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COMPARATIVE STRUCTURAL APPROACHES REGARDING RELEVANT INDICATORS OF INPUT-OUTPUT ANALYSIS AT MACRO AND SECTORAL LEVEL: A CASE STUDY OF SOME EUROPEAN UNION COUNTRIES

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Abstract: Sectoral detailed analysis of the economy of a country is a difficult process, but important in the current context of globalization, in particular because of the complexity of interconnections between the branches, being known the role of investments and capital, but also trade, in GDP creation. Activities of national economies, as a whole, form a complex mechanism that deserves a detailed investigation, not only in terms of their past and current situation, but also to create useful models to forecast and predict, useful for decision-makers. In this research we used Input-Output (IO) statistical tables and various principles of the IO model and method to make a structural and comparative analysis of relevant economic indicators of economy, for Romania and some European Union countries, based on the Eurostat data (years 2000 and 2006).

Keywords: Input-Output analysis, structural changes, macro and sectoral level

JEL Classification: C67, L16

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1. INTRODUCTION

In this paper we investigate some of the relevant indicators for economic development in Romania, which takes into account elements such as imports, exports, investment, output, etc., but also the impact of taxes on production (output) by branch and growth prospects in terms of implementing certain policies.

Starting from the fundamental equation of the Input-Output (IO) model, the total production requirements of the economy can be planned or programmed, taking into account the interdependence of its branches, to ensure the growth of one unit in final consumption.

Result of the IO analysis, multipliers or the coefficients of the Leontief inverse matrix (direct and indirect), shows the amount of production necessary to ensure an additional unit of final consumption, allowing different interpretations regarding the differentiation of the degree of efficiency between different branches of the national economy.

In other words, the multipliers are proving their usefulness in planning starting from the resources consumed in the national economy and quantified as total production to reach a certain volume of final consumption.

With the help of the multipliers several versions or wanted intervals of efficiency in socio-economic area may be calculated, taking into account the consumption of resources for a period and desirable final outcomes.

IO analysis allow to assess the impact of economic policies (for ex., fiscal, monetary, trade, etc.) generated by different macro-economic decisions, based on multipliers of output (and employment, income, value added, taxes, etc.) by which we can estimate

the impact of various changes that occur in the economy as a result of certain factors (climate changes, economic crises, etc.). Leontief inverse matrix multipliers help estimate total changes in the economy due to changes in final demand considered a target.

Taxes, as important financial resources for public decision maker represent the main feeder with revenues of the state budget and an important instrument of financial, economic and social policy. Represent the main way to ensure the necessary financial resources to cover public expenditure.

An assesment of the impact of tax changes is important because each stage of economic and social development is based on a certain level of taxes, which changes over time.

Taxes can be used as an instrument of state intervention in the economy, and may encourage the growth, or may reduce production or consumption of certain products and services, providing to the decision-makers the possibility to correct a certain development, and to stabilize the economic growth.

In cases in which it was intended to support a particular economic activity, taxes can be reduced by the decision makers, and when a reduction is wanted for certain activities, an increase in taxes may be considered.

In times of recession or economic crisis a few specific methods can be taken to encourage and stimulate business activities: tax exemptions, tax reductions or tax incentives.

Through taxes, a significant share of GDP between classes and social groups is redistributed. In this way, a certain correction of discrepancies between income levels may appear, according to criteria of fairness and equity, with the thematic basis of Pareto optimum or Kaldor-Hicks efficiency.

Other means and instruments of action in fiscal field may refer to: ensure a minimum non-taxable income, tax advantages for

disadvantaged groups, reduced taxation for certain products of basic necessities, increase in taxes for luxury goods.

In the case of consumption, tax cuts could be chosen to stimulate demand or an increase in taxes on goods or services can be used, to reduce it.

IO method is a rich source of information and a starting point in

analysis that deepens understanding of the economy in different periods of development and also in various countries.

This study is organized into several parts, as follows: next section gives a brief look at the literature, in Section 3 there are several explanations for the data used in calculations and some comments on the results obtained, Section 4 contains some final remarks.

2. LITERATURE REVIEW

In the literature there are several papers that deal with issues related to the potential of the IO method.

Zaman (1970) treats the subject of international trade efficiency, in close connection with the efficiency of national economy, stressing the need to introduce in the IO model of some elements of optimization specific to the linear programming model. Pavelescu (2005) examines the effects of the export in Romania, providing detailed methodological explanations on the forecast of the effects of the export and also some proposals regarding the methodology of calculation of IO multipliers.

Olteanu (2009) uses the IO model to investigate forward and backward linkages of manufacturing industries grouped in technology groups, for Romania and other EU countries. Matei (2008) investigate local economic development in the general framework of IO analysis, focusing on public utilities services, as vectors of development.

Lurweg et al. (2010) use IO analysis to explore the relationship between trade and job creation / job destruction in the German industry case. Reis and Rua (2006) use IO analysis to investigate the inter-sectoral relationships of Portugal's economy, assessing the sectoral interdependencies

and effects of trade for sectors as well as for the economy.

Rozenov (1998) deals with the restructuring process of Bulgaria economy in the transition period, the analysis carried out considering the use of IO tables. Maki (1981) examines the labor market in Minnesota using the IO method, IO tables, and various procedures being presented.

Titze, Brachert and Kubis (2008) investigate the inter-connected sectors using IO tables, performing an analysis of regionalization for Germany and searching to identify the regional industrial clusters. Dholakia et al. (2009) investigate the technical progress, which is regarded as an important source of economic growth.

From this brief overview of some papers from literature we may observe the great diversity of issues highlighted by IO analysis independently and / or in conjunction with other complementary methods of analysis and prediction, with an addition of cognitive and predictive value, at micro, meso and macro level, in terms of optimizing decisions, economic restructuring, regarding the increase of performance of various economic and financial mechanisms, etc.

The rich literature can be considered as a result of a great theoretical and practical interest of researchers in different issues of sustainable knowledge-based economy, in which the mix of economic, fiscal and monetary policies may prove the beneficial impact.

3. DATA USED AND THE RESULTS OF THE ANALYSIS

In this study the statistical IO tables from Eurostat were used for the years 2000 and 2006 (see Table A.1 in Appendix). The analysis of some relevant indicators of IO model was made for the following countries: Austria, Italy, Hungary, Romania and Germany.

Countries with different levels of social and economic development were selected as they allow highlighting the

features of national economies with different degrees of complexity and presenting various interconnections among them.

The indicators analyzed are represented by the ratio between the intermediate and final consumption, the ratio between exports and imports, the ratio between exports and output, the ratio between imports and output, the ratio between gross capital formation and output and the ratio between taxes less subsidies on products and output.

3.1 INTERMEDIARY CONSUMPTION - FINAL CONSUMPTION RELATION

The size of the ratio between intermediate consumption and final consumption leads to the classification of branches in four categories:

1.) *Essentially intermediary branches*, $IC/FC > 10$;

2.) *Intermediary branches*, where $IC > FC$, characterized by the high importance of the foreign stages character of the manufacturing process (essentially intermediary branches) that involves a high number of intermediate links of processing the raw materials with absorption and processing capacity of the imported intermediary products;

3.) Branches where $IC < FC$ are *final branches* that ensures to satisfy the final demand with the two of its major components - private and public consumption and private and public investment - with importance particularly for economic growth, that should be seen and approached by some instruments of proper analysis;

4.) Branches where $IC \approx FC$ (the interval between 0.8 - 1.2) are *intermediary-final branches*, which distributes equally the output for intermediate consumption and respectively final consumption.

Thus, for all five countries, there are certain industries in which for both

years the intermediate consumption is higher than final consumption, these branches being generally those in the manufacturing industry: *Pulp, paper and paper products; Chemicals, chemical products and man-made fibres; Machinery and equipment n.e.c.*, and also *Electrical energy, gas, steam and hot water* or services *Post and telecommunication services*.

Romania has some particularities regarding the ratio between IC and FC, thus if for all other countries $IC > FC$ for branches *Products of agriculture, hunting and related services; Products of forestry, logging and related services; Radio, television and communication equipment and apparatus; Land transport; transport via pipeline services*, for Romania the situation is different.

Thus, if the case of the services branches *Radio, television and communication equipment and apparatus; Land transport; transport via pipeline services*, in Romania $IC < FC$, for the primary sector, for branch – *Products of agriculture, hunting and related services* $IC \approx FC$, and for branch *Products of forestry, logging and related services*, intermediate consumption is the one that prevail over the final consumption, with a 12.0 ratio, and 13.4 respectively.

Final consumption is higher than intermediate consumption in the branches of manufacturing industry *Food products and*

beverages; Wearing apparel; furs; Furniture; other manufactured goods n.e.c.; but also of services, *Hotel and restaurant services; Real estate services* for all five countries in both years analyzed.

This ratio reflects the degree in which the branches of some national economy allocate production for intermediate consumption (which is

usually material consumption) in order to continue the production processes in other branches, and for final consumption (reflecting the target) which represent the potential of growth of a national economy viewed multisectoral in terms of its main growth factors, which are consumption, investments and foreign trade, final consumption being a growth factor *sui generis*.

Table1 Top branches by countries (IC / FC ratio)

| Countries | 2000 | 2006 |
|-----------|---|---|
| Austria | <i>Basic metals, Computer and related services, Financial intermediation services, except insurance and pension funding services</i> | <i>Basic metals, Computer and related services, Other business services.</i> |
| Italy | <i>Wholesale trade and commission trade services, except of motor vehicles and motorcycles; Coal and lignite; peat; Other mining and quarrying products</i> | <i>Other mining and quarrying products; Coal and lignite; peat; Computer and related services</i> |
| Hungary | <i>Basic metals; Computer and related services; Wood and products of wood and cork (except furniture); Articles of straw and plaiting materials</i> | <i>Basic metals; Wood and products of wood and cork (except furniture); articles of straw and plaiting materials; Computer and related services</i> |
| Romania | <i>Other mining and quarrying products; Coal and lignite; peat; Insurance and pension funding services, except compulsory social security services</i> | <i>Other mining and quarrying products; Computer and related services; Coal and lignite; peat</i> |
| Germany | <i>Other mining and quarrying products; Services auxiliary to financial intermediation; Other business services.</i> | <i>Other mining and quarrying products; Services auxiliary to financial intermediation; Other business services.</i> |

Source: authors' calculations based on Eurostat data.

There are also branches for which the intermediate consumption is much higher than the final consumption, the ratio between the two indicators taking values of 100 and even above.

For the branch from the mining industry *Other mining and quarrying products* and the services branch *Computer and related services*, the intermediate consumption is predominant, for all countries in both years.

