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Overview of the Polish and Ukrainian enterprises from the perspective of one hundred largest companies in 2009

Abstract. The article provides an analysis of the structure of operations performed by one hundred largest Polish and Ukrainian companies entailing a breakdown into the types of business activity typical of the industrial and post-industrial stage of development of both economies. In this respect, considerable statistical differences have been found. The authors have also analysed workforce productivity and profitability of the Polish and Ukrainian top 100 enterprises. The conclusions drawn pertain to the reasons for the structure observed, the restructuring activities undertaken and the potential strategic decisions to be made.

Key words: top 100 in Poland and Ukraine, industrial and post-industrial business activities, workforce productivity in Poland and Ukraine, profitability of Polish and Ukrainian companies

1. Introduction

The purpose of the article has been to discuss the chosen significant aspects of operations of Polish and Ukrainian enterprises and to compare them. An attempt has been made to depict the structure of operations within the groups analysed. The available data have also enabled investigating the issues of workforce productivity in the largest Polish and Ukrainian countries. The article is concluded with an analysis of the selected profitability ratios. The analysis has been conducted based on the statistical data provided in a ranking of 500 largest Polish companies and 100 largest Ukrainian companies according to their revenues of 2009.

2. Structure of operations of 100 top ranked companies in Poland and Ukraine

In order to examine the structure of operations of the largest Polish and Ukrainian companies as well as to capture the potentially existing specificity of both groups, each of the enterprises analysed was assigned a specific, predominant sphere of operation. In numerous cases, the task assumed posed a serious and risky problem, since the entities in question tend to be strongly diversified. Based on the preliminary overview of the Polish and Ukrainian list of 100 top ranked companies, one may also conclude that the ranking reflects a certain conjecture as to the existence of two fundamental groups of enterprises, namely those that represent the sector traditionally associated with the post-industrial stage of development of both economies as well as those linked with the typical industrial stage. Therefore, an assumption was made for the sake of the study that the said concept was indeed binding. Hence the study could potentially imply whether the Polish top 100 companies were indeed in the post-industrial era to an extent larger than the Ukrainian top 100, the concept of which became a specific research hypothesis. The conclusions drawn based on the analysis in question should be treated with caution, since classifying the companies in one or another group was without a doubt at least partially discretionary. Enterprises themselves expose different “faces”, since the segment they operate in can be apparently **industrial**, as in the case of mining, and yet another part of a company may be evidently **post-industrial**, such as that functioning in the mobile telephony sector. All in all, the Polish economy has seen such an example, as KGHM Polska Miedź (a copper mining corporation) owned the Polkomtel and Dialog telephone networks. Many Polish and Ukrainian companies are of a similar nature. Still the authors have made the risky attempt of qualifying the relevant companies under both groups based on the information available on their websites as well as their own conviction regarding the specific “point of gravity” in the operations undertaken by the individual companies. Two groups of companies have been distinguished, marked as T and R. The T group contains enterprises representing more traditional industries, often heavy industries, mostly dealing with manufacture in favour of other companies. The R group consists of the enterprises operating “closer” to the end client, focused on an individual recipient and more associated with market-based and consumer societies. The study results have been provided in Table 1. It shows the number of companies assigned to the potential distinguishable industries in a breakdown into both countries as well as activity types.

Having analysed the data provided in Table 2, one may devise a hypothesis that the structures of the economies in question, as perceived from the perspec-

Table 1. Top 100 Polish and Ukrainian companies according to the sphere and type of activity

Sphere of activity	Ukraine	Poland	Type
power engineering	14	14	T
mining (including mining and power as well as mining and metallurgical complexes)	7	5	T
pharmaceutical trade	3	4	R
coke chemical industry	2	0	T
railways	9	3	T
brewing industry	2	2	R
post	1	1	R
chemical industry	2	0	T
pharmaceutical industry	2	0	R
machine-building industry	3	0	T
metallurgical industry	13	0	T
petroleum industry, petrochemical industry and fuel trade	14	7	T
agricultural and food processing industry	10	2	R
automotive industry	2	5	R
tobacco industry	1	2	R
retail chains	6	20	R
telephony (including mobile)	3	5	R
transport (including supply for transport)	3	0	T
trade in household chemicals	1	1	R
IT	0	3	R
banking	0	9	R
insurance	0	3	R
construction	0	5	R
wood processing industry	0	1	T
tyre industry	0	1	R
lotteries	0	1	R
electronic and electromechanical engineering	1	6	R

Source: authors' own study based on: "The 500 List", *Rzeczpospolita*, 29th April 2009 and data on the largest Ukrainian companies from <http://investgazeta.net/> [2nd February 2011].

tive of the largest companies operating in both countries, differ considerably due to the criterion assumed for the division into enterprises representing traditional industries (T) and the consumer-focused companies operating in a free market economy (R). In the Polish ranking of top 100 companies, those from the second group (R) are predominant, whereas in the Ukrainian top 100 ranking, more companies represent the first group (T), this being certainly due to the historical

premises, natural resources, competences represented in the economy and foreign investments, making the current Polish economy more market-cantered, at least in light of 100 top ranked companies.

