more important in explaining employment outcomes than sectoral developments

The results of the AccessLab project extend on this last finding by suggesting that regional factors such as market access, infrastructure and R&D potentials are more important in shaping labour market developments in new member states candidate countries than sectoral specialisation. Traistaru and Wolf (2003) in workpackage 2 of the AccessLab project investigate and explain regional differentials in employment changes. They find that over the period 1990 – 1999 employment in the industrial sector declined in all candidate countries but Hungary, Slovakia and Poland, while employment in agriculture increased in Bulgaria and Romania. Using a shift-share method this paper finds that the variance of regional employment change is driven almost entirely by region-specific factors, while regional specialisation and regional competitiveness play only a minor role in explaining regional employment change differentials. Employment change differentials are uniform across sectors and

vary across regions. Regions lagging behind thus suffer from uniform employment growth differentials across sectors and shocks are regional rather than industry-specific. According to Traistaru and Wolff (2002) regional factors account for between 70% and 90% of the total variance of regional employment growth in the candidate countries.

National rather than regional factors are more important for explaining differences in regional unemployment rates and participation rates among the candidate countries' regions, however, (see: Huber and Gacs, 2003 in workpackage 2 of the AccessLab project). These results together with the findings of Traistaru and Wolff (2003) suggest that, while regional idiosyncratic shocks are more important in determining regional development of employment, when it comes to how these shocks are absorbed in the labour market (i.e. wage changes, unemployment or participation), national factors seem to be important. This hypothesis is also supported by the econometric analysis undertaken by Huber and Gacs (2003a) in workpackage 2 of the AccessLab project which shows that idiosyncratic region specific developments of unemployment and participation rates are of a smaller importance in first round candidate countries (but larger in second round candidate countries) than in EU member states. The candidate countries have, however, experienced larger region specific shocks to employment.

The Adjustment Capability of regional labour markets in Transition

As in most European labour markets a substantial part of regional adjustment is borne through participation decisions in the new member states and candidate countries

Aside from posing questions concerning the causes for long run differences in growth paths the high regional labour market disparities in transition economies also pose the question to what degree the mechanisms of regional equalisation on labour markets such as migration, wage flexibility, investments and changes in labour force participation can be considered viable in reducing differences in regional labour market outcomes. The central objective of the AccessLab project was to identify these mechanisms of regional adjustment in the new member states and candidate countries. Overall the results suggest that regional labour markets in the new member states and the candidate countries are typical European labour markets in many respects. In particular as in the EU, and in contrast to non-European OECD member states, adjustments in the participation rate play an important role and adjustments in migration a small role. The simulations presented in Gacs and Huber (2003a) in Workpackage 2 of the AccessLab project suggest that in the short run around 70% of a unit region specific shock to labour demand is accommodated through changes in labour supply in the new member states and around 20% is accommodated through changes in unemployment, the remainder of 10% is adjusted through migration. This is comparable to the stylised facts found in many EU studies, but differs significantly from non-European countries where migration accounts for a much larger share of the adjustment (see Table 7).

Quantity adjustments such as changes in participation rates and unemployment rates, however, are slightly less persistent in candidate countries and new member states than in the old EU member states, so that unemployment and participation rates return more rapidly to their long run levels following an adverse shock. This seems to be a very robust result. Huber, (2003) Gacs and Huber (2003a) and Büttner (2003) in Workpackage 2 of the AccessLab project all suggest that persistence of

regional unemployment rates is lower than in EU member states, in particular in first round candidate countries. In both first and second round candidate countries persistence in participation rates is lower than in EU member states. Furthermore, the evidence presented in Gacs and Huber (2003a) suggests that region specific shocks lead to a slightly higher long run change in employment at least in the new member states.

Table 7: Comparison of Shares of Shock Accommodated by Alternative Variables in the Literature

	Employment Rate	Participation Rate	Net Migration
Europe (1975 – 1987, 51 Regions)	22	75	4
Spain* (1976 – 1994, 17 regions)	36	23	41
Sweden (1966 – 1993, 24 regions)	8	26	66
Finland (1976 – 2000, 11 regions)	27	65	8
Netherlands* (1993 – 1999, 18 regions)**	14	74	12
Belgium (1970 – 1995, 3 Regions) ^{b)}	-4 to 22	3 to 33	45 to 99
Germany (8 regions, 27 years)	12	93	-5
Italy (11 regions, 27 years)	37	62	1
UK (11 regions, 27 years)	12	91	-3
US (1978 – 1990, 51 States)	34	26	40
Australia (1978 – 1997, 7 States)	20	40	40
AccessLab Results			
Member States	35	68	-3
Candidate Countries overall (200 regions)	16	71	12
First Round (1992 – 1998, 141 regions)	10	69	21
Second Round (1992 – 1998, 69 regions)	54	76	-41

Sources: Decressin and Fatas (1995) for Europe, Jimeno and Bentolila (1998) for Spain, Fredrickson (1998) for Sweden, Pekkala and Kangashartju (2002) for Finland, Boersma and van Dijk (2002) for the Netherlands, Deglaigle and Lohest (1999) for Belgium, Blachard and Katz (1992) for US and Debelle and Vickery (1998) for Australia Fatas (2000) for Germany, Italy, UK (approximate figures estimated from graphs)* Quarterly Data, ** First quarter a) separate for each of three regions. Own results are based on single equation robust Arellano-Bond estimations of log relative employment, log relative participation rate (participation rate defined as labour force to total regional population) and log relative employment rate where relative refers to relative to the CEEC average. Hungarian data from 1992 to 1997 employment growth and participation rate for Germany 1989 – 1994 Excluding overseas territories (Acores and Madeira).

Comparison of the above results with existing empirical evidence on the United States and other non-European OECD countries (see: *Gacs and Huber, 2003a*) suggests, however, that both participation rates and unemployment rates are more persistent than in the more flexible labour market environments of the US. Thus relative to non-European OECD countries the regional labour markets of the new member states and candidate countries seem as inflexible as most EU labour markets.

There are also some important regional differences in labour market adjustment (see table 8). In particular, some of the differences between high and low unemployment rate regions are attributable

to differences in the adjustment of regions to shocks in labour demand. High unemployment rate regions are characterised by larger (mostly negative) shocks to labour demand, a higher persistence of these shocks, and larger adjustment through unemployment rates rather than migration. Furthermore, urban regions are characterised by a very high persistence of the (mostly positive) shocks to labour demand, while in agricultural regions a substantial part of the adjustment is carried by changes in unemployment rates.

Table 8: Dynamic Behaviour of Employment and first year Adjustment by Region types

	Size of Shock	% of shock remaining after One year t=2	% of shock remaining after three years t=4	Share of shock accommodated in the first year by...		
				Employment Rate	Participation Rate	Net Migration
Non Border Regions	0.056	90	94	19	72	9
Agricultural Regions	0.057	62	64	46	71	-19
Industrial Regions	0.052	78	79	28	74	-2
Urban Regions	0.053	100	100	7	68	25
Low unemployment regions	0.049	68	69	24	74	2
High unemployment regions	0.062	81	79	45	75	-20

Note: German employment growth and participation rate 1989 – 1994, excluding Portuguese overseas territories (Acores and Madeira) Hungarian data from 1992 to 1997. high unemployment rate regions = regions with unemployment rates in excess of 10% in 1998; Low unemployment rate regions = regions with unemployment rates lower than 7% in 1998. Regional typology for candidate countries according to Scarpetta and Huber. Results for region types refer to candidate countries regions only.

In summary this suggests that in transition economies the regions hit most severely by employment losses, show little sign of recovering by increased job creation and that adjustment via labour market participation plays an important role in new member states and new candidate countries. This is also found by Bornhorst and Commander (2004).

Migration is low in transition countries and has fallen despite increasing regional disparities

One of the most outstanding features of the regional labour markets in the new member states and candidate countries, however, is the low inter regional migration even relative to the EU15 member states (see table 9). Fidrmuc (2003 in workpackage 3) comparing internal migration in the Czech Republic, Poland, Hungary, Slovakia and Slovenia with that in Italy, Spain, the Netherlands and

Germany concludes that migration is little effective in reducing regional disparities in the new member states and candidate countries. Ederveen and Bardsley (2003 in workpackage 3) finds evidence that after controlling for methodological and data construction differences between studies, migration in the candidate countries is less reactive in particular to differences in unemployment rates. Huber (2004 in workpackage 4) finds that migration is less reactive to regional disparities in accession countries than in EU-15 states. If reaction to disparities were similar gross migration should increase by 10 to 50 per cent and net migration by a factor of between 2 and 10.

Table 9: Migration indicators by country and year

	Gross Migration Rates ¹⁾		Net Migration Rates ¹⁾		Share of net Migration ¹⁾	
	1992	1999	1992	1999	1992	1999
Czech Republic	0.57	0.50	0.009	0.063	1.64	12.61
Estonia	0.87	0.53	0.203	0.024	23.24	4.64
Hungary	1.49	1.32	0.094	0.054	6.30	4.11
Poland ^{a)}	0.37	0.29	0.053	0.033	14.48	11.20
Romania	n.a.	1.23	n.a.	0.013	n.a.	1.09
Slovenia	n.a.	0.30	n.a.	0.021	n.a.	7.15
Slovakia ^{b)}	n.a.	0.22	n.a.	0.023	n.a.	10.25

Notes: Gross and net migration rates are measured in % of the population. Gross migration is the share of people moving across regional borders within the country in a year. Net migration is calculated as half the sum of absolute values of net migration across regions, the share of net migration is the ratio of net to gross migration a) Polish data for 1992 are 1990 figures b) Slovak data are from the year 2000. n.a. – data not available 1) Figures are in %. Source: Eurostat New Cronos, Huber 2004.

This said there seems to be some important variance across countries. While in most of the countries analysed by Fidrmuc (2003 in workpackage 3) low migration rates are the rule, Hazans (2003a in workpackage 3) finds that in the Baltic countries migration rates are relatively high by international standards, Cseres Gergeley (2002) finds higher short distance moves in Hungary, and Kallai (2003 in workpackage 3) shows that in Romania migration rates are comparable to those found in many of the more flexible western European Labour markets.

Furthermore, results also show that migration rates in the candidate countries have fallen substantially in the decade after the 1990's and thus relative to the socialist era although regional disparities have widened. Indeed this "stylized fact" seems to apply even more ubiquously than low migration rates themselves. Fidrmuc (2003 in workpackage 3) for the big central European candidate countries,

Hazans (2004a in workpackage 3) for the Baltic states and Kallai (2004 in workpackage 3) for Romania all find this decline in migration rates. The major difference is that in some countries (in particular in the Baltic Countries) this decline ends shortly after transition, while in others (in particular in the CEEC) this decline continues well into the mid 1990's.

Finally, the scarce evidence on commuting – which may serve as a substitute for migration – available in the transition economies does not seem to indicate that this is a viable alternative. Boeri, Burda and Köllö (1998) cite evidence that in Hungary migration in excess of 20 kilometres could cost as much as the minimum wage and travelling more than 50 kilometres would cost more than the average wage in Hungary, while Hazans (2003) finds that in the Baltic countries between 23% (Estonia and Lithuania) and 19.3% (Latvia) of the full time employees commute across municipal borders. This seems small given that commuting is measured across communal borders.¹⁶ Hazans (2003), however also finds that commuting has contributed to reducing regional labour market disparities.

In the framework of the AccessLab project Bartusz (2004) analyses the commuting behaviour of Hungarian job finders. He finds that travel to work costs severely constrain the commuting distance of unemployed workers in Hungary. Long-distance commuting seems conditional on employers' contribution to travel to work costs with only 15 per cent of the commuters self-financing their travels. Estimating a model of commuting decisions, he finds that travel to work costs limit the distance of self-financed commuting to 20 km with women and 50 km with men.¹⁷

¹⁶ In Austria for instance – which is a country where commuting is difficult due to geographic conditions in many areas, – around 42% of the employed (i.e. double as high a share) commuted across communal borders in 1991.

¹⁷ These findings are similar to those of earlier research by Kertesi (2001), who found that commuting costs tend to lock low-wage workers into high-unemployment villages while high-educated residents are able to access urban labour markets.

Liquidity constraints, housing market imperfections and the changes in migrant behaviour seem to be the most important factors accounting for low migration

Low and falling migration in the face of large regional disparities in terms of regional income and unemployment rates in the candidate countries present somewhat of a puzzle. According to standard economic theory (see Todaro, 1969, and Harris and Todaro, 1970) migrants move from places with low expected income to regions with high expected income in order to maximise their lifetime utility. Therefore, high regional disparities should increase the incentive to migrate rather than lower migration. Although some studies in the AccessLab project (e.g. Hazans 2004a for Latvia and Fidrmuc and Huber (2003) for the Czech Republic) find evidence of an increasing responsiveness of migration to wages, explanations for these low and declining migration rates are needed if policy is to effectively increase migration. A number of such explanations have been put forward and were analysed in the context of the AccessLab project:

- First, it has been argued (see: Faini et al, 1997) that spatial matching in labour markets may be less efficient in Europe. In particular if job searchers in the labour market face a substantially higher probability of being hired (per unit of time spent searching) in their region of residence, than in a region, where they do not live, and migration costs are high, low rates of migration despite large regional disparities may be an equilibrium outcome (see: Mohlo, 2001). This hypothesis finds some indirect empirical support in the case study on the Czech Republic by Huber and Fidrmuc (2003) which finds that distance has become a more important deterrent to migration and that migration rates have declined most severely over long distance categories.
- Second, and closely related, skill mismatch in may be an important element. New jobs are created mainly in the service sector in urban regions, these jobs may require skills not available to unemployed blue collar workers in other regions.

