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### Anna Ziełińska-Głębocka\*

# INDUSTRIAL COMPETITIVENESS IN AN ENLARGED EUROPE. REVIEW OF KEY THEORETICAL AND POLICY ISSUES

The paper presents the possible ways in which the accession of the CEE candidate countries may influence industrial structures and competitiveness-related policies in an enlarged European Union. The focus of the paper is theoretical concepts and policy implications that are linked to industrial competitiveness analysis.

Keywords: European integration, industrial competitiveness, industrial structures, European market

#### INTRODUCTION

The paper reviews the possible ways in which the accession of the CEE candidate countries may affect industrial structures and competitivenessrelated policies in an enlarged European Union. The key assumption is that the issue of competitiveness plays a significant role in the current debate on EU enlargement. As outlined in the Commission communication on Industrial Policy in an Enlarged Europe (2002) achieving "competitiveness – the ability of the economy to provide its population with high and rising standards of living and high rates of employment on a sustainable basis – depends on the ability of the European Union to maintain and develop the competitiveness of its manufacturing industry". Enlargement is likely to bring along new opportunities for industry in new and existing member states. In an enlarged Europe, industrial competitiveness will be a cornerstone of the EU's sustainable development strategy.

The focus of the paper is theoretical concepts and policy implications that are linked to industrial competitiveness analysis. To this end the relevant literature and practical solutions on the following four issues are surveyed:

 $\bullet\,$  the impact of enlargement on the pattern of specialization and location in the EU

• the productivity factor as a key determinant of industrial competitiveness

<sup>\*</sup> Department of European Integration Economics, University of Gdańsk

- inter-industry and geographical labour mobility
- EU Member States exposure to EU enlargement

## 1. THE STYLIZED FACTS ABOUT INDUSTRIAL STRUCTURES IN THE EU AND CEE

Major changes in industrial structures and location have occurred in the EU in recent decades. Midelfart-Knarvik et al. (2000) found that most European countries showed significant convergence of their industrial structure during the 1970s, but this trend was reversed in the early 1980s. From the early 1980s onwards, EU countries have become increasingly different from the average of the rest of the EU and from most of their EU partners. Diverging industrial structure is a serious cause for concern when considering the core-periphery issues in terms of industry location within the single market. Economists and politicians also recognize that European industry needs to become more innovative and based on stronger entrepreneurial capacity to take risks and start businesses if the ambitious goals of the 2000 Lisbon Agenda are to be achieved.

In the Central and Eastern accession countries the structure of manufacturing varies considerably from that of the present EU members. Industry is less specialized and more concentrated in low technology sectors, labour and total factor productivity is below the EU average and innovation activity is far from the EU standards. The candidate countries suffer from a slow development of entrepreneurial spirit, particularly among small and medium-sized enterprises. The causes of this situation are: "the lack of managerial, organizational and technological know-how, difficult access to finance, insufficient supporting institutions and difficulties to integrate in production networks" (EC 2002).

In an enlarged Europe there is a need to foster dynamism of industry both in the present and future member countries. To this aim the potential of the single European market should be fully exploited and industrial policy goals and tools appropriately set out.

On the eve of enlargement, changes in industrial competitiveness taking place in the accession countries since the beginning of economic transformation have drawn attention of economists and policy-makers. Several studies examine the directions of change in industry, in particular candidate countries and try to assess their economic policies in the context of competitiveness. There are also excellent works on the impact of closer European integration on productivity, specialization and location of European industry that come from such mainstreams of economics and geography as productivity analysis, convergence analysis, trade theory, new economic geography, agglomeration theory or industrial organization. The following competitiveness-related issues are examined in economic literature: productivity, technological frontier, convergence, labour costs, labour markets, migration, specialization, location of industry, business environment, regulations and institutions, policy implications. There is also a debate on the stance and instruments of economic policies that affect competitiveness and dynamism of industry.

### 3. SPECIALIZATION AND LOCATION OF INDUSTRY

## 3.1. Theoretical background

Economic literature predicts that the deepening and widening of European integration will affect specialization patterns and location of industry. Completion of the internal market and increasing its size after enlargement is likely to change the industrial location in result of exploitation of differences in countries' comparative advantages and clustering of activities in various areas. Specialization and location issues are examined by the new trade theories, new economic geography and integration literature. Krugman (1991) developed a core-periphery model which suggests that close but imperfect integration may create regional winners and losers. Venables (1996) and Krugman and Venables (1995) and Puga (1997) have found links between specialization, agglomeration and economic integration. According to their models, international market opening should increase efficiency and specialization of industry within countries, but it can also affect the international location of industrial activity. The process is significant within regional groupings. Baldwin and Forslid (1999) introducing endogenous growth into the Krugman core-periphery model look at various aspects of European integration that may encourage agglomeration or encourage the geographic dispersion of industry. They distinguish between stabilising and de-stabilising forces of integration. A purely trade cost-reducing integration encourages agglomeration, but inter-regional learning spillovers are a stabilising force that encourages geographic dispersion. In the single market, trading in ideas and knowledge-sharing via cross-country educational exchanges, expansion of intra-European mergers and acquisitions and intra-European foreign direct investment or EU-funded training and research programmes reduces the risk of extreme agglomeration.

