Self-regulatory Effectiveness of TSL Enterprises as an Indicator of Their Stratification Position in the Sector

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Abstract All of the enterprises which cooperate adapt different criteria for comparison of their achievements with the achievements of other participants of the market (revenues, costs, profit, employment). Consequently, an appearance of the market is created which is a sign of order of layers of different entities, striving to achieve different goals. One of those goals is to sustain the status quo on the market, which makes that status the primary goal of self-regulation. That goal can be described with an indicator of self-regulatory effectiveness. The indicator and its changes in the year 2014 has been analysed for the enterprises of the TSL sector shown in a published ranking. The analysis has proven that the enterprises with the highest efficiency or the highest share of the market were unable to achieve the best resource configuration. An optimal configuration, however, was achieved by an enterprise for which the growth of the self-regulatory effectiveness indicator had the value of 8906 points and was the last enterprise in the aforementioned ranking due to a low value of revenues and being a small enterprise. Ranking the enterprises according to the value of the growth of the self-regulatory effectiveness indicator creates an entirely different picture of the market.

Keywords Transport enterprise · Economic stratification of enterprises · Self-regulating · Self-regulating efficiency indicator

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Introduction

In the current functional conditions of the enterprises in the TSL branch, it becomes more and more important not only to have a good place among other entities but also to have a set of abilities, attributes of success which allow the enterprise the achieved position. As a result of the business processes in different enterprises, a complicated stratification structure of the TSL market appears, exemplified by the commonly known and published rankings of enterprises. However, in most cases, these rankings classify the enterprises according to the value of revenue which they had generated. They do not show the whole potential of the companies to sustain a certain position among other companies and to generate the revenues in the years to come.

The goal of the paper was to propose a method for measuring the self-regulatory skills of the enterprise (the self-regulatory effectiveness indicator), which lead to an achievement of a certain place on the market. As a result of ranking the TSL enterprises according to the value of growth of the proposed indicator, a different market picture is achieved, one which shows the ability of enterprises to achieve their long distance goals in fluctuating market conditions.

The methodological basis for the paper is as follows: the concepts of economic stratification of the enterprises and the theory of enterprises self-regulation.

Stratification of Enterprises as a Result of Achieving Market Goals

The purposefulness of the business activity of enterprises is their immanent characteristic. Every business entity strives to achieve its objectives and sets appoints different sets of goals—primary and secondary goals. The ability to reach those goals is the determined by the characteristics of the company itself as well as by the circumstances of its surroundings.

One of the most important factors determining the activity of the enterprises is their functioning in the market surroundings, which is a set of conditions, which, on the one hand stimulate the enterprises, but on the other hand create barriers for the achievement of their goals. The market is a place in which different enterprises allocate themselves, fighting constantly for their position, which is one of their main external goals. Therefore, the enterprise goals can be divided into two groups: the internal and the external (market) goals, and of the former ones the most important one is certainly to achieve a competitive position as good as possible under current circumstances and enterprise capabilities.

All of the enterprises participating in market competition can be perceived based on different references—among others their market share calculated as the overall turnover in the year. Business entities can also be presented and ranked based on different indicators (e.g. employment rate, value of motor vehicles). Regardless of

the adopted classification criterion, the result of the analysis is a specific picture of a market. It is a representation of the stratification structure of the enterprises in the economy, which can be applied in a certain order of the layers of enterprises and is used to describe the events causing that order, while also being its consequence [2].

The stratification of the enterprises can therefore be seen in a twofold way. First of all, it is a static picture of the market which shows the different layers of business entities in certain relations with each other—it is then a basis for the knowledge of the enterprise position in the ranking (based on a certain criterion) as regards to the other enterprises. Second of all, the stratification is also itself the process of layering of the enterprises, that is the sequence of events in time, therefore, by its nature, a dynamic event.