- Third, policy interventions as provided through social and regional policy have been considered potential culprits for low migration rates. To the extent that such transfers provide additional disposable income primarily to depressed regions, this will countervail existing unemployment and wage disparities, thereby reducing migration incentives. Huber (2003a in workpackage 3) addresses this issue by analysing the cross country variation in internal migration rates in the candidate and EU countries. He finds only mixed support. While the replacement rate of national unemployment benefit systems is not robustly correlated with the internal migration rates, his analysis also suggests that higher degrees of employment protection are robustly associated with lower internal migration rates.
- Fourth, aside from government support other unmeasured income components, such as black market income or income from subsistence farming may induce labour market searchers to stay at home rather than move elsewhere in the country. Such income will tend to reduce emigration from high unemployment (low wage) regions, if the share of unmeasured income components is higher in these regions than elsewhere. In this case actual disparities will be smaller than measured income and unemployment disparities. Again Huber (2003a in workpackage 3) addresses this issue and finds little support that this could explain cross country differences in migration rates. Measures of the extent of the black market are not robustly correlated with cross country differences in internal migration rates.
- Fifth, inefficiencies in the housing markets could have led to decreasing migration (see: Faini et al, 1997). This may be the case in particular in countries where rent controls are important and taxation of housing transactions is high. The evidence on the impact of this factor collected in workpackage 3 of the AccessLab project suggests that housing supply considerations may represent less of an impediment to migration in candidate countries. Hazans (2003a in workpackage 3) finds that commuting and migration are complements rather

than substitutes (i.e. high migration is associated with high commuting in the same direction rather than vice versa) in the Baltic countries, which suggests that migration is not foregone due to the unavailability of housing. Huber and Fidrmuc (2004) as well as Kallai (2003) in workpackage 3 find little evidence of a significant effect of housing availability on bilateral migration rates in the Czech Republic and Romania, respectively.

These results, however, pertain only to indicators of aggregate housing availability. When moving to structure of housing availability Huber (2003a) shows that for EU member states high shares of owner occupied housing belong to the most important correlates of low migration rates in EU member states and Fidrmuc and Huber (2003) also find that ownership of either own housing and or weekend houses seems to limit willingness to migrate. While these results require some corroboration before jumping to strong policy conclusions this suggests capital and housing market inefficiencies seem to play some role in explaining low migration in the candidate countries and that improved human capital will increase the adaptability of the workforce.¹⁸

- Sixth, high nation-wide unemployment rates may discourage internal migration, as they indicate falling probability of finding employment. This factor, however, seems to play only a minor role in explaining declining migration rates in candidate countries. Huber and Fidrmuc (2003 in workpackage 3) show that increasing aggregate unemployment rates are uncorrelated with the fall of Czech migration rates in the late 1990's after controlling for other factors impacting on migration.

¹⁸ The hypothesis that the structure of housing supply and institutional factors in the housing market act as an impediment to migration is also suggested in Hegedüs (2004). He argues that the lack of private rental housing, local government interventions and lacking transparency of housing prices are the major deficiencies of the housing market in Hungary.

- Seventh, the context of transition draws attention to the fact that low migration rates may reflect differences between short and long term developments and changes in migrant behaviour. In particular, it may be that current wage and unemployment disparities do not fully reflect the regions' long-term economic prospects. This can best be exemplified at the hands of transition economies. In these countries, in the early 1990's the heavy-industry and mining districts were among high wage regions and reported unemployment rates only slightly above the national average. Subsequently, these districts were hit disproportionately hard by the reform-induced shocks. To the extent that inhabitants had rational expectations concerning the extent of this upcoming decline, maximising future expected income may have involved moving even despite low wage disparities between sending and receiving regions. Indeed changes in behaviour and expectations seem to have been an important aspect to account for the decline in migration rates in the 1990's. Huber and Fidrmuc's (2003 in workpackage 3) case study suggest that the decline in migration is entirely due to changes in behaviour among migrants
- Eighth, in particular in the context of candidate countries, where income levels are substantially lower than in the EU, liquidity constraints could play an important role in shaping low migration rates. Kallai (2003 in workpackage 3) provides some evidence concerning the importance of this aspect of migration.¹⁹

In summary these findings suggest that low migration rates are one of the major obstacles to equalisation of regional disparities as well as to effective absorption of asymmetric shocks in the

¹⁹ A further reason for the declining rates of migration could be changes in the registration behaviour of individual. There are, however, reasons to doubt this. First the decline is continuous, which suggests that at least it is not the result of an abrupt policy change. Second, in some countries the decline starts already before changes in registration legislation start and third, and most importantly, in those cases where migration by distance is available (e.g. Fidrmuc and Huber, 2003 and Huber 2004 in workpackages 3 and 4 of the AccessLab project) the decline is almost fully accounted for by the reduction in moves over a distance of 100 kilometres .

candidate countries. The results, however, also suggest that low internal migration rates in the candidate countries have a wide range of reasons of which housing and capital market imperfections, are probably the most important but in which spatial matching and labour market institutions as well as changing migrant behaviour also have a role to play.

Wage flexibility is only slightly higher than in old EU-countries

Most studies that have attempted to empirically analyse wage determination in regional labour markets in transition economies focus on the elasticity of regional wages with respect to some measure of regional labour demand such as the unemployment rate. Within this framework there are two competing approaches. One class of studies follows the wage curve approach (see Blanchflower and Oswald, 1994) where the cross-sectional variance in variables is used to assess the impact of unemployment on wages, and second models use the longitudinal variance in data (i.e. the notion of Phillips Curves) (see Baddeley, Martin and Tyler, 2000).

Most of the evidence concerning the reaction of wages to regional unemployment rates in transition countries has been based on the wage curve approach. Results have been mixed. Boeri and Scarpetta (1996) find correctly (negatively) signed but insignificant parameters when estimating equations that relate regional wage change to changes or levels of unemployment rates, and Commader and McHale (1995) report ambiguous results for the Visegrad countries. By contrast, Kertesi and Köllö (1995), using smaller regional units, and Kertesi and Köllö (1997), using individual data for Hungary, find a significant negative impact of unemployment levels on regional wages and present evidence that the elasticity has increased in the course of transition. Kallai and Traistaru (2001) report a significant impact of unemployment rates on wages in a wide variety of specifications for Romania, while Duffy and Walsh (2001) find robust elasticities of wage levels with respect to unemployment rates using both Polish regional as well as individual data from 1991 to 1996 of around -0.1 .

The contributions of the AccessLab project extend this literature in three ways: First they compare the new member states and the candidate countries to the old EU member state. Second, they analyse in detail the regional interaction in wage setting. Third they provide evidence on the role of regional labour market conditions on the adjustment of wages and employment at the firm level. The results indicate that:

- 1) Wages in the candidate countries are slightly more responsive to regional labour market conditions in the new member states and candidate countries than in the EU. Following different methodologies, both Huber (2003) and Büttner (2003) in workpackage 2 of the AccessLab project find that wages are more responsive to regional labour market conditions in the new member states candidate countries than in the EU. In consequence this evidence suggests that although there is some variance across countries, wage responsiveness to regional unemployment rates is about comparable (and in some countries even slightly higher than in many EU countries). This, however, should not be taken as a sign of high flexibility, since EU countries themselves are known to have a low responsiveness of wage levels to regional unemployment rates. Furthermore, a more detailed country specific analysis by Iara and Traistaru (2003 in workpackage 2), suggests, that there is substantial heterogeneity across candidate countries. Wage flexibility is particularly high in Hungary, Poland and in Bulgaria, while in Romania wages do not seem to respond to regional labour market conditions at all.
- 2) In contrast to the findings of much of the literature on the EU, spatial interactions in wage setting and labour market conditions seem to be relatively unimportant in new member states and candidate countries. Iara and Traistaru (2003 in workpackage 2) find that spatial interaction effects play an important role only in Hungary. In addition, Gacs and Huber (2003 in workpackage 2) find that the labour market position of neighbouring regions has little explicative power for determining a regions labour market situation and Huber (2003) shows that nation wide unemployment rates have a weaker impact on regional wage changes in the candidate countries

and new member states than in the EU15 member states. This is indicative of the low spatial mobility found in new member states and candidate countries as documented in the results above. Since internal migration in the candidate countries is low, the unemployment rates of neighbouring regions' have little impact on the wage bargaining process in the home region and labour market conditions are largely independent of vicinity effects.

Table 10: Studies on regional response of wages to unemployment rates

	Countries	Dependent variable	Elasticity with respect to unemployment rate
Kallai and Traistaru (2001)	Romania	Wage level	0.13 to -0.25
Duffy and Walsh (2001)	Poland	Wage level	0.16 to -0.11
Huber (2002)	Czech R. Slovak R. Poland Hungary	Wage change	Elasticity with respect to unemployment rates is slightly higher in candidate countries than in the EU, the elasticity with respect to national unemployment rates is lower in candidate countries
Kertesi and Köllö (1997)	Hungary	Wage levels	Unemployment rate has significant negative impact on wage level
Kertesi and Köllö (1995)	Hungary	Wage levels (ind. data)	Unemployment rate has significant negative impact on wage level
Boeri and Scarpetta (1996)	Czech R. Hungary Poland Slovak R.	Wage change	Coefficients of change in unemployment are insignificant
Commander and Hale (1995)	Vysegrad Countries	Wage level	There is substantial heterogeneity among countries, results are ambiguous
Büttner (2004)	Czech Republic Poland Hungary Estonia Romania Slovakia Slovenia	wage level	regional unemployment rate is significant and correctly signed in Bulgaria, Czech Republic; Hungary; Poland Slovakia and Slovenia In these countries generally wage flexibility is higher in CEE than in Italy or Germany
Iara and Traistaru (2004)	Bulgaria Hungary Poland Romania	wage level	Significant negative impact of regional unemployment rate in all countries but Romania

Source: Burda, Boeri, Köllö (1998), own research.

3) Firm reactions to regional labour market conditions seem to be relatively high but vary substantially among firm types. Again this finding is highly robust across the countries analysed and is found in Mickiewicz, Garry and Bishop (2004), Köllö and Mickiewicz (2004) as well as Telegdy (2004) for Hungary, Poland and Romania, respectively in workpackage 5 of the AccessLab project. In particular wage dynamics in the state firms are highly sensitive to regional unemployment, unlike the private sector firms. This result is consistent with findings for the

earlier transition period, in the literature and indicates that wage curve effects may have been evolving over time in countries, which undergo ownership transformations. We thus expect the unemployment elasticity of wages to decrease as a result of the privatisation process. In addition, it was found that it is the change in local unemployment, not the level of unemployment, which affects wage behaviour more significantly. In particular, where local unemployment is growing, the wages are becoming more sensitive to the sales/employee measure. The tentative interpretation is that the bargaining power of workers is affected by the changes in outside option. Finally, firm level wages are also influenced by regional wages. We find significant and positive regional wage coefficients in wage regressions.

In sum wage flexibility in the new member states and candidate is lower than in the more flexible non-European OECD labour markets and there are reasons to believe that in reaction to continuing restructuring wage responsiveness may even fall in the future.

Members of ethnic minorities and lowly qualified have the largest difficulties in adjusting

Aside from differentiations concerning the adjustment behaviour of individual firm types, adjustment capabilities differ widely among individual groups of workers. In particular discrimination on ethnic grounds hampers regional labour market adjustment in the candidate countries and may be considered an important element causing regional "lock-in" of members of ethnic minorities. The region's division by *ethnicity, language and religion* manifested itself in several ways since 1989 even including inter-ethnic hostilities. The EU accession countries experienced less of the open conflicts but several of them have to cope with severe inequalities related to ethnicity. Hungary, Slovakia and the Czech Republic have sizeable Roma minorities living in underclass conditions and facing several times higher unemployment rates than do the non-Roma. The Baltic States through their large Russian minority are also challenged by a minority problem that is unparalleled in its scope and nature within

the former EU. Roma are the largest low status ethnic minority of Central Europe and the Balkans, and their deprivation represents one of the region's most severe social problems.

Using survey data the Kertesi (2004) in his in-depth analysis of the exclusion from the labour market of Hungary's sizeable Roma community (accounting for about 6 per cent of the country's population) in workpackage 4 of the AccessLab project suggests that under socialism (1984) 75 per cent of the Roma adults were steadily employed in large industrial organisations rather than traditional Gypsy occupations. By 1994 their employment ratio fell to 35 per cent and remained at that level until recently.²⁰ The study demonstrates that those staying in employment also have shorter job spells. About half of the employment gap can be attributed to lower education of the Roma, and their regional affiliation adds a further compositional effect. Industry-specific shocks do not explain the residual gap given that the Roma were not over-represented in industries severely exposed to the transition shock. Both the time path and the regional patterns of Roma unemployment suggest, however, that they were 'crowded out' by majority workers on a massive scale. Roma employment started to decline prior to 1989 as Hungary introduced a series of market institutions and hardened the enterprises' budget constraints. The bias against Roma workers also appears in their *relative* employment rates across regions. The employment gap between the Roma and the non-Roma sharply increases with the local unemployment rate - an observation that is hard to reconcile with non-discriminatory practices.