3.2 EXPORTS / IMPORTS RATIO

The values recorded by the ratio between exports and imports differ substantially from one country to

another, reflecting the branches that have a competitive advantage internationally. Because of its natural resources, in 2000 and

2006, branches that recorded a high ratio of exports / imports in Romania were *Other mining and quarrying products* (235.39 and 196.15); *Coal and lignite; peat* (162.82 and 92.62). Like Germany, the branch *Other mining and quarrying products* remain in both years in the top branches for which export is much higher than imports, although this ratio is much higher in the

case of Romania. For all the countries, the mining branches are those that have a competitive advantage internationally, exports being higher than imports. Although in developed countries, tertiary sector is value added creator in the economy and major exporter, in Romania only in 2006, the branch *Computer and related services* (179.9) recorded a ratio favourable to exports.

Table 2 Top of the branches, by country (exports / imports ratio)

| Countries | 2000 | 2006 |
|-----------|--|---|
| Austria | <i>Land transport; transport via pipeline services, Supporting and auxiliary transport services; travel agency services, Wood and products of wood and cork (except furniture); articles of straw and plaiting materials</i> | <i>Collected and purified water, distribution services of water, Wholesale trade and commission trade services, except of motor vehicles and motorcycles, Public administration and defence services; compulsory social security services</i> |
| Italy | <i>Water transport services; Furniture; other manufactured goods n.e.c.; Other non-metallic mineral products</i> | <i>Water transport services; Machinery and equipment n.e.c.; Furniture; other manufactured goods n.e.c.</i> |
| Hungary | <i>Secondary raw materials; Air transport services; Products of forestry, logging and related services</i> | <i>Sewage and refuse disposal services, sanitation and similar services; Secondary raw materials; Wholesale trade and commission trade services, except of motor vehicles and motorcycles</i> |
| Romania | <i>Products of forestry, logging and related services; Wearing apparel; furs; Land transport; transport via pipeline services</i> | <i>Wearing apparel; furs; Research and development services; Coke, refined petroleum products and nuclear fuels</i> |
| Germany | <i>Hotel and restaurant services; Food products and beverages; Textiles</i> | <i>Water transport services; Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods; Wholesale trade and commission trade services, except of motor vehicles and motorcycles</i> |

Source: authors' calculations based on Eurostat data.

Regarding the ratio between exports and imports, in 2006 we can see that for Romania, this indicator is above 1 only in 27.1% of the cases, which means that imports exceed exports for most of the economic branches. In 2000, 30.5% of

the values of this indicator were above 1. Therefore, the imports of goods and services dominate and even intensify in the period under analysis, Romania thus recording an overall disadvantage compared with other states.

3.3 EXPORTS / OUTPUT RATIO AND IMPORTS / OUTPUT RATIO

Export-intensive branches, whose share of exports in the total output recorded the highest values, vary substantially. In the period under analysis there have been substantial changes in the top of export-intensive branches by country. The only country that has preserved its export-intensive branches was Italy, while other

countries retain in their top three at least one export-intensive branch in both years of analysis, Austria (*Other transport equipment*), Hungary (*Office machinery and computers*), Romania (*Wearing apparel, furs; Leather and leather products*), Germany (*Water transport services; Other transport equipment*).

Table 3 Top of branches, by countries (exports / output ratio)

| Countries | 2000 | 2006 |
|-----------|---|---|
| Austria | <i>Other transport equipment, Wholesale trade and commission trade services, except of motor vehicles and motorcycles, Radio, television and communication equipment and apparatus;</i> | <i>Other transport equipment, Research and development services, Motor vehicles, trailers and semi-trailers;</i> |
| Italy | <i>Water transport services; Machinery and equipment n.e.c.; Other transport equipment;</i> | <i>Water transport services; Machinery and equipment n.e.c.; Other transport equipment.</i> |
| Hungary | <i>Air transport services; Office machinery and computers; Wearing apparel; furs ;</i> | <i>Wholesale trade and commission trade services, except of motor vehicles and motorcycles; Office machinery and computers; Motor vehicles, trailers and semi-trailers;</i> |
| Romania | <i>Water transport services; Wearing apparel; furs; Leather and leather products;</i> | <i>Wearing apparel; furs; Leather and leather products; Air transport services;</i> |
| Germany | <i>Water transport services; Other transport equipment; Machinery and equipment n.e.c.;</i> | <i>Water transport services; Wholesale trade and commission trade services, except of motor vehicles and motorcycles; Other transport equipment;</i> |

Source: authors' calculations based on Eurostat data.

Exports represent a mechanism to stimulate economic growth and should be a permanent priority of economic strategies over the medium and long term of developed and developing countries.

Export-intensive branches are an engine of the economy, those contributing to the balance of payments, offering internationally a competitive advantage to the economy of countries.

Compared with other developed countries, Romania does not have among the exporting branches those that incorporate innovation, technology and skilled labor. Romania's export potential has been insufficiently exploited as the country's economic growth potential was not exploited at fair value.

Although the Romanian economy has a number of competitive advantages related to the existence of raw materials, they were not introduced in production to achieve final

products that incorporate technical progress, innovation, etc.

However, certain branches such as IT, electronics, electronic components, textiles, etc. have registered an upward trend in the exported volume.

The most significant decreases in the ratio between exports and output were recorded for *Water transport services* (-0.56 pp), *Office machinery and computers* (-0.28 pp), *Wood and products of wood and cork; article of straw and plaiting materials* (-0.14 pp) and the highest increases for *Post and telecommunication services* (+0.11 pp),

Electrical machinery and apparatus (+0.11 pp), *Supporting and auxiliary transport services; travel agencies* (+0.10 pp).

In the analysis of the import-intensive branches situation, ie branches with the highest import, it is worth highlighting the situation of countries like Italy or Hungary, which retains the first three places in both years. Thus, both in Italy and Hungary the extractive branches are in top: *Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying; Coal and lignite; peat; Metal ores*.

Table 4 Top of branches, by countries (imports / output ratio)

| Countries | 2000 | 2006 |
|-----------|--|--|
| Austria | <i>Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying, Office machinery and computers, Other transport equipment</i> | <i>Water transport services, Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying, Coal and lignite; peat</i> |
| Italy | <i>Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying; Coal and lignite; peat; Metal ores.</i> | <i>Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying; Coal and lignite; peat; Metal ores.</i> |
| Hungary | <i>Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying, Metal ores, Coal and lignite; peat</i> | <i>Metal ores, Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying, Coal and lignite; peat</i> |
| Romania | <i>Radio, television and communication equipment and apparatus; Textiles; Office machinery and computers</i> | <i>Radio, television and communication equipment and apparatus; Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying; Office machinery and computers</i> |
| Germany | <i>Products of forestry, logging and related services; Secondary raw materials; Tobacco products</i> | <i>Metal ores; Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying; Office machinery and computers</i> |

Source: authors' calculations based on Eurostat data.

All countries analysed import oil, the branch *Crude petroleum and natural gas; services incidental to oil*

and gas extraction excluding surveying being import-intensive. In Romania, the import-intensive branches *Radio, television*

and communication equipment and apparatus; Office machinery and

computers are the same in 2000 and 2006.

3.4 GCF/OUTPUT RATIO AND TAXES LESS SUBSIDIES ON PRODUCTS/OUTPUT RATIO

Regarding the GCF / output ratio, one can note that, by countries, there are some branches which retains position from 2000 also in 2006, the situation being however different from one country to another.

Thus, the branch *Construction work* recorded the highest volume of investments in total output for the

countries analysed, both in 2000 and 2006, with the exception of Romania. In 2000 and 2006, another branch in which the investments have been substantial was *Computer and related services*. In Romania, in 2006, the highest investments were made in *Secondary raw materials* (0.84), *Construction work* (0.71), *Office machinery and computers* (0.6).

Table 5 Top of branches, by countries (GCF / output ratio)

| Countries | 2000 | 2006 |
|-----------|--|---|
| Austria | <i>Construction work, Office machinery and computers, Computer and related services</i> | <i>Construction work, Computer and related services, Office machinery and computers</i> |
| Italy | <i>Construction work; Office machinery and computers; Machinery and equipment n.e.c.</i> | <i>Construction work; Office machinery and computers; Medical, precision and optical instruments, watches and clocks.</i> |
| Hungary | <i>Construction work; Computer and related services; Machinery and equipment n.e.c.</i> | <i>Construction work; Machinery and equipment n.e.c.; Computer and related services.</i> |
| Romania | <i>Construction work; Computer and related services; Machinery and equipment n.e.c.;</i> | <i>Secondary raw materials; Construction work; Office machinery and computers</i> |
| Germany | <i>Construction work; Computer and related services; Office machinery and computers.</i> | <i>Construction work; Computer and related services; Other transport equipment.</i> |

Source: authors' calculations based on Eurostat data.

Regarding the ratio taxes less subsidies on products / output, one may observe that there are differences by years and by countries in terms of branches that occupy a particular place in the top three.

The branch that has the highest weight of taxes in output for all countries in both years is *Tobacco products* (except the case of Germania in 2000).

What is interesting is the fact that in

the case of Austria and also for Italy, the analysed ratio recorded the highest values for the same branches, in 2000 and 2006, respectively *Tobacco products; Coke, refined petroleum products and nuclear fuels; Insurance and pension funding services, except compulsory social security services.*

In 2006 there are two branches with the highest values of the ratio for all countries: *Tobacco products; Coke, refined petroleum products and nuclear fuels.*

Table 6 Top of branches, by countries (taxes less subsidies on products / output ratio)

| Countries | 2000 | 2006 |
|-----------|---|---|
| Austria | Tobacco products, Coke, refined petroleum products and nuclear fuels, Insurance and pension funding services, except compulsory social security services | Tobacco products, Coke, refined petroleum products and nuclear fuels, Insurance and pension funding services, except compulsory social security services; |
| Italy | Tobacco products; Coke, refined petroleum products and nuclear fuels; Insurance and pension funding services, except compulsory social security services | Tobacco products; Coke, refined petroleum products and nuclear fuels; Insurance and pension funding services, except compulsory social security services |
| Hungary | Tobacco products; Coke, refined petroleum products and nuclear fuels; Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods | Tobacco products; Coke, refined petroleum products and nuclear fuels; Food products and beverages |
| Romania | Wholesale trade and commission trade services, except of motor vehicles and motorcycles; Tobacco products; Sewage and refuse disposal services, sanitation and similar services | Tobacco products; Coke, refined petroleum products and nuclear fuels; Collected and purified water, distribution services of water |
| Germany | Secondary raw materials; Trade, maintenance and repair services of motor vehicles and motorcycles; retail sale of automotive fuel; Collected and purified water, distribution services of water | Tobacco products; Coke, refined petroleum products and nuclear fuels; Electrical energy, gas, steam and hot water |

Source: authors' calculations based on Eurostat data.

Taxes represent a source of income for the budget, the taxpayers being individuals or firms. The decision makers establish the taxes, this thing being explained in many ways over time.

In present, the decision makers may give to taxpayers various advantages,

between taxes and public expenditures being a tight connection.

The tax rate increase or the adoption of a new tax represents an inadequate measure when the economy has a slow growth, especially if the public expenditure policy is not efficient.

4. SOME FINAL REMARKS

A principle of economic policy represent the creation of proper conditions for national economy development, being necessary that the

taxation to favour the creation of some branches, the modernization of the economy.

