

# **The Prospective Structural Configuration of the Romanian Manufacturing Industry According to its Component Activities' Competitiveness**

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## **Abstract**

*The article attempts to prefigure the structural configuration of the Romanian manufacturing industry according to a qualitative analysis of the previous evolution of its component activities, performed through the analysis of some relevant indicators. The future intense development of manufacturing activities identified as having development prospects can be achieved through a judicious industrial policy, linked to current trends in the European Union and other developed countries.*

**Keywords:** *manufacturing activity; SWOT analysis; macroeconomic indicators; sectoral performance indicators; industrial policy*

**JEL Classification:** *L16*

## **Introduction**

The approach of the evolution of the manufacturing processing industry in the future is difficult, given the acute instability of the institutional framework, the lack of a country development strategy and industrial policy, the turmoil on international financial markets, and the reduction of the attractiveness of the economy for foreign investors. The fluctuating past evolution of some activities does not allow to identify trends that realistically mark out their future development, and other activities where trends are highlighted on enough long term to give them sustainability are under pressure from threats that can change them at any time.

In this context, the identification of possible directions for future development of manufacturing activities may be made with realism, taking into account the effects of all the determinants of structural changes and the competitiveness of products and services of these activities, as well as economic, social, political and geo-political changes that can be seen in the global evolution. Based on its geographical position as a link between Western Europe and the Middle East, Romania, through a smart strategy and policies, can capitalize the opportunities this position offers and the competitive advantages its economy presents, increasingly integrating into global competition, intensifying and diversifying its external trade links.

Establishing a national strategy for the development of society and economy and an industrial policy is indispensable for drawing up the major directions for the future realization of "smart

industrialization", the evolution of industrial activities that meet the requirements of sustainable development and the building of the "knowledge society"; only a strategy and a policy of the kind mentioned, which the European Union as a whole and other developed countries in the world have long established and continuously update them, can provide reference points in the approach to foresee future directions of manufacturing activities development. At the same time, must be kept permanently the awareness of the fact that the future of the manufacturing activities is decisively determined by the market, its fluctuations in prices and conjunctions, the opportunities it offers, and the threats it presents. The ability of companies to efficiently exploit opportunities and face threats, develop distinctive skills and competitive advantages contributes to shaping industrial structures and improving the competitiveness of their activities. Industrial policy, through the directions of action and the concrete measures it provides, can amplify this capacity in activities of strategic interest and in those with existing or potential competitive advantages.

## SWOT Analysis of the Current Situation of the Manufacturing industry

The starting point in drawing up directions for the future evolution of the manufacturing activities is, necessarily, the assessment of the present state of this industry summarized in a SWOT matrix presented in the following table.

**Table 1.** SWOT synthesis of the current manufacturing industry's state

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Sustained economic growth after 2000, with interruption during the 2008-2010 global crisis;</li> <li>• Improving the economic and financial performance of most businesses, including, among other things, reinforcing financial discipline and firmly discouraging arrears;</li> <li>• Industrial production growth by 34.1% in 2015 compared to 2010, a high rate due, to a large extent, to the increase in labor productivity;</li> <li>• Increasing the share of VAB in manufacturing of high-tech and high-tech activities from 22.1% in 2000 to 25.2% in 2014;</li> <li>• Deepening the specialization of the manufacturing industry in activities with competitive advantages, primarily as a result of the selective targeting of investments towards these activities;</li> <li>• Increasing the productivity of work / employee by 19.4% in 2015 compared to 2010;</li> <li>• Reducing the energy intensity of industrial production, in relation to VA and PPP, in the period 2000-2014, to 49%;</li> <li>• Increasing investments in the manufacturing industry at a higher pace than the one on the economy as a whole and on the whole of the industry (including mining);</li> <li>• Prevailing orientation of net investments after 2000 towards the high and medium-high technology sectors;</li> <li>• Substantial contribution of FDI to structural changes in the manufacturing industry;</li> </ul>	<ul style="list-style-type: none"> <li>• Slow pace of structural adjustments to gradually reduce the share of low and medium-low-tech activities and the corresponding increase of those of high and medium-high technology;</li> <li>• Maintaining the still high level of low-tech and medium-low-tech activities in the manufacturing industry's VAB;</li> <li>• The still high share of loss-generating public enterprises;</li> <li>• Insufficient favoring business environment because of the limited expansion of corporate governance, incomplete property rights regulation, ambiguous or incomplete entry or exit provisions in the market and tax regime, continuous change in tax regulations and financial procedures, weakness of the institutional framework in the application of laws and regulations, corruption, lack of transparency of many businesses;</li> <li>• Reduced scientific and innovation potential at the national and manufacturing levels because of the chronic limited financing of the activities, reduced involvement of the private sector and higher education in the financing of R &amp; D programs, continuous reduction of the number of employees, firstly of researchers, from these activities, relatively low share of innovative enterprises, precarious technical infrastructure, lack of adequate motivation of researchers and innovators, low cooperation of R &amp; D units with enterprises, low integration of Romanian researchers into community programs;</li> </ul>