The most important aspect of the stratification, regarding its usability, is the result of the conclusion that the position of the enterprise in the stratification order of the market is not random. On the contrary, it is the result of the unique characteristics of the entity (e.g. size, legal form, organisational form, ownership of the capital, market activity) but also the enterprise ability to perceive its surroundings and firmly adapt to its dynamics—the ability to self-regulate. Being in a certain layer is therefore the effect of a compilation of different characteristics of the enterprise. And even though the enterprises in the processes of achieving their goals are very individualised, a few groups of similarly behaving entities can be observed on the market. Based on the similarity of market behaviour, specific layers of enterprises are created. Since their market behaviour is similar, then, probably, their abilities to reach economic goals are also concurrent (not the same but comparable). On the basis of market behaviour observation and in consequence the processes of the creation of the stratification order of the market, enterprises can be ranked according to their ability to achieve market goals and therefore to survive in the long run.

If the market behaviour of the enterprise is positively verified by the environment, their ability to achieve long-term goals will be secured. However, for the market behaviour of the business entity to be appreciated in the market environment, it should possess a number of qualities. Most important of them is the ability to deal with the changes of the environment itself.

Self-regulation of the Enterprises as an Indicator of Their Ability to Compensate the Environment Changes

The overall awareness of the changes in the environments of the enterprises is common and beyond doubt in the current economic conditions. In the TSL sector, those changes are even more important because it is a result of the trade cycle changes among the current and potential contractors of haulage and the changes of the business conditions as regards the used materials, motor vehicles and workforce. Hence, the ability to compensate for the changes and to upkeep the

effectiveness of goal achievement (which is the essence of self-regulation) through the adaptation to new conditions is necessary. That necessity is the result of two factors: the short-term goal of generating profit and the cumulated short term goal, identified in the long run through the increase in enterprise market value.

In the market dimension, from the functional point of view, the short-term goal is to strive to sustain the status quo on the market, making that state the first and foremost objective of self-regulation, which induces the understanding of self-regulation as an activity within the spectrum of the abilities of the enterprise to relate with its environment, based on the character. One of the main characteristics of a business entity is its ability to accept challenges and allocate the resources in a formerly unrecognised way. Entrepreneurial business entities accept in their functional philosophy the strive to seek new functional solutions, previously absent in other entities of the intra-organisational network thanks to which they adapt more successfully to the market conditions. In consequence, in the self-regulatory activities in the entrepreneurial companies, it results in changes within the system of partial equilibriums in the form of qualitative functional changes concern [1]:

- technology and technique;
- market (the search for new markets, fulfilment of new needs, use of new distribution channels);
- financial solutions (sources and mechanisms of financing, customer-entity financial relations, prices, equity relations);
- formal rules and structures;
- social system (recruitment, motivation, evaluation, promotion, culture, communication mechanisms, social initiatives, decision-making);
- and relations with the environment (marketing, promotion, public relations, lobbing).

Each of these areas can become a partial goal of the enterprise attributing to the primary goal, and each of them should be measured in a way which allows to determine the degree of its completion, including the profit. The formal measurement of the degree of goal completion is in most cases determined by the legal regulations—the accounting law and the taxation law which define the methodologies for profit calculation and evaluation of costs and revenues. All of these values, in their logic correct, become the basis for the construction of sector rankings. However, regarding the comparison of different enterprises, they become invalid, if only for the fact that in one ranking there are enterprises with a different scale of resources used to generate a certain value of revenue or profit.

Self-regulation is attributed to the effectiveness of goal completion—in the financial view those goals are revenues, costs and profits. They are the economic equivalent of used resources, and their relative configuration is important. The compensation of the changes within the financial self-regulation activities boils down to a search for such a configuration of the functional mechanism of the transport enterprise that allows for the best possible adaptation of the use of

resources for revenue generation in the current market circumstances. The use of resources is evaluated in the form of the costs of the primary activity of the enterprise, in result becoming the basis for profit generation.

