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The Analysis of the Competitiveness of the Biggest Enterprises in the Construction Industry in Podlaskie Region Compared to the Sector, Based on Nagashima's Radar

JEL classification: *D21; D92; G32; G11*

Keywords: *Nagashima's radar; construction industry; analysis of competitiveness; financial indicators*

Abstract: *The purpose of the paper is to analyse the competitiveness of the largest enterprises of the construction industry operating in Podlaskie Voivodeship, against the background of other firms from the sector in the years 2010–2012. The analysis uses the so-called Nagashima's radar, which enables a synthetic depiction of the relative changes of selected sets of indicators concerning the analysed entities from the construction industry. The conducted research into the analysis of competitiveness of largest construction companies of Podlaskie, as compared with the rest of the sector, reveals that the period 2010–2012 saw both increases and decreased in the indicators regarding the profitability, financial stability, capital activity, growth, and efficiency of the studied companies. In 2012, in comparison*

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with the preceding year, a downturn was observed in e.g.: some of the profitability indicators, growth indicators, and labour efficiency indicators.

Introduction

The construction industry is one of the key sectors of the Polish economy. The year 2012 was expected to be one of great growth for the sector's companies, among other things, because of the culmination of investments made before the Euro 2012 championship. And yet, in spite of a relatively substantial contribution of the construction industry into the GDP and its significant influence on the labour market, 2012 brought a number of negative phenomena associated with increasing payment gridlocks and a considerable rise in the number of bankruptcies in the construction sector. The growing rate of bankruptcies was disquieting news for the entire economy. Of all the sectors, the construction industry was in the worst situation in 2012, as the added value in this field of the economy decreased by 0.5%, while the annual production growth rate plunged to -1.0 (*Stan i prognoza…*, 2013, p. 2).

The purpose of the paper is to analyse the competitiveness of the largest companies of the construction sector in Podlaskie Voivodeship, against the background of the entire branch, in the years 2010–2012. The conducted study will reveal whether the marked downturn in the sector observed in 2012 adversely affected the analysis of competitiveness of the enterprises under scrutiny, which found its reflection in a worsening of the selected financial results.

The first part of the paper contains a discussion of the significance of particular financial indicators in an analysis of business competitiveness. Moreover, the concept of the so-called Nagashima's radar is presented, as well as its usefulness to provide a synthetic overview of the changes in the sets of selected indicators concerning the studied entities, as compared with the rival firms from the same branch. The subsequent sections of the paper present the methodology of the research, an analysis of obtained results, and a conclusion.

Application of Financial Indicators for Analysis of Business Competitiveness

Literature concerning competitiveness is unusually extensive (compare Martin, 2003). According to Ambastha and Momaya (2004), “competitive-

ness is a multidimensional concept. It can be looked at from three different levels: country, industry, and firm level." The subject of many researches are different levels of competitiveness (Jonek-Kowalska, 2015; Korchagin *et al*., 2015; Varanavicius & Navikaite, 2015). Firm level competitiveness can be defined as the ability of firm to design and/ or produce market products superior to those offered by competitors, considering the price and non-price qualities (D'Cruz, 1992). According to Martin (2003), „at the firm, *or micro-economic*, level there exists a reasonably clear and straightforward understanding of the notion of competitiveness based on the capacity of firms to compete, to grow, and to be profitable. At this level, competitiveness resides in the ability of firms to consistently and profitably produce products that meet the requirements of an open market in terms of price, quality, etc. Any firm must meet these requirements if it is to remain in business, and the more competitive a firm relative to its rivals the greater will be its ability to gain market share. Conversely, uncompetitive firms will find their market share decline, and ultimately any firm that remains uncompetitive – unless it is provided by some 'artificial' support or protection – will go out of business."

Due to increasing globalisation, enterprises must systematically analyse their competitive positions in particular sectors of the economy, their strengths and weaknesses, as well as the changes occurring in the competitive, socio-economic, and international environment. If they are making profit and have good development prospects, they can be described as competitive (Bossak & Bieńkowski, 2004). Gorynia writes that many economists usually link business competitiveness with the financial indicators achieved by companies. He claims that the competitive position depends on the degree to which a firm has attained the key success factors, i.e. the firm's market position, cost position, brand and establishment in the market, technical competences, profitability, and financial power (Gorynia, 2009, pp. 78-79).

