Can EU Accession Reduce Regional Development Disparities in Slovenia?

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Abstract

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The paper investigates economic convergence of the Eastern Slovenia region in the changed economic and policy environment after the accession to the EU. The likely impacts of cohesion and agricultural policy in the period of the Community financial perspective 2007-2013 are analysed by the regional Input–Output model estimated with modified GRIT methodology. Results of the impact analysis within the various policy scenarios suggest that: (i) transfers from the cohesion and agricultural policy stimulate economic growth of the region; (ii) budgetary inflows stimulates economic convergence of the region; (iii) dynamic of the regional convergence is significantly dependant from the selected regionalisation at the NUTS 2 level; (iv) model results disconfirm a popular opinion regarding low redistributive effects of the CAP expenditure.

Key words: regional Input-Output model, Slovenia, EU regional and cohesion policy, Common Agricultural Policy

Introduction

Regional development disparities prevent the attainment of territorially balanced economic growth and a more equitable distribution of income and wealth. Taking into account the cumulative and self-perpetuating nature of these effects, they affect negatively economic efficiency of the entire national economy (Armstrong and Taylor, 2000). Apart from the economic aspects, there are also strong political and social arguments for public support towards reduction of regional development disparities (Illeris, 1993; Begg, 2003).

Despite its relative small size Slovenia faces the problem of divergence in economic performance of regions.

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Differences in economic development have been deepening throughout the period of economic transition (IMAD, 2006). Development disparities are perceivable especially between core (mostly urbanised) regions with diversified economic structure and remote regions which are facing with economic and demographic stagnation. Geographically, development disparities in Slovenia are exhibited also in the East-West manner, where the eastern, predominantly rural part of the country is lagging behind (Pecar, 2003). GDP per capita in Eastern Slovenia is about 16 percentage points under the national average (SORS, 2005). Increased competition due to the accession to the EU might cause further negative effects on the regional disparities, since the regions lagging behind have significantly weaker competitive capacity (IMAD, 2006). Due to the poorer economic performance, Eastern Slovenia will also be eligible for the bulk of regional structural support after the accession to the EU.

To a great extent accelerated by the EU-accession, conditions and structures for faster economic convergence of lagging regions in Slovenia are gradually being created. The EU accession implies also inclusion to common financial mechanisms such as CAP and EU cohesion support. The focus of these financial mechanisms is given to sectors and regions lagging in economic development or facing with structural problems (Artis et al., 2006). As suggested by Mole (2001) in assessing efficiency of these policy mechanisms, it is necessary to address the following questions: (i) do the analysed funds contribute to a faster economic convergence; (ii) are the expected impacts affected by different modalities of support; (iii) do the analysed

funds contribute towards reduction of regional development disparities; (iv) which economic sectors are likely to be affected the most; and (v) are there differences in the scope and sectoral distribution of impacts among various policy mechanisms.

Motivation for the paper is therefore threefold. First, the paper intends to provide a quantitative insight to the characteristics of economic structure of Eastern Slovenia and to estimate linkages between various sectors in the region. This is done by constructing the regional Input-Output (I-O) table. Second, the paper attempts to assess the likely economic performance of the region in the changed economic and policy environment after the accession to the EU. In doing so, the focus is given to the impacts of the EU financial mechanisms in the period of the Community financial perspective 2007-2013. The analysis is based on application of various policy scenarios to the I-O model. Finally; the paper investigates multiplicative impacts of different EU financial mechanisms.

The paper starts with a brief presentation of main socio-economic characteristics of the region and continues with a brief discourse to the methodology undertaken in derivation of the regional I-O table. This is followed by a presentation of the various EU financial mechanisms and expected allocation of these funds to the studied region and specification of policy scenarios and their application within the regional I-O model. In presentation of results, the emphasis is given to the likely impacts of analysed funds on output, employment and redistributive effects among economic sectors. The paper ends with commenting some of the most straightforward results and by discussing the implications for further research.

