

# IMPACT OF FOREIGN OWNERS ON THE RESTRUCTURING PROCESS OF ESTONIAN MANUFACTURING ENTERPRISES

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## Abstract

A large amount of foreign direct investment has moved into the transition countries as a result of the privatisation process. The purpose of this paper is to analyse empirically the role of foreign owners in the restructuring process of Estonian manufacturing enterprises. The main hypothesis is that foreign ownership contributes to an increasing efficiency at the company level in general. The second hypothesis is that enterprises representing different forms of ownership use different models for restructuring.

Efficiencies of domestic and foreign-owned enterprises in the manufacturing sector will be compared, using the pyramid of efficiency worked out by the British Institute of Management and Centre for Interfirm Comparison. Firm-level data of the Estonian Statistical Office for the period 1995–1998 will be used.

The analysis leads to the conclusion that foreign enterprises contribute to an increasing efficiency at the company level, having especially high labour and capital productivity, paying higher wages and having a several times higher ratio of fixed assets per employee. Another result of the paper indicates that foreign enterprises are more engaged in strategic restructuring, their labour productivity having increased because of sales growth. Moreover, they are more capital intensive, pay higher salaries, are more export oriented, have more assets per employee and have a high investment capability. At the same time, domestic enterprises are more likely to use re-active restructuring, reflecting from their growth of labour productivity owing to a reduced number of employees, decrease in costs and low returns on capital. However, there are some important signs for domestic enterprises to be

engaged in strategic restructuring as well, indicating that foreign investors motivate domestic enterprises to follow their strategy.

The results of the paper indicate the relevant role of foreign direct investment in speeding up the restructuring of manufacturing industry.

## **1. INTRODUCTION**

Most transition economies of Central and Eastern Europe state as official policy their intention to attract additional foreign direct investment. However, there is an active debate in these countries over whether the foreign ownership is too large, whether most of the benefits of foreign direct investment go to foreign nationals and whether a large foreign ownership share might produce some negative externalities for economic policy and for development of these countries.

Many authors argue that foreign direct investments have played a crucial role in supporting national enterprises to overcome the problems of restructuring and in providing more support for economic growth. Nowadays the fact is accepted that the change of ownership structure is crucial for increasing enterprise efficiency, but it creates only a possibility for growth. Actually the comprehensive restructuring of an enterprise is necessary for the improvement of efficiency. As large amount of foreign direct investment has moved into the Central and East European countries through privatisation process, there is a growing interest about the role of foreign direct investment in enterprise restructuring. This paper attempts to look at the problem from a viewpoint of improving industry efficiency contributed by foreign direct investment.

Purpose of this paper is to analyse empirically the role of foreign owners in the restructuring process of Estonian enterprises. The main hypothesis is that foreign ownership in manufacturing industry contributes to an increasing efficiency at the company level in general. The second hypothesis is that enterprises of different ownership forms use also different models for restructuring.

In order to achieve the purpose of the research paper, efficiency of domestic and foreign owned enterprises in manufacturing sector will be compared. Due to the lack of data, the issue is estimated not distinguishing local outsiders, managers, employees and other ownership types. For analysing and comparing enterprise efficiency the pyramid of efficiency worked out by British Institute of Management and Centre for Interfirm Comparison will be used. It

has been adjusted according to the specificity of this paper and available data. The crucial aspect of the pyramid is that it is applicable for every manufacturing or another sector firms independently from firm size and for making comparison between international organisations. The analysis gives complex and systematic overview about the enterprise performance. It allows distinguish the re-active<sup>1</sup> and strategic<sup>2</sup> restructuring behaviour of firms. The data from balance sheets and income statements are used. The available database for period of 1995–1998 allows comparing a number of performance indicators for foreign investment enterprises and domestically owned enterprises in general.

The intuition for results is that foreign investment enterprises are more successful in restructuring, especially in strategic restructuring, because this needs capital both in physical and investments form. These are scarce resources, especially in transition period. Also the imperfection of product, labour and capital market restricts restructuring process. That gives advantage to foreign investors who could have impact on industry efficiency due to the ownership-specific and internationalisation advantage.

## **2. THEORETICAL BACKGROUND**

In previous literature the importance of privatisation in restructuring process has been emphasised. Privatisation has characterised as the key of enterprise restructuring /23/. None of the authors has tried to dispute that, but it has been argued that privatisation does not increase efficiency and contribute successful restructuring itself. That means that for efficiency improvement it is necessary to determine privatisation policy together with other policies as antitrust, trade and foreign direct investment policy /25/. Clarity and transparency of privatisation policy and the choice of privatisation method are also important /13, 15, 28/. Purju and Teder have claimed that privatisation itself does not provide progress, but important is when (which year) and to whom (ownership type) has been privatised /24/.