Segregation in education also seems to play a role in transmitting the disadvantageous position of ethnic Russians in Estonia and, less clearly, Lithuania.²¹ For the Baltic countries Smith (2004) identifies substantial ethnic earnings wage gaps in Estonia and Latvia, and lower returns to human capital for members of the Russian minority in Estonia. In Estonia the bulk of the earnings gap is

²⁰ The 2001 Census, for instance, suggested that the Roma population's employment ratio fell short of 1/3 of the country's aggregate employment ratio.

²¹ According to newer results based on data with exact wages rather than intervals, ethnic earnings gaps (although smaller), however, also exist in Lithuania.

attributable to differential returns to human capital. The case is different in Romania where Andren, Earle and Sapatoru (2004) workpackage 4 of the AccessLab project find no statistically significant gaps in returns to human capital comparing ethnic Romanians, Hungarian and Germans. In particular their findings on the Romanian labour market refute the hypothesis that minorities' higher potential to migrate leads to higher wages and/or higher returns to human capital.

Aside from discrimination on ethnic grounds marked differentiations exist for labour market outcomes among different groups, which suggest substantial room for micro-oriented labour market policies. In particular returns to education increased dramatically during transition, which caused wage inequality to increase substantially. Furthermore lowly qualified workers are the main group with the largest difficulties in adjusting to labour market shocks. Andren, Earle and Sapatoru (2004) workpackage 4 of the AccessLab project find that in Romania returns to schooling increased from 4% in socialist times to 8.5% in 2000 and Smith (2004a) workpackage 4 of the AccessLab project finds similar stylised facts concerning household income in the Baltic countries. Addressing a number of alternative hypotheses concerning the increase in returns to schooling Andren, Earle and Sapatoru (2004) conclude that the high productivity of school-based skills (pre- and post-transition alike) in restructuring and entrepreneurial activities played key role in the doubling of returns to education.

Low skilled workers are, however, also found to be disadvantaged in a number of further respects relevant to their labour market adjustment. They are likely to have the lowest willingness to migrate (see Fidrmuc and Huber 2004 workpackage 4 of the AccessLab project) and have lower chances to participate in the labour market (see: Hazans 2004c workpackage 4 of the AccessLab project). While this finding is in accordance with much of the literature on labour market adjustment in the old EU member states it does suggest that issues of the education of the workforce are an important aspect in facilitating regional labour market adjustment.

Finally some evidence also suggests that gender differences in labour market outcomes may be further reason for regional lock in labour markets. In particular Bartus (2004 workpackage 4 of the AccessLab project) finds that commuting distances of Hungarian job finders are lower for females than for males. Furthermore, Hazans (2004c workpackage 4 of the AccessLab project) estimating separate models for females and males finds that that inactive females are most likely to be discouraged if they have secondary general and secondary vocational education (in Estonia also vocational without secondary). Thus these groups are also the most likely to be accessible to policies addressed at mobilising inactive parts of the workforce.

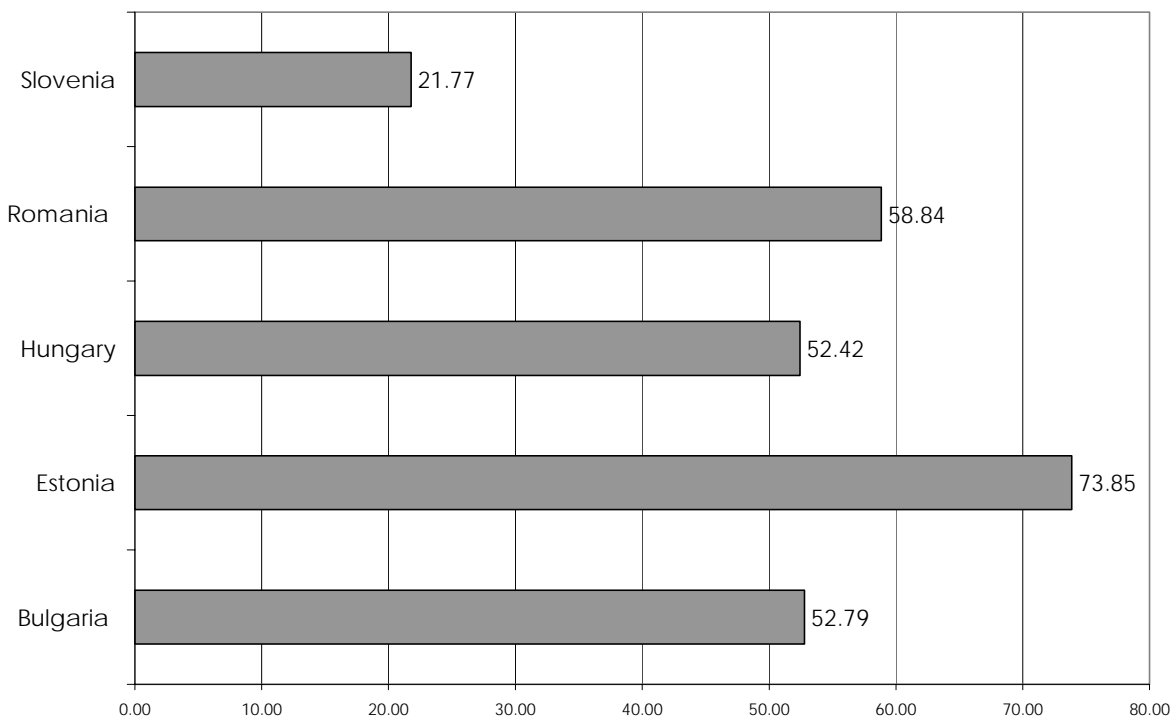
Thus in summary the results of the AccessLab project suggest that the perspectives for labour market adjustment mechanisms to equilibrate the regional disparities in the future seem relatively bleak. Migration is low in candidate countries and wage flexibility is only slightly higher. Most of the adjustment burden on the labour market has to be carried by changes in participation and unemployment rates. Furthermore, the evidence suggests that this macro-level rigidity is concentrated in particular population groups such as members of ethnic minorities, less qualified and in the case of spatial mobility women. In consequence it has to be expected that labour market adjustments will contribute little to reducing regional disparities in future.

Capital mobility is unlikely to contribute to regional equalisation

In textbook economic models labour market adjustments are, however, only one mechanism by which regional differences can be diminished. An alternative method could be capital mobility. If capital is mobile but labour is not, increased investments into low cost (or equivalently low wage) regions may provide a substitute mechanism for regional equilibration through migration. This prediction of standard theory, however, rests on a number of rather restrictive assumptions. More realistic theories of regional development such as the new economic geography models (see Fujita, Krugman and Venables, 1999) often argue that a firms location decision is shaped by centripetal (agglomerative) as

well as centrifugal (disagglomerative) forces. Agglomerative forces such as localised supply and demand networks, internal and external economies of scale, human capital spillovers and specialised infrastructure lead to higher productivity in centres of production and may compensate firms for higher wage (and land) costs, and thus creating incentives for firms to locate in economic centres. Disagglomerative tendencies such as the desire of firms to reduce wage and land costs, escape from high competition in central places and to serve immobile workers demand at low transport costs, by contrast, create incentives for firms to locate in the periphery. Thus even with high wage flexibility and capital mobility, new investments will not automatically flow to depressed regions. Much rather the direction of capital flows depends on whether agglomerative or disagglomerative forces prevail.

Figure 6: Share of total number of foreign owned firms located in Capital Cities in 1998 (in %)



Source: AccessLab/Regspec.

While capital mobility was not a topic in the AccessLab project the evidence available on firm location in transition economies suggests that agglomeration forces prevail. Recent studies suggest that FDI – while having a positive impact on a region's wage and employment growth – has remained

concentrated in particular on capital cities and other centres of economic activity as well as region's closer to western European borders. For instance Fazekas (2000) provides an account of how FDI went primarily to Budapest and more Western regions in Hungary.

Similar stylised facts apply to other transition economies. In Figure 6 we plot the share of total FDI located in the region of the capital city.²² While this data is on the number of enterprises and may thus distort findings relative to figures based on capital invested or employment at foreign owned firms, it is highly suggestive. In all of the countries but Slovenia – where the smallness and proximity to western European markets may have led to a more dispersed structure of FDI – at least over one half and up to almost three quarters of FDI's are concentrated in capital cities. This suggests that foreign investors prefer high wage central locations, to more depressed low cost regions as location of production in transition economies.

Table 11: Correlation of changes in enterprise numbers and investments with regional wage and unemployment levels in 1994

Dependent variable	Percentage change in number of Enterprises between 1994 and 1999 (NUTS III Level) ^{a)}				Investments 1995 to 2000 (in % of GDP 1995 at NUTS II Level) ^{b)} GDP per Capita (1995)
	Wages (1994)		Unemployment Rates (1994)		
	Including Capitals	Excluding Capitals	Including Capitals	Excluding Capitals	
Bulgaria	0.49	0.37	-0.37	-0.27	-
Czech Republic	-	-	-	-	0.17
Estonia	0.78	0.49	-0.39	0.32	-
Hungary	0.31	0.05	-0.32	-0.22	0.75
Poland (1998-2000)	-	-	-	-	0.83
Slovakia	-	-	-	-	-0.51
Slovenia	0.18	0.35	-0.53	-0.58	-

Source: a) AccessLab/RegSpec b) Eurostat NewCronos.

Similarly domestic investments seem to be unlikely to compensate for the concentration of FDI. This is evidenced in Table 11 where for a small group of countries for which we have data available we correlate the percentage change in the number of domestic firms between 1994 and 1999 with the wage levels and unemployment rates prevailing at the beginning of the period (i.e. 1994) and for

²² We would like to thank Iulia Traistaru for providing the data used in this section.

another group we use Eurostat data at NUTS II level to correlate regional investments in the period 1995-2000 (as a percentage of 1995 GDP) with GDP per capita of the regions at the beginning of the time period (i.e. 1995).

We find that in all countries (with the exception of Estonia) the net change in enterprises over this period is positively correlated with the wage level at the beginning of the period and negatively with the unemployment rate. Although these correlation coefficients are insignificant this implies that new enterprise formation was higher in high wage and low unemployment regions than in low wage and high unemployment regions. Similarly, for investment rates we find a negative correlation between initial GDP per capita and investment rates for Slovakia, only. Thus in the majority of countries investment rates were higher in regions with higher initial GDP per capita. In summary this evidence, thus suggests that capital mobility is unlikely to lead to reduced regional disparities in transition countries.

What can one expect from Integration?

Aside from research on labour market adjustment in the new member states and candidate countries a further focus of the AccessLab project was on the potential repercussions of accession on regional development both in the new member states as well as the incumbent countries. In particular the project considered two potential routes along which such repercussions could occur. On the one hand we used the experience of German unification to analyse the potential consequences brain drain on new member states. This is of particular relevance because a number of studies find that the skill composition of migrants favours emigration of highly skilled both in the national as well as the international context. Given this situation one of the potential risks associated with enlargement is a loss in human capital stock and thus long run growth potential in the newly acceding countries.

On the other hand, we focus on the potential impacts of integration on border regions by using previous experiences of European enlargement as well as German unification. This is important because border regions are usually considered more strongly affected by integration than inland regions. The traditional cross-border flows of trade, migration and FDI's, influence these regions more strongly, since they are distance dependent, and certain cross-border activities such as commuting, cross-border shopping and cross-border rendering of services with limited market areas, only impact on border regions.

The experience of German unification suggests that "Brain Drain" may cause only slightly slower regional growth

Aside from the concerns of old member states concerning the potential impact of migrants on their labour markets (see Boeri and Brücker, 2001) one of the central concerns related to migration issues in the accession negotiations was the potential emigration of highly qualified workers from the new member states. It was repeatedly stressed by both experts as well as policy makers that this could lead to "brain drain", which in turn would cause a reduction in growth in these countries. In the AccessLab

project Brücker and Trübswetter (2003 and 2004) use the experience of German unification to gauge the effects of migration on the sending countries. This is a particularly interesting example in the context of enlargement, since it represents the only example of a formerly planned economy that was fully integrated into a market economy.

The results of these studies suggest a modest potential for brain drain effects in new member states and candidate countries. In particular Brückers and Trübswetters (2003) contribution on the skill composition of the East-West migrants in Germany in workpackage 3 of the AccessLab project shows that, if one focuses on the economically active (i.e. excludes students and job starters), migrants from East-Germany have a qualification profile, which is not any higher than that of East German residents. Results suggest that the high education of migrants results primarily from mobility of young, well-educated East Germans migrating to find their first employment or education. This is important because it suggest that the major impediment to attracting well-educated workers in East-Germany (and by analogy in regions characterised by peripherality and weak economic development) is a lack of provision of adequate jobs and education, rather than the emigration of the working educated.

Brücker and Trübswetters (2003) results, however, also suggest that migrants from East Germany are also more highly skilled concerning unobserved characteristics. (I.e. that migrants from East Germany tend to perform better in west German labour markets than observationally equivalent East German and West German citizen that did not migrate.) This suggests that as held by much of traditional migration theory although the most educated may not end up migrating, among narrowly defined educational groups the most able migrate.

The consequences of this selectivity of migration with respect to education may have implications for the sending regions. Brücker and Trübswetters (2004 in workpackage 4 of the AccessLab project) find some indication of a negative effect of "brain drain" for the immobile residents of a region. East German workers can realise higher wage growth if there is a high share of highly qualified in the same

district and a lower emigration of highly qualified out of this district. For immobile workers in sending regions it would thus be preferable to restrain qualified worker from migrating.