Geographical Scope and Policy Context

Description of the region

Eastern Slovenia occupies about 55% of the country's territory and provides residence for about 54% of Slovene population (SORS, 2005). Over the last decade the number of inhabitants has been almost stagnating in the region whereas the population is ageing quickly. Currently the regional ageing index is above national average (Pecar, 2003). In terms of settlement distribution, the region is characterised by several villages and small towns, and only a few mid-size towns that are the main generators of economic exchange and entrepreneurship. The proportion of inhabitants living in rural municipalities (68%) is higher than national one (55.3%) (Table 1).

According to data for the year 2000, the region contributed around 46% to the national GDP. The region's GDP per capita was lagging behind the national average by 16% and amounting to 61% of the Community average, respectively. The taxable earnings per capita in the region have been weaker than national ones for

a number of past years - they reached 13% of national average in 2000 (Pecar, 2003).

Although the registered annual unemployment rate is gradually reducing, it still remains higher than national one (by 1.2 percentage points in 2001) and differences at the sub-regional level in unemployment growth have not been increasing with the same intensity lately. Most of the socio-economic indicators of the region reveal les favoured situation than the country average. There can still be found highly agriculture-dependent or declining industrial areas with the lack of employment opportunity and low educational level of population. The jobs in the industry prevail and the number of working places is falling (IMAD, 2006).

EU policies affecting regional convergence and economic growth in Slovenia

EU membership has brought significant changes in the policy environment of Slovenia. This applies also for policies that intrinsically affect economic growth by

Table 1

Eastern Slovenia: main socio-economic data

	Slovenia	Eastern Slovenia
Area, km^2	20.273	11.227
Population, thousands	1.992	1.081
Share of population living in rural areas, %	55.5	68.8
Structure of GVA by sectors, %		
- agriculture	3.1	4.9
- manufacturing	35.4	43
- services	61.4	51.8
GDP, Million EUR; current prices	21.829	9.937
GDP per capita, EUR; PPS	16.829	14.132
Unemployment rate, %	6.7	7.9

Source: SORS, 2005

supporting faster convergence of lagging regions or by stabilising markets and promoting restructuring within chosen sectors (Artis et al., 2006). The corresponding EU policy mechanisms can be broadly divided into two groups: the Common agricultural policy (CAP) and the Community Cohesion policy. Description of these policy mechanisms is focused to the period of new financial perspective (NFP) of the EU, i.e. to the period 2007-2013. It takes into account the proposed EU budgetary appropriations for Slovenia.

With regard to the previous programming period (2001-2006), the NFP brings some modifications. Within the Cohesion policy structural actions focuses around three priorities: (i) Convergence and competitiveness; (ii) Regional competitiveness and employment and (iii) European territorial cooperation. Another important change is a separation of the FIFG and the CAP Rural Development activities from the Structural Funds, which implies reduction of the Structural fund actions to those eligible under ESF and

ERDF. The FIFG and the CAP Rural Development activities are carried out within a separate European Agricultural Fund for Rural Development (EAFRD). Similarly, the CAP support saw some significant changes. A further aggregate decrease of market support can be envisaged especially in the sugar, fruit and vegetables and also wine sectors. In the policy domain of direct payments, the CAP reform agreed between Member States in 2003 and 2004 entailed a gradual decoupling of these payments but at varying form and degree between the Member States[1].

Estimated financial implications for Slovenia from the NFP are presented in the table below. It is assumed that Slovenia will remain treated as one single region also in the forthcoming financial perspective (Table 2).

Assumptions, attributed to individual financial mechanisms in terms of their expected economic implications (Structural funds, Cohesion Expenditure, Territorial integration, CAP and Rural

Table 2

Estimated total public transfers committed to Slovenia in the period 2007-2013 (in million EUR - prices 2004)

Source	Total	Annuity
Structural funds, competitiveness and jobs	1.568.4	224
Cohesion expenditure	1.291.5	184.5
Territorial integration	184.1	26.3
EAGGF - direct payments	738	105.4
European Agricultural Rur. Dev. Fund	942.2	134.6
Total	5.046.2	720.9

Own compilation based on various national and EU sources

[1]EU expenditure under another important segment of the 1st pillar of the CAP, i.e. market interventions is not discussed in the paper. This is due to the fact that funds attributed to CAP market interventions were not taken into account in the impact analysis. As a policy mechanism whose primary function is preservation of price stability, it does not directly affect the vector of final demand and is already contained in the original I-O table.

development) are further outlined. The heading "Structural Funds" is the policy instrument dealing with promotion of regional competitiveness (ERDF) and active labour market policy (ESF). The total amount of committed funds for this policy instrument was estimated at a level, proportional to the Structural Fund appropriations in the 2004-06 structural expenditure[2]. The structure of priorities and corresponding measures are assumed to be identical to those described in the first (ERDF) and second (ESF) priority of the Single Programming Document 2004-2006.