Majority of the studies have confirmed the hypothesis that outsider ownership compared to insider ownership contribute to strategic restructuring and increase the economic efficiency of enterprises /3, 5, 9, 16/. In case of outsider there is also a difference between foreign investors and local outsider owners. Usually the positive impact on restructuring is larger in case of foreign investors, but there are also opposite evidences /22/. In case of insider privatisation

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<sup>1</sup> Re-active restructuring is defined as improvement of cost competitiveness without major investments in plant and equipment. In this paper it is measured by profitability and the factors affecting it.

<sup>2</sup> Strategic restructuring is involving a forward-looking strategic orientation – new investment, reorganisation of product lines and processes. In this paper it is measured by changes in sales and capital structure.

the performance of enterprises with managers ownership has also been better than that of enterprises acquired by employees /1, 4, 8, 19/. Of course, it would be wrong to determine that evidence so evenly and always have stage for contrary situations. For instance, Djankov and Pohl did not find so strong difference between ownership type and its impact on restructuring, when studying the restructuring of Slovak enterprises. The firms with manager ownership were engaged with strategic restructuring without foreign ownership /6/. Better performance of foreign investment enterprises compared to insider owners has also not been found by many other authors /19, 14, 26/. But, it still can be talked about the most general viewpoint of that problem.

Hence, we may conclude that foreign investment enterprises are not always more successful than domestic enterprises in the process of restructuring and efficiency enhancing. Despite that in recent literature several aspects have been pointed out, which explain the role of foreign direct investment in enterprise restructuring. These aspects are following:

1. Through foreign direct investments capital transfer takes place and it includes investments and physical assets /2, 13, 17/.
2. Foreign investors can establish effective corporate governance /7/.
3. Foreign direct investments create transfer of knowledge in the form of management, know-how and technology /18, 21/.
4. Foreign investors have international relationships and they create linkages between domestically owned enterprises /20, 29/.
5. Foreign direct investments rearrange the industry structure and thus the specialisation patterns of a country /17/.

All these aspects are basis for efficiency improvement and stimulate economic growth.

In more recent literature there has been referred to the impact of foreign investment enterprises on industry efficiency as foreign investment enterprises may affect efficiency by increasing productivity through their own activities and spill-over effects on domestic enterprises. Theoretical background of that relates to the concept on ownership-specific advantages of foreign investors as a precondition to invest abroad and to the concept of internationalisation advantages originating from being a part of a network of multinational enterprises /27/.

### **3. DATA AND METHODOLOGY**

For the empirical analysis, annual financial data on enterprises of manufacturing industry, collected by Estonian Statistical Office (ESO), have been used. The analytical period is 1995–

1998. Analysis is mainly based on 330 enterprises, as these were present during the whole period. All enterprises belong to private owners. Enterprises, which were in state ownership at the beginning of the period, have been removed from the sample.

The main issue in the context of the present paper is to determine, which enterprises in the sample are foreign owned. According to the criteria of the ESO, enterprises are considered to be in foreign ownership when the share of foreign capital exceeds 50%. Authors of this paper believe that also enterprises with a minority foreign ownership should be included, because with it foreign investors still have the control over enterprise's management. In this paper, enterprises with at least 10% share of foreign capital are considered foreign investment enterprises. It also responds to the criteria for foreign direct investment set up by the Bank of Estonia.

All enterprises in the sample are divided into four groups:

- 1) Enterprises in domestic ownership during the observed time period (DE);
- 2) Enterprises in foreign ownership during the observed time period (FIE);
- 3) Enterprises with an ownership change from domestic to foreign ownership (DE to FIE);
- 4) Enterprises with an ownership change from foreign to domestic ownership (FIE to DE).

The given division will be a basis for the analysis of ownership dynamics in the Estonian manufacturing industry as well as the comparison of efficiency of different enterprise groups. The only problem is that groups are quite different in number of enterprises belonging to them, which may produce some distortions.

Another problem comes from the fact that the sample includes enterprises with different size. This can also cause biased results, which must be taken into account when conclusions will be made.

As methodology for analysis, the pyramid of efficiency worked out by British Institute of Management and Centre for Interfirm Comparison is used /12/. The pyramid consists of three ratios and factors affecting them. The main indicator is the return on assets, which is determined by the relationships between profit and sales as well sales and capital employed. The magnitude of profit and sales ratio is determined by cost factors (costs structure, labour productivity, capital-labour ratio and average wage). The return on assets is determined by sales income (including export performance) and capital structure and utilisation (assets per employee). It is possible to determine the restructuring models with help of three parts of the pyramid. Because of the cost reduction aim of the first part of the pyramid it is treated as the

model of re-active restructuring. The second ratio and factors affecting it express the change in investments and sales, reflecting the strategic behaviour of the firm and thus treated as a strategic restructuring model.