<ul style="list-style-type: none"> <li>• Expanding the financing of R &amp; D programs on a competitive basis after 2000;</li> <li>• Increasing opening of the economy and, in particular, of the manufacturing industry, towards the European Union, increasing the intra-industry trade, mainly with the member countries of the Union, which demonstrates the deepening the complementarity of the production of the Romanian manufacturers with that of the trading partners;</li> <li>• Increasing the share of products of high and medium-high technological level in the export value;</li> <li>• Integration of an increasing number of Romanian producers into international value chains;</li> <li>• The continued good performance of traditional light industry activities;</li> <li>• Significant contribution of SMEs to the production of some industrial sectors, especially in the Food, Beverage, Tobacco, Light Industry, Publishing houses, polygraphy and recording reproducible registrations</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced domestic investment potential;</li> <li>• Low absorption capacity of the structural and cohesion funds granted to Romania by the European Union;</li> <li>• Deep deficiencies of the national education and training system, consisting of its chronic underfunding, its poor real estate and technical infrastructure, the decreasing quality of teaching, lack of matching of the educational offer with the demand on the labor market, lack of the pragmatic character of the education, instability of government regulations;</li> <li>• Chronic negative balance of external trade balance;</li> <li>• High share in the value of imports of consumer goods for which there are substitutes in domestic production;</li> <li>• Lack of consistent involvement of SMEs in high and medium-high-tech activities, the specifics of which are appropriate for productive units of this dimensional category;</li> <li>• Reduced capacity of the Tax Administration National Authority - ANAF to collect taxes and fines and to recover damages caused by negative externalities of productive activities</li> </ul>
<p><b>Opportunities</b></p>	<p><b>Threats</b></p>
<ul style="list-style-type: none"> <li>• Favorable situations resulting from the free entry of Romanian producers into the Single European Market, consisting in the possibilities of expanding intra-industry trade and integrating into international value chains;</li> <li>• Increasing the attractiveness of the Romanian economy for foreign investments, especially for direct ones and, within them, for greenfield types, by gradually improving location factors (quality of business environment, infrastructure, fiscal policy, barriers to entry and exit to / from specific markets, government regulations, institutional stability, combating corruption);</li> <li>• Ensuring favorable conditions for the relocation on the national territory of productive activities from abroad, specific to the horizontal industry, favoring the integration of the domestic producers into the international value chains;</li> <li>• Continuing the construction on the national territory of the trans-European corridors IV and VII sections, as well as the extension of the motorway and high-speed road network, which will increase the demand for products supplied by the indigenous industry;</li> <li>• Continuing the privatization of industrial units still in public ownership;</li> <li>• Intensifying Romania's participation in European Union programs with an impact on industrial activity;</li> <li>• Increasing the participation of Romanian researchers in the R &amp; D Framework Programs of the European Union;</li> </ul>	<ul style="list-style-type: none"> <li>• Further instability of the legislative-regulatory framework, of the institutional framework, of the governmental policies that directly or indirectly affect the development of the manufacturing industry;</li> <li>• Maintaining the low capacity of the central, regional and local public authorities to professionally apply legislative and regulatory provisions (primary and secondary legislation), to absorb the EU Structural and Cohesion Funds to a greater extent, to mark out in strategic terms the economic development at the three mentioned levels;</li> <li>• Excessive exposure of some branches of the economy (agriculture, forestry) to the risk of natural phenomena - drought, floods, landslides - with negative effects because of the precarious nature of specific infrastructures (irrigation, embankments, consolidation of land), which generates real or potential threats to the industrial activities involved directly or indirectly as suppliers of products or as consumers of raw materials in the activity of these branches;</li> <li>• Strong competition from foreign producers, especially from China, India and other Southeast Asian countries, on the markets specific to the light industry;</li> <li>• Competition from other Central and Eastern European producers that have made significant increases in the competitiveness of their products as a result of the implementation of effective policies to stimulate the action of competitiveness</li> </ul>