Several studies have tested changes in specialization and the location of European industry in recent decades and assessed their consistency with different theories. Among them there are analyses by Sapir (1996), Amiti (1999) Brűlhart and Torstensson (1996), Brűlhart (2001), OECD (1999), WIFO (1999), Midelfart-Knarvik et al. (2000). The objectives of the studies are to describe the changes in industrial specialization and location patterns, to assess whether these are associated with the convergence or dissimilarity of economic structures, and whether industries are becoming more or less spatially concentrated, and less or more specialized; and to identify the forces that determine agglomeration or dispersion of industry. There are a number of measures used in empirical analysis, including the Herfindahl index, the GINI coefficients, the Krugman specialization index, as well as econometric simulation models.

To the accession countries single market opening will bring gains to trade due to lower unit costs of production, economies of scale and more varieties of goods. It may also cause an agglomeration of manufacturing in a limited number of locations that arise from Venables (1996) demand and cost linkages between firms, and from other agglomeration forces, including externalities. The main question is whether the core-periphery pattern prevails after enlargement, or whether one can expect a more dispersed industrial activity in an enlarged Europe. The direction and intensity of industrial relocation is another problem for review. Industrial relocation may occur from present members to new EU member countries, but also from peripheries to the core, or between peripheries including the accession countries themselves. Baldwin (1998) argues that a growing interest in defining agglomeration forces in Europe has its roots in predictions that free trade and integration may relocate industrial activity from one group of countries/regions to another. Rich EU countries fear relocation to low wage countries, poor countries are afraid of relocation of their activities to the richer ones, small countries-relocation to the core, the candidate countries want to avoid relocation to the present members.

Amiti (1999) and Midelfart-Knarvik et al. (2000) point to the need of identifying characteristics of industries that affect a degree of specialization and geographic concentration. In the constructed industry characteristic bias (ICB) Midelfart-Knarvik et al. include economies of scale, technology level, R&D intensity, capital intensity, share of labour, skill intensity, higher skill intensity, agricultural input intensity, intermediates intensity, intra-industry linkages, inter-industry linkages, final demand bias, sales to industry, industrial growth. Amiti (1999) identified the industries that have become more concentrated in Europe in recent decades by constructing industry Gini coefficients. The industry Gini coefficients were regressed on three variables: factor intensity, scale economies and intermediate-goods intensity. She found that industries which have become more concentrated were characterized by scale economies and high intermediate-input intensities. This provides some support for new trade theories and new economic geography theories.

#### Policy implications

The core-periphery models based on the specialization-location pattern point to two types of interlinked policy implications that are considered in economic literature. There are industry-oriented and regional-oriented policy implications. Industry-oriented policy studies assess the existing concepts of industrial policies or industrial competitiveness policies in the EU (European Commission, 1990, 1993, 1994, 2002) and other OECD countries (OECD Main Science and Technology reports - various volumes, OECD Industrial Policy - various volumes, OECD 1996). The EU reports look at national experiences in industrial and economic policies of particular groups of EU countries plus the eligible candidate countries. The need to revise the EU approach to industrial policy is also considered. The focus of some considerations is a possible impact of enlargement on policy setting and implementation at a national and Community level. Policy analysis reviews the implications of enlargement for European Community policies in an enlarged Europe (25), and also the critical competitiveness factors that affect policy priorities in the two groups of EU countries: the present member states and the newcomers. The 2002 Commission report on industrial policy in an enlarged Europe underlines the importance of framework conditions for improvements in industrial competitiveness. Four main categories of framework conditions are distinguished: rules that set the general market framework, sector-specific regulations, institutions that enable the market and other conditions related to the macro-economic framework. The EU concept of framework conditions complies with the OECD agenda on industrial competitiveness and the benchmarking of framework conditions (OECD 1999). Many industrial economists share the view that regulations and institutions matter for industrial competitiveness (Scarpetta and Tressel 2002; Eichengreen and Iversen 1999; Nicoletti et al. 1999). The Commission report stresses that some industrial policy instruments may have to be adapted to respond effectively to the specific needs of accession countries. Policy actions to create a business-friendly environment for entrepreneurship, to promote development of SMEs and sustain macroeconomic stability could be "implemented with particular intensity in candidate and accession countries".