Table 2. Table of empirical values for the χ^2 test

Group \ Country	Poland	Ukraine*
T	30	67
R	70	32

* A representative industry could not be identified for one Ukrainian company.

Source: authors' own materials.

The relevance level of the test in question came to $9 \cdot 10^{-8}$, hence it was below the assumed relevance level of $\alpha = 0.02$. Consequently, it was required that H_0 be rejected, as it implied that structures of both economies, perceived from the perspective of their 100 top ranked companies, were identical, bearing in mind the population division into company groups T and R. It may be assumed that the relevance of the companies representing the traditional industries in Ukraine will not decrease for many decades, and that they will keep playing the leading economic role in the land of our eastern neighbour. At the same time, however, one can suspect that a rapid compensation of the specific shortage of the individual client focused companies will take place among the largest enterprises. The group of large banks and insurance companies is certainly to strengthen, but also retail chains have certainly not yet reached their developmental peak in Ukraine. On the other hand, one should not expect that the deficit of large Polish companies associated with the traditional industries is to be compensated as compared with Ukraine. This is due to the potential of raw materials and of the country as a whole, hence the Polish economy, perceived from the angle of the top 100, will rather become even more saturated with companies of typically market-focused profile (client-centred ones) than it is now.

3. Employment and revenues in the group 100 top ranked Polish and Ukrainian companies

The employment analysis conducted in both groups of enterprises (Table 3) implies that the largest Ukrainian companies employ averagely more persons than the corresponding Polish companies. However, the headcount diversification in the groups analysed is larger. One may suspect that in the group of Ukrainian companies, the division into modern companies, managing their resources in more economical manner, and the traditional ones, where excessive employ-

ment does happen, is definitely more distinctive. Such an interpretation of the results obtained could probably also explain the fact that the workforce productivity measured by the proportion between the value of sales and the headcount is clearly higher in the Polish companies than in the Ukrainian ones.

Table 3. Headcount and revenues of 100 top ranked Polish and Ukrainian companies in 2009

Specification	Headcount		Top 100 revenues (in EUR million)	
	Polish companies (n = 75)	Ukrainian companies (n = 97)	Polish companies (n = 100)	Ukrainian companies (n = 100)
Average value	10,839	11,673	1,641	645
Standard deviation	15,397	19,797	1,907	845
Lower quartile	2,822	690	802	296
Median	5,152	4,838	1,058	424
Upper quartile	11,488	10,054	1,793	647
Minimum	20	14	666	229
Maximum	94,000	108,288	17,265	6,808
Range	93,980	108,274	16,599	6,579

Source: as in Table 1.

Productivity was calculated as a ratio between total revenues and total headcount in the groups¹. The following values were obtained: for the Polish companies, the productivity came to ca. EUR 0.152 million per an employee, whereas in the Ukrainian companies, the productivity reached the level of ca. EUR 0.055 million per a single employee. Therefore, the Polish enterprises seem to have been employing in a more economically sound manner which may be due to the fact that they represent slightly different industries (industry specificity) as well as that they have mostly undergone the restructuring phase and are now managed in a way more responsive to the requirements of the contemporary competitive economies.

4. Profitability of 100 top ranked companies in Poland and Ukraine

The authors also analysed the profitability of 100 top ranked companies in Poland and Ukraine. Unfortunately, full comparability of both groups was not attained since the data concerning the Polish companies, that were successfully

¹ Due to the information shortages encountered, data of 75 Polish companies and 97 Ukrainian companies were used.

collected, pertained to the return on assets, whereas the data of the Ukrainian companies regarded the return on sales. The measures of location for the ROA and ROS distribution have been provided in Table 4.

Table 4. ROA and ROS in the group 100 top ranked Polish and Ukrainian companies (2009)

Specification	Return on sales (%) for Ukraine (n = 97)	Return on assets (%) for Poland (n = 65)
Average value	1.96	6.11
Standard deviation	13.20	7.77
Lower quartile	-2.78	1.74
Median	0.61	4.06
Upper quartile	5.20	7.41
Minimum	-57.55	-8.91
Maximum	44.13	34.21
Range	101.68	43.12

Source: as in Table 1.