The Measurement of the Self-regulation Effectiveness of Enterprises

The measurement of the self-regulation efficiency of enterprises implicates the need to relate to a basic value, standardised in such a way that for all the enterprises the values are created according to the same methodology. It also requires a construction a measurement which then relativises the basic values positioning them on the basis of a relative value, which describes the relations describing the self-regulatory efficiency regardless of the scale of business activity. It is therefore needed to use a measurement which allows to describe the functional characteristics of an enterprise, while eliminating the influence of the revenues, costs and, in consequence, the profit.

By adapting the available business activity characteristics of transport enterprises, one can set the methodology for the measurement of self-regulatory effectiveness on revenues and profits generated by the enterprise. However, it is necessary to relativise those values through the effectiveness of activity in the form of the level of employment. It is a consequence of the characteristic of transport activity as a form of services. A useful measure in that matter might be the indicator of self-regulatory effectiveness (WSS), which takes into account the return on sales (effectiveness of financial self-regulation), efficacy of employment (effectiveness of operational self-regulation) and return on employment (effectiveness of economic self-regulation). Therefore, the formula for the indicator of self-regulatory effectiveness (WSS) is as follows:

$$\mathrm{WSS} = \frac{\frac{\mathrm{Zn}}{\mathrm{Ps}} \cdot \frac{\mathrm{Ps}}{\mathrm{Zatr}} \cdot \frac{\mathrm{Zn}}{\mathrm{Zatr}}}{\mathrm{Sop}} \tag{1}$$

where

- Zn—net profit,
- Ps—sales revenue,
- Zatr—employment,
- Sop—the degree of the sales revenue of the last enterprise in the sample; e.g., if the last enterprise has a sales revenue of around 1,000,000, then Sop is equal to one million.

Such an indicator does not have a reference value, nor does it have a border value. It is a relative measure and is therefore useful through the dynamic character of its analysis (changes of its value from one year to another), because of the fact

that its growth shows the self-regulatory abilities of the enterprise and therefore allows to predict the long-term growth trend for the value of the entity.

Analysis of the Self-regulatory Effectiveness of the TSL Enterprises in Year 2014

Enterprises which were ranked in "Dziennik Gazeta Prawna" from 24 June 2015, nr 120 (4013) have been analysed—the ranking is shown in Table 1.

The ranking, shown in Table 1, allows to position the enterprises on the TSL market, according to the criteria shown in the head of the table (the basis for the segregation is the total value of revenue achieved in 2014). The natural conclusion is that the first enterprise (JAS-FBG S.A.) had the biggest share of the market in 2014. However, the effectiveness of business activity measured by the profit changes that picture completely—the first position is then occupied by SKAT Transport Sp. z o.o. Sp. k. (11,725,744 PLN), while the first position according to the profit dynamic belongs to an enterprise called No Limit with the 2014/13 dynamics on the level of 1125.85%. Those are still large enterprises, due to the fact that JAS-FBG S.A. employed 1018 people in 2014, SKAT Transport Sp. z o.o. Sp. k. employed 135 people and No Limit employed 371 people in the same year. The analysis of the dynamics of employment in these enterprises allows to observe that the entity with the largest revenue dynamics decreased their employment from 1148 employees to 1036 in 214, while the entity with the largest profit dynamics has increased its employment from 354 employees to 371 employees in 2014. The enterprise with the largest profit in 2014 (SKAT Transport Sp. z o.o. Sp. k.) has at the same time increased their employment from 109 to 135 employees. This leads to a question—Which of the enterprises has adapted the best to the changing economic conditions on the TSL market during that time frame?

To answer such a question, one has to revisit the listing in Table 1 and calculate the indicators of self-regulatory indicators for the years 2013 and 2014 for all the listed entities and then to calculate the value of change of that indicator from year to year (Table 2).