The market position (share) of an enterprise and its financial situation are the two measures that are the most frequently encountered in the literature. Stankiewicz observes that the gauging of market share – under the globalisation of markets – is becoming an extremely difficult task, and for companies themselves often downright unfeasible. That is why, in practical terms, partial indicators are more useful: the share in the domestic market, or the relative market share as a ratio of the sales made by the company to the sales by its three greatest competitors, or the ratio of a company's sales to that of its main rival's. According to Stankiewicz, the indicators of financial condition that are recommended for depicting the effectiveness of competitive position usually include: profitability indicators, liquidity indi-

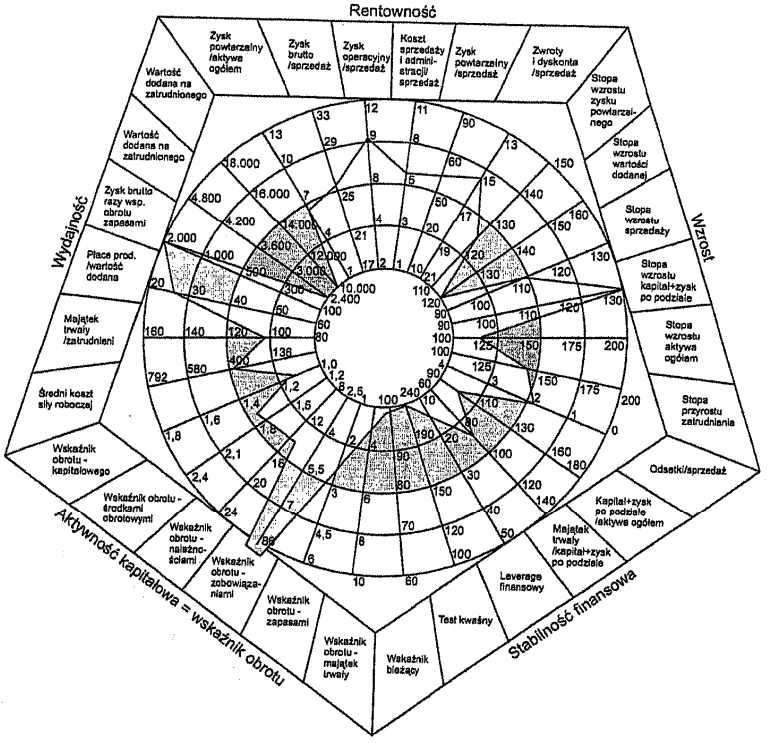
cators, debt indicators, and activity indicators. In his opinion, to assess the competitive position of a company, they should be applied jointly, as they complement one another (Stankiewicz, 2005, pp. 299-301). When Korol analyses the symptoms of decreased competitiveness in small and medium enterprises, he uses 13 financial indicators, divided into five groups, which examine the following aspects of enterprise performance: financial liquidity, profitability, indebtedness, efficiency, and indicators concerning the capital structure (Korol, 2008).

Analysis of Business Competitiveness Using Nagashima's Radar

Among the methods used for analysing the competitiveness of enterprises one should mention the comparative method. It involves, among other things, benchmarking of a group of financial indicators obtained from the studied subject to the average indicators from a given sector of the economy, or to entities which achieve the best results for the particular indicators (Bossak & Bieńkowski, 2004, pp. 140-150). In economic practice, an indicator analysis is often conducted. This method consists in comparing (year to year) selected financial indicators, which only allows for assessing the development tendencies of the examined values and the rate at which they change. On the basis of object analysis, it is merely possible to determine the direction in which the studied value is developing (whether it is rising or falling) and how fast this is happening. Such an analysis does not enable the researcher to assess the position occupied by the examined enterprise in the sector (branch) (Dudycz *et al.*, 2005, pp. 1-46).

Only a comparison of the indicators published by the analysed entity with those achieved by its competitors from the same sector, or with the sector's average, makes it possible to assess the position of the company, or companies, in question, within the particular economic sectors. Provided that sectoral indicators regarding rate of return, efficiency of resource management, financial liquidity, and other financial data are available, the so-called Nagashima's radar can prove to be a useful tool for analysing the competitive capacities of companies. The radar helps describe the relative changes in selected groups of indicators against the background of rival firms from the same branch (Bossak & Bieńkowski, 2004, pp. 140-150).

Figure 1. Analysis of business competitiveness: Nagashima's Radar



Source: (Bossak & Nagashima, 1997; after: Bossak & Bieńkowski, 2004, p. 14).

Each of the indicators included in the radar is calibrated according to a pre-determined range. The central circle of the radar is a benchmark and represents the values obtained by, e.g., the competition. If the given values of the indicators attained by the analysed company exceed the average indicators for the sector (e.g. profitability indicators), the company achieves an advantage dependent on the degree of the indicator's deviation. If, on the other hand, the indicators remain below the average values, the situation of the company is worse. Nagashima's radar, thanks to a considerably higher number of indicators referring to various aspects of business activity, allows for an in-depth analysis of the competitiveness of firms functioning in a given area of the economy (Bossak & Bieńkowski, 2004, pp. 140-150).

Research Methodology

The conducted study aims to analyse the competitiveness of the largest enterprises operating in the construction sector of Podlaskie Voivodeship, and to compare it against that of the entire sector, on the basis of data from the years 2010–2012. The research comprises 33 annual accounts submitted at National Court Register (*Krajowy Rejestr Sądowy*) by the region's 11 biggest firms from the construction industry for the above-mentioned period of time.