The heading "Cohesion Expenditure" includes activities in the areas of transport and environment, financed from the Cohesion fund in the previous programming period. The structure of Cohesion Expenditure in the NFP is assumed to follow a similar logic as in the period 2004-2006. Half of funds are assumed to be destined to transport and the other half to the environmental investments.

The New Financial Perspective is expected to grant a status of a new policy priority to the principle of inter-regional and cross border co-operation (including external cross-border co-operation) entitled "Territorial Integration". Estimated allocation of public funds for territorial integration in the programming period 2007-13 corresponds proportionally to the funds allocated to the "Interreg Community Initiative" within the EU structural expenditure of Slovenia for the period 2004-2006.

In 2007, the level of CAP direct payments (comprising of the EAGGF Guarantee and national top-up payments) in Slovenia will reach 100 % of the corresponding EU-level. Therefore the aggregate yearly allocations for direct payments are therefore expected to remain at the same level throughout the programming period. As implied in the text above, programming and financing of Rural Development measures within the CAP and FIFG measures will be simplified by their inclusion to a European Agricultural Rural Development Fund. The rise of budgetary appropriations for Rural Development policy reflects the trends outlined in the Commission regulation (European Commission, 2005). It is assumed that the list of eligible measures and the corresponding financial allocations have remained the same as in the 2004-2006 programming period.

Methodology

Regional Input-output model

A wide set of analytical tools have been developed for the purpose of quantitative economic evaluation of public expenditures. One of the well established strains of modelling approaches used is based on the input-output paradigm (Sadoulet and De Janvry, 1995). With the development of more capable modelling tools (e.g. computable general equilibrium model, econometric short-term forecasting macro-models) relevance of the linear deterministic models has certainly decreased. Nevertheless, the input-output modelling approach remains widely used for the analysis at the regional level (Armstrong and Taylor, 2000). The main

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[2] Funds previously attributed to EAGGF Guidance and FIFG were proportionally allocated to ERDF- (about 65 per cent) and ESF-type measures (about 35 per cent).

reason for popularity is robustness of the technique that can be implemented empirically despite data shortages (Thirlwall, 2003). Provided that regional I-O table is estimated accurately enough, theoretically implausible assumptions of the model[3] are in some respects overshadowed by its empirical realism and simplicity. With this in mind we can state that this approach towards modelling of policy expenditures gives at least approximate information about the expected changes in sectoral output and employment.

In the paper a regional I-O model was constructed to evaluate economic effects of various EU policies expected in the period 2007-2013. Due to lack of primary survey data the regional I-O table was derived from the national one (SORS, 2003) which comprises 60 sectors within two symmetric commodity-commodity tables in current basic prices and total and domestic flows. Other statistical data was employed in subsequent steps of disaggregation and estimation of the regional I-O table: (i) data on regional employment by sectors; (ii) regional data about agricultural sector and (iii) additional regional socio-economic indicators.

Aggregation of sectors in the original I-O table was carried out with regard to the regional structure of economic activities. Size of the region, its significance in national economic terms and sectoral structure were the main reasons to remain at a relatively broad structure of 29 sectors. Agriculture and forestry were disaggregated into two sectors. Other sectors remained at the 1st level of the Standard Classification of Activities (SCA), with the sole exception of the manufacturing sector, which remained disaggregated at the 2nd level of SCA.

This indirect approach towards construction of a regional I-O table was undertaken by the GRIT methodology (Jensen, Mandeville and Karunarante, 1997) which was in some cases slightly modified. The modification was done by having in mind the objective of producing a satisfying level of accuracy of the regional I-O table and the availability and quality of superior statistical data.