The analysis of the increase in the level of WSS that the aforementioned enterprises showing the largest market share or economic effectiveness were not the ones to have the best possible resource configuration for the functional equilibrium in 2014. Such a configuration of market activity and resource usage was achieved by the Albatros Cargo Sp. z o. o., for which the increase in WSS was on the level of 8906 points. It is especially interested when compared to the level of employment because that enterprise employed 6 workers in 2013 and 8 workers in 2014 which indicates a significant self-regulatory effectiveness. Arranging the enterprises according to the growth of the self-regulatory effectiveness indicator creates an entirely different picture of the market after all.

Table 1 Ranking of the TSL enterprises in 2014 according to their revenue

Name	Total revenue 2013	Total revenue 2014	Net profit 2013	Net profit 2014	Employment 2013	Employment 2014
JAS-FBG S.A.	447,214,000	457,265,000	6,086,000	7,808,000	950	1018
ERONTRANS	354,729,212	387,422,943	5,439,856	3,136,293	298	314
SKAT Transport Sp. z o.o. sp. k.	184,990,992	282,281,168	5,398,429	11,725,744	109	135
HellmannWordwide Logistics Sp. z o.o. sp. k.	254,294,000	280,525,000	1,126,000	1,033,000	410	391
Grupa Delta Trans	253,107,600	252,081,000	9,534,700	5,309,500	1148	1036
LINK Sp. z o. o.	220,176,170	247,844,431	5,030,073	5,092,203	504	531
CAT LC Polska Sp. z o.o.	202,044,000	209,214,000	2,370,000	2,370,000	266	282
Yusen Logistics (Polska) Sp. z o.o.	164,616,000	208,101,000	−275,000	1,077,000	178	205
MEXEM Sp. z o.o.	182,812,000	196,081,000	6,037,000	8,192,000	253	259
OMIDA Group	88,112,973	193,486,078	769,046	2,242,478	120	188
BATIM Transport Międzynarodowy i Spedycja	178,472,000	190,962,000	11,228,000	404,000	505	565
PPT PKS Gdańsk-Oliwa S.A.	162,868,849	180,486 579	2,776,186	2,372,011	148	164
SM LOGISTICS Sp. z o.o.	156,739,984	170,039,319	1,201,778	1,896,702	98	101
Eurogate Logistics Sp. z o.o.	99,502,000	117,176,000	878,000	1,701,000	57	68
No Limit	94,605, 000	103,279,000	147,000	1,655,000	354	371
Optima Sp. z o.o.	58,709,694	95,809,413	6,361,412	1,898,494	125	173
ZTE RADOM Sp. z o.o.	79,496,660	79,578,913	236,118	412,260	301	304
JURA POLSKA SP. Z O.O.	69,969,400	77,699,600	45,500	−261,600	29	33
Trans Logistyka–Olga Juchniewicz Sp. komandytowa	56,856,000	70,154,000	3,191,000	3,485,000	172	229
Botrans Sp. z o.o.	68,478,659	64,305,847	989,149	809,719	113	94
MAGTRANS	62,867,000	62,563,000	1,829,287	3,184,395	248	253
AsstrA Associated Traffic AG	84,354,000	58,677,000	1,133,000	187,000	77	80

(continued)

Table 1 (continued)

Name	Total revenue 2013	Total revenue 2014	Net profit 2013	Net profit 2014	Employment 2013	Employment 2014
SM Agroland Sp. z o.o.	48,281,824	48,172,666	842,979	622,275	33	35
INTERTRANSPORTSCENTRE-POLSKA Sp. z o.o.	34,227,322	36,932,883	1,426,238	1,501,991	18	19
NOX-POL Sp. z o.o.	27,149,655	35,817,308	185,385	385,414	87	100
Delphia Pisarska-Klinkosz, Klinkosz i Zagarów Spółka jawna	11,529,333	12,971,153	117,339	844,238	12	13
Transrem Sp. z o.o.	8,320,061	8,772,907	803,934	1,040,611	84	86
Albatros Cargo Sp. z o.o.	5,400,000	5,200,000	312,000	862,000	6	8