<ul style="list-style-type: none"> <li>• Expansion of external trade links, restoration of links in traditional markets where relations have diminished significantly from different causes after 1990;</li> <li>• Expanding the export of professional services (technological, managerial, organizational consultancy, etc.) in developing countries;</li> <li>• Exploiting the opportunities created by the imperative alignment of Romania with the principles and norms of environmental protection applied within the European Union by developing the industrial activities producing the technologies, equipment and materials specific to this field</li> </ul>	<p>determinants, as well as the better capitalization of structural and cohesion funds they have been allocated;</p> <ul style="list-style-type: none"> <li>• Further migration to the developed countries of the European Union of a significant part of the skilled labor force, especially of young people, which causes serious gaps and imbalances in the labor market, difficult to correct even in the medium term;</li> <li>• The risk of not aligning Romania with the targets set out in the Europe 2000 Strategy. A strategy for smart, sustainable and inclusive growth, which will, after 2020, attract burdensome fines;</li> <li>• Excessive volatility of financial markets, profound change in demand on product markets due to the emergence of new geo-political circumstances</li> </ul>
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*Source:* Own conception based on the conclusions of the numerous previous analyzes

The directions of future evolution of the manufacturing activities, the structural changes within it and the possibilities for increasing the competitiveness of these activities can be outlined in the light of the SWOT analysis summarized in the table.

### **Possible Developments in the Activities of the Manufacturing Industry and Their Competitiveness**

The range of studies and analyzes carried out after 1990 and the published papers devoted to structural changes in the Romanian economy and industry and its competitiveness are extremely wide and offer numerous points of support for the projective approaches on the respective themes.

The structural changes in industry and the competitive advantages of its activities was evaluated against different criteria, chosen according to the objectives pursued in each analysis. Regardless of the angle of approach of the analyzes, most studies and works come to some common conclusions regarding: the relatively slow dynamics of the structural changes in the Romanian industry; the generally reduced but growing competitiveness of most of the products; the competitive advantages the traditional industrial activities (specific to light industry, metallurgy, metal construction and metal products) continue to present in the international competition; low convergence with the average values of macroeconomic indicators of the European Union; increasing specialization of the manufacturing industry in activities with competitive and potential competitive advantages as a result of substantial FDI. Some studies and works include, in the authors' perspective, possible directions and projections of structural changes in the economy and industry and the predictable levels of competitiveness growth.

The most recent projection in this respect is that of the National Prognosis Commission, which, in the context of the mid-term evolution of the main macroeconomic indicators 2017-2021, also makes projections of the indices of variation of production on the entire manufacturing industry and its component activities (National Commission for Prognosis, 2018). The evolution of the Commission's projection of macroeconomic indicators that are relevant to the objectives of this paper is shown in the following table.

**Table 2.** Projection of the level of some macroeconomic indicators, 2018-2021 (percentage change compared to the previous year)

	2018	2019	2020	2021
<b>Gross domestic product</b> (real growth)	6,1	5,7	5,7	5,0
of which: <b>GVA in industry</b>	5,7	5,4	4,6	4,3
<b>Gross fixed capital formation</b>	7,9	8,4	8,6	7,4
<b>Export of FOB goods</b> (€ billions)	67,8	73,0	78,7	85,0
(%)	7,8	7,7	7,8	8,0
<b>Import of CIF goods</b> (€ billions)	82,5	89,3	96,9	105,3
(%)	8,9	8,3	8,5	8,6
<b>Balance of trade balance</b> (€ billions)	-14,7	-16,3	-18,2	-20,3
<b>Unitary labor cost</b> (%)	2,6	2,8	2,5	1,9
<b>Gross domestic product / inhabitant</b> (euro)	10339	11224	12214	13212

Source: National Commission for Prognosis. Projection of the main macroeconomic indicators 2017-2021, Winter forecast, 2 February 2018, pp. 1-2

The percentage changes of the projected GVA in industry in the period 2018-2021 are continuously inferior to those of GDP in the economy as a whole, which indicates that the industry (mining and processing) will tend to shrink its share in the economy in favor of the expansion of services (the normal evolution towards expanding the share of the tertiary sector in the economy).