A starting point for regionalisation was the adjustment to the national I-O table with total flows. The national flows matrix was converted to a technical coefficient matrix as follows:

$$A = Z\hat{X}^{-1}, \tag{1}$$

where A represents the matrix of technical coefficients, Z matrix of intersectoral transaction flows and X^{-1} the inverse of diagonal output matrix derived from output vector. Since the I-O table was expressed in total flows, no adjustment for international trade was needed. In contrast to the frequent practice of eliminating the elements on main diagonal (Morrison and Smith, 1974; Jensen, Mandeville and Karunarante, 1979; Johns and Leat, 1987), this was not carried out in our case, since the region is large compared to the national economy.

In the stage of the adjustment for regional technical coefficients, a non-survey method of Simple Location Quotients (SLQ) was used as follows:

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[3] One should take a full account to the limitations of methodological character which derive from the assumptions of the static I-O analysis, such as: (i.) Leontief production function which does not allow for substitution amongst factors of production and no choice of technique; (ii.) constant import coefficients, and therefore no increasing import substitution; (iii.) no capacity constraints are taken into account; (iv) not allowing for the repercussion effects from income generation to consumers demand (Keynesian multiplier effects).

$$A^R = \hat{q}\ A^N$$

$$(2)$$

Regional technical coefficients are denoted by subscript R and national ones by N. The SLQ vector is denoted by q and they were derived from the relevant secondary statistical data (e.g. breakdown of employment data by sectors, E). Simple location quotient for sector *i* can therefore be calculated:

$$q_i = \frac{E_i^R / E^R}{E_i^N / E^N}$$

$$(3)$$

The method used assumes that sectors whose relative importance at a regional level is equal or greater than at a national level ($q_i > 1$) are able to satisfy intermediate demand within the region and coefficients therefore remain the same as the national ones. Otherwise, the sector is supposed not to be self-sufficient and the corresponding national coefficient is multiplied by q_i.

In the next stage aggregation of the sectors has been conducted, hence first the regional matrix of technical coefficients was modified as follows:

$$A_{(1)}^R = A_{(0)}^R\ \hat{w}$$

$$(4)$$

The original technical coefficients were adjusted by the vector of employment weights *w*, by which approximation towards the regional structure of economic activities is made.

The next step is the derivation of a prototype transactions table with an estimation of regional output. These estimates were determined by using employment ratios.

$$X_i^R = X_i^N\ \frac{E_i^R}{E_i^N}$$

$$(5)$$

Estimation of three components of final demand was done in the next step of the prototype table derivation. The household consumption was calibrated by the share of regional income tax base in the total income tax base. The remaining two components of the final demand, namely exports and other final demand categories (comprised of government expenditures, gross capital formation, expenditures by non-profit institutions and changes in inventories) were estimated simultaneously with balancing of intermediate consumption. The starting values were derived from the national tables and later adjusted downwards using employment and location quotient. Intermediate consumption rows of 12 sectors were reduced and 16 on-diagonal elements of primary and secondary sectors were reduced as well.

Finally, the balanced I-O table was composed after the checks and balancing where some inconsistencies and errors were eliminated.

Regionalisation of public expenditure

Once the national budgetary appropriations were consolidated the annuities needed to be regionalised. The funds attributed to the Eastern Slovenia region have been estimated according to the selected regionalization weights: share of active population in the region, GDP contribution of the region, share of population in the region, size of farm sector (expressed in European size units, ESU). These were applied according to the characteristics of each policy instrument.

Envisaged public expenditure for the Eastern Slovenia region by the main policy instruments is presented in Table 3.

To evaluate the economic impacts of the formulated budgetary appropriations

Table 3

Estimated total public transfers available for the Eastern Slovenia in the period 2007-2013 (annuities, in million EUR - prices 2004)

Source	Annuity
Structural funds-total	106.87
ERDF-type measures	66.43
ESF-type measures	40.44
Cohesion expenditure	99.98
Territorial Integration	14.27
EAGGF - direct payments	58.63
EARDF	54.71
EARDF – Rural development	54.54
EARDF – Fisheries	0.17
Total	334.46

Own compilation based on various national and EU sources

with the constructed I-O model the funds had to be distributed according to the expected effects they will have on the final demand for the economy's outputs. This external shock is aggregated within the vector of final demand changes. The structure of investment demand from the national I-O table was taken as a basis for the distribution of funds.