#### 4. CHARACTERISTICS OF ESTONIAN MANUFACTURING INDUSTRY AND THE POSITION OF FOREIGN ENTERPRISES

The structure of Estonian manufacturing industry is quite traditional one. The share of manufacturing in economy is low – 14,8% in 2000. Majority of value added is produced in food products, textile and wood industry. The production of manufacturing itself gives a quite low value-added, because the large amount of products is produced in the form of contract work. Therefore it is quite difficult to compare the performance of Estonian manufacturing industry with that of other transition countries of Eastern and Central Europe, where the share of manufacturing sector in GDP is many times larger than in Estonia. For this reason, the comparison with other transition countries will not be done. However, the attractiveness of Estonian manufacturing industry, similarly to other Eastern and Central European economies, consists in cheap production factors as raw material and labour force.

In order to examine the role of foreign investment enterprises in Estonian manufacturing sector, at first the number of foreign owned enterprises and its change during the observed period will be given. As will be evident from Figure 1, the share of foreign investment enterprises fluctuates between 24 to 28% of the total number of manufacturing enterprises, not having any certain tendency to change.

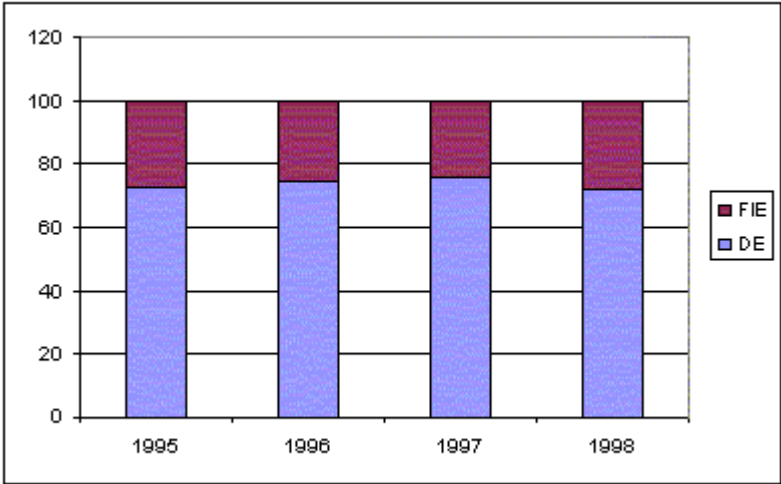


Figure 1. Share of domestic and foreign owned enterprises in manufacturing industry (%).

Figure 2 indicates the division of enterprises according to the ownership dynamics during 1995–1998. The largest part of enterprises (225) have been in hands of domestic owners all the time, 72 enterprises used to be foreign owned, 19 domestic enterprises have been bought by foreign investors and 14 enterprises have passed a change from foreign to domestic ownership.

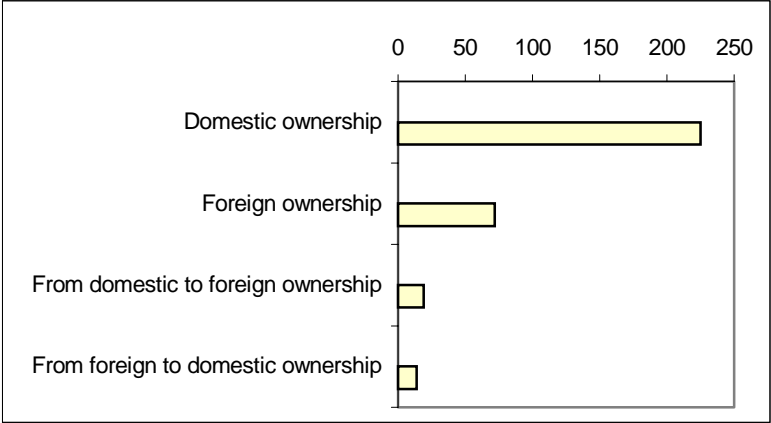


Figure 2. Ownership forms of manufacturing enterprises in 1995–1998

Although the number of foreign owned enterprises is almost four times less than that of domestically owned enterprises, foreign enterprises have a larger share of capital in the total capital of manufacturing industry (see Figure 3). The share of capital of foreign investment enterprises builds almost two thirds of the total capital of the industry. Although it has decreased during 1995–1997, in the last year of observation the share is over 60% again. The latter indicates to a much better capitalisation of foreign owned enterprises.

