STRUCTURAL ASPECTS OF LABOR FORCE COST COMPETITIVENESS AMONG EMPLOYEES IN CROATIA’S MANUFACTURING INDUSTRIES

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It is necessary to point out that competitiveness in the manufacturing industry is an area that encompasses:

• macroeconomics (wage growth management policy, monetary policy with reference to prices, exchange rate policies and so on);

• microeconomics (specific production functions, specific operating conditions on domestic and foreign markets, financing conditions);

• strategic management (horizontal and vertical linkage of products, marketing strategies and so on).

Thus, findings related to cost competitiveness are considered within the broader context of overall competitiveness.

A special facet of competitiveness is the human dimension of competitiveness. Industrial production has long ceased to be a predetermined process in which employees only service an assembly line. Employee satisfaction and motivation are among the key prerequisites for the growth and development of individual companies and therefore of entire industrial sectors. Managing cost competitiveness thus requires constant attention to non-cost aspects, which constitute an important part of the manufacturing process, particularly to motivation and creative abilities of people. Man-
agers must ensure that employees are motivated and able to perform increasingly complex and customer focused tasks.

At the same time, conclusions related to running a cost competitiveness policy will be conceptually and substantially different for different industries. Accordingly, the guiding idea underlying this research was that it should depict, in a five-year cross-section, seven different manufacturing industry sectors, analyzing the sector-determined wage trends. First of all, we compare wages to productivity trends in the economic branches under observation and finally compare them with export and import growth rates as indicators of competitiveness.

Table 1 Typology of industrial sectors

<table>
<thead>
<tr>
<th>Industry type</th>
<th>Indicator</th>
<th>Examples used in the analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor-intensive industries</td>
<td>Share of wages in total costs</td>
<td>Textiles, Lumber processing</td>
</tr>
<tr>
<td>Capital-intensive industries</td>
<td>Share of capital in total value</td>
<td>Chemicals, Coke and petroleum derivates</td>
</tr>
<tr>
<td>Technology-intensive industries</td>
<td>R&amp;D outlays in total turnover</td>
<td>Telecommunications equipment</td>
</tr>
<tr>
<td>Marketing-intensive industries</td>
<td>Marketing outlays in total turnover</td>
<td>Food and beverages</td>
</tr>
<tr>
<td>Resource-atypical industries (mainstream)</td>
<td>Any combination of the above</td>
<td>Machinery construction Production of other means of transport (shipbuilding)</td>
</tr>
</tbody>
</table>

For Croatia, a typical country with a small market and a high level of liberalization in the international trade regime, the question of competitiveness in specific industrial branches is actually a question of export competitiveness. One dimension of the research was thus the need to analyze the exports of various types of industries during the period under observation.

Graph 1 Exports of selected manufacturing industry sectors 1998-2002 (in million $)

As the graph shows, over the past five years Croatian exports experienced notable structural changes. Export restructuring differentiated certain industries into winners and losers, i.e. sectors which retained or acquired competitive capacity on foreign markets, and sectors that gradually lost their presence on foreign markets.

Export trends, particularly during this brief period, were subject to the cyclical oscillations and fluctuations characteristic of a structural change in an industry, influencing the pace of growth.

Growth or decline trends in absolute and relative terms in the exports of specific industrial sectors are rare. By presenting data on export trends, we can systemize an entire economy in terms of exports through four groups of industrial sectors:

- group A, which experienced a decline in exports throughout the period, and which includes the textiles sector;
- group B, which experienced growth in exports throughout the period, and which includes the production of telecommunications equipment, machinery and other devices;
• group C, which is characterized by stagnation – the maintenance of approximately the same absolute level of exports throughout the period – and which includes lumber processing and the production of electrical devices and appliances;

• group D, which experienced a decline in exports at the end of the 1990s, a consolidation of exports at the beginning of 2000, and finally a further slowdown in export growth which began in mid-2002, and which includes capital-intensive sectors such as coke and petroleum derivates production and the chemicals industry;

• group E, which is characterized by atypical export trends, present in the production of other means of transport (most sectors pertain to shipbuilding);

• group F, which is characterized by a trend towards export consolidation and encompasses the food and beverage sector from 2001 to the present.