When there is a need for a development of some branches, a positive rate of growth, the

tax system may act through the stimulation effect that came from the tax incentives, tax exemptions or tax reductions.

If decision makers have in view, through economic policy, the reorganization of the economy, a tax

system which may have influences on some not competitive branches may be promoted.

In this difficult period through which the global economy passes it is necessary to identify some measures to target on the stimulation of new activities in the economy.

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APPENDIX

Table A.1 Branches from Eurostat classification, UE countries

| No. | Branch Name | No. | Branch Name |
|-----|--|-----|--|
| 1 | Products of agriculture, hunting and related services | 31 | Secondary raw materials |
| 2 | Products of forestry, logging and related services | 32 | Electrical energy, gas, steam and hot water |
| 3 | Fish and other fishing products; services incidental of fishing | 33 | Collected and purified water, distribution services of water |
| 4 | Coal and lignite; peat | 34 | Construction work |
| 5 | Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying | 35 | Trade, maintenance and repair services of motor vehicles and motorcycles; retail sale of automotive fuel |
| 6 | Uranium and thorium ores | 36 | Wholesale trade and commission trade services, except of motor vehicles and motorcycles |
| 7 | Metal ores | 37 | Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods |
| 8 | Other mining and quarrying products | 38 | Hotel and restaurant services |
| 9 | Food products and beverages | 39 | Land transport; transport via pipeline services |
| 10 | Tobacco products | 40 | Water transport services |
| 11 | Textiles | 41 | Air transport services |
| 12 | Wearing apparel; furs | 42 | Supporting and auxiliary transport services; travel agency services |
| 13 | Leather and leather products | 43 | Post and telecommunication services |
| 14 | Wood and products of wood and cork (except furniture); articles of straw and plaiting materials | 44 | Financial intermediation services, except insurance and pension funding services |
| 15 | Pulp, paper and paper products | 45 | Insurance and pension funding services, except compulsory social security services |
| 16 | Printed matter and recorded media | 46 | Services auxiliary to financial intermediation |
| 17 | Coke, refined petroleum products and nuclear fuels | 47 | Real estate services |
| 18 | Chemicals, chemical products and man-made fibres | 48 | Renting services of machinery and equipment without operator and of personal and household |

| | | | |
|----|--|----|---|
| | | | goods |
| 19 | Rubber and plastic products | 49 | Computer and related services |
| 20 | Other non-metallic mineral products | 50 | Research and development services |
| 21 | Basic metals | 51 | Other business services |
| 22 | Fabricated metal products, except machinery and equipment | 52 | Public administration and defence services; compulsory social security services |
| 23 | Machinery and equipment n.e.c. | 53 | Education services |
| 24 | Office machinery and computers | 54 | Health and social work services |
| 25 | Electrical machinery and apparatus n.e.c. | 55 | Sewage and refuse disposal services, sanitation and similar services |
| 26 | Radio, television and communication equipment and apparatus | 56 | Membership organisation services n.e.c. |
| 27 | Medical, precision and optical instruments, watches and clocks | 57 | Recreational, cultural and sporting services |
| 28 | Motor vehicles, trailers and semi-trailers | 58 | Other services |
| 29 | Other transport equipment | 59 | Private households with employed persons |
| 30 | Furniture; other manufactured goods n.e.c. | | |

Sursa: Eurostat classification.

Table A.2 IC to FC Ratio, 2000 and 2006

| Countries/Years | | Branches | | | | |
|-----------------|------|---|---|---|--|--|
| | | IC/FC>10 | 1.2<IC/FC≤10 | IC/FC<0.8 | IC≈FC 0.8 ≤ IC / FC ≤ 1.2 | |
| Austria | 2000 | 10.4 ₅₀ ; 11.4 ₁₄ ; 12.6 ₂₂ ; 15.0 ₅₅ ; 20.1₈ ; 22.3 ₅₁ ; 50.2 ₄₄ ; 181.6₄₉ ; 208.4 ₂₁ | 1.3 ₃₉ ; 1.7₄₃ ; 1.9₁ ; 2.0₁₆ ; 2.9 ₂₆ ; 4.4 ₁₉ ; 6.2 ₄₀ ; 7.6 ₄₈ ; 7.7 ₂₅ ; 8.5 ₃₄ ; | 1.4 ₂₄ ; 1.8 ₄₁ ; 2.0 ₁₈ ; 2.2₃₂ ; 3.9 ₂₃ ; 6.2₂ ; 7.6 ₄ ; 7.8₁₅ ; 9.9 ₂₀ | 0.01 ₅₂ ; 0.03 ₅₃ ; 0.08 ₅₄ ; 0.09 ₅₆ ; 0.1₁₂ ; 0.14 ₅₈ ; 0.2₃₀ ; 0.23 ₈ ; 0.3 ₁₃ ; 0.4₉ ; 0.45 ₄₅ ; 0.45₄₇ ; 0.48 ₄₂ ; 0.5₃₅ ; 0.5 ₃₇ ; 0.54 ₅₇ ; 0.6 ₃ ; | 1.07 ₂₈ ; 1.08 ₂₉ ; 1.14 ₂₇ ; 1.16 ₁₇ |
| | 2006 | 10.5₄ ; 12.7 ₅₀ ; 13.3 ₄₆ ; | 1.4 ₄₂ ; 1.54₁ ; 1.63₃₉ ; | 1.4 ₂₇ ; 1.59 ₄₁ ; 1.8 ₁₈ ; | 0.01 ₁₀ ; 0.02 ₅₂ ; 0.03 ₅₄ ; | 0.83 ₁₁ ; 0.85 ₂₄ ; 1.15 ₁₇ |

| | | | | | |
|---------|------|---|---|---|---|
| | | 13.5 _{22i} 15.6 _{55i} 16.4 _{40i} 18.3 _{20i} 21.6_{8i} 23.5 _{51i} 117.2_{49i} 1053.5 ₂₁ | 1.83_{43i} 2.2 _{26i} 2.3 _{28i} 2.4_{16i} 3.0 _{29i} ; 3.5 _{48i} 3.7 _{44i} ; 4.1_{32i} 4.3 _{23i} ; 5.1_{2i} 6.2 _{19i} ; 7.7 _{15i} 8.8 _{34i} ; 9.5 _{25i} 9.7 ₁₄ | 0.06 _{12i} 0.06 _{53i} 0.10 _{58i} 0.13 _{56i} 0.22 _{13i} 0.24 _{38i} 0.25 _{30i} 0.43 _{45i} 0.45 _{3i} 0.47 _{9i} 0.49 _{57i} 0.51_{35i} 0.53 _{37i} 0.58₄₇ | |
| Italy | 2000 | 10.1 _{25i} 14.4 _{51i} 14.7 _{46i} 16.2 _{22i} 39.0 _{48i} 105.5_{49i} 470.5_{8i} 741.9 _{4i} 12098 ₃₆ | 1.3 _{50i} ; 1.32 _{56i} 1.5 _{26i} 1.6_{43i} 1.74_{16i} ; 1.8_{1i} 1.9 _{11i} ; 1.97_{18i} 2.0 _{32i} ; 2.12 _{41i} 2.4 _{29i} ; 2.46 _{55i} 2.5 _{24i} ; 2.5₃₉ 2.9 _{27i} ; 3.1_{23i} 3.1 _{44i} ; 3.2 _{42i} 3.3 _{2i} ; 3.97_{15i} 4.4 _{34i} ; 5.27 _{19i} 8.7 _{14i} ; 9.0 ₂₀ | 0.01 _{53i} 0.01 _{54i} 0.06 _{58i} 0.04 _{10i} 0.04 _{40i} 0.2_{12i} 0.33_{38i} 0.36 _{45i} 0.37 _{3i} 0.41_{35i} 0.45_{30i} 0.51_{47i} 0.67 _{9i} 0.68 _{28i} 0.71 _{33i} 0.99 _{17i} | 0.93 _{57i} ; 0.98 _{13i} 1.13 ₃₇ |
| | 2006 | 10.9 _{20i} 11.2 _{25i} 16.0 _{51i} 18.7 _{22i} 20.34 _{46i} 49.5 _{48i} 133.9_{49i} 462.5 _{4i} 476.6₈ | 1.31 _{50i} ; 1.37 _{26i} 1.46 _{17i} ; 1.5_{1i} 1.73 _{11i} ; 1.81_{43i} 1.95_{16i} ; 1.97_{18i} 2.18 _{29i} ; 2.18 _{55i} 2.4_{32i} ; 2.7 _{24i} 2.96_{39i} ; 3.1 _{42i} 3.28 _{44i} ; 3.34_{2i} 3.51 _{27i} ; 3.71_{23i} 3.9_{15i} ; 4.83 _{19i} 6.1 _{34i} ; 9.18 _{14i} | 0.01 _{10i} 0.02 _{58i} 0.07 _{54i} 0.09 _{53i} 0.1 _{40i} 0.23_{12i} 0.28_{38i} 0.35_{35i} 0.36 _{3i} 0.39 _{45i} 0.53_{47i} 0.57_{30i} 0.61_{9i} 0.71 ₃₃ | 0.82 _{57i} ; 0.89 _{13i} 0.94 _{28i} ; 1.06 _{37i} 1.09 _{56i} ; 1.14 _{41i} |
| Hungary | 2000 | 11.3 _{44i} 10.9 _{26i} 14.4 _{22i} 16.1 _{20i} 21.7 _{19i} 21.9 _{25i} 25.0 _{34i} 31.0_{8i} 36.3 _{51i} 72.6 _{24i} 155.02 _{14i} 276.5_{49i} 4354.7 _{21i} | 1.30 _{13i} ; 1.34_{43i} 1.45 _{35i} ; 1.55_{32i} 1.60_{39i} ; 1.83 _{17i} 1.98 _{42i} ; 2.04 _{28i} 2.4_{18i} ; 2.6_{2i} 2.7_{16i} ; 2.8_{1i} 3.32 _{27i} ; 3.51 _{11i} 3.9 _{4i} ; 4.35 _{48i} 5.18_{15i} ; 5.3_{23i} 8.5 _{46i} ; 9.1 _{29i} | 0.11 _{52i} 0.11 _{53i} 0.11 _{54i} 0.29 _{3i} 0.30_{38i} 0.35 _{56i} 0.37_{37i} 0.39_{47i} 0.44 _{58i} 0.50 _{57i} 0.51_{9i} 0.61_{12i} 0.61 _{41i} 0.65 _{33i} | 0.98 _{55i} ; 1.08 _{50i} 1.1 ₄₀ |