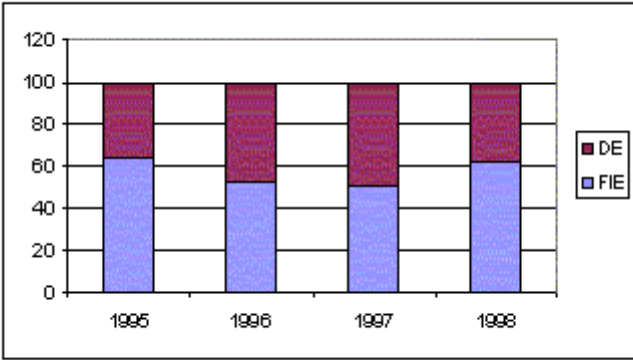


Figure 3. Division of total capital of manufacturing industry (%).

Comparison of foreign and domestic enterprises by their number of employees (see Figure 4) shows that in domestic enterprises the number has been at quite an unchanged level in course of 1995–1997, but in the last year it has steeply decreased. At the same time, foreign owned

enterprises tend to increase the number of employees during the whole period of observation. In 1998 there are already 25% more people employed by foreign enterprises. The latter indicates that foreign enterprises are able to produce with higher economies of scale and to better satisfy the needs of wholesales and retail sales firms.

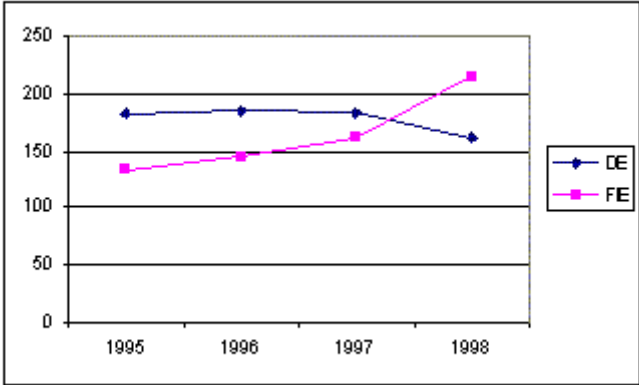


Figure 4. Number of employees in domestic and foreign owned enterprises.

One possibility for explaining the changes in employment can also be that employees of domestic enterprises have moved to foreign enterprises. However, the number of employees in the industry as a whole has also decreased in the observed period. Now it starts to increase again, despite the relatively high unemployment rate.

**5. COMPARATIVE ANALYSIS OF EFFICIENCY OF DOMESTIC AND FOREIGN OWNED ENTERPRISES**

The following analysis will be divided into three parts. In the first part, the factors indicating to the re-active restructuring (profitability and the factors affecting it) will be analysed. The second part is dedicated to the analysis of factors that indicate to the strategic restructuring (assets turnover). In the last part, return on assets of different enterprise groups will be compared.

One of the first signs of restructuring of an enterprise is the change in labour productivity, resulting from the reorganisation of resources. From Figure 5 it will be evident that labour productivity (calculated as the ratio of net sales and the number of employees) of foreign enterprises is about two times higher than in domestic enterprises. This indicates that foreign enterprises use more efficiently the available labour force, which also means that employees of foreign owned enterprises should be more motivated, qualified and trained. At the same time, if we look at the number of employees (see Figure 4), it will be evident that much of the



increase in labour productivity in domestic enterprises is resulting from labour force reduction. It is also worth mentioning that the change of ownership form during the period has not played any role in determining the ratio. Only a little bit faster increase of labour productivity can be noticed in the group of enterprises that have passed an ownership change from foreign to domestic, compared to foreign enterprises.

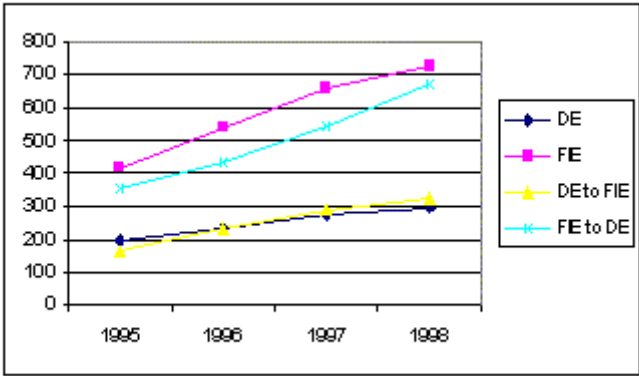


Figure 5. Labour productivity (computed as ratio of net sales to employees, %) in different enterprise groups.