Table 1. List of analysed companies

No.	Company	Location
1.	UNIBEP S.A.	Bielsk Podlaski
2.	BUDIMEX DANWOOD Sp. z o.o.	Bielsk Podlaski
3.	INSTAL BIAŁYSTOK S.A.	Białystok
4.	Przedsiębiorstwo Produkcyjno – Usługowo – Handlowe „RODEX" Sp. z o.o.	Białystok
5.	Przedsiębiorstwo Budowlane JAZ-BUD Sp. z o.o.	Białystok
6.	Przedsiębiorstwo Remontów i Budownictwa Ogólnego Sp. z o.o.	Suwałki
7.	KALTER Sp. z o.o.	Białystok
8.	YUNIVERSAL PODLASKI Sp. z o.o.	Białystok
9.	Przedsiębiorstwo Produkcyjno – Usługowe MARK-BUD Sp. z o.o.	Białystok
10.	Przedsiębiorstwo Produkcyjno – Usługowo – Handlowe KOMBINAT BUDOWLANY Sp. z o.o.	Białystok
11.	FADBET S.A.	Białystok

Source: author's own work.

For each of the analysed enterprises, 16 indicators grouped into five areas were calculated. Some of them were compared with the average indicators for relevant sectors.[1]

[1] Sectoral indicators are published on the website www.rachunkowosc.com.pl.

Table 2. Methodology of calculating indicators

Area	Indicator	Method of calculation
		Interpretation
Profitability	Return on assets *(ROA)**	$\frac{\textit{operating result x 100}}{\textit{average annual asset balance}}$
	Return on assets (ROA) shows the volume of profit per unit of capital invested in a company. This enables an assessment of the efficiency of total asset management by a given business entity, as well as an assessment of the efficiency in which particular sections of the assets are managed from the viewpoint of achieved profit. In this context, operating profit is the most universal measure. This indicator is quite widely regarded as an overall measure of a company's results. ROA reflects both the profitability of the entire set of assets and of the invested capital, i.e. the sources of financing in general. Because the assessment of results is founded on operating activity, this indicator can be used for comparing the profitability of all companies, regardless of their debt burden.	
	Return on equity (ROE)*	$\frac{\textit{net profit x 100}}{\textit{average annual equity balance}}$
	Return on equity (ROE) represents the rate of profit obtained by shareholders from their investment in a given company. High return on equity is, which continues to improve on a regular basis, manifests a considerable development potential of the studied business entity.	
	Return on net sales (RNS)*	$\frac{\textit{net financial result}}{\textit{total revenues}}\ \textit{x 100}$
	Return on net sales (RNS) reflects the long-term development prospects of the studied entities and their position in the market. As the numerator includes net profit, the evaluation concerns not only the financial efficiency of direct and indirect operating activity, but also the conducted financial operations (incl. the level of debt), extraordinary revenues or losses, and tax policies.	
	Return on sales (RS)*	$\frac{\textit{net profit from sales of products, goods and materials}}{\textit{net revenue from sales of products, goods and materials}}$
	The return on sales indicator informs about the profits derived directly from a company's core activity. It is characterised by a high degree of comparability and for this reason can provide a basis for assessing the competitive position of an enterprise. This is because net profit from sales of products, goods and materials has a fairly stable nature and is rather forecastable. A negative deviation of the indicator requires detailed analysis of the company's share in the market, changes in sales volumes and development of new products, changes in prices and the product structure, costs of sold goods and products, as well as the overall costs of management and sales.	
	Economic return on sales (ERS)*	$\frac{\textit{financial result on operating activity + depreciation}}{\textit{revenue from sales of products, goods and materials, and other operating activity}}$
	Economic return on sales (ERS) informs about the capability to generate financial resources from operating activity. Therefore, the accrual-based approach changes into the cash accounting approach. This is an important difference as it is a firm's ability to produce monetary results through its operating activity that affects the potential benefits of its owners and creditors, by increasing their wealth. This indicator fills the gap that appears when an assessment study comprises a large group of enterprises which are not required to publish cash flow statements.	

Table 2 continued

Area	Indicator	Method of calculation
		Interpretation
Growth	Revenue growth rate (RGR)	*net revenue from sales of products (in current year)– net revenue from sales of products (in preceding year)* ---------- *x 100* *net revenue from sales of products (in preceding year)*
	The revenue growth indicator provides information about the scale of revenue growth/decline in the analysed period in relation to the corresponding period of the preceding year.	
	Assets growth rate (AG)	*total assets (in current year)– total assets (in preceding year)* ---------- *x 100* *total assets (in preceding year)*
	Assets growth rate informs about the scale of growth/decline of assets in the analysed period in relation to the corresponding period of the previous year.	
Financial stability	First degree financial liquidity (1st DFL)*	*total current assets (excluding trade receivables due within more than one year)* ---------- *short-term liabilities (excluding trade liabilities due within more than one year)*
	The first degree financial liquidity is regarded as a basic measure of a company's ability to settle all its current liabilities by liquidating the available resources of current assets. This indicator reflects the extent in which short-term liabilities are covered with current assets and provides information about the ability of the company to pay off the current liabilities which are outstanding on the day they are measured.	
	Second degree financial liquidity (2nd DFL)*	*total current assets (excluding trade receivables due within more than one year) - inventories – short-term accruals* ---------- *short-term liabilities (excluding trade liabilities due within more than one year)*
	The second degree financial liquidity - quick liquidity ratio - is another important indicator used for assessing the cash flow liquidity of companies. It helps to estimate the extent in which the liabilities are covered by short-term assets of a high degree of liquidity. The level of this indicator (similarly to the previous one) depends on the type of business activity and varies from one industry to another. Also the chosen method of accounting affects the level of the indicator's value. For instance, in the case of firms widely using trade credits, it can be lower than 1, which does not necessarily mean the loss of financial liquidity. A very high level of the indicator usually signals inefficient recovery of receivables or 'non-productive' aggregation of monetary assets or other current assets.	
	Third degree financial liquidity (3rd DFL)*	*short-term investments* ---------- *short-term liabilities (excluding trade liabilities due within more than one year)*
	The third degree financial liquidity complements the analysis of a company's financial liquidity. Its cognitive value is, however, limited because of the highly liquid nature of the components which make up the indicator's numerator, and the fact that they are not always properly reflected at the balance-sheet date. This is why it is difficult to define the desired value of this indicator. It is generally believed that it should fall between 0.1 and 0.2.	