| | | | | | |
|---------|------|--|--|---|--|
| | | | | 0.65 ₄₅ ; 0.66₃₀ | |
| | 2006 | 12.8 ₃₄ ; 13.9 ₂₂ ; 15.83 ₂₀ ;19. 0 ₄₆ ; 22.5 ₁₉ ; 28.7 ₂₅ ; 44.8 ₂₄ ; 52.3 ₅₁ ; 53.0₈ ; 87.1₄₉ ; 140.3 ₁₄ ; 3300.7 ₂₁ | 1.25₄₃ ; 1.33₃₂ ; 1.63 ₁₇ ; 1.73₁₈ ; 1.8 ₁₁ ; 1.83 ₂₈ ; 1.84 ₃₅ ; 2.06₃₉ ; 2.36 ₂₇ ; 2.5₁₆ ; 2.58 ₅₀ ; 2.61 ₄₂ ; 2.62 ₄₄ ; 2.7₁ ; 2.97₂ ; 3.29 ₄ ; 3.42 ₄₀ ; 4.75₂₃ ; 5.0₁₅ ; 7.1 ₄₈ ; 7.99 ₂₉ ; 9.8 ₂₆ | 0.06 ₅₄ ; 0.12 ₅₂ ; 0.16₃₈ ; 0.16 ₅₃ ; 0.22 ₄₁ ; 0.33₁₂ ; 0.40₉ ; 0.43₃₀ ; 0.45 ₅₆ ; 0.50 ₅₇ ; 0.59 ₃₃ ; 0.62 ₅₈ ; 0.64₄₇ ; 0.78 ₃ ; | 0.98 ₁₃ ; 0.99 ₃₇ ; 1.15 ₄₅ ; 1.19 ₅₅ |
| | 2000 | 11.72 ₂₄ ; <u>12.0₂</u> ; 12.96 ₁₉ ; 24.6 ₄₉ ; 33.2 ₄₈ ; 70.1 ₂₁ ; 94.26 ₂₅ ; 94.3 ₄₅ ; 162.8 ₄ ; 235.4₈ | 1.59₂₃ ; 1.63 ₄ ; 1.64 ₄ ; 1.75₄₃ ; 1.86 ₂₇ ; 1.9 ₄₀ ; 2.00 ₁₀ ; 2.22 ₅₀ ; 2.3 ₃₃ ; 3.45 ₁₁ ; 3.55 ₅₁ ; 3.8₁₆ ; 4.04₁₈ ; 4.88₃₂ ; 4.95 ₂₂ ; 6.3 ₂₀ ; 7.1 ₂₉ ; 7.62₁₅ ; 9.84 ₁₄ | 0.05₃₅ ; 0.07 ₄₂ ; 0.09 ₄₁ ; 0.11₄₇ ; 0.31₃₈ ; 0.37₃₀ ; 0.43₁₂ ; 0.57₉ ; 0.71 ₂₆ ; 0.73 ₃₇ ; 0.79 ₂₈ ; <u>0.79₃₉</u> ; 0.94 ₁₃ | 0.88 ₃ ; 0.96 ₁₇ ; <u>1.13₁</u> ; 1.17 ₅₅ |
| Romania | 2006 | 12.62 ₄₀ ; <u>13.4₂</u> ; 15.84 ₁₉ ; 34.02 ₂₄ ; 50.8 ₄₈ ; 64.98 ₂₅ ; 87.9 ₂₁ ; 92.6 ₄ ; 180.0₄₉ ; 196.2₈ ; | 1.31 ₁₀ ; 1.82 ₃ ; 1.95 ₄₄ ; 2.03₂₃ ; 2.04 ₁₁ ; 2.15 ₄₅ ; 2.41 ₅₀ ; 2.67₄₃ ; 2.73₁₆ ; 3.36₃₂ ; 3.45₁₈ ; 3.69 ₂₀ ; 3.92 ₃₄ ; 3.96 ₄₂ ; 5.24 ₂₉ ; 5.79 ₅₁ ; 6.3 ₃₆ ; 6.5₁₅ ; 6.94 ₂₂ ; 8.62 ₁₄ ; | 0.01 ₅₃ ; 0.02 ₅₄ ; 0.22₃₅ ; 0.25 ₂₈ ; 0.27₄₇ ; 0.28 ₄₁ ; 0.32 ₃₀ ; 0.32₃₈ ; 0.33 ₁₇ ; 0.36₁₂ ; 0.39 ₃₉ ; 0.42 ₁₃ ; 0.55 ₂₇ ; 0.56 ₃₇ ; 0.59₉ ; 0.63 ₂₆ ; 0.7 ₅₅ ; | 0.96 ₃₃ ; <u>1.12₁</u> |
| Germany | 2000 | 11.18 ₄ ; 11.46 ₄₈ ; 11.5 ₁₄ ; 11.61 ₃₄ ; 20.5₄₉ ; 20.75 ₂₅ ; 22.41₅₁ ; 38.2 ₄₆ ; 59.6₈ | 1.21 ₄₁ ; 1.26 ₂₈ ; 1.31 ₅₀ ; 1.34₁₆ ; 1.59₃₂ ; 1.66₄₃ ; 1.80₁₈ ; 1.93₁ ; 2.15 ₂₉ ; 2.24 ₂₄ ; 2.39 ₂₆ ; 2.68 ₄₄ ; 3.16₃₉ ; 3.49₂ ; 3.54 ₅ ; 3.72₂₃ ; 3.92 ₄₀ ; 5.4₁₅ ; 5.67 ₄₂ ; 5.75 ₁₉ ; 6.04 ₂₀ ; 9.47 ₂₂ | 0.01 ₃₇ ; 0.02 ₁₀ ; 0.03 ₅₄ ; 0.06₁₂ ; 0.10 ₅₂ ; 0.13 ₅₃ ; 0.16 ₁₃ ; 0.17₃₀ ; 0.21₃₈ ; 0.33₉ ; 0.50₃₅ ; 0.54₄₇ ; 0.62 ₁₁ ; | 0.93 ₂₇ ; 0.97 ₁₇ ; 0.99 ₅₅ ; 1.13 ₃ |

| | | | | | |
|--|------|--|--|--|--|
| | | | | 0.64 ₅₈ ; 0.65 ₄₅ ; 0.69 ₅₆ ; 0.77 ₃₃ ; 0.79 ₅₇ | |
| | 2006 | 11.17 ₄₈ ; 11.21 ₃₄ ; 11.7 ₂₂ ; 12.7 ₁₄ ; 24.01 ₂₅ ; 25.7 ₄₉ ; 26.0 ₅₁ ; 51.0 ₄₆ ; 56.4 ₈ | 1.71 ₁ ; 3.21 ₂ ; 9.04 ₄ ; 3.8 ₅ ; 5.3 ₁₅ ; 1.7 ₁₈ ; 6.6 ₁₉ ; 5.84 ₂₀ ; 5.07 ₂₃ ; 2.23 ₂₄ ; 2.90 ₂₆ ; 1.41 ₂₈ ; 2.89 ₂₉ ; 1.75 ₃₂ ; 3.16 ₃₉ ; 2.50 ₄₀ ; 8.35 ₄₂ ; 1.34 ₄₃ ; 2.13 ₄₄ ; 1.49 ₅₅ | 0.01 ₁₀ ; 0.01 ₃₇ ; 0.04 ₅₄ ; 0.06 ₁₂ ; 0.09 ₃₈ ; 0.11 ₅₂ ; 0.15 ₁₃ ; 0.16 ₃₀ ; 0.18 ₅₃ ; 0.37 ₉ ; 0.56 ₃₅ ; 0.56 ₄₇ ; 0.57 ₁₁ ; 0.69 ₅₆ ; 0.72 ₄₅ ; 0.73 ₅₈ ; 0.79 ₅₇ | 0.90 ₅₀ ; 0.92 ₄₁ ; 1.02 ₃ ; 1.07 ₂₇ ; 1.12 ₁₇ ; 1.16 ₁₆ ; 1.17 ₃₃ |

Note: IC - Intermediate consumption, FC – Final consumption;

Source: authors' calculations based on Eurostat data.

Table A.3 Export to Import Ratio, 2000 and 2006

| Countries/Years | | Branches | | |
|-----------------|------|--|---|--|
| | | 0.0 < E/M < 0.9 | 0.9 ≤ E/M ≤ 1.1 | E/M ≥ 1.1 |
| Austria | 2000 | 0.01 ₅ ; 0.06 ₃ ; 0.13 ₄₁ ; 0.15 ₂ ; 0.22 ₁₇ ; 0.31 ₁ ; 0.33 ₅₇ ; 0.44 ₁₂ ; 0.49 ₂₄ ; 0.53 ₄₀ ; 0.75 ₂₇ ; 0.81 ₁₈ ; 0.81 ₄₇ ; 0.82 ₄₉ ; 0.84 ₄₅ ; 0.86 ₈ ; 0.88 ₃₀ ; 0.89 ₁₃ | 0.91 ₂₉ ; 0.92 ₉ ; 0.98 ₁₁ ; 0.92 ₂₈ ; 0.99 ₂₆ ; 1.00 ₁₉ ; 1.02 ₂₅ ; 1.09 ₄₃ ; 1.10 ₄₄ | 1.13 ₅₃ ; 1.17 ₄₈ ; 1.21 ₂₀ ; 1.21 ₂₁ ; 1.21 ₂₃ ; 1.23 ₃₁ ; 1.26 ₁₆ ; 1.32 ₅₁ ; 1.33 ₃₂ ; 1.37 ₅₀ ; 1.68 ₁₅ ; 1.8 ₁₀ ; 1.97 ₃₄ ; 2.28 ₃₆ ; 2.35 ₁₄ ; 3.88 ₄₂ ; 12.46 ₃₉ |
| | 2006 | 0.06 ₃ ; 0.10 ₅ ; 0.12 ₂ ; 0.14 ₅₄ ; 0.20 ₃₅ ; 0.31 ₅₈ ; 0.34 ₁ ; 0.35 ₁₇ ; 0.41 ₄₀ ; 0.47 ₂₄ ; 0.48 ₁₂ ; 0.54 ₅₇ ; 0.57 ₃₁ ; 0.59 ₅₅ ; 0.74 ₁₃ ; 0.86 ₂₇ ; 0.89 ₁₈ | 0.91 ₁₁ ; 0.92 ₂₆ ; 0.93 ₄₁ ; 0.97 ₈ ; 1.00 ₄₂ ; 1.01 ₃₂ ; 1.01 ₃₈ ; 1.02 ₃₇ ; 1.04 ₃₀ ; 1.05 ₁₉ ; 1.06 ₄₆ | 1.13 ₁₆ ; 1.16 ₂₈ ; 1.17 ₉ ; 1.18 ₂₉ ; 1.19 ₂₅ ; 1.21 ₄₃ ; 1.23 ₂₁ ; 1.33 ₃₄ ; 1.39 ₂₃ ; 1.41 ₁₀ ; 1.41 ₂₀ ; 1.52 ₄₅ ; 1.58 ₄₈ ; 1.78 ₁₅ ; 1.95 ₄₉ ; 2.64 ₁₄ ; 3.35 ₅₆ ; 3.48 ₄₄ ; 3.63 ₅₀ ; 6.3 ₃₃ ; 20.3 ₆ ; 41.39 ₃₉ |
| Italy | 2000 | 0.01 ₁₀ ; 0.04 ₇ ; 0.07 ₃₂ ; 0.17 ₅₃ ; 0.18 ₁ ; 0.27 ₃ ; 0.27 ₅₅ ; 0.33 ₄₉ ; 0.34 ₈ ; 0.37 ₂₄ ; 0.43 ₄₁ ; 0.44 ₁ ; 0.45 ₁₄ ; 0.48 ₅₈ ; 0.51 ₂₁ ; 0.52 ₄₈ ; 0.56 ₂₆ ; 0.58 ₅₇ ; 0.59 ₅₄ ; 0.61 ₅₆ ; 0.65 ₄₇ ; | 0.90 ₁₇ ; 1.02 ₅₁ ; 1.03 ₃₄ | 1.12 ₄₆ ; 1.22 ₂₅ ; 1.31 ₂₉ ; 1.32 ₅₀ ; 1.35 ₃₇ ; 1.48 ₄₅ ; 1.68 ₃₃ ; 1.72 ₁₉ ; 1.73 ₄₂ ; 1.93 ₁₂ ; 1.94 ₁₆ ; 2.29 ₁₁ ; 2.48 ₁₃ ; 2.54 ₂₃ ; 2.62 ₂₂ ; 2.68 ₃₉ ; 3.25 ₂₀ ; 4.01 ₃₀ ; 5.06 ₄₀ |