Further debate on the role of industrial policy in an enlarged Europe could be directed towards the following issues:

• policy concepts and supply-side instruments that promote incentiveenhancing market structures and capability-enhancing institutions (OECD 1996)

• priorities of industrial policy in the face of enlargement

• country-specific critical competitiveness factors versus Communitywide industrial approach

• policy processes and procedures – benchmarking as the method of policy setting and evaluation. The role of policy benchmarking in the EU industrial policy: three levels of benchmarking procedures: framework conditions, industrial sectors and enterprises (EC 1996, 2002).

• policy goals – rethinking the role of the state, strengthening competition, enhancing employment and entrepreneurship

• industrial policy and state aid. Sectoral, regional and horizontal state aid rules and guidelines

• the role of public-private partnership

• industrial policy towards particular sectors – rethinking the notion of EU "sensitive" industries and revision of the EU approach to state aid may be needed. This is the case of the EU sectoral rules for state aid in the so-called sensitive sectors – the shipbuilding industry, the steel industry, the motor-car industry, coal mining. Is there a need to revise the rules on horizontal aid, including aid for rescue and restructuring of enterprises in distress?

In the debate on the notion of competitiveness policy – the positive and negative – mercantilism-oriented effects of policy actions in support of industrial competitiveness may have to be revitalized in the core-periphery pattern. Krugman's concept of "national obsession" (1994, 1996) linked to the competitiveness policy and strategic trade policy seems to be relevant to the possible danger of promoting "national champions" or picking the winners in the new members. In such a situation there is a need to apply a more systematic approach to industrial policy based on a type of Pact for Competitiveness. Applied stances of competitiveness policy should be integrated with the competition policy and regulatory policies. Moreover, competitiveness and economic reforms in the EU-25 must be pursued in the light of the Lisbon process.

The problems of geographic agglomeration, convergence and the coreperiphery patterns give rise to debates on forces and public actions that may countervail the negative results of excessive concentration of the more advanced economic activities in the core and of less mature activities in peripheries. There is a growing interest in regional industrial clusters as a means to promote regional development and industrial restructuring,

particularly in the less advanced economies. The idea of industrial clusters goes back to various concepts that relate to innovation, technological progress and knowledge spillovers (Mansfield, Scherer, Freeman, Nelson, Soete and others). Some authors argue that the clustering of industries may help to develop national or regional innovation systems and strengthen both interregional and intra-regional technology diffusion (Nelson 2000; Lundvall 1992; Carlsson 1994; OECD 1997). There are good examples of the growing significance in the learning and networking externalities in the development of innovation systems (Goolsbee and Klenow 1999; Branstetter and Sakakibara 1997; Feldman and Lichtenberg 1997). The role of public policy is to create a friendly climate for public-private partnership, promote the culture of cooperation between enterprises and the development of business services. Clustering of industries and organizations may enhance forward and backward linkages and stimulate the development of learning processes in established industries and firms. Industrial clusters could help to cope with the problems of the ageing regions and industries in the present EU peripheral countries that may suffer from competition from the acceding countries (the Southern EU member states). Industrial clustering, networking and creating industrial systems may become a new form of partnership and co-operation in an enlarged Europe. Technology transfer and spillovers must receive significant interest in the Community and national policies. To this end research consortia, technological parks and innovation systems should be supported by public-private partnership.

The changing pattern of industrial specialization and location is likely to call for the re-consideration of the present EU structural policy. Emerson and Gros (1998) argued that unemployment as a criterion for the allocation of EU funds for Objective 1 may be questioned in the face of enlargement and differentiated experience of EU countries with the labour market policies. The cohesion countries that pursue effective policies cannot be punished for that by being excluded from EU structural aid like in the case of Portugal tested by the authors.

The changing industrial structures in an enlarged Europe may exert an impact on the distribution of Community aid. There are indications of possible incentives for launching a new agenda for structural funds in a new Community financial perspective starting from 2007 due to the effects of the changing export market shares in the single market on demands for the Community support from various countries, including Portugal, Spain, Ireland etc.

#### **4. PRODUCTIVITY ANALYSIS**

Productivity is a key determinant of industrial competitiveness in all OECD countries. The performance of productivity growth in Europe has been very poor in recent years, thus slow productivity growth became a serious cause for concern of the EU policy-makers. In the 2002 Communication, the European Commission underlines that on the eve of enlargement, it should be ensured that the EU will be able to "reap the benefits of its industrial potential in the years to come". The Communication identifies three key factors of industrial competitiveness: knowledge, innovation and entrepreneurship (EC 2002).