Manufacturing industry labor productivity trends (1998-2002)

Graph 2 Average labor productivity in selected manufacturing industries, 1998-2002

Note: Graph 2 shows the average of observed monthly indicators for the current year in comparison to the average of indicators for the same period in the previous years
Source: the author, using data from the National Statistics Bureau
The fundamental microeconomic postulate of cost competitiveness of the manufacturing labor force is the imperative that wage rises must derive from labor productivity growth. According to marginalist theory, the price of inputs (wages in this case) must equal the productivity deriving from the use of this input (employees in this case). In other words, increased production made possible by the increased quality or intensity of the efforts of an individual – accompanied by a fixed combination of technology – must/should be awarded with higher wages. To be sure, average productivity trends in the sector do not provide sufficiently detailed information on labor productivity in a specific production plant, productivity in various operating units (such as finance and accounting or marketing) or management process productivity. Additionally, companies within a single sector differ from one another in terms of the combinations of labor, capital and technology encompassed in production. This abstraction can certainly not be neglected for the needs of analysis and consideration of this model, but the connection between average productivity and average wage growth is doubtlessly an essential indicator.

Thus, disregarding the aforementioned, we can still point to the following structural features of productivity trends:

- in line with the recession in 1999, all sectors in that year – with the exception of coke and petroleum derivate production – experienced a decline in average annual productivity;
- 2000 was a year of revitalized industrial production, in line with growth in the volume of production and labor productivity;
- above-average labor productivity growth (annual labor productivity growth over 10%) has since 2000 been characteristic of production of machinery and other devices, chemicals, and telecommunications equipment;
- slower labor productivity growth (annual labor productivity growth under 10%) has since 2000 been characteristic of the foods, lumber processing and textiles sectors;
- the coke and petroleum derivate sector is specific in that its growth was significant throughout the period under observation, except in 2000, but it is not a typical industrial sector due to the monopolistic position of the national petroleum company INA, while the market has a different impact on it than on other sectors;
• in the textiles and other means of transport (dominated by shipbuilding) sectors, a decline in the annual rate of labor productivity growth was recorded.

This study has analyzed trends in employment, imports, exports and productivity with the goal to compare them with trends in the aforementioned industrial typology.


*Graph 3 Average net wages in selected manufacturing industry sectors 1998-2002 (in HRK)*

As shown in the graph, and even more clearly in Table 1, during the period under observation the following trends were present:

• labor-intensive industries, such as the textile and lumber processing sectors, were characterized by below-average wage growth (25 to 40% lower than the manufacturing industry average) at the beginning and end of the period, i.e. the ratio between average nominal wages in the sector and those in the manufacturing industry as a whole has deteriorated since 1998;
• average wages in the machinery and equipment production sector (which we have classified as a resource-atypical industry) were lower than the average during the period under observation, but average wages grew faster than the overall industry average, so that by the end of the period they were almost equal to the overall average;

• average wages in the coke and petroleum derivate production sector (capital-intensive industries), which were among the highest in this sample at the beginning of the period – 33% above the average – grew somewhat slower than average during the period under observation, but at the end of the period they were again among the highest wages in the sampling (31% above the average);

• sectors with above-average wage growth were: production of other means of transport (72% growth), production of electrical appliances and devices (84%), and production of telecommunications equipment (83%), so that by the end of the period under observation wages in them were from 30% to 60% higher than average manufacturing industry wages.

Instead of a conclusion: the answer is not in labor cost competitiveness...

Even though a simple interpretation of the general industrial trends shown by the indicators would lead to the conclusion that a growth of average wages that is faster than the growth in average labor productivity has negative consequences for the cost competitiveness of the labor force in the manufacturing industry and thereby its export competitiveness, a detailed sector-by-sector analysis points to different findings.

The analysis of average net wage trends in various sectors and trends in productivity, employment, exports and imports leads to the conclusion that the growing export sectors do not correspond to the pace of growth in labor costs. The growth in exports in specific sectors does not correlate with the dynamics of labor costs in that sector. Moreover, the radio, television and telecommunications equipment production sectors, and the food and beverage production sector, which exhibit the highest wage growth (both in absolute and average terms, wages are growing faster than productivity), represent a source of export growth in the period under observation.
On the other hand, not only did wages grow most slowly in labor-intensive sectors, which was to be expected, but the wages in these sectors rose in accordance with the need to satisfy the conditions for the maintenance of the cost competitiveness of the employed labor force. In other words, wage growth in these sectors accompanied growth in labor productivity. Despite the modest wage growth, the shares of these traditionally export-oriented Croatian sectors in overall exports declined in both absolute and relative terms. Thus the maintenance of labor force cost competitiveness did not even facilitate the maintenance of the level of competitiveness on foreign markets for the textiles or the lumber processing industries.

From everything that has been said it may be concluded that for manufacturing industry export competitiveness certain non-cost factors are crucial: investment in technological development, an efficient system of distribution, successful marketing campaigns, superlative design and product quality, a flexible management structure, good acquaintanceship with new markets and consumer needs, as well as a pay system that provides incentives for employee creativity.

LITERATURE