Extending these results to enlargement suggests that the concerns with respect to potential "brain drain" from the accession candidate countries and new member states may have less empirical support than often argued in the popular debate. If emigration of highly qualified will occur it is likely that this will primarily involve young persons either moving to their first job or to receive education. This expectation is also supported by the research on internal migration in the candidate countries. For instance Hazans (2003) finds that while among the population at large (i.e. including the economically inactive) higher educated workers have a higher propensity to migrate in Estonia, but that among employees there is no significantly higher probability of migration among the better educated and Huber and Fidrmuc (2004) show that students have the highest willingness to migrate for jobs. Migration of the highly qualified both in an international and a national context thus primarily reflects the search of educated for adequate higher education and work places. Furthermore, the potential effects of brain drain on wage growth seem to be limited. According to the results in Brücker and Trübswetter (2004) an emigration rate of high skilled which is by one percentage points higher than the average in a region would lead to a reduction in wage growth by 0.3%.

Labour market effects on border regions of existing EU member states are likely to be small, while border regions in new member states can expect substantial gains

A second concern in the public debate on EU-enlargement has been the effects of integration on border regions. In this case the net effects were heavily disputed. On the one hand, concerns were often voiced about potential negative wage and employment effects due to increased competitive pressures as well as capital and labour mobility. On the other hand, it was repeatedly argued that integration alleviates the disadvantages of limited market access in border regions and should thus have particularly favourable effects.

Recent economic theories in the tradition of “geography and trade” models, suggest that determining, whether border regions are positively or negatively affected from integration may be difficult to assess from a purely theoretical perspective. In these models the combination of increasing returns and localised externalities as well as agglomeration and transport costs leads to two countervailing effects when cross border transport costs are reduced (which is a synonym for increased integration in these models). On the one hand the increased demand potential leads to border regions becoming more attractive locations for production, because a larger demand potential can be accessed at low transport costs after integration. On the other hand this "market access effect" is countervailed by a "market crowding effect" which arises because firms located across the border will now also have improved access to the home market. This, *ceteris paribus*, will create incentives to move production away from the border in order to escape from more severe competition.

Recent theoretical contributions (such as Crozet and Koenig-Soubeyran, 2004) suggest that the likelihood of beneficial effects on border regions increases the smaller are the pre-existing centres in a country, the higher is the relative cost advantage of border regions in accessing new markets, the higher is the market potential across the border, the lower is the competitiveness of regions across the border, the lower is the extent of mobility of factors within the country and the lower is the share of mobile sectors in a country. Finally, institutional aspects of integration may be of importance. In particular western European in contrast to North American integration has been characterised by allowing for migration.

Theory thus suggests that the effects of integration on border regions may be highly specific to the case studied. Recent empirical evidence corroborates this suggestion. For instance Hanson (1996, 1997 and 1998) finds that trade liberalisation and integration of Mexico led to more rapid wage and employment growth in Mexican border regions, but finds no effects on US production. This may be attributed to the fact that the Mexican market potential was too small to matter relative to the sizeable

US market. Similarly, the few studies on European integration which focus primarily on the opening of Central and Eastern Europe or German unification in the 1990's (see Niebuhr and Stiller, 2004 and van Houtem 2004 for surveys) find that investments and firm start-ups in border regions have been only weakly affected by trade liberalisation.

In the framework of the AccessLab project three case studies on the effects of integration of border regions and the regional distribution of economic activity were conducted. These case studies include analyses of: the effects of previous EU enlargements on employment, wage and population growth as well as investment rates, the effect of German unification on the former border regions on western German regional labour markets in the time period from 1987 to 2000 and the effect of the opening of candidate countries in the 1990s on gross and net employment changes and firm creation in border regions of Austria. The results of these case studies suggest that:

1. In contrast to the effects of North American integration, which has moved industrial production in Mexico nearer to the border, effects of European Integration on border regions are more difficult to find, in general. In the European context integration seems to have a neutral effect on the regional distribution of economic activity, although examples of positive effects (which, however, are often small) and even negative effects on some border regions can be found. For instance the analysis of previous enlargements of the European Union by Greece, Spain and Portugal and Northern Enlargement by Huber (2004b in workpackage 6) shows that over a seven year period after enlargement few significant effects relative to the period before accession can be found. But some evidence of higher wage and investment growth in border regions can be found over longer observation periods. The Austrian experience after the opening of Central and Eastern Europe after 1989 by Huber (2004a in workpackage 6) by contrast shows that integration has had insignificant effects on firm creation but a small positive effect on employment growth, which is owed to reduced job destruction in border regions and in the case of German unification analysed by Büttner and Rincke (2004 in workpackage 6) border regions were characterised by a fall in

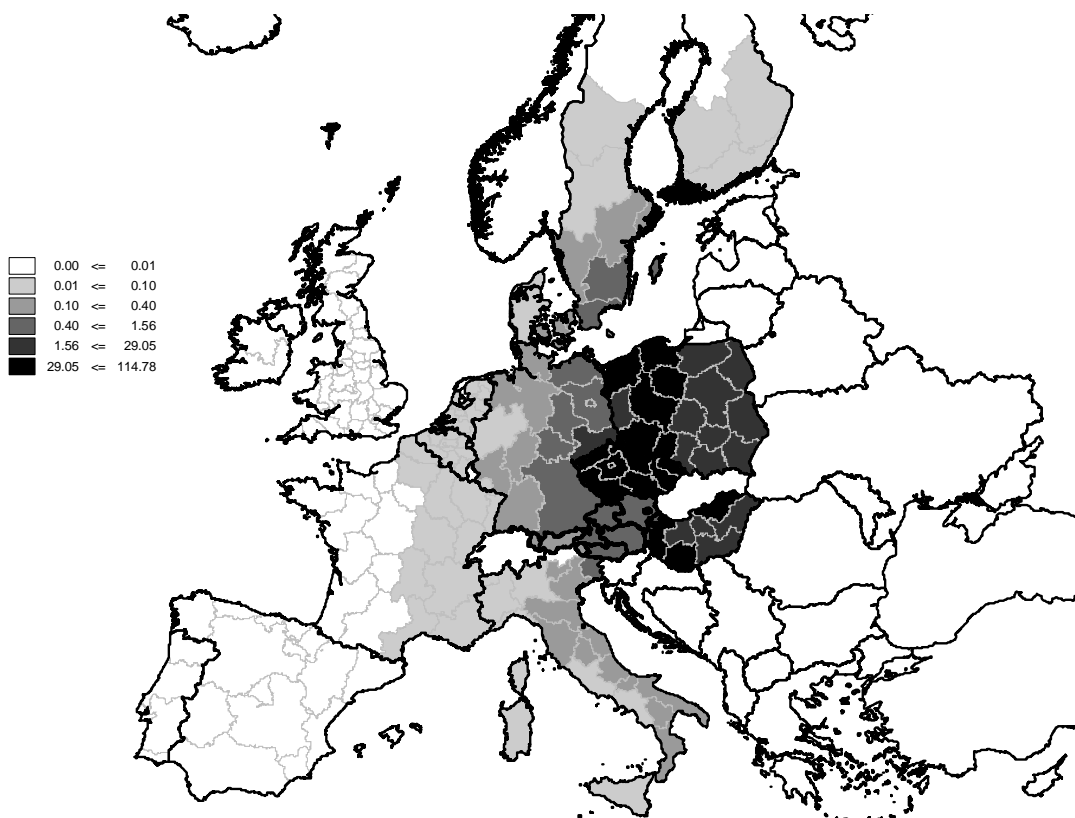
relative wage position and an increase in unemployment, even after controlling for the reduction in investment subsidies in these regions.

2. There is some evidence that integration effects may vary over time and regions. Concerning differences over time periods evidence on previous enlargements (see: Huber 2004b in workpackage 6) suggests that border regions do not immediately profit from integration, but that in the long run increased wages may be a result of integration for incumbent countries. Concerning differences in region types, theory would suggest that border regions with a larger market potential and a weaker competition effect across the border, a high relative cost advantage in accessing the market potential and low migration and capital mobility across the borders, should be more likely to profit from integration. The empirical papers presented in workpackage 6 find some evidence for this prediction. In particular the case study on Austria by Huber (2004a) finds significant effects only for the immediate border regions, that is those regions having the highest relative cost advantage in accessing the market.
3. Despite these small effects of previous integrations on European border regions, borders still are an important impediment to economic activity. The estimates of border effects in the wage structure presented by Pfaffermayr, Huber and Wolfmayr-Schnitzer (2004) suggest that neighbours within the EU15 but in different countries affect each others wages significantly, but that for the EU15 regions the purchasing power of Non-EU15 regions is still an unimportant determinant of the wage level. Thus there are still significant border effects between EU15 and non-EU15 countries.
4. The returns to reducing border effects could be high. Huber, Pfaffermayr and Wolfmayr-Schnitzer (2004 in workpackage 6) estimate that wage effects due to a reduction of cross border transaction costs (border effects) in the process of EU enlargement are of a much higher magnitude for the new EU member states in the sample than for EU15 countries, and that regions closest to the

borders of the "old" and "new" EU are to gain most in terms of wage increases. In particular, the simulations (presented in Figure 7) suggest that wages in regions in the new member states near to the EU15 border should increase by 30% to over 100% if border effects were of the same magnitude as within the EU15. Regions more distant from the borders of the EU15 would also have higher wages in this case. For the old member states effects would be much smaller. Regions near the old EU15 border should experience wage increases between 0.4% and 1.56%. At the country level, the results for EU15 countries indicate the most pronounced wage effects for Austria (0,6%), followed by Germany (0,4%), Denmark, Sweden and Italy. Within the group of the new member countries the Czech Republic is to be most affected.

Figure 7: Estimated Impact on Wages of the EU-Enlargement by Hungary, Poland and the Czech Republic

*Simulation based on regression results for Specification II – medium decay
(Simulated wage change in percent)*



Source: Huber, Pfaffermayr and Wolfmayr-Schnitzer (2004)

5. While increased integration in the international division of labour increases regional growth rates, not all regions will be able to achieve this goal to the same degree. Thus, trade liberalisation and or FDI inflows may well contribute to increasing regional disparities. This is shown for the case of increased foreign trade by Egger, Huber and Paffermayr (2004 in workpackage 6). They find that the speed with which regional disparities within candidate countries and new member states have increased is positively correlated with the increase in trade volumes. Thus trade liberalisation has contributed to increased regional disparities in the new member states as well.

In summary the results based on previous experiences with EU-enlargement and European integration suggest that fears of substantial brain drain through emigration from the new member states should not be exaggerated, but that based on the experiences of the current EU one may expect some wage increases in the regions bordering on the EU in new member states, while effects on old member state regions, by contrast, can be expected to be modest. Furthermore the results suggest that existing patterns of regional disparities – which have followed a west-East differential in many new member states and candidate countries – will in all likelihood be reinforced through integration. Thus we predict further divergence after accession of the new member states and candidate countries and expect that regions at the new external border of the EU may require some policy initiatives to reduce their disadvantages in market access.

Conclusions & Policy Implications

This summary report on the AccessLab project surveys the contribution of the project to the literature on regional development in the Central and Eastern European new member states and accession candidate countries of the EU. The evidence collected suggests that:

- The marked divergence of labour market conditions among regions in the new member states and candidate countries which led to large and persistent regional labour market disparities in the last one and a half decades is primarily a consequence of different starting conditions and market access among regions. Thus regional problems are long run and may be expected to persist over a longer time period in the future. In consequence any policy, which aims at reducing regional disparities, should take a long run view on regional development in transition countries.
- Hopes for regional disparities to diminish automatically through the operation of market mechanisms alone, seem to be rather bleak. Labour mobility is low in most new member states and candidate countries, investments primarily go to regions which are already performing better and overall evidence on wage flexibility suggests that wages are only slightly more flexible in most new member states and candidate countries than in EU labour markets, which are often considered sclerotic and incapable to adjust to asymmetric shocks. In general, as in many European labour markets, adjustment to regional demand shocks takes the form of changes in participation rates, while migration is ineffective in adjusting regional shocks. This is important from a policy perspective because it suggests that without policy interventions, depressed regions are unlikely to recover quickly.
- Candidate countries and new member states' regions are typical European labour markets in the sense that regional job losses in regions are often permanent and that internal migration is

low. Given the substantial evidence of regional "lock-in" in these countries, most of the adjustment in regional labour markets – as in EU15 labour markets - occurs through participation rates, while wages – as a rule – are only slightly more flexible than in the EU15 member states. Thus any adjustment to asymmetric regional shocks in all likelihood will primarily reflect in long term changes in participation, rather than migration and or capital mobility.

- Based on previous experiences with EU-enlargement and integration, fears of substantial brain drain through emigration from the new member states are exaggerated but based on the experiences of the current EU one may expect some wage increases in the regions bordering on the EU in new member states, while effects on old member state regions in general can be expected to be modest. Existing patterns of regional disparities will thus in all likelihood be reinforced through accession. Furthermore, allowing for migration may, however, impact negatively on labour market outcomes in the receiving countries' border regions, in particular when the competitiveness of these regions is low and labour markets are sclerotic, as is for instance the case in many Eastern German labour markets.

Together with the more detailed results of the individual studies of the AccessLab project, this leads to a number of policy relevant predictions and suggestions relevant to the fields of labour market policy, regional policies and to the future of the integration process:

Changing institutions and labour supply oriented policies alone are unlikely to solve the labour market problems in the new member states candidate countries

In particular the results suggest that changing labour market institutions and directing policies at labour supply issues alone will not be fully effective in reducing high unemployment rates. Labour market institutions do not differ so dramatically between the new member states and the remaining differences to EU15 member states cannot explain the differences in labour market outcomes to the

new member states and candidate countries. A number of studies both in the AccessLab project as well as in existing literature suggest that fighting the disincentives to individual adjustment which inevitably develop in low-wage environments requires careful policies addressing labour demand-side deficiencies and transaction costs, rather than aggregate level policy intervention aimed at labour supply.