The value of the FOB export will continue to grow at a rapid pace, but its growth will be exceeded more and more by that of CIF imports, which will increase the external trade deficit and reduce the ratio of import coverage by export. The deficit would not be worrying if the import would mainly consist of machinery, equipment, and devices necessary for the upgrading and modernization of productive activities and various areas of social life and not of consumer goods, whose demand may be increasingly covered by domestic production.

The industry's contribution to real GDP growth will, according to the projection, decrease from 1.4% in 2018 to 1.0% in 2021, reflecting the further expanding the share of the tertiary sector in the economy, although the contribution of services will fall from 3.7% to 3.1% in the same year; in the structure of GDP per branch, the share of industry will decrease from 24.3% in 2018 to 23.8% in 2021, and service will increase from 55.7% to 56.9% in the same years.

The unitary labor cost, a relevant indicator for labor productivity (is its inverse) and competitiveness, will decrease over the reference period, which means reducing production costs and, implicitly, increasing the competitiveness of products.

In the context of the evolution of the macroeconomic indicators, which shifts the position of the industry in the national economic complex, changes in the structure of industrial production, gross series, are forecasted based on the percentage changes in the production of the component activities compared to the previous year.

According to this projection, manufacturing output for the manufacturing industry will significantly and continuously temper its growth rate: 2018/2017 - 5.8%; 2019/2018 - 5.5%; 2020/2019 - 4.8%; 2021/2020 - 4.4%; reducing the growth rate of manufacturing output largely explains the reduction in the contribution of industry as a whole (therefore including the mining and quarrying) to GDP formation.

If in the years 2016 and 2017, included in the projection, negative values of the percentage changes in many activities were recorded, from 2018 to 2021 it is anticipated that all activities will record increases in their production, even some where the trend of decline was clear in recent years (for example, textile products).

Depending on the projections of variation index in production of manufacturing activities, in the period 2018-2021, they may be grouped as follows:

- activities with an increase of indices over the manufacturing industry average - Coke products, crude oil processing; Pharmaceutical products;
- activities with an increase of indices below the manufacturing industry average - Food, Tobacco, Garments, Woodworking and wood products, Other industrial activities, Repair, maintenance and installation of machinery and equipment;
- activities with a decrease of growth indices - Beverages, Textile products, Tanning and finishing of hides, Paper and paper products, Other non-metallic mineral products, Metallurgy, Metallic and metal products, Computers and electronic and optical products, Machinery and equipment, Road transport vehicles, Other means of transport, Furniture (these activities will continue to register rising productions, but the pace will be less and less).

It is noteworthy that in the Commission's projection a number of activities which, after 2007, have recorded significant increases in the level of some indicators (production value, investment intensity, balance of tangible and intangible assets, export value) - such as Rubber and plastics products, Metal constructions and metal products, Electrical equipment, Machinery and equipment, Road transport vehicles, Computers and electronic and optical products - were included in the last group, where production growth indices are decreasing.

We consider that the development of some of these sectors, together with others that we will list below, must be stimulated by industrial policy, given their evolution especially after 2007, their current state, their competitive advantages, the strategic role they have in general economic development, these considerations giving them promising prospects of future positive evolution. Obviously, the aforementioned arguments supporting the intense development of the processing activities specified below are invalid in the circumstances of materializing some of the threats listed in Table 1 with the most negative effects on the future development of these activities.

Activities with the best prospects for sustainable development are considered as follows:

- Food industry;
- Manufacture of coke products and products obtained from crude oil processing (NACE 19 code);
- Manufacture of basic pharmaceutical products and pharmaceutical preparations (NACE Code 21);
- Manufacture of rubber and plastics products (NACE Code 22);
- Metal constructions and metal products industry (NACE 25 code);
- Manufacture of electrical equipment (NACE 27 code);
- Manufacture of machinery and equipment (NACE Code 28);
- Manufacture of motor vehicles, trailers and semi-trailers (NACE 29 code);
- Information technology services (NACE Code 62), Computer services (NACE Code 63).

In the case of the other manufacturing activities, some of them with a strong openness towards the outside and very good performances on the international markets, but also with potential threats that can influence negatively the perspectives of their evolution, their future depends, decisively, on the ability of the component companies to adapt to dynamic market demands and significantly improve product competitiveness by reducing costs and improving quality.

