

MODERN MANUFACTURING AS CAPITAL-INTENSIVE SECTOR

Astra Auziņa, RTU, Latvia

Manufacturing^a for considerably long time period has been comprehended as a labour-force demanding sector. By definition the concept of manufacturing means involvement of labour-intensive (manual) power. Many of manufacturing branches as manufacture of textiles, manufacture of food products, manufacture of furniture etc. involve a considerable lots of labour hours during full production cycle – from raw materials to final consumption (or intermediate) consumption product. Long working hours and large number of employees were some of the chief characteristics of manufacturing sector's enterprises.

Nowadays due to increase of labour costs, strict regulations regarding the working hours per week and shifts, safety at work regulations, insurance, ect., many functions and operations so far been implemented by labour force have been replaced by machines and equipment.

For estimation and evaluation the actual share of capital and labour costs in manufacturing branches costs' structure can be applied the author's calculated indicators – ratios:

- 1) ratio between total compensation of employees and total value added;
- 2) ratio between total compensation of employees and total output;
- 3) ratio between total capital consumption and total value added;
- 4) ratio between total capital consumption and total output.

According to the carried-out international comparison, share of labour costs in total economy is larger than in total manufacturing and in majority of manufacturing branches. However, the results of comparison indicate that value added per unit of output in Latvia a one of the lowest. Regarding the unified data source's (Eurostat) statistical information: in Latvia, value added per unit of output was 0.245, along with the lowest level was in Bulgaria (0.203), and the largest value added per unit of output was in Greece (0.365).

In accordance with the research results on the labour costs share, the level of compensation of employees per unit of output is varying between different manufacturing branches. For instance, manufacture of chemicals (0.213), manufacture of wood articles (0.130), manufacture of food articles (0.141), on average in manufacturing sector the ratio is 0.153, however, in total economy due to service industries impact it is accounted for 0.214.

Equipment, machines, etc. become more and more sophisticated and, in many cases, the costs of purchases, installation, upgrades of technologies increase from year to year. As technologies cost more, share of capital costs enlarges.

Many manufacturing branches cannot be directly compared with the situation 10, 20 or even more years ago. For instance, food industry has significantly changed the manufacture of many products due to high costs, availability of new lower-costs raw materials, changes in consumers' tastes, tough competition between domestic and foreign companies, and other factors. Consequently, due to changes in technologies and applied equipment, raw materials demanded in production have undergone changes.

Sophisticated and comprehensive analysis of existing current manufacturing branches costs' basic structure give an insight of great importance in overall technologies and demand for capital and labour resources. These issues are object of further detailed research in many countries to reveal relations, connections, interrelations. Such ratios, as above mentioned, form an additional essential information source for further sectoral analysis and forecasting. These indicators and many indicators alike them are integrated in macroeconomic models, including multisectoral macroeconomic models all over the world.

^a According to NACE 1.1.rev. classification „Manufacturing” is D group of economic activities (“The manufacturing activity is the mechanical, physical or chemical transformation of materials, substances or components into new products. The materials, substances or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities.”).