This is evidenced by Kertesi's and Köllö's (2004) study on the natural experiment of doubling the minimum wage in Hungary 2001-2002, which was a straightforward attempt to break low equilibrium by widening the gap between wages and benefits. In extension of this result one could expect that other more macro oriented policies directed at increasing search incentives for the unemployed (such as reductions in unemployment benefit entitlements) are also unlikely to contribute to reducing high unemployment in particular in regions with low labour demand. This is also stressed in the contribution by Ederveen and Thissen (2004 in workpackage 5) who find that an approach focusing on labour demand deficiencies, combating skill mismatch and improving policy implementation are likely to be the most efficient in reducing regional labour market problems. Furthermore, Hazans (2004) finds relatively annual flow rates between unemployment and employment as well as from unemployment to inactivity among Baltic countries, despite substantial variation unemployment benefit policies.

In addition, some scepticism concerning the potential of such policies to reduce regional disparities seems to be warranted. At least in the Hungarian minimum wage experiment depressed regions were equally or more severely hit by the hike despite the fact that some positive supply-side effects, as predicted in several theoretical models of the minimum wage, are more likely to develop under conditions characteristic of such provinces. (Workers have higher probability of receiving unemployment benefits; the benefits replace a larger fraction of their lost earnings; they have better than average access to informal second jobs, are more severely constrained by fixed costs like travel-to-work expenses whereas monopsonies are also more likely to occur.) The evidence thus suggests

that even in these regions the expected positive supply-side responses were more than offset by the elementary cost effect of a move to a higher minimum wage. We thus conclude that as long as the equilibrating mechanisms of the labour market work sluggishly, the depressed regions face a high risk of slipping to a low equilibrium state characterised by low participation and wages, and massive reliance on social welfare. Thus we would also argue that a policy addressing the issues of regional demand deficiencies and investments into an improved implementation of regional policy is more likely to contribute to regional equality.

Increasing the efficiency and funding of micro oriented policies (such as active labour market programs) directed towards those groups of the workforce which have the largest difficulties in adjusting to structural change, should have high priority in the new member states and candidate countries. The results of the AccessLab project suggest that the obvious target groups of these policies should be the members of ethnic minorities, lowly qualified and long term unemployed. Furthermore, gender issues should be given some priority in an attempt to retain the relatively favourable situation of women in employment and participation of the new member states and candidate countries. Given the substantial disadvantages of ethnic minorities found in some studies in the AccessLab (in particular the Roma in Hungary), we would, however, also suggest that re-integrating these groups of persons into the labour market will require integrated and long term strategies, which encompass not only active labour market policies, but also target at reducing discrimination in other fields of life as well (e.g. in education and housing).

In this respect the AccessLab project shows that minority issues are and will be a major issue in the policy debate on social cohesion in the new member states as well as in the candidate countries for some time to come. The findings, in sum, call for action in educational and regional policies as well as in the enforcement of anti-discrimination laws. The degree and nature of social exclusion demonstrated in the individual papers warns that the re-integration of the Roma (in the CEEs) as well as ethnic Russians (in the Balkans) should be given high priority in an EU committed to social

cohesion. Fighting school segregation seems particularly important in order to block the inter-generational transmission of deprivation.

Among the institutional factors, improving implementation at all levels of government and the development of good governance are important fields.

This focus, however, should not mask that institutional aspects of labour market governance are still of importance. Our results suggest that relative to the early years of transition, where the major challenge for the set of countries analysed was in developing institutions typical for market economies, currently the challenge is with providing efficient implementation at all levels of government and the development of corporate governance. Again the results of the AccessLab project are indicative of the foci that policies to address these issues could take. They suggest that delay in industrial restructuring, poor implementation and potentially even corruption at the local level and inefficient corporate governance structures are an impediment to employment growth and job creation. In particular firm level job creation depends mainly on internal firm organisation (size, ownership status and multi- vs. single plant firms) and human capital endowment of managers. Issues of corporate governance thus are important also from a labour market perspective since the incentive structure of managers has a direct impact on firm level employment behaviour. Good corporate governance also improves long run employment prospects.

Our results, however, also suggest that with the completion of the privatisation processes, the focus of technical assistance oriented on firms performance and employment growth should switch to skills enhancement, since it seems to be primarily the complementarity of skills and management incentives that have the largest impact to improve corporate governance. Furthermore, since small and medium sized enterprises are important contributors to employment growth, focusing policies of skill enhancement to foster the development of SME's may add substantially to alleviating unemployment problems. In particular in depressed regions, this could activate endogenous development potentials.

Finally, our results suggest that in new member states and candidate countries as in the new EU member states the relevant comparative advantages are moving in the direction of high human capital. In particular the substantial increases in returns to education in the new member states and candidate countries suggest that the increased demand for better educated workers exceeded the supply of such workers. As in the old EU member states education policy and strategies to implement life long learning seem are a key element in facilitating the adaptability of the workforce in new member states and candidate countries. While in this respect both candidate countries and new member states do not differ much from the old EU-member states, we would argue that the priority given to designing efficient strategies of increasing the human capital stock in new member states and candidate countries (and in particular in backward regions), should even be higher, because the dramatic increases in returns to education and the low mobility of less skilled workers, suggest substantial skill mismatch in the regional labour markets.

Policies to reduce barriers to mobility are needed in candidate countries and new member states...

What is true at the national level is even more apparent at the regional level. In particular our results throw a rather bleak perspective on the potential of convergence of regions within the new member states. While accession to the European Union will in all likelihood increase growth rates for the new member states and thus contribute to convergence to the EU average on a national scale, at the sub-national level intra-national disparities will continue to increase and are likely to be reinforced by integration. Furthermore, much of the evidence also suggests that the key problem of the most backward regions in the candidate countries consists of a combination of a lacking capability of attracting internal or external investments (and thus a failure to create new jobs) after a period of job losses paired with a regional "lock in" of the resident population, which prevents people from escaping from depressed regions through migration.

In principle two strategies to address this problem are conceivable. The first strategy would bring "work to the workers" by mobilising investments in the regions. The results of the AccessLab project suggest that such a strategy – aside from subsidising investments in particularly backward regions – could also consist of measures directed at infrastructure, human capital and R&D development, since these factors have been shown to be decisive for regional growth in the new member states and candidate countries. This, however, has a number of unattractive features. In particular we would suggest that – aside from the substantial dead weight losses and inefficiencies that inevitably arise from investment subsidies, – the evidence in the AccessLab project indicates that regional problems in the candidate countries are long term and may be expected to persist over a longer time period in the future. In consequence any such strategy should not be expected to yield short term results. Experiences in the European Union suggest that rural development as well as restructuring old industrial areas is a long term project and may yield only limited results in the short term.

An alternative to such a policy could be to accept regional disparities as a natural outcome of market processes and to devote attention more to issues of efficiency rather than regional equity. This would imply strengthening the existing growth poles and thus increasing regional disparities, at least initially. Clearly this would seem particularly tempting in many new member states and candidate countries since it is more compatible with the goal of aggregate (nation – wide) growth and avoids much inefficiency generated by policies of for instance providing subsidies to backward regions.

While these features may seem attractive, a precondition for such a strategy to at least contribute to the goal of social cohesion, is sufficient inter regional mobility of the work force, since under this strategy workers in depressed regions can only reap the benefits from the policy by moving to centres. In the absence of mobility, focusing policy on growth poles in all likelihood will increase labour demand in low unemployment regions, which cannot be satisfied through migrant labour from depressed regions. Thus in the current low mobility context of new member states and candidate countries, such a policy

may be counterproductive by generating excess labour demand in centres, – at least in the short run, – while aggravating unemployment in the periphery.

Thus due to the low internal migration in most candidate countries the classical policy trade off between regional equity and efficiency is more strongly felt in new member states and candidate countries. Clearly a policy that takes measures to remove barriers to migration in transition economies in order to avoid the "poverty-cum-liquidity" trap (Bornhorst and Commander, 2004) in which residents of more backward regions find themselves now is needed in new member states and candidate countries and should have a very high priority in all countries. The results in the AccessLab project suggest that such a policy should take a relatively wide view on migration barriers and would need to address housing market inefficiencies (in particular for rental housing), capital market inefficiencies (which may be at the root of liquidity constraints in financing migration) and a range of wider institutional measures. Furthermore policies should be targeted towards the groups of people who have the greatest difficulties in adjusting to structural change (i.e. minorities, less well educated and in the case of spatial mobility women).²³

...in addition regionally differentiated strategies will be needed to enhance job creation in depressed regions

Aside from this, however, also strategies are needed to enhance job creation in depressed regions. Many results in the AccessLab project indicate substantial heterogeneity in regional problems in backward regions which range from lacking infrastructure over low human capital endowments to problems of mono-industrialisation. We would thus also argue that there is a need for differentiating regional policy within countries, so that it can fit the individual needs of regions.

²³ Furthermore country size will play an important role in deciding on the need for differentiated regional policies. Clearly smaller countries – where regional spill-overs can be deemed to operate more effectively - are less in need of a policy directed at regional equalisation than large countries.

The results of the AccessLab project suggest a number of types of regions that may be "target groups". Agricultural peripheral regions have been shown to suffer most severely from low human capital endowments and bad infrastructure, individual industrial regions – in particular those industrialised in socialist times – suffer under ongoing restructuring at the enterprise level and low R&D capacities and border regions at the new external border of the EU have severe problems due to lacking access to relevant markets.

Furthermore, in a number of regions enlargement will bring new challenges. The results of the AccessLab project indicate that benefits of integration to border regions accrue neither immediately nor automatically. Thus removing the barriers to integration through improving cross-border regional policy and increasing integration as foreseen in the framework of objective III in the next structural funds period could potentially yield high rewards for regional development in candidate countries and new member states. In particular the foreseen policies to improve the institutions delivering cross-border regional policies could be of high relevance in this context.

Our findings, however, also imply that more eastern regions, at the new external border of the EU, – which already belong to the most deprived regions in the enlarged EU, – will fall even further behind. Given this expectations it seems that effective policies to address the problems of these regions may have to be implemented. The principle options for such a policy could be either to increase integration through exports and foreign direct investments – which have gone to more Western regions in the new member states, – increase endogenous development potentials in the regions. While our results indicate that the first option may be more promising in general, it seems unlikely that these easternmost regions of the EU will recover from their adjustment problems rapidly since they are far from western European markets, have a lower endowment with infrastructure and are often characterised by a number of problems typical of many rural-peripheral regions.

Institutions at the regional level matter for efficient deliverance of policy

Clearly, differentiating regional policy will require some decentralisation of activities at least in implementation. Many new member states and candidate countries, however, – due to the more pressing needs of national reforms and the greater ease with which such reforms can be conducted from the centre – have generally devoted few funds to regional policy and little energy into designing efficient for institutional implementation of such a policy (see: Bachtler, 1992, for a survey of regional policy institutions in transition). Thus a regionally differentiated policy may also imply reviewing the institutional setup within regional policy is conducted in many new member states and candidate countries. The evidence collected in the AccessLab project suggests that inefficiency and potentially even corruption at the regional level are as hindering for employment growth in particular of SMEs as at the national level.

Furthermore, from a labour market perspective our analysis suggests that there may be a strong need for increased co-ordination of instruments of regional and active labour market policies. Regional labour market disparities in the candidate countries are closely associated with long run structural characteristics of regions and backward regions often suffer from a lack of labour demand. Thus generating investments and creating new jobs in these regions should have high priority. This is most appropriately addressed in a regional policy framework and cannot easily be addressed by standard active labour market policies or macro-oriented policies alone. However, the low mobility of the work force and problems of human capital development which act as impediments to regional development suggest that active labour market policy may have an important role to play in an integrated regional policy package designed to solve regional labour market problems.

EU-policies require no fundamental change due to the accession of new member countries, but accession and further integration policies should prioritise the goal of growth and convergence over deeper integration

In summary thus many of the policy relevant results in the AccessLab resound themes that are not too different from those discussed in the policy debate in the old EU. This suggests that addressing regional labour market problems in the new member states will not require a fundamental shift in the policy design of the European Union. Certain themes (such as minority issues, enhancing mobility and increasing the efficiency of regional policy), however, may receive more attention due to accession in the future. In addition the limited experience of many new member states and candidate countries in European policy and in some cases limited capacities for implementation suggest that programs should be kept simple and easy to implement.

Furthermore, both regional as well as national development in the new member states and candidate countries will be shaped by the European Union's policy stance concerning the future path of integration followed. This influence will be particularly strongly felt in those policy fields where under the accession agreement the new or existing member states took over obligations (such as to join the monetary union or to introduce freedom of movement of labour and services).

- With respect to monetary union the new member states under the stipulation of the accession agreement are obliged to pursue the goal of joining the monetary union as soon as possible. The earliest date for this membership to the monetary Union could be after two years of membership in ERM II, that is in the year 2006. In his contribution Fidrmuc (2005 in workpackage 7 of the AccessLab project) argues that the results of the AccessLab project as well as related literature suggest that in all likelihood the new member states of the European Union are not an optimal currency area in terms of the criteria set up in the classic contributions of the optimum currency area theory. Furthermore, he argues that new member states should follow a "wait and see strategy" for monetary integration, in order to avoid the potential risks involved in such a step.