Table 2 continued

Area	Indicator	Method of calculation
		Interpretation
Financial stability	Sustainability of financing (SoF)*	*own capital (fund) + long-term provisions + long-term liabilities (including trade liabilities due within more than one year)* / *total financial assets*
	Sustainability of financing measures the debt burden and the financial independence of an enterprise. It provides information about the sustainability of sources with which assets are financed; the higher the indicator's value, the greater the share of constant capital in the financing of assets, and the lower the financial risk.	
	Total debt ratio (TDR)*	*liabilities and provisions for liabilities × 100* / *total assets*
	Total debt ratio helps to determine the source from which an enterprise derives the financial means necessary for its functioning, i.e. whether it uses its own funds or external financing.	
Capital activity	Receivables collection period (RCP)*	*average annual balance on total trade receivables due within one year x 365* / *net revenue from sales of products, goods and materials*
	Receivables collection period provides information about the average number of days between the time a trade receivable arises until the moment the money transferred by the debtor reaches the company's account, or is paid directly at the cash desk. The indicator illustrates the length of receivables collection cycle. The period can vary according to, e.g., the nature of the sector and the customs associated with debt settling which prevail in a given milieu. Thanks to sectoral comparisons, the influence of these factors is, however, being gradually eliminated. It remains, therefore, to assess the competitive position of a company in relation to its clients and the efficiency of its financial department (recovery of receivables).	
	Liability payment period (LPP)*	*average annual balance on total trade liabilities due within one year x 365* / *net revenue from sales of products, goods and materials*
	Liability payment period informs about the average number of days between a credit purchase of materials, goods, labour, or services and the moment the credit is repaid. The indicator is assessed in a manner that is similar to that of trade receivables collection period. Both these indicators ought to be considered jointly since a divergence between them might mean serious difficulties in financial liquidity. When a cross-sectoral analysis is performed, the level of this indicator depends on the competitive position and the negotiating leverage of a company in relation of its contractors, as well as on its financial position.	
	Inventory turnover rate (ITR)*	*average annual inventory balance x 365* / *net revenue from sales of products, goods and materials przychody*
	Inventory turnover rate measures the efficiency with which a company uses the capital involved in its inventory. It indicates after how many days its stock levels are replenished. The value of this indicator provides information about the amount of time during which capital remains in this form. Inventory turnover rate is in fact interpreted similarly to receivables collection cycle. The shorter the period of time when capital is engaged in asset items, the better. The shorter this period, the greater the liquidity of the capital employed in inventories, and conversely. It is natural to attempt to minimise the length of the inventory turnover cycle. The level of this indicator, against the background of the size of a sector, can serve as a basis to assess the efficiency of an enterprises' operations, and thus also its competitive advantage in this respect, or possible threats.	

Table 2 continued

Area	Indicator	Method of calculation
	Interpretation	
Productivity	Labour productivity (LProd)	$\frac{\textit{net revenues from sales}}{\textit{average paid employment}} \times 100\%$
	The indicator informs about the productivity of the workforce employed by the analysed entity in the studied period.	

*****the indicators have been compiled by the Financial Analysis Committee of the Accountants Association in Poland (*Komisja ds. Analizy Finansowej Rady Naukowej Stowarzyszenia Księgowych w Polsce*).

Source: author's own work on the basis of: Dudycz *et al.* (2005, pp. 1-46); Dudycz & Skoczylas (2008); Dudycz & Skoczylas (2014, pp. 57-58); Gąsiorkiewicz (2002, p. 141); Jankowiak (2007, pp. 101-131); Gołębiowski & Tłaczała (2005, pp. 112-130); Skowronek (Ed.) (2004, p. 242); Bednarski (2007, pp. 77-120); Leszczyński *et al.* (2000, pp. 91-131); Waśniewski & Skoczylas (2004, p. 451).