The positive correlation between labour productivity and capital intensity has been assured in many studies. Figure 6 confirms that circumstance, as foreign enterprises appear to have a higher capital-labour ratio as well. The ratio of total capital per employee tends to increase in all observed categories of enterprises, but there is still a difference of almost four times between domestic and foreign owned enterprises in 1998. As may be seen from the Figure, the group of enterprises that have come from foreign to domestic ownership differs totally from all other groups. At the beginning, in time of foreign ownership it proves a steep increase in capital productivity, but after transferring the ownership to domestic hands, ratio has decreased. However, the ratio remains higher than in foreign owned enterprises.

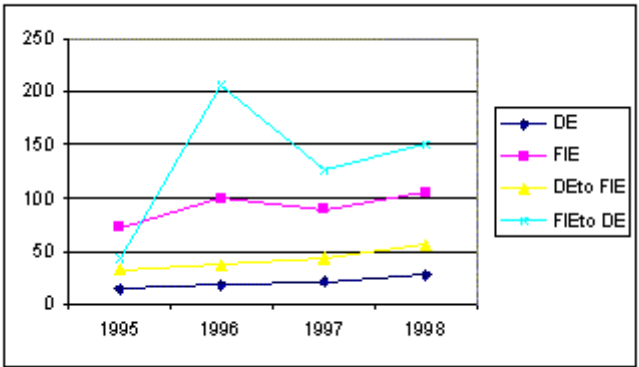


Figure 6. Capital productivity (computed as ratio of total capital to employees, %) in different enterprise groups.

The analysis of wage differences indicates that foreign enterprises pay higher wages per employee than domestic ones. Figure 7 shows that whereas there were almost no differences in the indicator in 1995, the difference has grown during the observed period, amounting to 35% in 1998. The ability of foreign owners to pay higher wages appears also in both groups of changing ownership. Therefore it can be said that the labour force of foreign enterprises is more motivated, which reflects also in their higher labour productivity. The latter also enables to conclude that foreign enterprises consciously pay higher wages to attract more qualified labour and avoid tensions. Hence, the conclusion can be made that foreign enterprises are more productive than domestic ones.

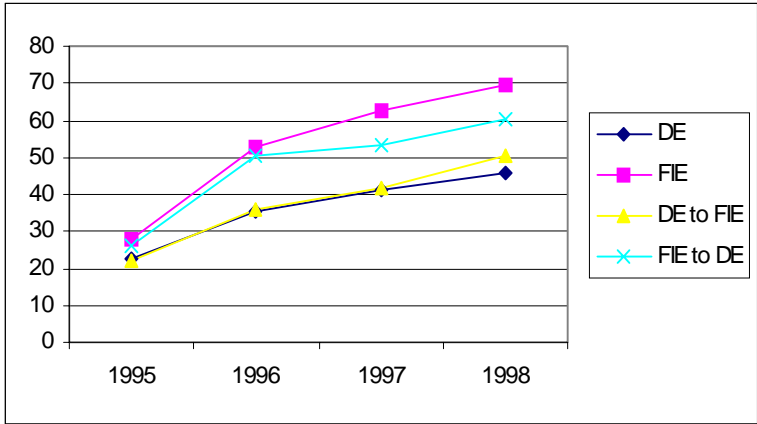


Figure 7. Wage per employee (in thousands EEK) in different enterprise groups.

The analysis of unit costs confirms that material assumptions for productivity improvement of production process is valid more in case of foreign than domestic enterprises. If we analyse

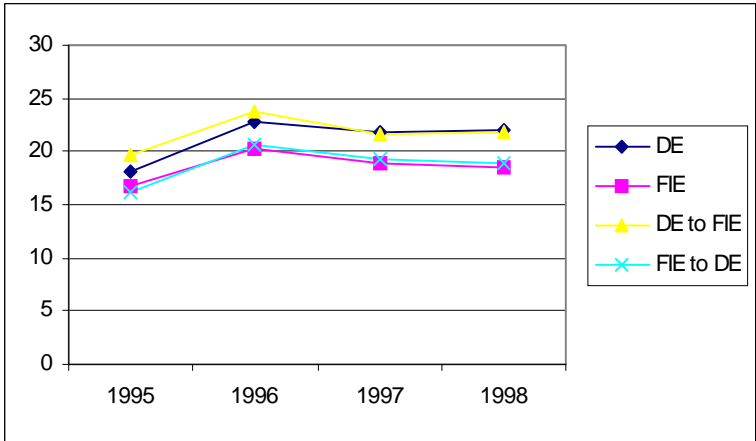


Figure 8. Unit labour cost (computed as ratio of wage per employee to labour productivity), (%) in different enterprise groups.

the change of unit labour cost, it appears that the situation is quite similar in all groups of enterprises (see Figure 8). Ratio has been relatively stable during the whole period of observation. Nevertheless, domestic enterprises tend to have higher unit labour cost.