We would argue that there are yet more reasons why the European Union should not insist on a rapid monetary integration. In particular a substantial body of research (e.g. Maurel 2004) suggests that pressure on the side of the European Union to join monetary union rapidly, may lead to excessively restrictive monetary and exchange rate policies, which may come into conflict with the Unions goal of cohesion and growth. We would thus argue that in order to make accession successful both the commission and new member states should take a realistic approach towards integration into the monetary union that takes due account of both the goal of cohesion and achieving the goal of monetary union.

- With respect to the current derogation periods on the freedom of movement of labour and services the results suggest that from the point of view of the new member states the risks associated with potential brain drain should not be overrated. Freedom of movement of labour in all likelihood will not lead to the emigration of high skilled workers from the new member states to the extent that this will have detrimental aggregate effects on the sending country labour markets. This, however, does not preclude the possibility of some effects in particular demographic groups, regions and/or sectors. In particular the results of the AccessLab project suggest that the emigration of high skilled will attain quantitative significance for the young, who either are looking for a first employment and/or education. Thus adequate education policies and high demand for high skilled could reduce the risks of brain drain effects.

Furthermore some results of the AccessLab project (in particular those by Büttner and Rincke, 2004) indicate that the freedom of movement of labour involves some risks for regional labour markets of the old member states. Despite increasing welfare, immigration may also lead to increased unemployment and reduced employment of natives in some regions. This risk is highest in regions which are structurally weak and not competitive and where the market potential across the border is low. A number of our results suggest cases where such negative effects are possible. In particular rural-peripheral regions are facing problems. Furthermore,

our results also indicate that migration may further increase adjustment problems in these regions. A number of old EU member states regions at the border to the CEEC in particular at the German-Polish border are characterised by structural problems and relatively high wages which impede on their competitiveness. This indicates that these regions may have substantial labour market adjustments ahead of them. Increasing the flexibility of regional labour markets and the adaptability of the work force in these regions may be an important element in remedying the potential problems of these regions.

Furthermore, our results suggest that benefits to integration to border regions accrue neither immediately nor automatically and that increased integration will reinforce tendencies of divergence in the new member states and candidate countries. Thus some policy measures may be needed to help the transitory adjustment problems of border regions. We would argue that aside from posing institutional challenges to regional administrations, increased cross-border co-operation will also necessitate a review of national policies which impede on cross-border exchange.

Thus in the field of migration as in that of monetary union the commission should take a realistic view. On the one hand increased incentives are necessary to encourage old member states to liberalise their labour markets, on the other hand the potential risks for individual sectors, regions and groups of the population involved in a complete liberalisation of migration should be minimised through appropriate policies in the European context. Similarly, monetary union should not be made a prestige objective to be followed for its own sake, but should be embedded in a strategy which does not impede on the more fundamental goals of growth and cohesion for the European Union.

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Optimal Path into the EMU: Big Bang or Gradualism?

JAN FIDRMUC*

ECARES, UNIVERSITÉ LIBRE DE BRUXELLES;
CENTER FOR EUROPEAN INTEGRATION STUDIES (ZEI), UNIVERSITY OF BONN;
CEPR, LONDON; AND WILLIAM DAVIDSON INSTITUTE, MICHIGAN.

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Abstract:

This paper surveys the literature on economic benefits and costs of adopting the euro by the countries that will be included in the next round of EU enlargement. The emphasis is on implications of common currency as identified by the theory of optimum currency areas. In particular, I discuss correlation of output shocks between the candidate countries and the EMU core and effectiveness of mechanisms for absorbing adverse effects of asymmetric shocks. Then, I offer suggestions on the optimal path towards full EMU membership.

Keywords: currency union, asymmetric shocks, migration, risk sharing,
option value of waiting, European Union.

JEL Categories:

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* ECARES, Université Libre de Bruxelles, CP 114, 1050 Brussels, Belgium. Email: JFidrmuc@ulb.ac.be.
Phone: +32-2-650-4462. Fax: +32-2-650-3369.

1 Introduction

Within a few years, the EU will admit up to ten new members¹, including eight formerly socialist economies. With the process of EU enlargement to the East now apparently (and hopefully) firmly on track, the obvious next question is that of adoption of the euro and full EMU membership (as is discussed below, these two decisions are not necessarily conjoint). It is envisaged that the new member countries will join the EMU in due course after acceding to the EU. In fact, one of the obligations of membership that the candidate countries are obliged to take on is adherence to the aims of political, economic and monetary union. In other words, unlike Denmark and the UK, the new members will not be given the option to opt out from EMU membership. There is, nevertheless, substantial latitude with respect to the paths the new member countries can pursue. On the one hand, the new members may seek full EMU membership shortly after accession. As the Maastricht criterion of exchange-rate stability requires that the EMU hopefuls spend two years in the new Exchange Rate Mechanism (ERM2) without realignment, the earliest date of full EMU membership is 2006-07 (assuming that EU enlargement will take place in 2004-05 and that the new members meet the other Maastricht criteria). Even more rapid strategy is *unilateral euroization*, as suggested recently by several analysts (see Schoors, 1999; Bratkowski and Rostowski, 2000; Coricelli, 2000; Nuti, 2000) whereby a country adopts the euro as legal tender (either parallel to or replacing the domestic currency) even before EU accession (or instead of seeking EU/EMU membership at all). On the other hand, the new members could also follow the example of Sweden and postpone EMU membership almost indefinitely by deliberately failing to meet some of the Maastricht criteria (for example by not entering the ERM2).² Hence, the euro-zone can expand Eastwards in as little as four or five years from now, but it can also remain easily unchanged for a decade or more.

In this article, I review the growing literature on optimality of EMU membership from the point of view of the new members. Should they seek full EMU membership as soon as possible? Or would their economic interest be better served by adopting a gradual wait-and-see approach? I start, in Section 2, by discussing the arguments put forward by the theory of optimum currency areas and their implications for the candidates for membership. Then, I

¹ Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.

² In theory, the Commission might try to force the new members to make good on their pre-accession commitments with respect to full EMU membership once they are deemed ready. However, the leverage of even small member countries on EU decision making is such that the Commission would never risk a deadlock by, for instance, proclaiming a member country fit for the EMU without unequivocal consent of the country in question.

proceed by discussing recent empirical evidence on the various aspects of EMU membership. In section 3, I show that the candidate countries continue to encounter shocks that are largely uncorrelated with those affecting the core EMU countries. In section 4, I argue that labor mobility has been low and falling despite rising regional disparities in earnings and unemployment. Even more importantly, migration does not appear very effective as a mechanism for absorbing adverse effects of asymmetric shocks – even when the relationship between migration and local economic conditions appears statistically significant, the potential impact of migration on smoothing inter-regional disparities is economically small. In section 5, I point out the lack of mutual insurance through fiscal transfers in the EU. In section 6, finally, I discuss some strategic considerations related to the candidate countries' path towards full EMU membership. Adopting the euro is a costly and largely irreversible decision with an uncertain payoff. Therefore, postponing (in the short to medium term) EMU membership implies that the prospective members retain an option not to enter or enter later, possibly under different and more favorable conditions. Similarly, proceeding gradually, for example by implementing first a currency board or another rigid regime but staying short of full membership, helps reveal partial information about the eventual outcome of adopting the euro without incurring the full cost of membership. Because of the underlying uncertainty, the option value of waiting or proceeding gradually is positive and may outweigh the costs of delaying the expected benefit of EMU membership. Hence, the available evidence as well as strategic considerations weigh in strongly in favor of a gradual approach rather than early EMU membership.

2 Benefits and Costs of Common Currency³

Benefits

The literature has identified several important channels through which common currency benefits economic development. Being able to use the same money across national borders reduces transaction costs and eliminates exchange rate volatility vis-à-vis union partners. Lower transaction costs and lower uncertainty in turn encourage trade flows between

³ Unless specifically referring to the EMU, this section deals with the benefits and costs of participation in a currency union in general. In this context, a *currency union* can take several forms, such as a monetary union, a country using another country's currency, or a bilateral or multilateral agreement establishing fixed and irrevocable parity between the member countries' currencies.

currency-union members. Frankel and Rose (2000) and Rose (2000) use the gravity model to assess the impact of common currency on trade. They find that countries using the same currency on average trade three times more with each other compared to otherwise similar countries that use different currencies. This finding obtains after controlling for other factors that can potentially enhance bilateral trade such as adjacency, common language, preferential trade areas or colonial heritage. They also argue that higher trade directly translates into higher economic growth. According to their estimates, every one percentage point increase in trade-to-GDP ratio raises GDP per capita by 1/3 percentage point over 20 years. Thus, participation in the EMU should, over the long term, lead to higher trade and, more importantly, higher welfare (of course, the actual effect of EMU membership will not necessarily be a factor of three, as Frankel and Rose's finding is an average over dozens of quite different currency unions). Moreover, this gain will be in addition to the positive stimulus to trade of participation in the EU customs union – most studies tend to find that EU membership raises bilateral trade approximately by 40-50 % (see, for example, Fidrmuc and Fidrmuc, 2003).

Another important gain from EMU membership that is particularly relevant for the formerly socialist economies is that it introduces an external policy constraint (see Cukierman, 1995). Membership in a currency union can be a way of importing low inflation and prudent monetary policy. In addition, the Growth and Stability Pact imposes explicit rules on member countries' conduct of fiscal policy. All formerly socialist economies experienced periods of high inflation, especially during the early stages of transition. In a high inflation environment (or in one with recent history of high inflation), an external anchor such as a rigid exchange-rate peg provides an effective stabilization tool (see Végh, 1993, Sahay and Végh, 1996). In that respect, adoption of another currency is the ultimate external anchor. Indeed, yielding the conduct of monetary policy to the ECB and submitting to strict rules on fiscal prudence (and external monitoring) is likely to deliver policy outcomes that would not have been attainable otherwise (especially in countries that already have a record of failed stabilizations and where home-grown attempts at reigning in inflation might not be credible).

A powerful argument in favor of euroization and even more so of full EMU membership is that investors will perceive candidate countries' assets as less risky. There are several reasons why the risk premium should fall in the wake of EU/EMU membership or euroization. Firstly, the perceived risk of devaluation may be lower for euro-denominated assets (and vanishes completely for investors located in another EMU country) than for assets denominated in the original currencies. Second, the markets may perceive EU/EMU

membership as a guarantee of political stability, rule of law and sound economic policies. Third, investment in candidate countries may be deemed more attractive because it will give access to the entire EU market.

Currently, interest rates in the candidate countries are considerably higher than those prevailing in the EMU. Lower risk premium makes interest rates drop, which in turn results in higher investment (both domestic as well as foreign). Greater capital accumulation then brings about higher economic growth. Baldwin, Francois and Portes (1997) use a computable general equilibrium model to assess, *inter alia*, the impact of a lower risk premium on candidate countries' income levels. They find that a reduction in risk premiums on candidate countries' assets to the level of Portugal will result in a long-term income gain of 18.8%, compared to 1.5% in the baseline scenario without the risk-premium effect. More recently, Bris, Koskinen and Nilsson (2002) indeed find that large firms in ten EMU countries (leaving out Greece and Luxembourg) saw the value of their equity (measured by Tobin's Q) rise by more than those in the three EU countries that stayed out of the EMU (Denmark, Sweden and the UK), and Norway and Switzerland. Moreover, they find that the gains were more profound in the countries that experienced currency crises in the past (and in those countries, the valuation of small firms increased as well).

Among other benefits of adopting a common currency are the following: Membership in a currency union fixes the value of foreign debt denominated in the union currency, thus reducing the uncertainty about the future costs of servicing foreign debt (clearly, this argument can also go against EMU membership, if the bulk of the candidate countries' debt is denominated in US dollar or other currencies). Membership in a larger currency union reduces vulnerability to currency crises. Finally, membership in the EMU may be favored for political reasons. Currency is perceived as an important symbol of national sovereignty, just as a national flag, anthem, language or a soccer team. In as much as fostering political integration in Europe is in the candidate countries' long term interest, adoption of the euro may be pursued as a stepping stone to a closer political union.

Costs

Just as there are benefits, membership in a currency union also brings about certain costs. The loss of policy independence is among the most important of them. Members of a currency union relinquish autonomous monetary policy and instead are subject to policy decision of the union's monetary authority. Depending on institutional design, the participating countries may

or may not have much influence on common monetary policy. In the EMU, as most candidate countries are relatively small, it is likely that their interests will not weigh in heavily in ECB's decision making. Without an independent monetary policy, the member countries' ability to respond to idiosyncratic economic developments is reduced. Moreover, the limits on public deficits and debt imposed by the Growth and Stability Pact constrain also the independent conduct of fiscal policy, thus further restricting the ability to respond to asymmetric shocks. Both of these constraints are discussed in greater detail below.

The Balassa-Samuelson effect is another potentially negative implication of currency-union membership. Countries at a lower level of development tend to experience higher inflation than developed countries. This disparity obtains because high productivity growth in tradable sectors drives wage growth in both tradable and non-tradable sectors (e.g. services) despite typically lower productivity growth in the latter. Higher inflation in turn leads to real appreciation and eventually deterioration of competitiveness. Countries can counter this development by allowing their currencies to depreciate – this option, however, is not available in a currency union. Therefore, monetary integration involving countries at different levels of economic development may result in persistent inflation differentials and entail non-negligible cost in terms of deteriorating competitiveness for the less developed members.