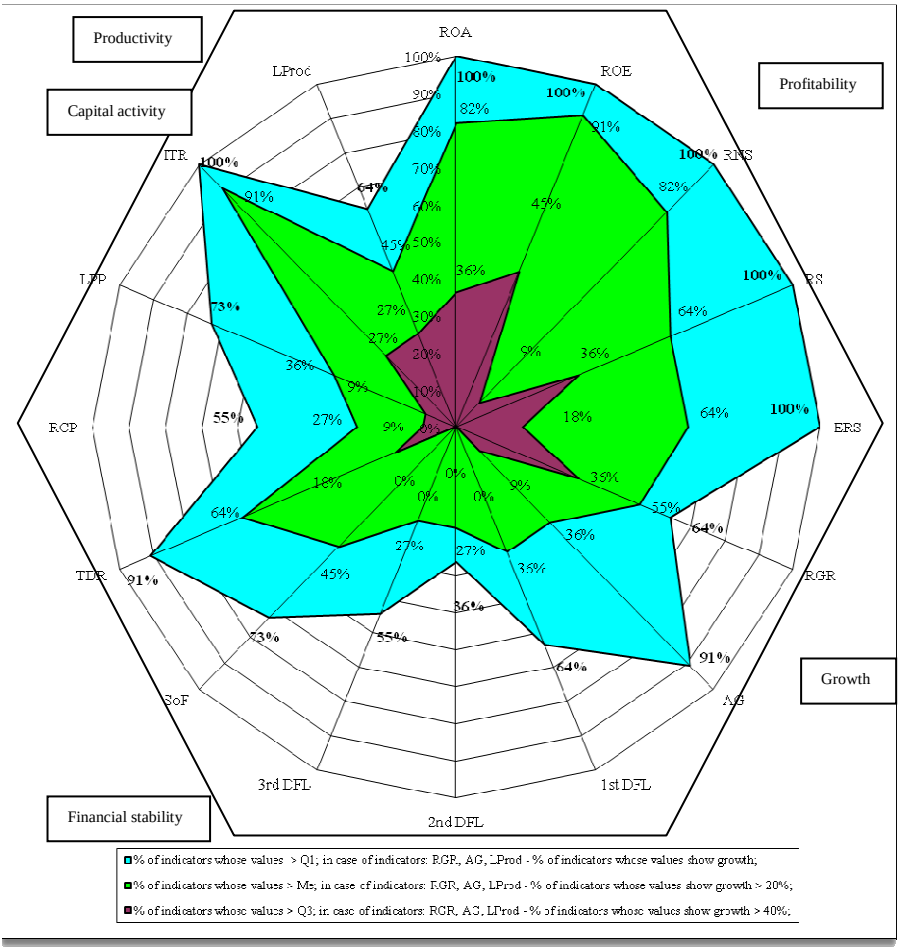
The present study uses the concept of analysing business competitiveness by means of Nagashima's radar. In order to determine the competitiveness of the examined entities, a detailed comparative analysis was conducted of the financial indicators reported by the companies in question against the average indicators for the sector. The analysis consisted in juxtaposing the selected indicators of the studied groups of entities and the selected average indicators for the relevant sectors. The performed comparative analysis makes it possible to determine the extent to which the state or the economic results of the studied group of subjects deviated from the average indicators for the sector which served as the benchmark.

Analysis of Obtained Results

In the course of the conducted research, it was found that in 2010 the largest construction industry companies of Podlaskie Voivodeship achieved high values of profitability indicators. For the ROA, ROE, RNS, RS and ERS indicators, 100% of the study subjects achieved values exceeding the first quartile (Q1). Above-median results were attained by 82%, 91%, 82% of the companies for ROA, ROE and RNS, respectively, whereas 64% of the studied entities reported above-median values for RS and ERS. As regards the results exceeding the third quartile (Q3), 36% firms achieved them for ROA, 45% for ROE, 9% for RNS, 36% for RS, and 18% for ERS.

The high values of profitability indicators prove their outstanding financial results achieved in terms of sales value, employed assets and capital.

Figure 2. Radar chart illustrating the results of the conducted competitiveness analysis of major enterprises of Podlaskie's construction industry, as compared with the sector as a whole (year 2010)



Source: author's own work on the basis of research results.

When analysing growth results, it must be noted that in 2010, in comparison to 2009, as many as 64% of the companies reported increased revenues; 55% of them attained a growth of revenues greater than 20%, while

in the case of 36% the improvement exceeded 40%. Similar increases can be noticed in the AG indicator: 91% reported growth, 36% had an increase by more 20%, and in 9% of the firms the growth was greater than 40%.

As far as financial stability is concerned, the following proportions of companies attained values above Q1: 64% for 1st DFL, 36% for 2ndDFL, 55% for 3rd DFL, 73% for SoF, and 91% for TDR. Above-median results were achieved by: 36% firms for 1st DFL, 27% for 2nd DFL and 3rd DFL, 45% for SoF, and 64% for TDR. Values exceeding the Q3 quartile regarded only the TDR indicator and were attained by 18% of the investigated companies.