As next the analysis of costs will be done. Table 1 indicates that foreign enterprises have better cost management and control. In domestic enterprises a crucial increase of material costs has taken place. At the same time labour costs have decreased. The cost structure of foreign enterprises has remained quite unchanged. However, it will be evident that foreign enterprises are more energy and electricity saving, especially when we compare the cost changes with the increase of sales (see Appendix). The latter can be explained by more capital intensive production process of foreign enterprises. The share of depreciation in total costs is naturally larger in foreign enterprises, explained by their large share of productive assets. The low level of R&D costs confirms that foreign enterprises are not actively engaged with R&D work. Hence, they probably transferred R&D work to their parent companies.

Table 1

**Structure of production costs (costs/sales) in enterprises of manufacturing industry (%)**

Indicator	Ownership, year							
	Domestic enterprises				Foreign enterprises			
	1996	1997	1998	Change	1996	1997	1998	Change
Material costs	45.3	46.8	47.4	2.1	46.6	45.0	47.0	0.4
Electrical costs	1.8	1.9	1.9	0.1	3.3	3.1	2.9	-0.4
Energy costs	2.9	3.2	2.6	-0.3	2.8	2.7	2.3	-0.5
Labour costs	20.2	16.9	16.9	-3.3	15.0	14.4	15.0	0.0
Depreciation*	3.3	3.0	3.5	0.2	4.9	4.6	5.0	0.1
R&D costs	0.3	0.2	0.3	0.0	0.5	0.3	0.3	-0.2

\* Share in total costs

Source: Calculations of the authors from ESO database on Estonian Manufacturing Industry 1995-1998

All above analysed indicators determine the ratio of enterprise profitability. In Figure 9 the comparison of profitability (computed as ratio of profits to net sales) will be given. Profitability is considered here as the main factor indicating to the re-active restructuring. The Figure shows that more effective performance of foreign enterprises has fostered the increase of profitability. During the observed period, the profitability of foreign enterprises has increased from -12% to 2,5%. This indicates that foreign enterprises can afford themselves losses and that profit earnings have not been first targets for foreign owners in Estonian manufacturing sector. Another reason for quite low profits of foreign enterprises could be the fact that a big part of their earnings have been reinvested during the period. At the same time it may be a sign from hiding returns as foreign enterprises have the possibility to transfer their costs in the form of management rewards and transfer pricing.

Profitability of domestic enterprises has practically not changed, but there is a little tendency to decrease. Thus, domestic enterprises have not achieved the progress in profit level despite the downsizing of employees and decrease in unit labour cost during 1996–1998. One reason for the unchanged profitability may be the general economic recession and Russian crisis in 1997. The last one had a larger impact on domestic enterprises.

The results for enterprises with an ownership change have not included to the Figure, because initial data within the groups were too heterogeneous and therefore the biased interpretation would have arisen.

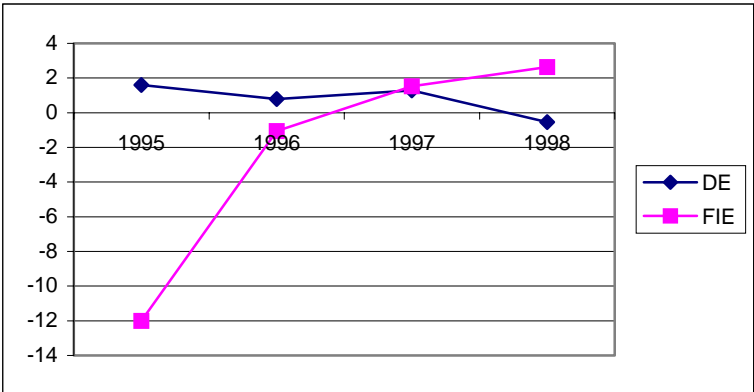


Figure 9. Profitability (computed as ratio of profits to net sales, %) in different enterprise groups.

The first part of the analysis will be a basis for investigating whether manufacturing enterprises use re-active restructuring models. Concerning domestic enterprises, there are more signs of re-active restructuring like downsizing labour force and decrease of labour costs, as well decrease in other costs. Foreign enterprises seem not to consider the lowering of costs as one of the main tasks. Thus, they presumably use more strategic firm behaviour.