• "Europe needs to be at the cutting edge of knowledge. The need for more and better efforts in education, vocational training and research, to put this knowledge at the disposal of industry,

• European industry also needs to become more innovative. Every sector and activity needs to be constantly initiating, refining and improving its products, services and processes,

• Europe must also develop its entrepreneurial capacity to take risks and grow new and bigger businesses".

Scarpetta and Tressel (2002) underline that Europe is facing "the impressive performance of the US economy over the 1990s and the diffusion of information and communication technologies". The US has not only accelerated its labour and multifactor productivity (MFP) growth but also increased its employment level and GDP per capita. The country still remains at the world productivity frontier in many industries. In contrast, other OECD economies including EU members, have experienced a slow-down in GDP per capita and productivity growth and stagnant employment. In an enlarged Europe, considerable efforts aimed at restructuring industry will be needed if Europe is to catch up with the US productivity performance. Many authors state that growing disparities in industrial performance amongst industrial countries will be related to their different abilities to adapt new highly productive equipment (ICT) and make the best use of its potential. In this light the role of Information and Communication Technologies in industrial development and R & D and innovation policies would grow.

Economic and industrial organization literature examines the causes and consequences of technological lead and catch-up in order to explain the observed differences in total factor productivity growth amongst countries. Two strands of analysis may become useful for the evaluation of policy implications:

### • productivity convergence analysis

• analysis of relationship between productivity and market structures and institutional settings (regulations).

Productivity convergence analysis rests on standard literature on Total Factor Productivity (for survey see Hulten 2000 and OECD 2001). Nishimizu and Page (1982) have developed a concept of a frontier or best practice production function that can explain technological progress and technical efficiency change. Frontier production functions were used by Bernard and Jones (1996) for comparisons of productivity performance across industries and countries. To determine productivity convergence Bernard and Jones considered both multifactor productivity measures and labour productivity measures. They constructed a simple model of productivity catch-up and derive testable implications for cross sections of productivity levels and growth rates. The cross-section convergence model was tested for six industrial sectors and for 14 OECD countries. The convergence approach was recently developed by Grifith et al. (2000), Harrigan (1998), Dollar and Wolff (1994), Scarpetta and Tressel (2002). The literature underlines that a productivity catch-up within each industry is "influenced by technological and organisational transfer from the technology-frontier country to other countries (...) thus multi productivity for a given industry "j" of country "i" at date "t" can be modelled as an auto-regressive distributed log process in which the level of MFP is co-integrated with the level of MFP of the technological frontier country " (Scarpetta and Tressel).

In the context of an enlarged Europe, convergence analysis may explain the size of technology gap and the pace of productivity catch-up between the core frontier countries and the peripheral regions and countries via technology transfer and spillovers. The findings will help to design proper industrial competitiveness policies for a bigger Union.

Recent literature on competitiveness emphasizes the role of business environment and regulatory settings for the economic performance of different industries. The European Commission (2002) points out that EU and national industrial policies should be horizontal in nature and aimed at securing framework conditions favourable to industrial competitiveness. According to Nicoletti and Scarpetta (2003) "strict product market regulations – and lack of regulatory reforms – appear to underline the meagre productivity performance of some European countries, especially in those industries where Europe has accumulated a technology gap (e.g. industries producing or using information and communication technologies)". Scarpetta and Tressel (2002) confirm the key role of market structures and institutions in explaining productivity performance of different industries. This tendency has also been found by Aghion et al. (2001), Hall and Jones (1999) and Sutton (1998). Competition in the product market brings about static allocative efficiency gains and also dynamic efficiency gains. The latter are related to productivity growth. Scarpetta and Tressel look at the links between productivity and competition. The focus is on a set of indicators of product market regulations and the potential policy determinants of competition. On the basis of the constructed taxonomy of market structure the authors examine productivity performance in industries that differ in market structures and consider different product market regulations. The constructed indicators of product market regulations can be very useful in economic analysis of an enlarged Europe. These indicators are as follows:

• the overall index of the stringency of product market regulation composed of three elements: direct state control of economic activities, barriers to private entrepreneurial activity, regulatory barriers to international trade and investment

• the industry-specific indicator of product regulation

• the aggregate time-varying indicator of the stance of regulation as a simple average of time-varying indicators of the stringency of regulations in electricity, gas, and transport and communication.

The other set of indicators concerns employment protection legislation and the bargaining systems (corporatism).

Nicoletti and Scarpetta (2002) emphasize the links between productivity growth and regulatory policies. Strict product market regulations may weaken productivity performance, and similarly entry-limiting regulations may hinder technology spillovers and entry of new technological firms. The authors claim that regulatory policies have become dissimifar in real terms in OECD countries. In many countries of the European continent the regulatory environment is not market friendly, and regulatory reforms are postponed. The result is poor economic performance relative to that of the US. In the EU dissimilarity of regulatory policies is likely to increase after enlargement, and stronger policy coordination may be needed in effect.