A superficial observation (compare with Table 5) of the average values of return on sales and return on assets obtained in group T and group R implies certain research hypotheses. Based on the assumed division into companies of group T and R, the following was investigated by application of z-test:

- hypothesis of equality of average ROS values (against an alternative hypothesis: average ROS value in group T is considerably lower than that of group R) for the Ukrainian companies;
- hypothesis of equality of average ROA values (against an alternative hypothesis: average ROA value in group T is considerably lower than that of group R) for the Polish companies.

For the Polish companies, the probability value of $P(Z \leq z) = 0.058$ obtained is higher than that of the assumed relevance level of $\alpha = 0.02$. Consequently, there are no premises to reject the hypothesis of equality between the average ROA values in both groups distinguished (T and R).

For the Ukrainian companies, the probability value of $P(Z \leq z) = 0.007$ obtained is lower than the assumed relevance level of $\alpha = 0.02$. It implies that in group T, the average profitability ratios are more relevant than those of group R. Many among the T group companies are enterprises of long traditions established under the past economic system. In numerous cases, they are capital-consuming enterprises still awaiting modernisation and restructuring. In group R, there are more companies built from scratch assuming the premises of rationality, savings and economical management. As a specific confirmation of the conclusions derived from the studies,

Table 5. ROA and ROS in the group 100 top ranked Polish and Ukrainian in a breakdown into group T and R (2009)

Specification	Return on sales (%) for Ukraine		Return on assets (%) for Poland	
Group	T	R	T	R
Average value	-1.04	5.47	4.29	6.98
Standard deviation	12.92	12.84	5.07	8.68
Variance	166.96	164.79	25.72	75.39

Source: as in Table 1.

in group R, one will find the company holding a record in terms of return on sales, i.e. Киевстар, operating the telecommunications sector (44.13%), whereas in group T, the entity holding the dishonourable record of negative ROS is a company operating in the metallurgical sector, namely Макеевский металлургический з-д (-57.55%). However, there are also opposite cases to be found in both groups. For instance, the Астелит mobile telephone network reports negative ROS on the level of -25.1%, whereas a company operating in the mining sector, i.e. Ингулецкий ГОК, reached the ROS value of 34.3%. Therefore, in many cases, it seems probable that despite a certain general and still noticeable tendency, a company's performance depends not so much on the type of activity conducted, but on the skill and competence in managing the enterprise. One may suppose, that as the restructuring activities implemented in the Ukrainian traditional industries keep moving forward, the discrepancies between the average measures of performance reported in distinguishable groups of more industrial and more market-focused companies will become smaller and smaller. Hence many Ukrainian companies, as well as the Polish ones, will undoubtedly be looking forward to entering a phase of difficult transitions in the sphere of ownership, employment and management focused on a "lean" model of enterprise and improved performance.

5. Conclusions

The conclusions that can be drawn based on the partial analysis of top 100 companies cannot be far reaching and uncompromising. They should be treated with due caution. The top 100 group represents a quantitatively insignificant portion of all companies, although having a considerable impact on the condition of economy and constituting its specific flagship. Despite the evident constraints, the authors aimed at reaching certain conclusions which, however, to a large extent are of more hypothetical natural and require further investigation. Therefore, the analysis discussed may lead to the following conclusions:

1. The Polish 100 top ranked companies are slightly more post-industrial in terms of their structure of operations than the corresponding top 100 Ukrainian ones. Not only may the foregoing be caused by the fact that the Polish enterprises have already passed the strong wave of restructuring, but also by the specificity of both economies. Poland is in disposal of definitely less abundant resources of raw materials which forces it to make the most of the demand in the industries based on entrepreneurship to a greater extent than on raw materials and broad-scale industrial technology. The Ukrainian market still seems to be offering considerable growth or at least consolidation opportunities to the companies operating in the domain closer to an individual recipient (insurance, banking, retail chains, etc.).

2. The Ukrainian top 100 companies still show lower average workforce productivity rates than the Polish top 100. The foregoing may be due to the specificity of operations of the Ukrainian companies, nevertheless, it is most probable that in many cases, such a state of matters has been a consequence of the solutions applied under the former economic system that still exert a significant impact on the current reality. Managers in charge of many Ukrainian as well as Polish companies are ahead of facing serious challenges related to the ownership restructuring, activity profile, managing methods and more economically sound employment. It seems that collaboration between the managers is possible in this particular field and that they can all benefit from the experience exchange.

3. It has been determined that average profitability ratios in groups T and R of the Ukrainian companies significantly differ which, assuming far reaching caution while applying the conclusions devised, may constitute a certain premise for the management boards to make decisions concerning the strategic nature of the activity conducted by their respective companies.

Literature

<http://investgazeta.net>.

“The 500 List”, *Rzeczpospolita*, 29th April 2009.