No additional weights or corrections were applied for assessing the structure of demand in the case of policies with general investment patterns, whereas "objective-oriented policies" were treated specifically. Allocation of funds along the vector of final demand has been determined in accordance with the scope and mechanism of the policy outlined in the programming documents. In the case of policies with an income support character (e.g. decoupled direct payments in agriculture) the effects were distributed according to the household final demand structure.

In the last stage of the vector definition the origin of demanded good has been taken into account. In the case of investment demand the share of domestic goods in investment from the national I-O table was applied, whereas for the correction of the household final demand the proportions of the domestic supply in total market supply was used.

Impact of projected funds on the final demand vector

Economic impact of the projected funds was carried out by the I-O model where public expenditure was treated as an external shock to the regional economy regarded as an increase of final demand. Vectors representing changes in the final demand are applied to the matrix of multipliers derived from the I-O table. The stage of distributing the public expenditure along the 29 sectors representing the aggregated I-O table was given a special attention. The most plausible and

reasonable distribution of funds by sectors was estimated for each policy item separately. This entailed also division of funds being effectively spent within the region with these being spent on imported goods and services. A distinction was furthermore made with respect to the investment, intermediate demand or final demand character of analysed policy mechanisms. In the case of investment-related expenditure, the structure of investment demand from the national I-O table (SORS, 2003) was taken as a basis for the distribution of funds. In the cases where public support was more objective-oriented, allocation of funds along the vector of final demand has been determined as outlined in the programming documents[4].

As for the CAP-related expenditure apart from rural development, only those funds and purposes were taken into account that were not existing in the agricultural policy expenditure for the year 2000. Inflows from market interventions were not included into the vector of final demand since they do not affect the demanded but only stabilise price levels. In the case of direct payments, their partial decoupling is assumed to reflect in the following distribution: 30 per cent will have production effect in agriculture and therefore spent according the sector's vector of intermediate demand; 60 per cent will be spent by the agricultural household's final demand vector and 10 per cent of direct payments will be reinvested along the structure of farm investments.

Definition of policy scenarios

Within the defined policy scenarios impacts of public expenditure towards reduction of development disparities of the Eastern Slovenia has been evaluated. In order to enable comparison of impacts with the national benchmark, scenario analysis was undertaken on both, regional and national level. The sum of regional inflows is also highly dependent from the territorial scope of support. This is due to the fact that the process of regionalisation in Slovenia is under way at the moment and there are various concepts of the territorial division at the NUTS 2 level at stake. Slovenia is currently treated as one NUTS 2 region, but is reopening negotiations with the European Commission at this issue before the start of the NFP. Various alternatives of territorial division inevitably affect eligibility status of NUTS 2 regions and thus yield significant differences in estimated inflows of EU funds (particularly cohesion policy expenditure). With regard to the alternative options of regional division at the NUTS 2 level, two sets of estimates were taken into account:

1. Entire Slovenia is treated as one NUTS 2 region;

2. Slovenia is divided in two NUTS 2 regions (Eastern and Western);

There are no significant differences between the estimated inflows of Cohesion fund support between the three alternative estimates, as the whole country is likely to remain eligible for support from the Cohesion fund.

Finally the simulation scenario with two sub-scenarios was formulated where the

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[4] Programming documents for the previous programming period (2004-2006) were taken as a reference for the Structural funds and rural development expenditure (i.e. Single programming document and its Programme complement, and rural development programme). In the case of Cohesion fund expenditure, priority projects are outlined in the Cohesion strategy of Slovenia.

Table 4

Results of scenario analysis: percentage changes in total output by sectors

Eastern Slovenia	
Agriculture	5.2
Industry	4.72
- of which construction	18.13
Services	5.87
Total	5.16
Slovenia	
Agriculture	4.68
Industry	3.74
- of which construction	13.41
Services	3.03
Total	3.43

Model results

projections of public expenditure attempt to provide maximum potential impacts of analysed structural funds, cohesion funds and territorial integration fund. With regard to the projected budgetary inflows from the CAP measures a limited absorption of funds is envisaged. As proposed by Erjavec (2005) expected absorption level for direct payments in Slovenia are 90% and for rural development measures 80%. All three alternatives regarding regionalisation of Slovenia at the NUTS 2 level were formulated as sub-scenarios.