As next, factors affecting the assets turnover will be analysed, in order to find some implications to strategic restructuring. As seen from Appendix, the growth in net sales has been essentially bigger in foreign owned enterprises. The share of exports in net sales testifies the higher export orientation of foreign enterprises (see Figure 10). It appears that the indicator has increased from 54 to 61% in foreign enterprises, but remained almost unchanged on 40% level in domestic enterprises. Concerning the enterprises that have passed an ownership change, the results are logical as well: with the transfer of ownership from foreign to domestic hands the export share has decreased and *vice versa*. Thus, foreign owners seem to have raised the export competitiveness of enterprises in Estonian manufacturing sector.

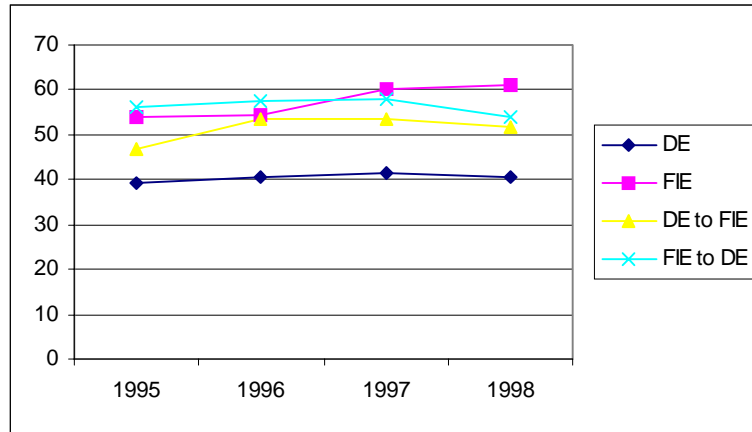


Figure 10. Exports as share of net sales (%) in different enterprise groups.

Foreign enterprises also prove a bigger capacity of assets, as seen from Figure 11. Fixed assets per employee are several times higher in foreign than domestically owned enterprises. This indicates a better financial position of foreign enterprises and means that they are able to make investments. At the same time it appears that the ratio has increased much more in domestic enterprises (47%), compared to foreign enterprises (26%), which is certainly a sign of their increasing investment capability. However, the difference in 1998 is still more than three times. The situation of enterprises, which were domestically owned either only at the beginning or all the period of observation, is very similar. At the same time, a steep decrease of the ratio can be noticed in the fourth group, after change of ownership from foreign to domestic. The latter leads to the conclusion that domestic owners are even not able to keep the ratio on the level achieved.

The authors have also analysed the ratio of total assets per employee. Principally, the results are the same.

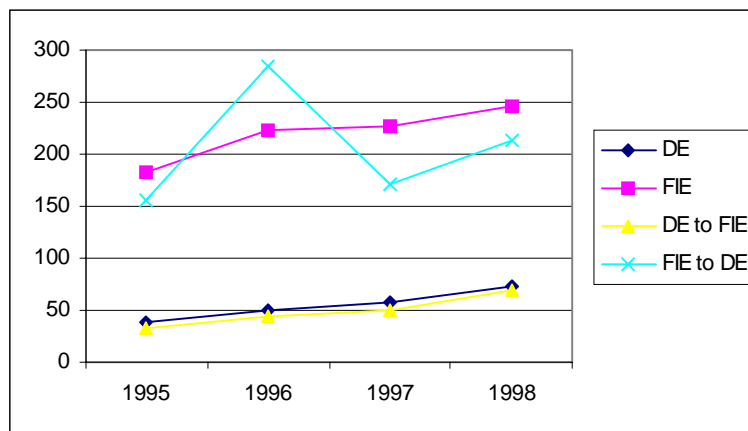


Figure 11. Fixed assets per employee (in thousands EEK) in different enterprise groups.

The ratio of sales to assets is higher in domestic enterprises (see Figure 12). This indicates that domestic enterprises use their assets more efficiently, presumably having a higher proportion of productive assets, more qualified machinery and equipment and production process. The tendency appears also in case of enterprises with changed ownership. Hence, the turnover of assets is faster in domestic enterprises. An explanation to this relatively incomprehensible result could be the fact that the better financial position of foreign enterprises enables delays with assets. On the one hand, they have better conditions for loans and on the other hand, pressure for sales turnover is missing.