Euroization (unlike full EMU membership) also entails additional costs due to loss of lender of last resort and loss of seigniorage revenue.⁴ Nevertheless, as far as the former is concerned, this is likely to be largely alleviated by the ongoing privatization of the banking sector in the candidate countries, with the bulk of domestic banks being sold to foreign investors, often to large European banks.

The Theory of Optimum Currency Areas

A commonly used framework for assessing the economic optimality of membership in currency unions is the theory of optimum currency areas (OCA), originally formulated by Mundell (1961).⁵ The fundamental question posed by the OCA literature is whether the country or region in question is better off with its own currency or whether its economic interests would be better served by participating in a wider currency area. An *optimum currency area* then is a geographical area within which exchange rates should be fixed

⁴ See Horvath (2002c) for more detailed discussion of these two factors.

⁵ Horvath (2002a) presents a survey of the ensuing literature.

irrevocably but whose rates should fluctuate vis-à-vis the outside world. Two types of criteria are used to assess the optimality of currency unions. First, countries that are exposed to symmetric output shocks tend to have more synchronized business cycles and thus similar policy preferences. Therefore, yielding the conduct of monetary policy to a common monetary authority will not be associated with excessive costs. Second, even if shocks are largely asymmetric, currency-union membership may still be optimal if the countries possess effective mechanisms for absorbing adverse effects of the shocks. Such absorption mechanisms can be the mobility of labor and capital, price flexibility, or a system of fiscal risk sharing by means of intra-union transfers. The absorption mechanisms in effect facilitate spillovers of shocks to the rest of the union and thus ensure that their effects are mitigated and short-lived.

To illustrate the argument, consider the implications of a negative demand shock. A country with a flexible exchange rate could counter rising unemployment and falling real incomes by allowing its currency to depreciate, thus altering the relative prices and stimulating foreign demand. This option, however, is not available in a currency union, unless the shock is shared by the other union members. Nevertheless, rising unemployment and falling wages may induce an outflow of labor and/or an inflow of capital into the country. Alternatively, prices and wages may fall sufficiently for demand to pick up. Finally, the union may mitigate adverse effects of the shock by channeling additional funds into the country. If none of these absorption mechanisms is effective, the effects of the shock will persist and, in the extreme case, may eventually induce the country to withdraw from the union.

It is important to note that the two OCA criteria do not have to be fulfilled simultaneously. Either symmetry of output shocks or availability of effective absorption mechanisms is sufficient to ensure optimality of a currency union. Also, the arguments of the OCA theory have had no bearing on the criteria that the EU chose for deciding on which countries are fit for EMU membership (the so-called Maastricht criteria). The OCA theory is concerned with the economic desirability of membership in a currency union. Maastricht criteria, on the other hand, were set to ensure fiscal prudence and convergence in inflation rates and to prevent individual member countries from upsetting the union's monetary stability.

Finally, the OCA theory does not necessarily require that only countries that have sufficiently synchronized business cycles can successfully form a currency union. In fact, pooling economically diverse countries in a currency union may be advantageous, as long as

they all have a say in policy making. In that case, neither member country will be able to exert dominant influence on the single monetary policy. Thus, as in an investment portfolio, country-specific risks will be diversified away and monetary policy will respond largely to common and global shocks. From that point of view, the EMU is a substantial improvement over the previous arrangement, where a number of Western European countries pegged their exchange rates to the D-mark and effectively were subject to German monetary policy. Also, this argument goes strongly in favor of the UK entering the EMU so as to provide a counter-weight to the current core formed by Germany, France, Austria and the Benelux countries.⁶

3 Empirical Evidence on Symmetry of Shocks between the Candidate Countries and the EMU

A number of studies estimate correlations of shocks between the candidate countries and various EMU members or the EMU as a whole (see Frenkel, Nickel and Schmidt, 1999; Boone and Maurel, 1999; Jarko Fidrmuc and Korhonen, 2001; Babetski, Boone and Maurel, 2002; and Horvath, 2002b). They build on similar analyses carried out during the early and mid 1990s assessing the desirability of EMU. Although the methodologies used differ, the most common approach follows Bayoumi and Eichengreen (1993) in using the bivariate VAR methodology to identify and measure correlations of demand and supply shocks.⁷ The objective of these studies is to assess to what extent the candidate countries are subject to shocks that are similar to those prevailing in the EMU core. If the shocks are by and large positively correlated, then early adoption of the euro is not likely to pose substantial economic problems. If, on the other hand, the shocks are largely asymmetric, then as discussed in the preceding Section the accession countries had better possess effective absorption mechanism, otherwise EMU membership or euroization can potentially lead to divergent policy needs and persistent economic disparities between the new and old members.

Table 1 reproduces the main results of Horvath (2002b) who measures correlations of demand and supply shocks between eight candidate countries that likely to be included in the next wave of EU enlargement and four large EU member countries (Germany, France, Italy and the UK). For comparison, Table 2 presents similar results of Jarko Fidrmuc and Korhonen

⁶ I am grateful to Boyan Tonkov for suggesting this implication.

⁷ This terminology is based on the standard aggregate demand – aggregate supply framework, which Bayoumi and Eichengreen used to motivate their analysis. Supply shocks are those that result in permanent changes in output whereas demand shocks affect output only temporarily.

(2001) with correlations of shocks between the candidate countries (as well as the current EU members) and the EMU as a whole. Both studies use quarterly GDP data, although for slightly different time periods.

The common pattern in both sets of estimates is that the correlation of shocks between the accession countries and the core EMU members or the EMU as a whole is very low. Essentially no candidate country, with the possible exception of Hungary, encounters shocks that are positively correlated with those prevailing in the EMU as a whole, or with at least two of the core EMU members. Most of the estimated correlation coefficients are very close to zero and for the rest negative figures appear almost as often as positive ones. This contrasts quite sharply with the evidence for majority of EMU member countries, including the smaller ones (Austria, Belgium or the Netherlands). Nonetheless, some of the more peripheral EMU countries, in particular Greece and Ireland, show correlation coefficients that are similarly low as those obtained for the accession countries.

Some studies argue that the OCA criterion of symmetry of shocks should not be considered in a static manner because it is in fact endogenous in the degree of economic integration. However, there is no consensus on how the intensity of integration affects the pattern of shocks. On the one hand, Frankel and Rose (1998) argue that the correlation of shocks between a pair of countries is positively related to the intensity of trade between them. Accordingly, increasing trade and financial integration fosters greater exposure to common shocks as well as wider spillovers of idiosyncratic shocks. Past figures then are not necessarily a good indication of current and future nature of shocks – a country that fails to meet the OCA criterion for EMU membership *ex ante* still may meet it *ex post*, after entering. In contrast, Krugman (1993) argues in favor of the opposite – as transaction costs fall and trade between union members becomes easier and cheaper, countries or regions tend to specialize in those products for which they possess comparative advantage, and thus become more vulnerable to idiosyncratic shocks. Therefore, if membership in the EMU does not appear optimal *ex ante*, it will be even less optimal *ex post*.

Babetski, Boone and Maurel (2002) consider the possibility that the correlation of shocks may change over time and estimate time-varying correlation coefficients of demand and supply shocks. Indeed, given the relative isolation of Eastern Europe under communism and the ongoing reform process, it is not all that surprising that the correlation coefficients estimated over the 1990s are low. Their findings indicate that demand shocks have indeed become more similar over time whereas supply shocks have in fact diverged and become less

correlated (the latter pattern may be due to reform-specific shocks that the candidate countries encounter).

In summary, according to the available evidence, the candidate countries are exposed to shocks that are largely uncorrelated with those prevailing in the EMU. Moreover, the evidence is mixed with respect to shocks becoming more similar over time – while this pattern indeed holds for demand shocks, the opposite is true for supply shocks. Nevertheless, this does not necessarily mean that the adoption of the euro will not be optimal for the candidate countries. Rather, the evidence stresses the importance of adjustment mechanisms in case of EMU membership. Without effective mechanisms for absorbing and mitigating idiosyncratic shocks, however, accession to the EMU or euroization may be costly.

4 Adjustment to Shocks through Migration

If shocks affecting the candidate countries are largely uncorrelated with those prevailing in the EMU core, this increases the need for other adjustment mechanisms such as migration to smooth away the effects of shocks. If migration responds readily to changes in regional economic conditions, idiosyncratic shocks will not bring about long-term differentials in unemployment and wages but instead will result in flows of labor from depressed areas those with more favorable labor-market realizations. This ensures that none of the regions or countries participating in the EMU has preferences for policies that are dramatically different from those implemented by the ECB.

Countries often differ in the way their labor markets adjust in the wake of idiosyncratic shocks. Blanchard and Katz (1992) find that in the US, employment shocks are absorbed primarily through labor mobility instead of causing changes in unemployment or participation rates. In contrast, Decressin and Fatas (1995) find that in Western Europe, the impact of employment shocks on participation rates is much stronger, largely due to low response of migration. Thus, instead of moving and seeking jobs elsewhere, European workers tend to drop out of labor force. This low mobility of European labor is frequently cited as a factor undermining the stability of the EMU.

Given the important role played by migration in facilitating regional adjustment, it is therefore important to assess how effective is migration in this respect in the candidate countries. Huber (2002 a,b) points out that migration rates in five candidate countries (Czech Republic, Hungary, Poland, Slovakia and Slovenia) are lower than in EU countries.

Moreover, migration has been declining in the course of transition despite rising regional disparities (ibid, see also Fidrmuc, 2002).

At the outset of transition, the candidate countries had essentially no (official) unemployment and very egalitarian wage distribution. The transition subsequently brought about rapidly rising unemployment and widening regional disparities in unemployment and especially wages. This implies that the potential gains from moving have increased – but the data suggest that there is actually less rather than more migration. In Fidrmuc (2002), I analyze the effectiveness of migration in facilitating regional adjustment in the Czech Republic, Hungary, Poland and Slovakia and compare it with the pattern obtained for Italy, Spain and Portugal. The analysis relates gross and net migration rates (total immigration and emigration to/from each district, and net immigration, divided by the district's population) to the average wage (normalized by dividing by the national average wage of that year) and unemployment rate prevailing in the district (both lagged by one year) and population density. The analysis is based on inter-regional rather than international migration. Clearly, the latter would be more relevant for an assessment of the candidate countries' adjustment capability in the wake of EMU membership. However, migration between the candidate countries and the EU is currently subject to strict restrictions that will be eventually removed in the wake of EU enlargement. Therefore, any model estimated with past data on international migration would be of little relevance for assessing the potential for post-enlargement migration – the removal of barriers to migration after accession will constitute a structural break in the model.

Table 3 presents the main results of that analysis. The question of interest here is how regional wages and unemployment affect migration flows, and especially whether migration is effective in facilitating regional adjustment to idiosyncratic shocks. Note that in order for migration to effectively absorb region-specific shocks, high wages and low unemployment should be associated with lower gross emigration and higher gross immigration – and thus high net immigration into the district. This, however, is not the pattern obtained for the candidate countries. In fact, high wages apparently encourage both higher immigration as well as emigration whereas unemployment does not appear to affect gross migration in a statistically significant way. Net migration, on the other hand, does respond to regional economic conditions more-or-less as expected: unemployment reduces net immigration whereas high wages encourage it (although the latter effect is not always significant).

This might suggest that most migration flows are between relatively prosperous regions and thus do not lead to a net flow of labor from depressed areas to those with better economic

realizations. Moreover, the effect of net migration on regional disparities is economically very small –relatively sizeable differentials in unemployment rates and wages give rise only to very small net migration flows. It is difficult to pin down the reasons for the low labor mobility in the candidate countries and for the low net migration from poor to rich regions. The list of plausible explanations includes high fixed costs of migration and liquidity constraints that prevent low-wage earners from moving, and a tight and inflexible housing market.

Comparing the candidate countries with Southern EU countries, Italy is the only country that stands out – both unemployment and average wages affect gross migration flows in the expected way, although the impact of wages is not statistically significant. The patterns of migration in Spain and Portugal, on the other hand, are again rather disappointing. In summary, migration in the candidate countries appears little effective in absorbing adverse effects of idiosyncratic shocks. Therefore, once the candidate countries adopt the euro, asymmetric shocks are likely to have highly persistent effects – unless they can be absorbed by other channels.

5 Fiscal Risk Sharing in the EMU

If as the evidence presented in the previous section indicates labor mobility largely fails to facilitate regional adjustment, there will be greater need for other absorption mechanisms such as fiscal risk sharing. Countries often have formalized programs facilitating fiscal transfers between regions. These programs may fulfill one of the following two (or both) objectives: redistribution and risk sharing. The former refers to fiscal redistribution from rich to poor regions regardless of the current phase of the business cycle so as to encourage convergence in per capita incomes. The latter makes fiscal transfers conditional on business cycle developments so that regions hit by favorable shocks are net contributors and those hit by adverse shocks are net benefactors. The risk-sharing objective thus may be in conflict with the redistribution motive as fiscal insurance may also require that poor regions make transfers to rich ones.

The interest in the use of fiscal policy as a mechanism for absorbing adverse effects of idiosyncratic shocks has been spurred by the findings of Sachs and Sala-i-Martin (1992) who find that in the US, changes in States' contributions to and transfer receipts from the federal budget absorb approximately 40 % of state-specific variations in personal income. Although later studies indicate lower extent of shock absorption, they clearly show that inter-regional risk sharing is an important aspect of fiscal policy in developed countries (Bayoumi and

Masson, 1995; von Hagen, 1998; von Hagen and Hepp, 2001) For example, Mélitz and Zumer (2002) find that national/federal fiscal policy absorbs around 20 % of shock-induced changes in personal income in France, the UK and the US and 10-14 % in Canada (their methodology is such so as to measure risk sharing but not redistribution).