The performance recorded since 2000 of the mentioned processing activities, which outlines predictable trends that will continue in the future and which may be stimulated by appropriate industrial policy measures, are summarized in the following table.

**Table 3.** Developments after 2000 of manufacturing activities' performance with good prospects

Indicator	FI	CPPO COP	FP	RPP	MCM PI	EE	ME	RT V
<b>The share in the VAB structure of manufacturing (2000-2014)</b>	-	+	+	+	+	c	+	+
<b>Labor productivity growth (2010-2015)</b>	<M	>M	<M	<M	<M	>M	>M	>M
<b>Production indices (2010-2015)</b>	<M	<M	<M	>M	<M	>M	<M	>M
<b>Investment intensity (2000-2014)</b>	-	+	-	-	+	-	-	+
<b>Investment intensity variation (lei/average employees number) (2010-2015)</b>	<M	>M	<M	=M	>M	>M	>M	>M
<b>Share of the tangible and intangible fixed assets (end-2016)</b>	average	high	low	low	high	low	low	high
<b>Share of FDI stock accumulated in activity in total FDI in manufacturing (2002-2016)</b>	-	+	+	+	+	-	-	+
<b>Share of the greenfield FDI stock accumulated in activity in total greenfield FDI stock in manufacturing (2002-2016)</b>	low	high	?	high	low	low	low	high
<b>Share of the number of researchers in the total number of researchers in manufacturing (%) (2015)</b>	2,4	?	15,1	0,1	5,8	9,5	7,1	42,9
<b>Average employees number in activity (2000-2015)</b>	-	-	+	+	+	+	c	+
<b>Share of the activity in the total goods export (2000-2015)</b>	+	-	+	+	-	+	+	+
<b>RCA of the SITC products groups in the export (2000-2015)</b>	+	+	-	-	-	+	+	+
<b>RTB on activities (2000-2015)</b>	+	+	+	+	-	+	+	+

*Note:* FI – Food industry; CPPOCOP – Coke products and products obtained from crude oil processing; FP – Pharmaceutical products; RPP - Rubber and plastic products; MCMPI – Metal constructions and metal products industry; EE – Electrical equipment; ME – Machinery and equipment; RTV – Road transport vehicles

+ - growth; - - down; c – approximately constantly; <M – below the manufacturing industry average;

>M – above the manufacturing industry average; =M – at the manufacturing industry average

*Source:* Own conception, appreciation based on the results of the previous analysis

The review of the level of indicators characterizing the dynamic state of the manufacturing industry during the analyzed periods highlights the fact that all activities present, in different proportions, positive and negative evolutions, the only activity at which the proportion is net in favor of the positive ones being Road transport vehicles. This makes it more difficult to prefigure the prospects for the evolution of the activities selected and presented in the previous table. Industrial policy is but an effective tool to significantly reduce the uncertainties surrounding the future of some activities by stimulating them, in ways that are fully compatible with the competitive market mechanisms, to develop in such a way as to ensure, in the long run, the achievement of strategic objectives of the country's and the economy's development.

The reasons we advocate to stimulate the sustained development in the future of the processing activities presented in the previous table, most of them with prospects for reduction of growth

indices according to the projection of the National Prognosis Commission, are presented in the following table.

**Table 4.** Arguments in favor of stimulating through industrial policy the intense future development of some manufacturing activities