| | | | | |
|---------|------|---|--|--|
| | | 0.68 ₁₅ ; 0.71 ₄₃ ; 0.72 _{28;35} ; 0.74 _{18;36} ; 0.75 ₂₇ ; 0.76 ₄₄ ; 0.84 ₉ | | |
| | 2006 | 0.01 ₁₀ ; 0.07 ₇ ; 0.18 ₂ ; 0.22 ₂₄ ; 0.27 ₃ ; 0.31 ₃₂ ; 0.36 ₁₄ ; 0.38 ₄₉ ; 0.39 ₈ ; 0.40 ₄₈ ; 0.46 ₁ ; 0.49 ₂₆ ; 0.64 ₂₁ ; 0.68 _{41;57} ; 0.69 ₄₃ ; 0.71 ₂₈ ; 0.72 ₁₈ ; 0.73 ₄₇ ; 0.80 ₃₄ ; 0.81 ₃₆ ; 0.85 ₁₅ ; 0.86 ₂₇ ; 0.89 ₉ | 0.93 ₄₄ ; 1.01 ₄₅ ; 1.05 ₅₁ ; 1.09 ₃₉ | 1.33 ₂₅ ; 1.35 ₂₉ ; 1.39 ₁₂ ; 1.42 ₅₅ ; 1.45 ₅₈ ; 1.48 ₄₆ ; 1.56 ₁₇ ; 1.62 ₅₆ ; 1.62 ₄₂ ; 1.70 ₁₉ ; 1.71 ₅₀ ; 1.75 ₁₆ ; 1.82 ₁₁ ; 1.86 ₁₃ ; 1.88 ₃₅ ; 2.25 ₃₃ ; 2.47 ₃₇ ; 2.60 ₂₂ ; 2.67 ₂₀ ; 2.70 ₃₀ ; 2.85 ₂₃ ; 39.01 ₄₀ |
| Hungary | 2000 | 0.01 _{4;5;7} ; 0.19 ₄₅ ; 0.21 ₄₈ ; 0.30 ₁₆ ; 0.44 ₁₅ ; 0.47 ₄₄ ; 0.49 _{8;11} ; 0.50 ₅₁ ; 0.50 ₂₇ ; 0.51 ₂₃ ; 0.53 ₃₂ ; 0.54 ₁₉ ; 0.57 ₁₈ ; 0.59 ₂₁ ; 0.69 ₂₂ ; 0.72 ₂₀ ; 0.76 ₂₆ | 0.92 _{13;49} ; 0.99 ₅₂ ; 1.02 ₂₉ ; 1.03 ₁₇ ; 1.07 ₃₆ ; 1.08 ₂₅ ; 1.10 ₁₄ | 1.12 ₃₀ ; 1.15 ₃ ; 1.23 ₅₇ ; 1.25 ₄₀ ; 1.46 ₄₃ ; 1.48 ₂₈ ; 1.60 ₁₀ ; 1.68 ₃₄ ; 1.82 ₂₄ ; 2.05 ₉ ; 2.25 ₁ ; 2.35 ₃₉ ; 2.59 ₁₂ ; 3.09 ₄₂ ; 3.45 ₂ ; 7.23 ₄₁ ; 8.75 ₃₁ |
| | 2006 | 0.01 ₇ ; 0.06 ₄ ; 0.07 ₄₅ ; 0.22 ₁₀ ; 0.32 ₈ ; 0.38 ₃ ; 0.40 ₃₂ ; 0.43 ₂₉ ; 0.49 ₁₆ ; 0.55 ₅₂ ; 0.57 ₅₁ ; 0.58 ₅₀ ; 0.60 ₁₅ ; 0.61 ₄₄ ; 0.62 ₅₄ ; 0.63 ₅₈ ; 0.64 ₄₈ ; 0.65 ₁₁ ; 0.65 ₅₃ ; 0.66 ₂₁ ; 0.67 ₂₂ ; 0.73 ₄₀ ; 0.76 ₁₇ ; 0.82 ₁₃ ; 0.83 ₂₀ ; 0.84 ₁₈ ; 0.87 ₁₉ | 0.91 ₁₄ ; 0.92 ₂₅ ; 0.93 ₄₉ ; 0.95 _{23;43} ; 0.96 ₃₀ ; 0.98 ₂₇ | 1.17 ₂₆ ; 1.18 ₉ ; 1.24 ₅₇ ; 1.27 ₂₄ ; 1.29 ₁₂ ; 1.47 ₄₁ ; 1.52 ₂₈ ; 1.73 ₃₄ ; 1.80 ₄₂ ; 2.07 ₁ ; 2.85 ₃₈ ; 3.27 ₂ ; 4.10 ₃₉ ; 4.12 ₃₆ ; 6.41 ₃₁ ; 7.25 ₅ |
| Romania | 2000 | 0.02 ₁₀ ; 0.03 ₅ ; 0.07 ₃ ; 0.08 ₇ ; 0.09 ₂₇ ; 0.10 ₁₆ ; 0.20 ₅₅ ; 0.23 _{9;19} ; 0.26 ₈ ; 0.31 ₁₅ ; 0.33 ₁₁ ; 0.37 ₂₃ ; 0.41 _{26;28} ; 0.44 ₅₁ ; 0.45 ₂₄ ; 0.49 ₃₈ ; 0.51 ₁₈ ; 0.52 ₂₅ ; 0.61 ₃₃ ; 0.62 ₄₈ ; | 0.94 ₂₂ ; 0.98 ₃₄ ; 1.04 ₄₄ ; 1.12 ₀ ; | 1.14 ₁ ; 1.51 ₃ ; 1.18 ₃₂ ; 1.19 ₅₀ ; 1.46 ₄₁ ; 1.55 ₄₉ ; 1.81 ₄₃ ; 2.06 ₂₁ ; 2.19 ₂₉ ; 2.47 ₃₀ ; 2.64 ₁₇ ; 2.88 ₄₅ ; 6.17 ₄₀ ; 6.21 ₁₄ ; 8.69 ₃₉ ; 10.41 ₂ ; 34.8 ₂ ; |
| | 2006 | 0.01 ₅ ; 0.02 _{10;24} ; 0.1 ₇ ; 0.19 ₉ ; 0.21 ₃₃ ; 0.22 ₁₅ ; 0.24 _{8;16} ; 0.26 ₂₇ ; 0.29 ₂₈ ; 0.30 ₂₆ ; 0.34 ₂₀ ; 0.39 ₁₈ ; 0.41 ₂₂ ; 0.44 _{11;45} ; 0.46 ₂₃ ; 0.48 ₁₉ ; 0.61 ₅₅ ; 0.62 ₄₀ ; | 0.92 ₁ ; 0.96 ₄₉ ; 1.00 ₄₄ ; 1.05 ₃₄ | 1.12 _{48;51} ; 1.18 ₃₂ ; 1.19 ₂₉ ; 1.26 ₂₁ ; 1.47 ₁₃ ; 1.50 ₂ ; 1.62 ₄₁ ; 1.88 ₃₀ ; 2.33 ₄₂ ; 2.37 ₁₄ ; 2.45 ₄₃ ; 2.63 ₁₇ ; 3.07 ₅₀ ; 5.88 ₁₂ ; |

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|---------|------|--|--|--|
| | | 0.81 ₂₅ ; 0.88 ₃₈ ; | | |
| Germany | 2000 | 0.01 ₅₈ ; 0.03 _{2;52} ; 0.04 ₃₇ ; 0.05 ₃₅ ; 0.07 ₁₀ ; 0.12 ₄₇ ; 0.15 ₁₃ ; 0.26 ₄₃ ; 0.29 ₄₅ ; 0.39 ₈ ; 0.39 _{4;19} ; 0.40 ₃₀ ; 0.46 ₁₂ ; 0.49 ₂₄ ; 0.50 ₁₆ ; 0.52 ₂₉ ; 0.53 _{14;20} ; 0.63 ₂₂ ; 0.63 ₂₇ ; 0.80 ₅ ; 0.81 ₃₉ | 0.90 ₅₀ ; 0.97 ₂₅ ; 1.00 ₄₆ ; 1.03 ₁ ; 1.10 ₄₀ | 1.23 ₄₄ ; 1.38 ₁₇ ; 1.41 ₂₆ ; 1.50 ₄₂ ; 2.65 ₁₅ ; 2.82 ₅₁ ; 3.51 ₄₁ ; 4.11 ₁₈ ; 4.33 ₂₁ ; 5.88 ₂₃ ; 6.86 ₂₈ ; 13.5 ₁₁ ; 14.1 ₉ ; 31.03 ₃₈ |
| | 2006 | 0.01 ₅ ; 0.03 _{7;34} ; 0.09 _{4;58} ; 0.14 ₄₇ ; 0.26 ₄₆ ; 0.31 ₁ ; 0.34 ₅₇ ; 0.52 ₄₃ ; 0.53 _{3;12} ; 0.54 ₁₃ ; 0.63 ₃₉ ; 0.75 ₁₇ ; 0.77 ₂₄ ; 0.79 ₈ ; 0.83 _{26;38} ; 0.85 ₄₂ | 0.91 ₁₁ ; 0.93 ₉ ; 0.96 ₂₉ ; 0.99 _{21;30} ; 0.99 ₃₀ ; 1.07 ₂ | 1.15 _{14;52} ; 1.19 ₄₄ ; 1.22 ₁₅ ; 1.39 ₁₈ ; 1.42 _{32;50} ; 1.43 ₂₀ ; 1.44 ₄₉ ; 1.47 ₅₁ ; 1.48 ₄₅ ; 1.50 ₂₅ ; 1.52 ₁₉ ; 1.65 ₂₂ ; 1.75 ₂₇ ; 1.98 ₄₁ ; 2.17 ₂₈ ; 2.22 ₁₆ ; 2.42 ₂₃ ; 2.91 ₁₀ ; 3.27 ₃₆ ; 4.33 ₃₇ ; 5.05 ₄₀ |

Note: E - Export, M - Imports;

Source: authors' calculations based on Eurostat data.