Regulatory reform should aim at removing the excessive administrative burden that hinders entrepreneurship and expansion of smaller businesses.

In the context of enlargement, the following three enterprise policy-related problems may deserve particular attention:

- entrepreneurship
- access to finance
- technology transfer and spillovers.

Entrepreneurship needs more efficient enterprise policy at both Community and national level. This is critical for accession countries where enterprises, in particular SMEs, are reluctant to bear entrepreneurial risk and a heavy burden of over-regulation. A policy approach that helps to start and grow businesses by reducing the regulatory burden and improving healthy business environment requires reconsideration.

Access to finance is crucial for small and medium businesses, particularly innovative ones. There is a need to pursue an effective policy promoting the creation and development of venture capital. The venture capital market in the EU is lagging behind the US and Japan. Enlargement seems to worsen the situation in this respect. Venture capital may help to transfer knowledge, learning and technology from the EU core to peripheries and thus diminish the costs of adjustment to the relocation of economic activity and export market shares.

### 5. INTER-INDUSTRY AND GEOGRAPHICAL LABOUR MOBILITY

Enlargement offers the EU new opportunities to accelerate labour mobility between industries and geographical locations. In this context many authors consider arguments for and against lifting restrictions on migration from East to West. The arguments are drawn on the latest estimates of the potential flow of people from the CEE countries to particular EU members (see: Socha and Turcla, A Modelling..., Keuschnigg and Kohler, 1999; Breuss and Teschke, 1997; The Free .. 2000; The Impact... 2000).

It is widely recognized that Europe needs new labour market policies and the removal of some restrictions on migration from the accession and candidate countries. The authors of the CEPR Policy Paper 7, 2002 on *Who's Afraid of the Big Enlargement* argue that the present EU members could "smooth the adjustment process by beginning to open their labour markets to migration from the CEE countries". Their study suggests that the EU can use the NAFTA experience in this respect because "integration of economies at vastly different levels of development calls for significant inter-industry and geographical labour mobility". The following policy recommendations are proposed:

• as suggested by the US experience with the North American Free Trade Agreement, the establishment of mobility-friendly labour market institutions in combination with more unemployment insurance of short duration and wage flexibility would smooth the cost of adjustment

• before allowing the free movement of workers from new members, a transitional period should be used to adopt a common EU-wide migration

policy, involving common quotas, co-financing of border controls and coordination of in-site inspections to limit illegal employment of foreign workers.

The relationships between enlargement, present competitiveness and migration are examined by Firdmuc (2002). He looked at the response of migration to economic incentives in the Southern European members states and the candidate countries. The results of his empirical analysis suggest that in acceding countries migration does not react to regional differences in wages and unemployment rates. These findings do not coincide with the traditional theories of modern migration literature that focuses on the role of wages and employment prospects in explaining migration patterns. Firdmuc attributes low labour mobility in retarded regions to such factors as high search and information costs, poor prospects for low-skilled workers because the pool of potential migrants consists of high-skilled workers earning relatively high wages, some structural factors related to low inter-industry labour mobility. This is in line with social and demographic variables in migration studies. The conclusions concern not only international migration but also inter-regional migration within the candidate countries. Firdmuc suggests that the potential effect of migration on regional differences in unemployment and wage is economically small. Thus "in the acceding countries migration patterns appear much less effective in facilitating regional adjustment" than in some EU countries, particularly the Southern member states. The paper by Firdmuc yields implications for labour market policy in an enlarged Europe. Several lessons can be drawn from the empirical results on the migration patterns in the candidate countries. An appropriate policy response aimed at increasing labour mobility may be needed both for the accession countries and the Community as a whole. The pattern of labour mobility could have implications for EMU enlargement. According to standard optimum currency area literature, migration is one of the principal mechanisms for absorbing adverse effects of asymmetric shocks in a monetary union. Firdmuc suggests that because of the efficacy of migration in smoothing away inter-regional differentials in unemployment and wages, an early membership in the EMU is not necessarily the optimal policy choice for the accession countries.

The patterns of labour migration in an enlarged Europe would have implications for labour market policies, including the European employment strategy based on the Luxembourg process. There may appear a need for more flexibility and modernization of the EU social model and new guidelines for the reform of national employment policies. The same is true for EU training and education policy interlinked with R & D and innovation policy and the growing significance of Information and Communication Technologies in industrial and social development.