In the field of capital activity, values above Q1 were recorded by: 55% of the enterprises for the RCP indicator, 73% for the LPP indicator, and 100% of the subjects for the ITR indicator. Above-median results were reported by 27% of the firms for RCP, 36% for LPP, and 91% for ITR. Values exceeding Q3 were attained by 9% of the companies for the indicators RCP and LPP, and 27% for ITR.

In the area of productivity, it was concluded that in the case of 64% of the examined entities, a rise in labour productivity occurred in comparison with the preceding year; 45% enterprises reported an increase in productivity that exceeded 20%, whereas 27% of them boosted the level of labour productivity by more than 40%.

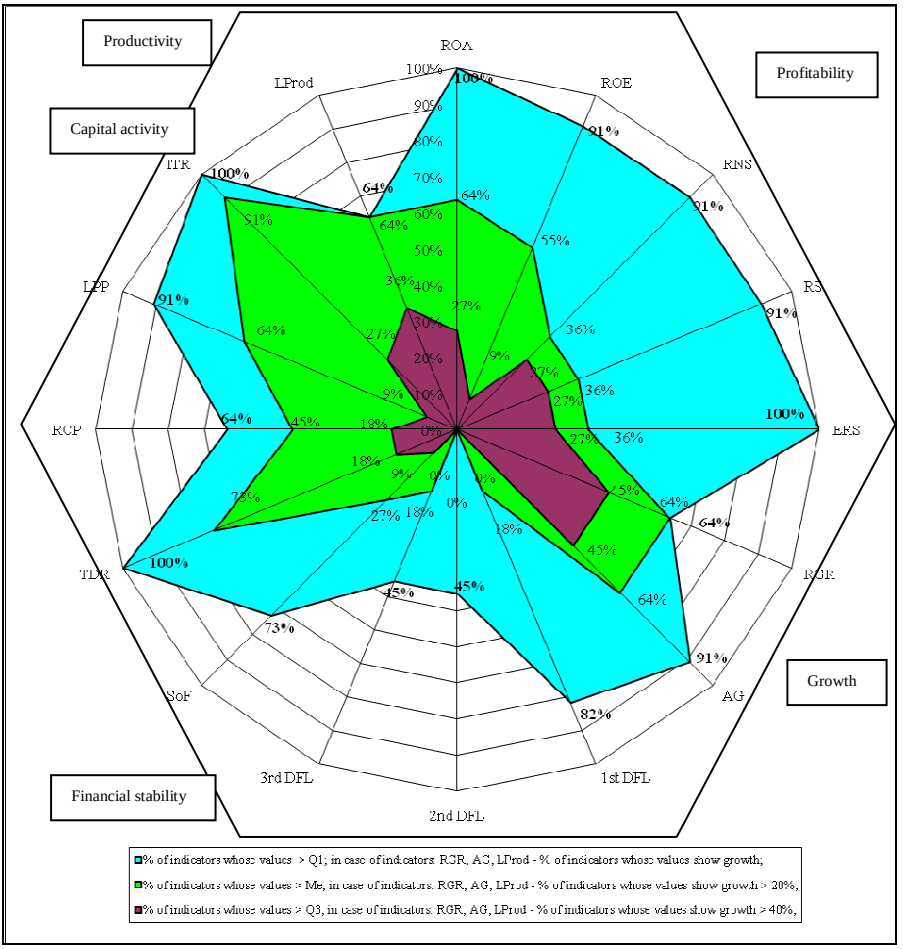
In 2011, as compared to 2010, a slight drop occurred in the number of subjects which achieved profitability indicators exceeding both Q1 and the median. Among those which reported values above Q1, 100% did so for indicators ROA and ERS, while 91% for ROE, RNS and RS. Above-median profitability indicators were attained by 64 companies for ROA, 55% for ROE, and 36% for RNS, RS and RNS. As for figures higher than Q3: 27% of the firms achieved them for ROA, RNS, RS, and ERS, while 9% for the ROE indicator.

When analysing growth indicators, it should be noted that in 2011, 64% of the studied business entities recorded increases in revenues in relation to the preceding year; 64% had revenue growth exceeding 20%, while in the case of 45% of the firms, the growth was greater than 40%. Similar increases can be observed in the value of the AG indicator: 91% of the subjects enjoyed growth of assets, 64% of them reported growth exceeding 20%, and in 45% the growth was greater than 40%.

In the area of financial stability, indicator values above Q1 were attained by: 82% of the entities for 1st DFL, 45% for 2nd DFL and 3rd DFL, 73% for the SoF indicator, and 100% for TDR. Above-median indicator values were recorded by: 18% of the companies for 1st DFL and 3rd DFL, 27%

for SoF, and 73% for TDR. Values above Q3 were achieved by 9% of the subjects for SoF and 18% for TDR.