Table A.4 Export to Output Ratio, 2000 and 2006

| Countries/Year s | | Branches | | |
|---------------------|------|--|--|----------------------|
| | | 0.0<E/O<0.4 | 0.4 ≤ E/O ≤ 0.7 | 0.7<E/O ≤ 0.99 |
| Austria | 2000 | 0.01 ₅ ; 0.02 _{3;34} ; 0.03 _{2;41} ; 0.04 _{10;17;49;57} ; 0.05 ₃₂ ; 0.06 _{1;43} ; 0.07 ₄₅ ; 0.09 _{31;44;48} ; 0.11 ₈ ; 0.14 ₉ ; 0.15 _{12;51} ; 0.16 _{16;42} ; 0.21 ₃₀ ; 0.22 ₂₀ ; 0.24 _{22;39} ; 0.28 ₁₁ ; 0.29 ₄₀ ; 0.30 _{24;27} ; 0.31 _{14;18} ; 0.32 ₁₃ ; 0.34 ₁₉ ; 0.38 ₂₅ | 0.41 ₂₃ ; 0.42 ₁₅ ; 0.43 _{21;28;50} ; 0.45 ₂₆ ; 0.49 ₃₆ ; 0.55 ₂₉ | |
| | 2006 | 0.01 _{46;52} ; 0.02 _{2;3;34;37} ; 0.06 _{32;48;57} ; 0.07 ₁ ; 0.09 ₅ ; 0.10 ₄₃ ; 0.11 _{10;17;38;45} ; 0.13 _{8;51} ; 0.14 ₄₂ ; 0.18 ₁₆ ; 0.19 ₄₉ ; 0.20 _{12;44} ; 0.21 ₉ ; 0.25 ₄₁ ; 0.26 _{20;30} ; 0.28 ₁₃ ; 0.32 _{11;24;27;39} ; 0.36 ₁₄ ; 0.38 ₁₉ ; 0.39 _{18;40} | 0.44 _{25;26} ; 0.45 ₁₅ ; 0.46 ₂₁ ; 0.48 ₃₆ ; 0.49 ₂₈ ; 0.50 ₅₀ ; 0.64 ₂₉ ; | |
| Italy | 2000 | 0.01 _{47;56} ; 0.02 _{46;48;49;57} ; 0.03 _{3;7;43;44} ; 0.05 _{1;16;17;50;51} ; 0.06 _{2;14;39;45} ; 0.07 ₈ ; 0.08 ₉ ; 0.10 ₄₁ ; 0.12 _{36;42} ; 0.13 _{15;22} ; 0.15 ₂₄ ; 0.17 ₂₁ ; 0.19 ₁₂ ; 0.20 _{18;20} ; 0.21 ₁₉ ; 0.23 ₂₅ ; 0.24 ₂₈ ; 0.26 _{11;30} ; 0.26 ₁₁ ; 0.29 ₁₃ ; 0.33 ₂₉ ; 0.38 ₂₃ | | 0.78 ₄₀ |
| | 2006 | 0.01 _{32;55;56;58} ; 0.02 _{46;49;57} ; 0.04 _{3;16;43;44} ; 0.05 _{1;45;48;50} ; | 0.40 ₂₃ ; | 0.80 ₄₀ ; |

| | | | | |
|---------|------|--|---|--|
| | | 0.06 _{2;8;14;39} ; 0.07 ₅₁ ; 0.09 _{9;24} ; 0.10 _{17;42} ; 0.13 ₃₆ ; 0.14 _{15;22} ; 0.17 ₂₀ ; 0.19 ₂₆ ; 0.21 _{12;41} ; 0.22 _{18;30} ; 0.23 _{19;27} ; 0.24 _{21;28} ; 0.25 ₂₅ ; 0.26 ₁₁ ; 0.28 _{13;29} ; | | |
| Hungary | 2000 | 0.01 _{5;52} ; 0.02 _{10;34;45} ; 0.04 _{16;43} ; 0.05 _{44;48} ; 0.06 ₃₈ ; 0.07 ₅₀ ; 0.09 _{46;49} ; 0.11 _{8;17;36;57} ; 0.13 _{1;51} ; 0.14 ₃₁ ; 0.16 ₉ ; 0.18 _{20;39} ; 0.19 ₁₅ ; 0.20 ₃ ; 0.21 ₄₂ ; 0.24 _{19;22} ; 0.25 _{11;18;23} ; 0.26 _{21;27} ; 0.29 ₂ ; 0.29 _{14;40} ; 0.30 ₂₉ ; 0.31 ₃₀ ; 0.37 ₁₃ ; 0.38 ₂₆ ; | 0.47 ₂₅ ; 0.50 ₂₈ ; 0.52 ₁₂ ; 0.62 ₂₄ ; 0.69 ₄₁ | |
| | 2006 | 0.01 _{7;10;45;52} ; 0.02 _{34;55} ; 0.03 _{32;44;58} ; 0.04 _{4;8} ; 0.05 ₁₆ ; 0.06 ₃ ; 0.07 ₄₃ ; 0.10 ₃₈ ; 0.12 _{48;51} ; 0.13 ₄₉ ; 0.14 ₁₇ ; 0.15 ₉ ; 0.16 ₁ ; 0.18 ₂ ; 0.21 _{20;57} ; 0.22 ₅₀ ; 0.23 ₂₉ ; 0.24 _{15;22} ; 0.26 ₁₄ ; 0.29 ₃₀ ; 0.30 ₃₉ ; 0.31 ₁₁ ; 0.32 ₄₂ ; 0.33 ₁₃ ; 0.34 ₂₁ ; 0.36 _{18;31} ; 0.37 _{12;40} ; 0.38 ₁₉ ; 0.39 ₂₇ ; | 0.40 ₂₃ ; 0.46 ₂₅ ; 0.52 ₂₆ ; 0.54 ₄₁ ; 0.56 ₂₈ ; 0.57 ₂₄ ; 0.69 ₃₆ ; | |
| Romania | 2000 | 0.01 _{5;9;16;34;55} ; 0.02 _{32;33} ; 0.03 _{1;50} ; 0.04 ₇ ; 0.05 ₃₈ ; 0.06 _{8;27} ; 0.07 _{43;51} ; 0.08 ₁₉ ; 0.10 ₂₈ ; 0.11 ₁₅ ; 0.13 ₂₀ ; 0.15 _{23;49} ; 0.16 _{2;44} ; 0.19 ₁₈ ; 0.20 ₁₇ ; 0.21 ₄₈ ; 0.22 ₁₁ ; 0.23 ₂₂ ; 0.27 _{25;26} ; 0.29 ₂₄ ; 0.32 ₃₉ ; 0.36 ₄₅ ; 0.38 ₃₀ | 0.43 ₄₁ ; 0.44 ₁₄ ; 0.47 ₂₁ ; 0.49 ₂₉ ; 0.70 ₁₃ | 0.82 ₁₂ ; 0.89 ₄₀ |
| | 2006 | 0.01 _{5;24;32;33;34} ; 0.02 _{9;16;55} ; 0.03 _{1;2;7} ; 0.04 ₈ ; 0.06 _{20;45;46} ; 0.07 _{44;50} ; 0.09 ₁₅ ; 0.10 _{42;51} ; 0.12 _{28;38} ; 0.14 _{22;27} ; 0.16 _{19;48} ; 0.18 _{18;43} ; 0.21 ₂₆ ; 0.23 ₄₉ ; 0.24 ₂₃ ; 0.26 _{11;17} ; 0.30 _{14;39} ; 0.33 ₄₀ ; 0.36 ₃₀ ; 0.38 ₂₅ ; 0.39 ₂₉ ; 0.42 ₂₁ ; 0.47 ₄₁ ; | 0.64 ₁₃ ; | 0.75 ₁₂ ; |
| Germany | 2000 | 0.01 _{32;35;45;57} ; 0.02 _{5;37} ; 0.03 ₇ ; 0.04 _{4;46} ; 0.05 _{38;51} ; 0.06 ₄₄ ; 0.07 _{1;17;42} ; 0.08 ₃₉ ; 0.09 ₁₀ ; 0.10 ₄₉ ; 0.11 _{9;16} ; 0.12 _{2;14} ; 0.13 ₈ ; 0.15 _{20;30} ; 0.18 ₂₂ ; 0.18 ₅₀ ; 0.21 _{36;41} ; 0.28 _{11;19} ; 0.30 ₃ ; 0.31 ₁₅ ; 0.35 ₂₁ ; 0.36 ₁₈ ; | 0.40 ₂₈ ; 0.49 ₂₉ ; | 0.72 ₄₀ ; |
| | 2006 | 0.01 _{5;35;52} ; 0.02 _{7;57} ; 0.04 _{4;43;44;45} ; 0.05 ₄₆ ; 0.06 ₃₈ ; 0.07 _{37;51} ; 0.08 _{1;39} ; 0.09 ₄₂ ; 0.11 _{10;32} ; 0.12 ₂ ; 0.14 ₉ ; 0.15 ₁₇ ; 0.16 ₈ ; 0.17 ₄₉ ; 0.18 ₁₂ ; 0.20 ₁₄ ; 0.21 _{13;16} ; 0.22 ₃₀ ; 0.23 _{3;41} ; | 0.40 ₂₆ ; 0.43 ₂₈ ; 0.45 ₂₄ ; 0.46 ₂₇ ; 0.50 ₂₉ ; 0.59 ₃₆ ; | 0.75 ₄₀ ; |

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| | | 0.26 ₅₀ ; 0.31 ₁₁ ; 0.34 ₂₅ ; 0.36 ₁₅ ; | | |
|--|--|--|--|--|

Note: E - Export, O – Output;

Source: authors' calculations based on Eurostat data.