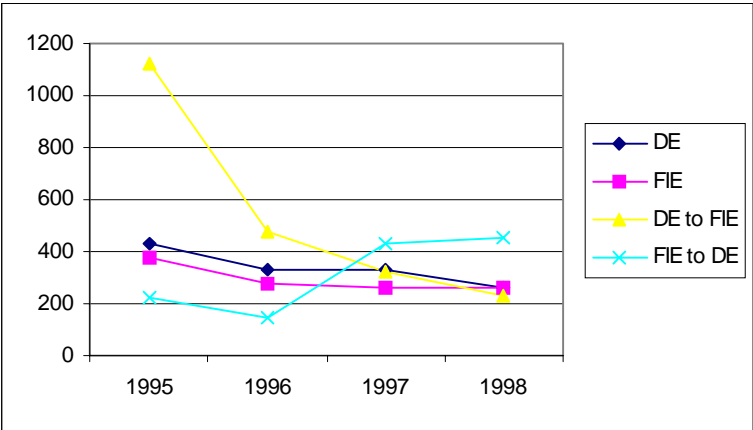


Figure 12. Ratio of net sales to total assets (%) in different enterprise groups.

To sum the second part of the analysis up, there are evidences that foreign enterprises are more likely to use strategic restructuring models. The latter can be explained by a remarkable growth in net sales, a high share of exports in net sales and a high ratio of assets per employee. There is only one ratio (sales turnover) that was higher in domestic enterprises.

Finally, domestic and foreign enterprises are compared by the return on assets. Enterprises with changing ownership forms have not been included, because of the difficulties of interpretation. From Figure 13 it will be evident that the ratio has a tendency to decrease in both domestic and foreign enterprises. The explanation for the situation of 1996, where domestic enterprises have been almost two times more effective, could be the fact that foreign enterprises are not fostered to worry about the increase of profit any time. Instead of that, they can be more flexible and afford themselves a higher dependency on the overall economic situation of the country.

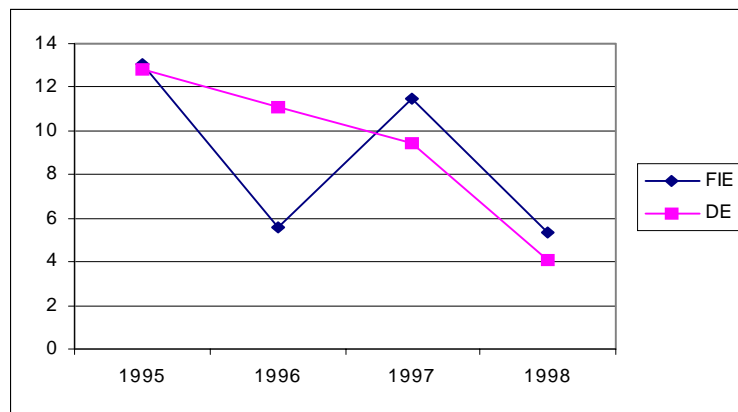


Figure 13. Return on assets (computed as ratio of profits to total assets, %) in different enterprise groups.

Nevertheless, the ratio seems to be higher in foreign owned enterprises, indicating to a higher efficiency of them compared to domestic enterprises.

## CONCLUSIONS

The analysis leads to the conclusion that foreign owned enterprises contribute to increasing industry efficiency at the company level in general as they have especially high labour and capital productivity, they pay higher wages and have a several times higher ratio of fixed assets per employee. Only the assets turnover in domestic owned enterprises is higher. Thus, the main hypothesis of the present paper has been proved.

Concerning the hypothesis about the models of restructuring, the answer is not so easy. On the one hand, there is evidence that foreign enterprises are more engaged with strategic restructuring and domestic owned enterprises with re-active restructuring. But on the other hand, there are deviations from that as well.

The strategic behaviour of foreign investment enterprises appears from following aspects. Labour productivity of foreign enterprises has increased because of sales growth, they are more capital intensive, pay higher salaries, are more export oriented, have more assets per employee and have a high investment capability. The re-active behaviour of domestic owned enterprises reflects from growth of labour productivity because of lessening of the number of employees, decrease in costs and low return on assets.

However, there are some important signs for domestic enterprises to be engaged with strategic restructuring as well. For example, high profitability as one of the signs of re-active restructuring, is not the case for domestic enterprises. At the same time, the ratio of sales to assets tends to be higher in domestic enterprises, thus indicating to a more efficient usage of

assets and to a more strategic behaviour of firm. Hence, enterprises in domestic ownership seem to start moving from re-active restructuring phase to strategic restructuring phase.

Altogether, foreign direct investments are one of the most important factors of successful enterprise restructuring. The analysis suggests that it is relevant to attract foreign direct investment to speed up the restructuring of manufacturing industry. Additionally strategic activity of foreign investors motivates domestic enterprises to follow their strategy, which finally increases efficiency. It can be concluded that foreign direct investments contribute to micro-economic restructuring by increasing industry efficiency more than domestically owned enterprises.

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APPENDIX

Net sales in different enterprise groups (in thousands EEK)