Figure 3. Radar chart illustrating the results of the conducted competitiveness analysis of major enterprises of Podlaskie's construction industry, as compared with the sector as a whole (year 2011)



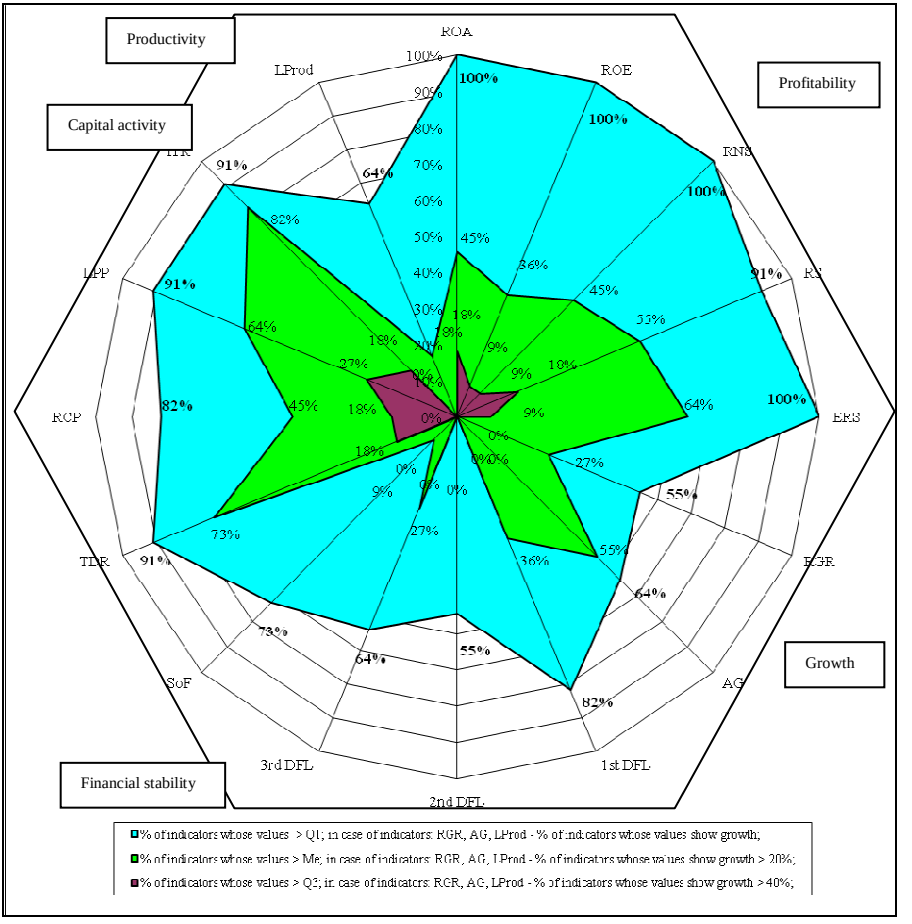
Source: author's own work on the basis of research results.

In the category of capital activity, indicator values above Q1 were attained by: 64% of the firms for RCP, 91% for LPP, and 100% for ITR. Above-median values were recorded by: 45% of the firms for RCP, 64%

for LPP, and 91% for ITR. Indicator values above Q3 were recorded by 18% of the companies for RCP, 9% for LPP, and 27% for ITR.

As far as productivity is concerned, it was observed that 64% of the studied enterprises had recorded increased labour productivity in comparison with the preceding year. Of these, 64% achieved a rise of more than 20%, while in 36% of them it exceeded 40%.

Figure 4. Radar chart illustrating the results of the conducted competitiveness analysis of major enterprises of Podlaskie's construction industry, as compared with the sector as a whole (year 2012)



Source: author's own work on the basis of research results.

In 2012, in the area of profitability, above-Q1 results were achieved by: 100% of the entities for the indicators ROA, ROE, RNS and ERS, and 91% of the companies for RS. Above-median profitability indicators were attained by: 45% of the firms for ROA and RNS, 36% for ROE, 55% for RS, and 64% for ERS. Values above Q3 were recorded by: 18% of the companies for ROA and RS, and 9% for ROE, RNS and ERS.

In the years 2010-2012, the number of entities attaining profitability indicators above Q1 remained at a comparable level. Meanwhile, in the entire analysed period, there was a drop in the number of companies which achieved ROA and ROE above the median. As regards RNS, RS and ERS, in 2011, the number of firms which recorded above-median values of these indicators declined in comparison to 2010, to rise again in 2012 in relation to the preceding year. Additionally, the number of entities recording above-Q3 values of profitability indicators in the studied period of time declined in the case of ROA, ROE and RS. As regards RNS and ERS, the number of companies which achieved this level of the indicators grew in 2010 (in relation to 2010), and then fell in 2012 (in relation to 2011).

An analysis of growth indicators should take into account that 55% of the studied business entities reported an increase in revenues when years 2011 and 2012 are compared: 27% of them recorded growth that exceeded 20%. Similar increases can be noticed in the case of the AG indicator, where 64% of the examined companies attained some degree of growth in their assets, while 55% achieved growth that was greater than 20%.

In the years 2010 – 2012, the number of subjects whose indicator values demonstrated growth dropped slightly, both in terms of RGR (from 64% in 2010 and 2011 to 55% in 2012) and AG (from 91% in 2010 and 2011 to 64% in 2012). Moreover, the number of companies whose RGR and AG indicators rose by more than 20% increased in 2011, as compared with 2010, and then in 2012 dropped again, as compared with 2011. Apart from that, the number of firms which recorded values of indicators increased by more than 40% grew in 2011, as compared with 2010, whereas in 2012 none of the companies from the studied group achieved indicator values that would meet the criterion in question.