Table A.5 Import to Output Ratio, 2000 and 2006

| Countries/Year s | | Branches | | |
|---------------------|------|---|--|---------|
| | | 0.0 < M/O < 0.5 | 0.5 ≤ M/O ≤ 0.99 | M/O > 1 |
| Austria | 2000 | 0.01 ₃₄ ; 0.02 _{10;39} ; 0.03 ₃₂ ; 0.04 ₄₂ ; 0.05 _{43;49} ; 0.06 ₃₈ ; 0.07 _{31;48} ; 0.08 ₃₇ ; 0.09 _{44;45} ; 0.11 ₅₁ ; 0.13 _{8;14;16;57} ; 0.15 ₉ ; 0.18 _{17;20} ; 0.19 ₁ ; 0.20 ₂ ; 0.21 ₃₆ ; 0.23 ₄₁ ; 0.24 ₃₀ ; 0.25 _{15;22} ; 0.28 ₁₁ ; 0.31 ₅₀ ; 0.34 _{19;23} ; 0.35 ₁₂ ; 0.36 _{13;21} ; 0.37 ₂₅ ; 0.38 _{3;18} ; 0.40 ₂₇ ; 0.44 ₂₈ ; 0.45 ₂₆ ; | 0.54 ₄₀ ; 0.58 ₄ ; 0.60 ₂₉ ; 0.62 ₂₄ ; 0.82 ₅ ; | |
| | 2006 | 0.01 _{31;46;58} ; 0.02 _{37;53;54} ; 0.06 ₄₄ ; 0.07 _{45;48} ; 0.08 _{10;43} ; 0.10 ₄₉ ; 0.11 _{38;51} ; 0.12 ₃₆ ; 0.12 ₅₇ ; 0.13 ₈ ; 0.14 _{14;50} ; 0.15 ₄₂ ; 0.16 ₁₆ ; 0.18 _{2;9;20} ; 0.20 ₁ ; 0.23 ₃₉ ; 0.25 _{15;30} ; 0.26 ₂₂ ; 0.27 ₄₁ ; 0.32 ₁₇ ; 0.33 ₂₃ ; 0.34 ₁₉ ; 0.36 _{11;19} ; 0.37 _{3;21;25;27} ; 0.38 ₁₃ ; 0.41 ₁₂ ; 0.42 ₂₈ ; 0.44 ₁₈ ; 0.49 ₂₆ ; | 0.55 ₂₉ ; 0.69 ₂₄ ; 0.76 ₄ ; 0.86 ₅ ; 0.94 ₄₀ ; | |
| Italy | 2000 | 0.01 _{56;58} ; 0.02 _{16;39;46;47} ; 0.03 _{32;50;57} ; 0.04 _{38;44;45;48} ; 0.05 _{22;43;49;51} ; 0.06 _{17;20} ; 0.07 _{30;42} ; 0.11 ₁ ; 0.12 _{3;19} ; 0.15 ₂₃ ; 0.16 _{36;40} ; 0.18 ₂₅ ; 0.19 ₁₅ ; 0.24 ₄₁ ; 0.25 ₂₉ ; 0.28 ₁₈ ; 0.30 ₂₇ ; 0.33 ₂₈ ; 0.34 ₂₁ ; 0.35 _{2;26} ; 0.40 ₂₄ ; | 0.73 ₇ ; 0.82 ₄ ; 0.83 ₅ ; | |
| | 2006 | 0.01 _{47;55} ; 0.02 _{16;32;40;46} ; 0.03 _{38;50;57} ; 0.04 ₄₉ ; 0.05 _{22;44;45} ; 0.06 _{20;39;42;43} ; 0.07 _{17;51} ; 0.08 ₃₀ ; 0.11 _{1;9} ; 0.12 ₁₀ ; 0.13 ₄₈ ; 0.14 _{3;11;19;23} ; 0.15 _{12;13} ; 0.16 _{8;14;1536} ; 0.19 ₂₅ ; | 0.80 ₇ ; 0.89 ₄ ; 0.93 ₅ ; | |

| | | | | |
|----------------|------|--|---|--|
| | | 0.21 ₂₉ ; 0.27 ₂₇ ; 0.30 _{2;18} ; 0.31 ₄₁ ; 0.35 ₂₈ ; 0.38 _{21;26} ; 0.42 ₂₄ ; | | |
| Hungary | 2000 | 0.01 _{10;34;52} ; 0.02 ₃₁ ; 0.02 ₅₂ ; 0.04 _{32;44} ; 0.05 ₅₈ ; 0.06 ₁ ; 0.07 ₄₃ ; 0.08 _{2;9;39} ; 0.09 _{49;57} ; 0.10 _{36;44} ; 0.11 _{17;45} ; 0.12 ₄₅ ; 0.13 ₁₆ ; 0.14 ₄₉ ; 0.17 _{3;57} ; 0.18 _{42;48} ; 0.20 _{12; 51} ; 0.23 ₄₈ ; 0.23 _{8;40} ; 0.25 ₂₀ ; 0.26 ₁₄ ; 0.26 ₅₁ ; 0.27 ₃₀ ; 0.29 ₂₉ ; 0.34 _{22;24;28} ; 0.37 ₄₁ ; 0.38 ₅₀ ; 0.40 ₁₃ ; 0.43 _{15;18} ; 0.44 _{19;25} ; 0.45 ₂₁ ; 0.49 ₂₃ ; | 0.50 ₂₆ ; 0.51 _{11;40} ; 0.52 ₂₇ ; 0.56 ₄ ; 0.65 ₇ ; | 1.03 ₅ ; |
| | 2006 | 0.01 ₃₄ ; 0.04 ₃₈ ; 0.06 _{2;31} ; 0.07 _{10;39} ; 0.08 _{1;32} ; 0.11 ₁₆ ; 0.13 _{8;9} ; 0.15 ₃ ; 0.17 ₃₆ ; 0.19 ₁₇ ; 0.25 ₂₀ ; 0.28 ₁₄ ; 0.29 ₁₂ ; 0.30 ₃₀ ; 0.36 _{22;28} ; 0.40 _{13;15;27} ; 0.42 ₂₃ ; 0.43 ₁₈ ; 0.44 _{19;26} ; 0.45 ₂₄ ; 0.49 ₁₁ ; | 0.51 _{21;25} ; 0.54 ₂₉ ; 0.74 ₄ ; 0.83 ₅ ; 0.90 ₇ ; | |
| Romania | 2000 | 0.01 _{32;34} ; 0.02 ₁ ; 0.03 _{33;46;50} ; 0.04 _{39;43;55} ; 0.06 ₉ ; 0.07 _{14;17} ; 0.08 ₁₂ ; 0.09 _{16;49} ; 0.10 ₃₈ ; 0.12 ₂₀ ; 0.13 ₄₅ ; 0.14 ₄₀ ; 0.15 ₃₀ ; 0.16 _{44;51} ; 0.17 ₁₀ ; 0.21 ₄ ; 0.22 ₂₉ ; 0.23 _{8;21} ; 0.24 _{22;28} ; 0.30 ₄₁ ; 0.34 _{15;48} ; 0.35 ₁₉ ; 0.37 ₁₈ ; 0.41 ₂₃ ; 0.46 ₇ ; 0.47 ₅ ; 0.48 ₁₃ ; | 0.53 ₂₅ ; 0.59 ₂₇ ; 0.65 ₁₁ ; 0.67 ₂₆ ; | |
| | 2006 | 0.01 _{32;34} ; 0.02 _{2;50} ; 0.03 ₁ ; 0.04 ₃₃ ; 0.05 ₄₂ ; 0.07 _{16;43;44} ; 0.08 ₉ ; 0.09 ₅₁ ; 0.10 ₁₇ ; 0.13 _{12;14} ; 0.14 _{38;45;48} ; 0.15 ₈ ; 0.18 ₁₀ ; 0.19 ₃₀ ; 0.24 ₄₉ ; 0.29 ₄₁ ; 0.30 ₇ ; 0.33 _{4;29} ; 0.34 ₁₉ ; 0.40 ₂₈ ; 0.43 ₁₅ ; 0.44 ₁₃ ; 0.47 _{18;25} ; | 0.52 ₂₃ ; 0.53 _{27;40} ; 0.59 ₁₁ ; 0.61 ₂₄ ; 0.63 ₅ ; 0.69 ₂₆ ; | |
| Germany | 2000 | 0.01 _{9;53;56} ; 0.02 _{5;11;47;51} ; 0.04 ₄₆ ; 0.05 _{17;42;44;45} ; 0.06 _{28;41;59} ; 0.07 _{1;23} ; 0.08 _{33;43;52} ; 0.09 ₁₈ ; 0.10 _{4;39} ; 0.11 ₄₈ ; 0.12 ₁₅ ; 0.13 ₃₅ ; 0.14 ₅₈ ; 0.20 ₅₀ ; 0.22 ₁₆ ; 0.23 ₁₄ ; | 0.50 ₃ ; 0.55 ₂₇ ; 0.62 ₂₄ ; 0.65 ₄₀ ; 0.68 ₃₇ ; 0.72 ₁₉ ; 0.95 ₂₉ ; 0.97 ₁₃ ; | 1.33 ₁₀ ; 3.35 ₃₁ ; 4.16 ₂ ; |

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|--|------|--|--|--|
| | | 0.27 ₁₂ ; 0.28 ₂₆ ; 0.29 ₂₂ ; 0.30 ₂₅ ; 0.32 ₈ ; 0.38 ₃₀ ; | | |
| | 2006 | 0.01 _{34;55;58} ; 0.02 _{37;47} ; 0.03 _{44;45} ; 0.04 ₁₀ ; 0.05 ₅₁ ; 0.07 _{38;57} ; 0.08 _{32;43} ; 0.09 ₁₆ ; 0.10 ₄₂ ; 0.12 _{2;39;41;49} ; 0.15 _{9;20;22;40} ; 0.17 ₁₄ ; 0.18 _{36;46} ; 0.19 ₅₀ ; 0.20 _{8;17;23;28} ; 0.23 _{19;25;30} ; 0.26 _{1;27} ; 0.30 ₁₅ ; 0.32 ₁₈ ; 0.34 _{11;12} ; 0.39 ₁₃ ; 0.40 ₂₁ ; 0.44 _{3;4} ; 0.48 ₂₆ ; | 0.52 ₂₉ ; 0.59 ₂₄ ; 0.73 ₅ ; 0.96 ₇ ; | |

Note: M - Import, O – Output;

Source: authors' calculations based on Eurostat data.