Results

Change in gross output

The most straightforward output of scenario analysis with the I-O model is the change in gross output by sectors. Main results presenting the percentage change of the gross output in comparison to the base year (2000) and the main sectoral aggregates (agriculture, industry, services)

As a general observation, the aggregate levels of output growth at the regional level tend to surpass the national level. Therefore proportionally higher EU budgetary inflows would result in faster economic growth of the region. Results further suggest that there are no major differences in the structure of the effects from the national-regional comparisons.

No significant implications are expected in the manufacturing sector and the sector does not surpass the average levels of output increase. The highest increases are anticipated in the construction sector, whose output as a consequence of EU public expenditure is projected to grow by 13 up to 18 per cent. Most of this is due to infrastructural investments, and partly also due to investments in real estate, which represents a significant part of Structural fund support. Model estimates reveal an increase by 3 to 6 per cent for service sector, which is slightly above the total average in the Eastern Slovenia region.

Table 5

Results of scenario analysis: changes in labour demand by the sectors (in FTE equivalents)

Eastern Slovenia	
Agriculture	1.086
Industry	8.415
- of which construction	5.551
Services	11.928
Total	21.429
Slovenia	
Agriculture	1.368
Industry	12.525
- of which construction	8.537
Services	14.119
Total	28.012

Model results

Interesting results are foreseen for agriculture, which seems not to benefit significantly from the regionalisation as other sectoral aggregates.

Employment effects

One can use the estimated changes in gross output also to make some preliminary assessments of the changes in regional employment assuming that the change in output implies the change in labour input. Since labour productivity may differ between various sectors, it can be expected that the changes in labour input will act correspondingly. This assessment however contains some highly restrictive assumptions, such as no technical progress (implying constant labour productivity) and infinite elasticity of labour supply. Rather than projected change in employment, we interpret the results (presented in the Table 5) as change in labour requirements by the analysed sectors.

Similarly as in the case of total outputs, the range of projected impacts is highly dependent from the territorial level of eligibility and, correspondingly, from the funds channelled to the region. The estimated increased total output due to EU public expenditure would yield an increased demand for labour at around 28 thousands full-time equivalents Slovenia. The analysed region receives majority of this increase where the effects are concentrated. Estimated labour demand is estimated more than 21 thousand FTE. More than half of total employment effect is attributed to services at both levels of simulation.

Impacts of individual policy mechanisms

Besides the scenarios analysis, another relevant issue both from the scientific and policy view is to disaggregate the total impact of transfers according to the

Table 6

Disaggregation of effects by the three groups of policy mechanisms (In million SIT, prices 2000 and FTE equivalents)

	Total output change, in million SIT			Total labour requirements change, in FTE		
	CAP	Cohesion fund	Structural funds	CAP	Cohesion fund	Structural funds
Agriculture	10.2	0.5	0.81	319	15	20
Industry	18.18	50.83	34.31	292	889	596
- of which construction	5.06	37.85	24.01	86	645	409
Services	29.83	14.05	27.3	932	451	898
Total	58.22	65.38	62.28	1.542	1.354	1.514

Model results

"generic" grouping of the existing policy mechanisms. This exercise is regarded useful especially in order to check multiplicative effects of individual "strain" of policy mechanisms. Our approach departs from a simple assumption that the same amount of funds is allocated to one of the group only and internally allocated in the same proportions as within the 2004-2006 programming period. Vectors of final demand are adjusted accordingly. Policy mechanisms have been merged into three groups of policy mechanisms: (i) Common agricultural policy (market support, direct payments and rural development measures financed from the Guarantee section of EAGGF); (ii) Structural funds and Community initiatives (ERDF, ESF, FIFG, Guidance section of the EAGGF, Equal and Interreg) and (iii) Cohesion expenditure. Results of this analysis are presented in

Observing the overall magnitude of impacts towards output increase, results suggest that expenditure from Cohesion fund brings the most significant effects.