As far as financial stability is concerned, indicator values above Q1 were attained by: 82% of the subjects for 1st DFL, 55% for 2nd DFL, 73% for SoF, and 91% for TDR. Above-median indicator values were recorded by: 36% of the subjects for 1st DFL, 27% for 3rd DFL, 9% for SoF, and 73% for TDR. As for values exceeding Q3, 18% of the subjects achieved it for TDR.

In the years 2010 - 2012, the number of subjects whose indicator values were higher than Q1 grew (from 64% in 2010 to 82% in 2011 and 2012for

1st DFL; from 36% in 2010 to 55% in 2012 for 2nd DFL). In the case of 3rd DFL, in 2011 a slight drop in the number of firms achieving results above Q1 was observed in relation to the preceding year, while in 2012 an increase in this category was recorded. In terms of the SoF indicator, the number of subjects which met the above-mentioned criterion remained at the same level. In the case of TDR, year 2011 brought a small growth in relation to the corresponding period of the previous year, while in 2012 a slight decrease was recorded. Additionally, in 2011 the number of entities which attained above-median values of financial stability indicators dropped in comparison with the preceding year in the case of 1st DFL and 3rd DFL, while in 2012 it grew in comparison with 2011. As for the indicator 2nd DFL, none of the enterprises met the criterion. For the SoF indicator, a drop in the number of such firms was recorded, while for TDR, the number of entities that fulfilled the above-mentioned criterion grew in 2011 and remained at the same level in 2012.

Besides, in the studied period none of the investigated entities achieved values of financial stability indicators that would exceed the Q3 level for 1st DFL, 2nd DFL or 3rd DFL. In the case of SoF, such entities were observed in 2011, while in the case TDR, their number increased, as compared to the preceding year, remaining at the same level in 2012.

In the area of capital activity, indicator values above Q1 were attained by 82% of the subjects for the RCP indicator, and 91% for LPP and ITR. Above-median indicator values were achieved by: 45% of the firms for RCP, 64% for LPP, and 82% for ITR. Values above the Q3 level were recorded by 18% of the companies for RCP and ITR, while 27% for LPP.

In the years 2010-2012, the number of entities which attained values of capital activity indicators that exceeded Q1 in the studied period increased in the case of RCP and LPP, whereas in the case of ITR, it remained at the same level in 2011, as compared to 2010, and in 2012, it declined slightly in relation to the preceding year. Additionally, the number of companies whose capital activity indicators exceeded the median level in 2011 increased in comparison with the preceding year, to grow in the following year for the indicators RCP and LPP, whereas ITR it remained in 2011 at the same level as in the preceding year, while in 2012, it dropped slightly, as compared to 2011. The number of companies whose capital activity indicators exceeded Q3 in 2011, as compared with the preceding year increased and remained at the same level in 2012 for RCP; in the case of LPP in remained at the same level in 2011, as compared to the preceding year, while in 2012, it grew; as for ITR, in 2011 it grew as compared to the preceding year, while in 2012, it dropped slightly in comparison to 2011.

In the field of productivity, it was found that in 64% of the examined companies, an increase in labour productivity was recorded in comparison with the preceding year, and in 20% of the firms that increase was greater than 20%.

It was observed that in the years 2010-2012 the growth tendency in the area of productivity remained at the same level, i.e. 64% of the studied entities reported an increase in labour productivity in relation to the preceding year. Moreover, a marked change was noticed in terms of the dynamics of labour productivity growth. The number of subjects which recorded growth by 20% in this area increased from 45% in 2010 to 64% in 2011, to drop to 18% in 2012. Besides, the number of firms which attained growth of labour productivity that was greater than 40% increased from 27% in 2010 to 36% in 2011, whereas in 2012, none of the companies attained this result.

Conclusions

It stems from the conducted analysis of the competitiveness of Podlaskie's largest companies operating in the construction sector, that the years 2010-2012 brought both growth and decreases in the values of selected indicators attained by the studied subjects in the areas of: profitability, financial stability, capital activity, growth, and productivity.

The downturn in the construction industry which occurred in 2012 undoubtedly exerted a negative impact on the competitiveness of the business companies under investigation, which found its manifestation in, among other things, the observed drops in the values of selected financial indicators.

In 2012, as compared with the preceding year, the following values deteriorated:

- some of the profitability indicators; it was noticed, for instance, that the number of subjects which achieved profitability indicators above Q3 declined in the case of ROA, RNS, RS and ERS;
- growth indicators; a decrease was noted in, e.g., the number of companies whose RGR and AG indicators grew. The number of firms which attained growth in the AG and RDR indicators of more than 20% and 40% also declined.
- labour productivity; it was observed, for example, that there was a considerable decrease in the number of companies which attained growth of labour productivity greater than 20% and 40%.

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