Table A.6 Gross Capital Formation to Output Ratio, 2000 and 2006

| Countries/Year s | | Branches | | |
|---------------------|------|--|--|--|
| | | 0.00 < GCF/O < 0.50 | 0.50 ≤ GCF/O < 0.70 | 0.7 ≤ GCF/O ≤ 0.99 |
| Austria | 2000 | 0.01 _{11;15;16;18;21} ; 0.02 _{1;35;47;50} ; 0.03 ₁₉ ; 0.04 ₈ ; 0.05 ₅₇ ; 0.10 _{2;51} ; 0.11 ₁₄ ; 0.12 ₂₅ ; 0.15 ₂₀ ; 0.16 ₂₆ ; 0.16 _{28;30} ; 0.17 ₂₂ ; 0.21 ₂₉ ; 0.26 _{23;27} ; 0.29 ₄₉ ; 0.44 ₂₄ ; | 0.66 ₃₄ ; | |
| | 2006 | 0.01 _{1;5;18;33;50;57} ; 0.02 _{17;19;35;47} ; 0.03 ₃ ; 0.04 ₈ ; 0.06 ₂ ; 0.08 _{20;51} ; 0.10 ₂₉ ; 0.11 ₁₄ ; 0.13 ₂₆ ; 0.15 _{25;28} ; 0.17 _{22;30} ; 0.22 _{23;27} ; 0.32 ₂₄ ; 0.43 ₄₉ ; | 0.59 ₃₄ ; | |
| Italy | 2000 | 0.01 _{1;10;11;12;16;19;20} ; 0.03 _{3;14;51;57} ; 0.04 _{21;47} ; 0.05 ₅ ; 0.08 ₃₅ ; 0.10 ₂₂ ; 0.15 ₃₀ ; 0.16 ₂₉ ; 0.21 ₂₅ ; 0.23 ₂₈ ; 0.25 ₄₉ ; 0.27 ₂₆ ; 0.30 _{23;27} ; 0.31 ₂₄ ; | | 0.72 ₃₄ ; |
| | 2006 | 0.01 _{1;8;11;13;16;19;21;31} ; 0.02 ₅ ; 0.03 _{51;57} ; 0.04 ₃ ; 0.05 _{14;47} ; 0.07 ₃₅ ; 0.12 ₂₂ ; 0.16 ₃₀ ; 0.18 ₂₉ ; 0.20 ₂₅ ; 0.20 ₂₆ ; 0.21 ₄₉ ; 0.22 ₂₈ ; 0.29 _{23;27} ; 0.34 ₂₄ ; | | 0.72 ₃₄ ; |
| Hungary | 2000 | 0.01 _{4;15;17;44} ; 0.02 _{1;2;3;5;12} ; 0.03 _{9;10;11;13;18;20} ; 0.04 _{14;21;45} ; 0.05 ₅₁ ; 0.07 _{16;19;25} ; 0.08 ₂₆ ; 0.09 _{22;47} ; 0.10 ₃₀ ; 0.11 ₂₈ ; 0.13 ₂₄ ; 0.19 ₂₇ ; 0.21 ₂₉ ; 0.30 ₂₃ ; 0.41 ₄₉ ; | | 0.82 ₃₄ ; |
| | 2006 | 0.01 _{5;14;18;21;44} ; 0.02 ₅₇ ; 0.03 _{3;7;12;13;25;30;45} ; 0.04 _{26;51} ; 0.05 _{4;9} ; 0.06 _{22;31} ; 0.07 ₁ ; 0.08 ₂₈ ; 0.10 ₂₇ ; 0.15 ₂₄ ; 0.20 ₂₉ ; 0.22 ₄₉ ; 0.25 ₂₃ ; | | 0.81 ₃₄ ; |
| Romania | 2000 | 0.01 _{1;8;14;15;17;18;19;20} ; 0.02 ₇ ; 0.03 ₂ ; 0.05 ₃ ; 0.08 _{22;25;30} ; | 0.51 ₂₄ ; 0.57 ₂₃ ; | 0.71 ₄₉ ; 0.74 ₃₄ ; |

| | | | | |
|----------------|------|---|----------------------|--|
| | | 0.10 ₂₉ ; 0.13 ₂₇ ; 0.27 ₂₆ ; 0.29 ₅₁ ; 0.46 ₂₈ ; | | |
| | 2006 | 0.01 _{1;4;7;14;16;18;19;20;21} ; 0.04 ₂ ; 0.09 ₈ ; 0.11 ₃₀ ; 0.15 ₃ ; 0.16 ₂₂ ; 0.17 ₂₅ ; 0.23 ₂₇ ; 0.26 ₅₁ ; 0.32 ₂₆ ; 0.34 _{29;49} ; 0.44 ₂₃ ; 0.47 ₂₈ ; | 0.60 ₂₄ ; | 0.71 ₃₄ ; 0.84 ₃₁ ; |
| Germany | 2000 | 0.01 _{11;20;21;31;52} ; 0.02 ₂ ; 0.02 ₁₉ ; 0.03 _{5;16} ; 0.05 _{1;57} ; 0.07 ₅₁ ; 0.11 ₂₅ ; 0.12 _{22;28} ; 0.13 _{14;30} ; 0.17 ₂₆ ; 0.21 ₂₉ ; 0.24 ₂₇ ; 0.27 ₂₃ ; 0.33 ₂₄ ; 0.35 ₄₉ ; | | 0.77 ₃₄ ; |
| | 2006 | 0.01 _{2;4;47;52} ; 0.02 ₉ ; 0.03 ₂₀ ; 0.05 _{51;57} ; 0.06 _{1;5} ; 0.08 ₂₂ ; 0.10 _{14;25;28;30} ; 0.16 ₂₆ ; 0.20 _{23;27} ; 0.22 ₂₄ ; 0.25 ₂₉ ; 0.33 ₄₉ ; | | 0.78 ₃₄ ; |

Note: GCF – Gross Capital Formation, O – Output;

Source: authors' calculations based on Eurostat data.

Table A.7 Taxes less subsidies on Products to Output Ratio, 2000 and 2006

| Countries/Year s | | Branches | | |
|---------------------|------|--|----------------------|---------|
| | | 0.00 < T/O < 0.50 | 0.50 ≤ T/O ≤ 1.00 | T/O > 1 |
| Austria | 2000 | 0.01 _{15;41;53} ; 0.02 ₅ ; 0.02 ₁₄ ; 0.02 _{22;23;25;26;33;42;49;50} ; 0.03 _{19;20;29;48;51;55} ; 0.04 _{24;43;47} ; 0.05 _{3;18;34} ; 0.06 _{16;27;46} ; 0.07 ₂₈ ; 0.08 ₁₁ ; 0.09 _{9;13;35} ; 0.10 _{30;37;38;57} ; 0.11 ₃₂ ; 0.13 _{12;58} ; 0.14 ₄₅ ; 0.36 ₁₇ ; | 0.69 ₁₀ ; | |
| | 2006 | 0.01 _{1;2;4;5;8;15;22;23;25;29;50;53} ; 0.02 _{14;19;20;33;41;42;49;51} ; 0.03 _{26;55} ; 0.04 _{16;18;28;47} ; 0.05 _{24;27;34;48} ; 0.06 _{3;32;43;46} ; 0.07 _{9;11} ; 0.08 ₃₀ ; 0.09 _{38;57} ; 0.10 _{13;35;37;58} ; 0.13 ₁₂ ; 0.14 ₄₅ ; 0.30 ₁₇ ; | 0.64 ₁₀ ; | |
| Italy | 2000 | 0.01 _{14;20;21;22;23;25;47;48;56} ; 0.02 _{3;15;18;19;42;44;49} ; 0.03 _{11;24;26;33;41} ; 0.04 _{9;13;16;28;29} ; 0.05 _{30;38;43;55} ; 0.06 _{12;34} ; 0.07 ₃₇ ; 0.08 _{46;51} ; 0.09 ₃₅ ; 0.10 ₅₈ ; 0.20 ₃₂ ; 0.22 ₅₇ ; 0.29 ₄₅ ; 0.48 ₁₇ ; | 0.73 ₁₀ ; | |
| | 2006 | 0.01 _{2;14;20;22;23;25;47;48;56} ; 0.02 _{3;15;19;42;49} ; 0.03 _{11;18;24;27;29;41} ; 0.04 _{9;13;26;28;46;55} ; 0.05 _{30;33;38} ; 0.06 _{12;43} ; 0.07 _{34;51} ; 0.09 _{37;58} ; 0.10 ₃₅ ; 0.15 ₃₂ ; 0.16 ₅₇ ; 0.19 ₄₅ ; 0.34 ₁₇ ; | 0.73 ₁₀ ; | |
| Hungary | 2000 | 0.01 _{8;14;24;25;31;44;45;50} ; 0.02 _{2;22;26;51} ; 0.03 _{4;15;18;19;23;41} ; 0.04 _{27;40;42} ; 0.05 _{11;16;28;49} ; 0.06 _{13;29;32;48;55;57} ; 0.07 _{12;33} ; 0.08 _{3;34;58} ; 0.09 ₃₀ ; 0.10 _{9;38} ; 0.11 ₄₃ ; 0.13 ₃₅ ; 0.19 ₃₆ ; 0.26 ₃₇ ; 0.32 ₁₇ ; | 0.60 ₁₀ ; | |

| | | | | |
|---------|------|---|--|----------------------|
| | 2006 | 0.01 _{8;14;24;25;26;31;36;41;44;45;46;47;53;54} ; 0.02 _{15;19;20;22;23;29;42;50;58} ; 0.03 _{18;27;48;51} ; 0.04 _{4;28;40} ; 0.05 _{11;13;16;35;49} ; 0.06 ₃₀ ; 0.08 _{12;34;57} ; 0.09 _{2;33;55} ; 0.10 _{3;32;37;43} ; 0.11 ₃₈ ; 0.13 ₉ ; 0.27 ₁₇ ; | 0.70 ₁₀ ; | |
| Romania | 2000 | 0.01 ₄₀ ; 0.02 _{8;13;14;21;29;34;43} ; 0.03 _{2;22;25;32;48;49} ; 0.04 _{3;11;18;19;26;33;38;39;41} ; 0.05 _{15;23;45;51} ; 0.06 ₅ ; 0.07 _{20;24;27;30} ; 0.09 _{9;12} ; 0.13 _{28;42} ; 0.14 ₁₇ ; 0.16 ₅₅ ; 0.40 ₁₀ ; | | 1.37 ₃₆ ; |
| | 2006 | 0.01 _{29;40;47;49;54} ; 0.02 _{8;13;22;25;34} ; 0.03 _{3;14;21;23;24;30;51} ; 0.04 _{2;11;16;19;20;26;32;48;55} ; 0.05 _{1;5;28;41} ; 0.06 _{15;18;31;37;42;43} ; 0.07 _{9;12;27;38} ; 0.10 _{8;39} ; 0.09 ₃₃ ; 0.21 ₁₇ ; 0.46 ₁₀ ; | | |
| Germany | 2000 | 0.01 _{15;16;21;23;26;28;38;42;43} ; 0.02 _{17;20;25;30;55} ; 0.03 ₄₉ ; 0.04 _{3;27;44;48} ; 0.05 _{12;24;50;56} ; 0.06 ₁₄ ; 0.07 _{1;36} ; 0.09 _{39;52} ; 0.10 _{19;58} ; 0.11 ₂₉ ; 0.21 ₁₈ ; 0.28 ₄₆ ; 0.31 ₁₁ ; 0.36 ₁₃ ; 0.37 ₅₉ ; | 0.69 ₁₀ ; 0.76 ₃₃ ; 0.77 ₃₅ ; | 1.44 ₃₁ ; |
| | 2006 | 0.01 _{2;4;8;19;22;23;25;42;47;50;53} ; 0.02 _{3;14;15;20;28;29;31;49;55} ; 0.03 _{16;18;26;48} ; 0.04 _{1;24;27;33;41} ; 0.05 _{43;51;57;58} ; 0.07 _{9;11;35} ; 0.08 _{5;30;38} ; 0.09 _{34;37} ; 0.10 ₁₃ ; 0.11 _{12;45} ; 0.12 ₃₂ ; | 0.32 ₁₇ ; 0.68 ₁₀ ; | |

Note: T – Taxes less subsidies, O – Output;

Source: authors' calculations based on Eurostat data.