Taking into account the fact that virtually all expenditure from this fund is attributed to infrastructure, which is characterised by a widespread vector of intermediate consumption, this result is hardly surprising. The magnitude of impacts on total gross output increase between the CAP expenditure and Structural fund group appear to be fairly similar. There is however significant differences with regard to the sectors targeted by these two sources of EU expenditure. The structural expenditure brings the biggest impacts on output growth in the construction sector, whereas the prevailing part of output increase caused by agricultural expenditure (about 70%) is attributed to services (mainly on personal and household goods and in the real estate, renting and business activities). High multiplicative effects of agricultural expenditure bring some telling reservations to the popular opinion about low redistributive and short-term effects of agricultural expenditure (Rodriguez-Pose and Fratesi, 2004).

Conclusions

Paper tries to quantify the effects of EU funds on the regional economy using I-O methodology. Additionally some analysis about the magnitude and distribution of effects of various types of EU public expenditure were made. Policy relevance of the research undertaken can be argued by provision of a valuable insight into the pattern of policy expenditure through various sectors of the regional economy. The following conclusions can be derived.

Results suggest that the analysed funds can bring a significant contribution to the overall output growth of the regional economy. Nevertheless, projected impacts differ considerably with respect to the scope of public expenditure. The volume of budgetary appropriations primarily depends on the outcome of the negotiations about the regional division of Slovenia at the NUTS 2 level. With respect to this issue, the range of potential impacts is between 3.4 and 5.2 per cent of total output growth. We leave it for the reader to judge whether this is a valid argument for regionalising the EU cohesion expenditure in Slovenia.

The favourable impacts of EU budgetary inflows on total output, suggested by the results of the proposed policy scenarios, should be regarded with some caution. There are various factors that can aggravate the optimistic view expressed with the benchmark results. Factors reducing the positive impacts range from budgetary; e.g. limited co-financing capacities of national budget to organisational like: efficiency of the implementation structures; availability of private capital; lower absorption level. The abovementioned factors could significantly deteriorate favourable results.

One of the core research questions was of course whether the analysed funds will effectively do their job in reducing regional disparities. This question was tackled by comparison of model results of the regional I-O model with its national counterpart, where effects at the national level are used as a comparative benchmark. As a general observation, there are no major differences in the structure of effects between Slovenia and Eastern Slovenia region. In both cases, high public investments are channelled into labour intensive sectors (construction, agriculture) with low labour productivity. Our results also show that the impacts of analysed funds on output are slightly higher in the region of Eastern Slovenia. However, these differences are rather moderate. For the actual financial perspective the projected growth in the region is about 1.7 percentage points higher in comparison to the national average. Our results therefore suggest that the analysed funds contribute towards reduction of development disparities in Slovenia, albeit the pace of this reduction is not stunningly high.

The research brings some interesting results of the magnitude and redistribution effects of public expenditure items. The results suggest that expenditure from Cohesion fund yields the most favourable impacts of the three analysed policy mechanisms groups. Difference between the projected impacts should be treated with some caution. In practice, lower differences can be expected to due to the differences in absorption rate and co-financing level between the analysed funds. Some interesting results can be pointed out also in the case of agricultural expenditure, where the results

(expectedly) show a relatively low impact on the overall output increase, but on the other hand only about 6 % of this increase is attributed to agriculture. Therefore rather opposite conclusion has been revealed according to the redistribution effects of agricultural policy spending.

Lets us resume with the limitations of the research undertaken. Firstly financial transfers from the EU budget represent only one dimension of the accession-related effects. The analysis does not deal with other important aspects of integration, such as increased competition and international trade, division of labour, specialisation and change in the system of relative prices. The I-O methodological framework is useful only for measuring tangible impacts which therefore inevitably results in their over-valuation against the impacts of 'soft' investments. Note that many of listed disadvantages attributed to I-O models cannot be solved with other economic models either. With this methodological approach also no aspects related to the flow of externalities (e.g. food safety, environmental management, rural development) can be taken into account. However, issues dealing with externality and public good aspects are gaining importance on the policy agenda. This implies that analytical tools for assessing efficiency of public expenditure will have to be upgraded accordingly.

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