### 6. MEMBER STATES' EXPOSURE TO EU ENLARGEMENT

The recent literature on EU enlargement examines the degree to which present EU member states are exposed to EU enlargement in terms of trade and welfare gains and loses (Baldwin 1994, Baldwin et al. 1997, Emerson and Gros 1998, Egger and Kratena 2003). Most of the studies concentrate on gains for the EU and competition between Eastern and Southern Europe. The question that arises from the studies is whether EU imports from the accession countries and from the southern EU countries are complementary or substitutional. If imports from the eastern countries are substitutes, the present suppliers from the South of Europe can be adversely affected in terms of their industrial and trade potential. The studies by Baldwin et. al. 1997 and Emerson and Gros 1998 concentrate on identifying the countries that are relatively the most exposed of present member states to EU enlargement on grounds of industrial and trade structure. Baldwin et al. (1997) stated that Portugal would be the only country to lose from enlargement, since it would have to face the competitive pressure coming from the CEECs producers in such sectors as textile and clothing where the candidate countries have a comparative advantage. Emerson and Gros (1998) examined the case of Portugal in order to assess whether Portugal is particularly vulnerable to the major changes in the EU's economic environment due to EU enlargement. The economists found that Portugal is relatively the most exposed of the present member states to EU enlargement on the grounds of industrial and trade structure, however, it would be premature and unduly pessimistic to assume that these will necessarily translate into absolute disadvantage. It is also suggested that the overall Portuguese case has to be concerned at a combination of other elements of EU policies, including the changes in the EU Structural Funds, the EMU, the reform of the CAP and the policy changes proposed by the Commission's Agenda 2000. Portugal's industrial and trade structure is very far from the EU average. The top export products of Portugal include clothing, mechanical vehicles, electrical goods and footwear. The textile-clothing-footwear nexus account for almost 30% of total Portuguese exports and is in head-on competition with the export commodities from the CEE countries to the EU. Portugal would also be exposed to trade competition from the acceding countries in other products. including vehicles, electrical equipment and telecommunications equipment.

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These are all branches that have grown up more recently in Portugal, but constitute mainstream manufacturing export products in the EU itself and the CEE countries. Portugal, CEE countries and other EU countries would compete not only for export shares but also for location of new investments. The authors also emphasize that, independently of enlargement, Portugal will be forced to strengthen its capacity to cope with competition from other EU countries (Italy for shoes, Germany for textiles) and third world countries.

Egger and Kratena (2003) concentrate on EU imports from the EU-South and from the CEE countries and try to answer the question if these imports are complementary or substitutional by distinguishing between final and intermediate goods trade. They come up with the results that EU imports from the CEE and Southern member countries are substitutes and that import substitution is due to the dominance of the intermediate goods trade. Final goods imports between the two regions are complementary. Intermediate goods substitution is strong in sectors with a low share of high-skilled workers and a low degree of multinationality.

The findings of empirical analysis suggest the following conclusions:

• on average EU imports from the CEE countries and EU-South are substitutes. The fact is driven by the dominance of intermediate goods trade

• in industries where the EU imports from the two regions are substitutes for the labour unit costs, the share of high-skilled workers and degree of multinationality is lower

• the EU-South and CEE countries generally compete for outsourcing activities that are related to intermediate goods production and trade.

Competition between the CEE and the EU-South can bring about policy implications in various fields of the Community and national policies, including single market policies, industrial policies, competition policy, industrial policy, etc. European competition policy may be challenged, particularly in the field of merger control. Market opening may create a new impetus for mergers and acquisitions; since the candidate countries could compete for foreign investors among themselves and with the EU Southern countries. There is the challenge for competition policy as regards a levelplaying field approach.