Activity	Arguments
<b>Food industry</b>	<p>Industry of strategic importance, which ensures food security of the population and can contribute substantially to the growth of exports</p> <p>It presents comparative advantages - a broad and diversified base of raw materials, skilled labor, long tradition, many SMEs that can ensure diversification of production</p> <p>It can gradually gain competitive advantages based on the creation and consolidation of an efficient agro-industrial system at national level, the international recognition of reputed national brands, the development of national and foreign distribution chains, the integration in international value chains through cooperation with large companies in the field</p>
<b>Manufacture of coke products and products obtained from crude oil processing</b>	<p>Activity contributing to the provision of material support necessary to social life, development of the branches of economy and other manufacturing activities</p> <p>It presents competitive advantages - indigenous raw material base (with prospects for expansion through the exploitation of hydrocarbon deposits in the Black Sea continental shelf), long tradition, technical expertise, the infrastructure needed to transport crude oil and petroleum products, production flexibility (refinery with modular construction), refinery complexity (Nelson index comparable to that of refineries in Eastern Europe), alignment of fuel characteristics to European standards</p> <p>Wide perspectives for increasing the demand for mineral fuels and lubricants due to the increase of the population motorization, the share of the car transport, the development of agriculture, the increase of the purchasing power of the population</p> <p>It encounters difficulties in internalizing environmental protection costs, which can be overcome by an adequate fiscal policy</p>
<b>Manufacture of basic pharmaceutical products and pharmaceutical preparations</b>	<p>Industry of strategic importance that contributes to the health of the population and to the increase of the efficiency of the export through the high value products that it can provide</p> <p>It has a developed, traditionally and internationally recognized R &amp; D base</p> <p>Presents competitive advantages - tradition, expertise in the field, suitably qualified personnel, internationally recognized brands</p> <p>Opportunities to attract FDI and to relocate the productive units of reputable multinational companies</p>
<b>Manufacture of rubber and plastic products</b>	<p>It presents competitive advantages - tradition, expertise, qualified workforce, product diversification</p> <p>It has attracted a relatively high volume of foreign investment, especially indirect (less greenfield type), which has allowed the upgrading of production equipment and manufacturing technologies</p> <p>Produces some products marketed under internationally reputed brands (Continental, Pirelli)</p> <p>It is related to another manufacturing activity - Road transport vehicles - which is spectacularly expanding, to which it supplies a large part of the necessary tires and accessories</p>
<b>Metal constructions and metal products industry</b>	<p>Industry with a special role in the technical endowment of the branches of the economy and other manufacturing activities</p> <p>It attracted a growing volume of investment, especially FDI, which allowed the recovery and modernization of activity, reflected by the increase of its weight in the export of products</p> <p>It has the potential to improve the product quality and the level of the RCA and RTB indicators</p>
<b>Manufacture of electrical equipment</b>	<p>Industry with an important role in the technical endowment of the branches of the economy and other manufacturing activities</p> <p>It attracted a growing volume of investment, less foreign direct investments, which contributed to the modernization of the productive apparatus and to the increase of the labor productivity above the average in the manufacturing industry</p>

	<p>It includes a large number of SMEs that ensure production flexibility and diversification of the manufacturing nomenclature</p> <p>It includes wholly foreign-owned companies with a significant export contribution (in the production of automotive wiring, electrolytic capacitors, etc.)</p> <p>It has a good external competitiveness of products</p>
<b>Manufacture of machinery and equipment</b>	<p>Industry with an important role in the technical endowment of the branches of the economy and other manufacturing activities</p> <p>Presents competitive advantages - skilled labor force, technical expertise, high intra-industry trade potential, high production integration in some sub-activities</p> <p>At the production of some product groups there is complementarity with similar sub-activities in European Union member countries (e.g. in shipbuilding)</p> <p>Has sub-activities in which partnerships have been established with reputable foreign firms (for example, in the automotive factory with Siemens - Germany, in the manufacture, maintenance and repair of subway vehicles with Bombardier - Sweden, Alstom - France, etc.), or which have grown spectacularly based on the acquisition of manufacturing licenses from prestigious firms (for example, in wagon manufacture from Siemens, De Dietrich, Alstom)</p> <p>Presents good competitiveness of export products</p> <p>The Bearing manufacturing sub-activity is one of the most advanced, highly integrated, operates on a well-defined niche market (spare parts)</p>
<b>Manufacture of motor vehicles, trailers and semi-trailers</b>	<p>Industry with an important role in endowing with the specific means the whole society (population, institutions, enterprises)</p> <p>This is the activity with the most spectacular development since 2000, due, primarily, to the massive investments made by two world giants, with rising performances at all levels, especially at export</p> <p>It benefits from competitive advantages consisting of a highly skilled workforce, high R &amp; D potential, a large network of internal sub-contractors (horizontal industry) that provide quality components and accessories, access to international distribution channels provided by the two investing companies</p> <p>It has the prospect of a high demand for its products on the domestic and international markets</p> <p>Its products are of medium-high technological level, with substantial value added, their high weight in the value of the export being an important factor for increasing its efficiency</p>
<b>Information technology services, Computer services</b>	<p>(The activities do not appear in Table 3 because the Romanian Statistical Yearbook does not provide data on the status and performance of these activities)</p> <p>(Including: 62 - designing software systems, software applications, databases, websites, software adaptation to specific customer applications, consulting in Information technology, management and exploitation of means of calculation; 63 - providing the infrastructure for data processing, hosting and managing web pages, web portal activities, etc.)</p> <p>Activities that play an essential role in digitizing society and providing support for the building of the information society</p> <p>It presents the essential competitive advantage of having a highly professional and creative workforce, confirmed by the frequent requests of Romanian specialists abroad</p> <p>It advertises small investments, oriented towards the recruitment and improvement of human resources</p> <p>They are aligned with advanced technologies in the field - development environments, methods of modeling and application architecture, application/solutions development, etc.</p>