Although the EU budget provides for sizeable fiscal transfers, the objective is exclusively redistribution – from rich and industrial areas to poor and agricultural regions. Indeed, the very idea that, for instance, Greece or Portugal should ever have to make transfers to Germany or Sweden seems unthinkable given the current practice. This absence of an EMU-wide stabilization policy tool has been pointed out as a factor potentially undermining the stability of the monetary union (see Fatás, 1998, and the studies cited above). The same argument holds for the candidate countries' strive towards EMU membership – if a country is hit by a large asymmetric shock, its fiscal obligations towards and receipts from the EU will remain largely unchanged. Therefore, the countries will have to rely on national policy tools to deal with the effects of the shock. Yet, their ability to do so by counter-cyclical conduct of national fiscal policy will be constrained by the Growth and Stability Pact, which imposes limits on public deficit and debt levels. Clearly, countries that, under normal economic conditions, have low debt-to-GDP ratio and surplus public finances will enjoy sufficient leeway in their conduct of fiscal policy. But for those countries already close to violating the debt and deficit limits, the Growth and Stability Pact introduces a pro-cyclical bias into national fiscal policy.

6 Strategic Considerations

The adoption of the euro either through full EMU membership or euroization will be a costly and largely irreversible step (in fact, EU treaties and regulations formalize procedures for entering the EMU but present no provisions for exiting). As the previous sections show, the outcome of this step is highly uncertain. It is conceivable that the new members will encounter no major asymmetric disturbances and, with intensifying economic integration, their business cycles will become increasingly synchronized with those in the EMU core. It is, however, also possible that, given the currently low degree of correlation of shocks, they will continue to experience largely idiosyncratic economic developments. With the straightjacket of single monetary policy along with restrictions on counter-cyclical conduct of fiscal policy and low labor mobility, they will find themselves unable to deal with these shocks effectively. Therefore, the decision to adopt the euro may result in substantial economic costs.

The choice whether or not a country should adopt the euro is therefore analogous to an investment decision. A potential member country can decide whether or not it desires to enter the EMU and has considerable flexibility in choosing the timing of its entry. Once it enters, however, the decision is irreversible and the eventual payoff is uncertain. These types of decisions can be analyzed using options theory. By postponing the entry, candidate countries retain the *option* not to enter, and/or enter under different, more advantageous conditions (for example, with a more favorable conversion rate for their currency). It can be shown analytically, that the value of this option is unequivocally positive (see Pindyck, 1991; and Dixit, 1992, 1993). This is so because waiting brings the benefit of obtaining additional information about the eventual outcome (in this particular case, for example, about realizations of future shocks and the degree of synchronization of business cycles between the EMU and the candidate countries). By procrastinating, the country avoids incurring the (irrecoverable) costs of a decision that in the future may turn out not to be optimal. On the other hand, the cost of waiting is that the payoff from adopting the euro is delayed. Because of the underlying uncertainty, postponing EMU entry may therefore be preferable to early membership. The candidate countries can also benefit from proceeding gradually – instead of adopting the euro as soon as possible, they may be better off by implementing a relatively rigid fixed exchange-rate regime or a currency board and proceeding with full EMU membership or eurization only later. Adopting an exchange-rate regime that is close to, but stops short of, full EMU membership, reveals additional information about the eventual outcome of this step, while the country still retains the option of not entering and avoids incurring the full cost. Again, the cost of such an approach is that the country does not receive the full benefit of adopting the euro straight away. But given the irreversibility of the decision and uncertainty about its outcome, the positive option value of waiting may more than outweigh this cost (Dewatripont and Roland, 1995, formulate this argument in the context of choosing between adopting a big bang and a gradual reform). Moreover, the higher is the uncertainty and/or the higher is the cost of reversing the decision, the higher is the option value of waiting. Hence, the optimal length of *procrastination* may differ from country to country, depending on their specific conditions (such as the degree of similarity of output shocks and/or availability of effective absorption mechanisms).

7 Conclusions

The evidence reviewed in this paper indicates that the candidate countries currently encounter shocks that are largely uncorrelated with those in the EMU core. After EMU entry, the set of tools available to deal with asymmetric shocks will be reduced – members will all be subject to the same monetary policy and their ability to engage in counter-cyclical stabilization through fiscal policy will be constrained by the requirements of the Growth and Stability Pact. The available evidence also suggests that migration is not an effective channel of regional adjustment to idiosyncratic shocks. Moreover, the EU will impose transitional barriers to international migration following EU enlargement, which will further restrict the candidate countries' adjustment capability. Finally, there is essentially no fiscal risk sharing among the EU or EMU countries. There is certainly little doubt that EMU membership is desirable and beneficial in the long term. Nevertheless, a rapid entry to the EMU does not seem to be the optimal strategy in the short to medium term. Rather, the candidate countries can benefit from postponing the entry or proceeding gradually. The value of the option entailed in such a strategy is likely to outweigh the costs of delaying the benefits of membership.

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Table 1 Correlation of Supply and Demand Shocks between Candidate Countries and Four Large EU Countries

Supply Shocks				
	Germany	France	UK	Italy
Czech Rep.	-0.05	-0.06	-0.14	0.26
Slovakia	-0.04	0.26	-0.03	0.12
Poland	0.00	0.07	0.17	0.03
Hungary	0.28	-0.02	-0.30	-0.06
Slovenia	0.02	0.28	0.28	0.09
Estonia	0.08	-0.05	-0.15	0.02
Latvia	-0.07	0.18	0.16	0.04
Lithuania	-0.16	-0.31	-0.04	-0.03
Demand Shocks				
	Germany	France	UK	Italy
Czech Rep.	0.10	0.09	0.03	0.14
Slovakia	0.04	-0.31	-0.10	0.18
Poland	0.14	0.07	0.23	0.24
Hungary	-0.40	0.26	0.52	0.39
Slovenia	0.03	0.29	0.10	-0.02
Estonia	0.05	0.19	0.09	0.06
Latvia	0.11	-0.21	-0.11	0.11
Lithuania	0.33	0.18	-0.03	-0.21

Source: Horvath (2002b). Notes: Computed with quarterly GDP data over 1993:1 – 2000:3 (Hungary 1995:1 – 2000:3). Bold figures indicate correlation coefficients that are statistically significant at the 5% level.

Table 2 Correlation of Supply and Demand Shocks between Candidate and Member Countries and the EMU

	Supply Shocks	Demand Shocks		Supply Shocks	Demand Shocks
Austria ^{(a), SA}	0.38	0.08	Bulgaria ^(d)	-0.03	0.03
Belgium ^{(a), SA}	0.53	0.00	Croatia ^(e)	0.21	-0.18
Finland ^(a)	0.30	0.06	Czech Rep. ^(d)	0.04	-0.15
France ^{(a), SA}	0.69	0.30	Estonia ^(e)	0.25	0.12
Germany ^(a)	0.66	0.18	Hungary ^(e)	0.46	0.25
Greece ^{(a), IP}	0.05	-0.01	Latvia ^(e)	0.30	-0.49
Ireland ^{(a), IP, SA}	-0.14	0.13	Lithuania ^(e)	-0.11	-0.49
Italy ^{(a), SA}	0.52	0.57	Poland ^(e)	0.08	0.28
Netherlands ^(a)	0.47	0.04	Romania ^{(b), IP}	0.02	0.03
Portugal ^(a)	0.45	0.09	Slovakia ^(c)	0.05	-0.05
Spain ^(a)	0.22	0.16	Slovenia ^(d)	0.15	-0.18
Denmark ^(a)	0.18	0.13			
Sweden ^{(c), SA}	0.24	0.09			
UK ^{(a), SA}	0.21	-0.13			

Source: Jarko Fidrmuc and Ikka Korhonen (2001).

Notes: Computed with quarterly GDP or industrial production (indicated by superscript IP), for the following periods: (a) 1991-2002; (b) 1992-2000; (c) 1993-2000; (d) 1994-2000; (e) 1995-2000. Data indicated with superscript SA are seasonally adjusted.

Table 3 Determinants of Migration

	Czech Republic, 1992-98, 518 obs.			Slovakia, 1992-96,			Hungary 1994-98, 100 obs		
	IN	OUT	NET	IN	OUT	NET	IN	OUT	NET
Unempl. Rate (lagged)	-0.017 (2.90)	0.002 (0.52)	-0.022 (2.97)	-0.006 (2.08)	0.003 (1.56)	-0.008 (2.75)			-0.024 (3.47)
Wage Ratio (lagged)	0.462 (2.71)	0.469 (4.16)	0.069 (0.32)	0.076 (0.37)	0.054 (0.37)	0.173 (0.82)			0.550 (1.25)
Population Density (log)	-3.864 (5.43)	-0.061 (2.18)	-4.096 (4.65)	0.057 (1.14)	0.057 (1.70)	-0.008 (0.23)			-0.222 (4.54)
Dummy Suburb									1.421 (14.26)
Constant	19.482 (5.67)	1.047 (6.68)	19.781 (4.64)	0.567 (2.12)	0.530 (2.88)	-0.095 (0.46)			0.779 (2.48)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes			Yes
District Fixed Effects	Yes	Yes	Yes	No	No	No			No
District Random Effects	No	No	No	Yes	Yes	Yes			Yes
R ² (within)	0.567	0.780	0.124	0.663	0.865	0.270			0.012
R ² (between)	0.047	0.125	0.056	0.115	0.051	0.098			0.948
R ² (overall)	0.042	0.325	0.031	0.271	0.514	0.167			0.895
Breusch-Pagan (p-value)	1022.1 (0.00)	1071.1 (0.00)	290.1 (0.00)	244.52 (0.00)	233.28 (0.00)	98.67 (0.00)			19.25 (0.00)
Hausman (p-value)	48.82 (0.00)	15.90 (0.07)	21.36 (0.01)	4.32 (0.74)	3.21 (0.87)	8.22 (0.31)			4.81 (0.57)

Source: Fidrmuc (2002). T -statistics in parentheses. The dummy for suburbs denotes the district of Pest in Hungary, which completely encircles the capital city of Budapest.

Table 3 Determinants of Migration (continued)

	Poland 1992-93 and 1996-97, 196 obs.			Italy 1984-95, 219 obs.		
	IN	OUT	NET	IN	OUT	NET
Unempl. Rate (lagged)	0.003 (0.86)	0.003 (0.91)	-0.002 (0.95)	-0.010 (4.83)	0.008 (4.36)	-0.020 (7.55)
Wage Ratio (lagged)	0.669 (4.47)	0.533 (3.52)	-0.045 (0.41)	0.211 (0.93)	-0.222 (0.99)	0.581 (2.39)
Population Density (log)	-0.305 (11.69)	-0.358 (12.94)	0.137 (5.63)	-0.155 (3.62)	-0.024 (0.41)	-0.099 (2.65)
Constant	2.087 (13.04)	2.534 (14.96)	-0.637 (4.43)	1.332 (4.92)	0.900 (2.69)	0.150 (0.57)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	No	No	No	No	No	No
District Random Effects	Yes	Yes	Yes	Yes	Yes	Yes
R ² (within)	0.418	0.628	0.067	0.401	0.479	0.173
R ² (between)	0.810	0.837	0.482	0.406	0.231	0.752
R ² (overall)	0.673	0.787	0.446	0.391	0.245	0.657
Breusch-Pagan (p-value)	8.25 (0.00)	56.68 (0.00)	171.37 (0.00)	751.66 (0.00)	873.80 (0.00)	359.01 (0.00)
Hausman (p-value)	3.77 (0.58)	3.18 (0.67)	11.12 (0.05)	8.70 (0.80)	18.15 (0.15)	12.03 (0.53)

Source: Fidrmuc (2002). T -statistics in parentheses.

Table 3 Determinants of Migration (continued)

	Spain 1984-94, 187 obs.			Portugal 1987-92, 30 obs.		
	IN	OUT	NET	IN	OUT	NET
Unempl. Rate (lagged)	-0.009 (1.44)	-0.002 (0.34)	-0.006 (1.56)	-0.008 (0.46)	-0.028 (1.41)	0.020 (0.72)
Wage Ratio (lagged)	0.277 (1.25)	0.355 (1.91)	-0.329 (2.31)	2.435 (3.55)	0.773 (1.37)	1.661 (1.80)
Population Density (log)	-0.039 (0.62)	3.797 (3.61)	0.053 (2.94)	-0.247 (4.02)	-0.248 (3.28)	0.001 (0.01)
Constant	0.469 (1.33)	-16.870 (3.70)	0.237 (1.33)	-0.944 (1.82)	0.868 (2.81)	-1.813 (2.37)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	No	Yes	No	No	No	No
District Random Effects	Yes	No	No	No	No	No
R ² (within)	0.432	0.692	0.072	0.639	0.513	0.366
R ² (between)	0.031	0.112				
R ² (overall)	0.229	0.039				
Breusch-Pagan (p-value)	288.90 (0.00)	364.86 (0.00)	0.45 (0.50)	2.61 (0.11)	0.21 (0.65)	0.70 (0.40)
Hausman (p-value)	4.32 (0.99)	7796.84 (0.00)	11.10 (0.60)			

Source: Fidrmuc (2002). T -statistics in parentheses.

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