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#### REFERENCES

- Aghion P., Harris C., Howitt P., Vickers J. Competition, Imitation and Growth with Step-by-Step Innovation, "Review of Economic Studies", 2001.
- Amiti M. Specialization patterns in Europe, "Weltwirtschaftliches Archiv", vol. 135(4).
- Baldwin R.E. On the Measurement of Dynamic Effects of Integration, "Empiria", vol. 201999, 1993.
- Baldwin R.E. Towards an Integrated Europe, London CEPR, 1994.
- Baldwin R.E. Francois J., Portes R. The Costs and Benefits of Eastern Enlargement: the Impact on the EU and Central Europe, "Economic Policy", April 1997.
- Baldwin R.E. Agglomeration and Endogenous Capital, NBER Working Paper no. 6459, Cambridge, Mass., 1998.
- Baldwin R.E., Forslid R. The Core-Periphery Model and Endogenous Growth: Stabilising and De-Stabilising Integration, NBER Working Paper no. 6899, Cambridge, Mass., 1999.
- Breuss F., Teschke J., A General Equilibrium Analysis of East-West Migration: The Case of Austria and Hungary, in: Biffl. G., ed. Migration, Free Trade and Regional Integration in Central and Eastern Europe, WIFO, Vienna, 1997.
- Branstetter L., Sakakibara M. Japanese Research Consortia: A Microeconometric Analysis of Industrial Policy, NBER Working paper no. 6066, 1997.
- Brühlhart M. Trading Places: Industrial Specialization in the European Union, "Journal of Common Market Studies", vol. 36, no. 3, 1998.
- Brühlhart M. Evolving Geographical Concentration of European Manufacturing Industries, "Weltwirtschaftliches Archiv", vol. 137, no. 2, 2001.
- Brühlhart M., Torstensson J. Regional Integration, Scale Economies and Industry Location in the European Union, CEPR Discussion Paper 1435, London, 1996.
- Budnikowski A. Międzynarodowe stosunki gospodarcze [International Economic Relations], PWE, Warszawa, 2001.
- Caves D.W., Christensen L. R., Diewert W.E. Multilateral Comparisons of Output, Input, and Productivity Using Superlative Index Numbers, "The Economic Journal", vol. 92, no. 365, 1982.
- Czarny E. Teoria i praktyka handlu wewnątrzgalęziowego [Theory and Practise of Inner-Branch Trade], Szkoła Główna Handlowa, Monografie i opracowania no. 496, Warszawa, 2002.
- Czernielewska M. Metody ilościowe w badaniu regionalnej integracji gospodarczej na przykładzie Unii Europejskiej. Próba oceny [Quantitative Methods in Researching Regional Economic Integration on the Example of the European Union. An Attempt of an Evaluation], Łódź, 2002.
- Diewert W. E. Exact and Superlative Index Numbers, "Journal of Econometrics", vol. 4, 1976.
- Diewert W. E. *The Economic Theory of Index Numbers: a Survey*, "Discussion Paper no. 79–09, Department of Economics, University of British Columbia, March, 1979.

- Dollar D., Wolff E. Capital intensity and TFP convergence by industry in manufacturing, in Baumol W., Nelson R., Wolff E, eds. Convergence of Productivity: cross-national studies and historical evidence, Oxford University Press, 1994.
- Egger P., Kratena K. A Tale of Competition between Eastern and Southern Europe, "Review of World Economics", Weltwirtschaftliches Archiv, vol. 139, no. 1, 2003.
- Eichengreen B., Iversen T. Institutions and Economic Perspective: Evidence from the Labour Markeet, "Oxford Review of Economic Policy", vol. 15, 1999.
- Emerson M., Gros D. Impact of Enlargement, Agenda 2000 and EMU on Poorer Regions The Case of Portugal, CEOS Working Document no. 125, 1998.
- European Commission The impact of the internal market by industrial sector: the challenge for the Member States, by Buigues P., Ilzkovitz F., Lebrun J-F., "European Economy", Special Edition 1990 (Social Europe).
- European Commission The competitiveness of European industry. 1999 report. Luxembourg, 1999.
- European Commission European Governance. A White Paper. COM (2001) 428 final, Brussels, 2001.
- European Commission Industrial Policy in an Enlarged Europe, Communication from the Commission... COM (2002) 714 final, 2002.
- Feldman M., Lichtenberg F. The Impact and Organization of Publicly-Funded Research and Development in the European Community, NBER Working Paper no. 6040, 1997.
- Fidrmuc J., Migration and Regional Adjustment to Asymmetric Shocks in Transition Economies, Center for European Integration Studies (ZEI), University of Bonn: CEPR, London, and William Davidson Institute, Michigan, August 2002
- The Free Movement of Persons for the Pursuit of Economic Activity in the Context of Enlargement, Additional Facts on the Austria Situation relating to the Commission's Information Note of 17 April 2000.
- Gawlikowska-Hueckel K. Procesy rozwoju regionalnego w Unii Europejskiej. Konwergencja czy polaryzacja? [Regional Development Processes in the European Union. Convergence or Polarization?]. Gdańsk, 2002.
- Goolsbee A., Klenow P. Evidence on Learning and Network Externalities in the Diffusion of Home Computers, NBER Working Paper, No. 7329, 1999.
- Griffith R., Redding S., Van Reenen J. Mapping the two faces of R&D: Productivity growth in a panel of OECD industries, IFS Working Paper W00/02, 2000.
- Hall R., Jones C. Why Do Some Countries Produce So Much More Output per Worker than Others, "Quarterly Journal of Economics", 1999.
- Harrigan J. Estimation of Cross-Country Differences in Industry Production Functions, "Journal of International Economics", 1998.
- Hansen J.D. European Integration. "An Economic Perspective", Oxford University Press, 2001.
- Hulten Ch.R. *Total Factor Productivity: A Short Biography*, National Bureau of Economic Research Working Paper no. 7471, Cambridge, Mass., 2000.
- The Impact of Eastern Enlargement on Employment and Labour Markets in the EU Member States, European Integration Consortium: DIW, CEPR, FIEF, IAS, IGIER, Berlin, Milano.