Source: Own conception

The competitive advantages of the processing activities highlighted in the table and the prospects for their development call for incentives to them, derived from a clear strategic line that marks out future efforts to continue strategic changes and increase the competitiveness of those activities.

## Conclusions

- Changes in the structure of industrial production and, more relevantly, in the GVA produced by the manufacturing industry, have caused changes in the structure of the country's foreign trade relations, where this industry has, by far, the majority share. The cycle "selective investments in the industrial sectors - changes in the structure of industrial production - changes in the structure of trade relations - increase of the competitiveness in these relations - obtaining higher profits from the sale of products - allocation of increased quotas from the profits obtained to the selective investments in the sectors" has proved its viability by differentiating the sectors from the point of view of their economic and financial performances on domestic and international markets. Numerous factors of an economic, social and political nature have led to differentiation, sectors that, through their policies and the strategies of their component companies, have synergistically combined the action of these factors, managing to progressively become more efficient and competitive;
- Restructuring efforts at the sectoral and firm level have been severely hampered by the precarious state of some of the main determinants of competitiveness - the scientific and innovation potential, the domestic investment potential, the availability and qualification of the necessary labor force, which has repercussions on economy, industry and industrial products' competitiveness on international markets;
- The notable advances in competitiveness during the analyzed period consisted in: increasing the share of the high- and high-medium-tech products and services value in the export value; the still modest reduction of import value in that of export to many products; the intensification of intra-industry trade, which signifies the deepening of complementarity of domestic production with that of trading partners, especially with those in the European Union; wider opening of the economy and manufacturing industries to the world and the Union; the integration of an increasing number of Romanian producers into international value chains; increasing the presence of Romanian industrial products on markets recognized for their special requirements, such as those in North America and the European Union;
- Competitiveness shortfalls caused by the aforementioned deficiencies, which are largely perpetuated from the centralized economy, consist in: the still higher share of raw materials and primary processing products in the export value; insufficient turning to account the existing and potential comparative and competitive advantages of certain manufacturing activities (e.g. Food, beverages, tobacco); the persistence of the external trade deficit caused, inter alia, by the major share in the import value of consumer goods for which substitutes exist in domestic production; the low weight or narrowing to insignificant dimensions of foreign markets on which there were consolidated links of Romanian producers; insufficient advertising on the international markets of Romanian companies and products; the reduced number of Romanian products consolidated brands abroad; the poor activity of some Romanian commercial representations abroad.
- The evolution of the state and performance of the manufacturing activities after 2000 revealed structural changes in the manufacturing industry with implications for its overall competitiveness and with very varied perspectives of the future dynamics of these activities. Depending on the perspectives, we have selected the manufacturing activities that, in our view, present competitive advantages that are likely to ensure sustainable development, or are capable of turning progressively to account their potential competitive advantages;
- Partial differences between the National Prognosis Commission's view and mine regarding the prospects for the medium-term development of manufacturing activities are, in our

- view, explained by the nature of the approach: in the case of the Commission, a quantitative projection based on recent trends in macroeconomic and in the production of the activities concerned; in our case, the qualitative assessment of the prospects for the evolution of the selected activities, based on the analysis of trends in the dynamics of the relevant indicators regarding their status and performance in the last decade and a half;
- Activities considered to have the best prospects for development may follow the foreseen trajectory due to their own efforts, but also it is necessary to stimulate this development through appropriate governmental measures derived from an industrial policy, in line with trends in the European Union and other developed countries in the world. These trends set the role of industrial policy as an effective tool to stimulate structural changes in the direction of progressive building of the information society and the knowledge economy, consistent with sustainable development.

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