- Jorgensen D.W., Nishimizu M. US and Japanese economic growth, 1952-1974: an international comparison, "Economic Journal" vol. 88, no. 352, 1978.
- Keuschnigg Ch., Kohler W. Eastern Enlargement to the EU: Economic Costs and Benefits for the EU Present Member States? Study XIX/B1/9801, 1999.
- Keuschnigg Ch., Kohler W. The German Perspective on Eastern EU Enlargement, "The World Economy", vol. 24 (4) 2001.
- Krugman P. Geography and Trade, Cambridge, Mass. MIT Press, 1991.
- Krugman P. Increasing Returns and Economic Geography, "Journal of Political Economy", vol. 99, no. 3, 1991a.
- Krugman P. Competitiveness: A Dangerous Obsession, "Foreign Affairs", No.73, 1994.
- Krugman P., Venables A. Integration, Specialization, and Adjustment, NBER Working Paper no. 4559, Cambridge, Mass., 1993.
- Krugman P., Venables A. Globalization and the Inequality of Nations, "Quarterly Journal of Economics", vol. 110, issue 4, 1995.
- Krugman P., Venables A. Integration, Specialization, and Adjustment, "European Economic Review", vol. 40, 1993.
- Midelfart-Knarvik K.H., Overman H.G., Redding S.J., Venables A.J. The Location of European Industry, "Economic Papers", no. 142, April 2000, European Commission.
- Myrdal G. Economic Theory and Underdeveloped Regions, London, 1957.
- Nicoletti G., Scarpetta S., Boylaud O. Summary indicators of product market regulations with an extension to employment protection legislation, OECD Economics Department Working Paper no. 226, Paris, 1999.
- OECD Structural Adjustment and Economic Performance. Paris, 1987.
- OECD Economies at a Glance Scoreboard of Indicators. Paris, 1995.
- OECD Industrial Competitiveness. Paris, 1996.
- OECD Science, Technology and Industry Scoreboard of Indicators. Paris, 1997.
- OECD Nauka, Technika, Przemysł Przegląd [Science, Technology, Industry Overview]. KBN, Warszawa, 1999.
- OECD Industrial Competitiveness. Paris, 1996.
- OECD OECD Productivity Manual: A Guide to the Measurement of Industry-level and Aggregate Productivity Growth. Paris, March 2001.
- Pelkmans J. European Integration. Methods and Economic Analysis, Longman, London, New York, 1997.
- Porter M. E. The Competitive Advantage of Nations, Macmillan, London, 1990.
- Pratten C. A Survey of the Economies of Scale, in: Studies on the Economics of Integration, Research on the "Cost of Non-Europe", Basic Findings, vol. 2, European Commission, Luxembourg, 1988.
- Puga D. The Rise and Fall of Regional Inequalities, "European Economic Review", vol. 43, no. 2, 1999.
- Puga D. European Regional Policies in The Light of Recent Location Theories, CEPR Discussion Paper no. 2767, 2001.

#### A. ZIELIŃSKA-GŁĘBOCKA

- Quah D.T. Regional Convergence Clusters across Europe, "European Economic Review", vol. 40, 1996.
- Samuelson P.A., Swamy S. Invariant Economic Index Numbers and Canonical Duality: Survey and Synthesis, "American Economic Review", vol. 64, 1974.
- Scarpetta S., Tressel T. Productivity and Convergence in a Panel of OECD Industries: Do Regulations and Institutions Matter?, OECD Economics Department Working Papers no. 342, 2002.
- Socha M., Turcla G. A Modelling Perspective on Industrial Labour Market in Transition Trends, Institutions and Reallocation, manuscript.
- Solow R.M. Technical change and the aggregate production function, "Review of Economics and Statistics", vol. 39, August 1957.
- Sutton J. Technology and Market Structure, "European Economic Review", vol. 40, 1996.
- Sutton J. Technology and Market Structure, MIT Press, Cambridge Mass., 1998.
- Venables A. J. Equilibrium Locations of Vertically Linked Industries, "International Economic Review", vol. 37, no. 2, 1996.
- Zielińska-Glębocka A., ed. Ewolucja integracji gospodarczej w Unii Europejskiej, Wyzwania dla Polski [The Evolution of Economic Integration in the European Union. Challenges for Poland], Gdańsk, 1997.
- Zielińska-Głębocka A., ed. Konkurencyjność przemysłowa Polski w procesie integracji z Unią Europejską. Teoria, praktyka, polityka [Poland's Industrial Competitiveness in the Integration Process with the European Union. Theory, Practise, Policy], Fundacja Rozwoju Uniwersytetu Gdańskiego, Gdańsk, 2000.

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