Source "Dziennik Gazeta Prawna", 24.06.2015 nr 120 (4013)

Table 2 Ranking of TSL enterprises according to the dynamics of self-regulatory effectiveness indicator

Name	Self-regulatory effectiveness indicator		Change
	2013	2014	
Albatros Cargo Sp. z o.o.	2704.00	11,610.06	8906.06
SKAT Transport Sp. z o.o. sp. k.	2452.91	7544.20	5091.29
Delphia Pisarska-Klinkosz, Klinkosz i Zagarów spółka jawna	95.61	4217.38	4121.77
MEXEM Sp. z o.o.	569.38	1000.42	431.04
Eurogate Logistics Sp. z o.o.	237.27	625.74	388.47
SM LOGISTIC Sp. z o.o.	150.63	352.66	202.03
MAGTRANS	54.41	158.42	104.01
OMIDA Group	41.07	142.28	101.21
JURA POLSKA Sp. z o.o.	2.46	62.84	60.38
Transrem Sp z o.o.	91.60	146.41	54.82
Yusen Logistics (Polska) Sp. z o.o.	2.39	27.60	25.21
No Limit	0.17	19.90	19.73
JAS-FBG S.A.	41.04	58.83	17.79
NOX-POL Sp. z o.o.	4.54	14.85	10.31
ZTE RADOM Sp. z o.o.	0.62	1.84	1.22
Hellmann Wordwide Logistics Polska Sp. z o.o. sp. k.	7.54	6.98	−0.56
Botrans Sp. z o.o.	76.62	74.20	−2.42
LINK Sp. z o.o.	99.61	91.96	−7.64
CAT LC Polska Sp. z o.o.	79.38	70.63	−8.75
INTERTRANSPORTS CENTRE-POLSKA Sp. z o.o.	6278.26	6249.24	−29.01
Grupa Delta Trans	68.98	26.27	−42.72
Trans Logistyka-Olga Juchniewicz spółka komandytowa	344.19	231.60	−112.59
PPT PKS Gdansk-Oliwa S.A.	351.86	209.19	−142.67
AsstrA Associated Traffic AG	216.51	5.46	−211.05
ERONTRANS	333.23	99.76	−233.46
SM Agroland Sp. z o.o.	652.54	316.10	−336.43
BATIM Transport Międzynarodowy i Spedycja	494.34	0.51	−493.82
Optima Sp. z o.o.	2589.92	120.43	−2469.50

Source Own analysis

Conclusions

Stratification of the enterprises that is the process of the layering of the market is one of the possible methods for the description of the state of the market. The state of the TSL sector is constantly described through the publication of rankings in which enterprises are arranged according to the basic economic characteristics such

as revenue, profit or employment. Using those rankings, one can also perform the stratification of the enterprises based on the changes of these values from year to year. However, such a description of the market and the comparison of different enterprises has one significant drawback, that is that the first places are always occupied by large enterprises with large potential, while the small enterprises, with small potential occupy the last places. The values of the economic categories generated by these groups of enterprises are beyond comparison, and while the dynamics of the levels show a bit different picture of the market, the stratification is still performed based one criterion. That leads to the inability to evaluate the enterprises according to their ability to adapt to changing market conditions—to self-regulate. The measure which layers the market according to the effectiveness of compensation of changes is the self-regulatory effectiveness indicator which describes in a relative way the characteristics of the achieved effect and the used resources. The indicator shows the effects of business activity while including the employment levels in the transport and haulage enterprises by bringing together the return on sales, the efficacy of employment and the effectiveness of employment. The use of the change in the value of the indicator, as calculated year by year (the value of WSS in 2014 minus the value of WSS in 2013) has shown during the research that the picture of the market and the layering of the enterprises is entirely different than when it is constructed according to the revenue, the profit or the employment. The enterprise which turned out to be the most effective one was an entity which was the smallest and therefore the last in the published ranking. It was characterised by a negative revenue dynamic, a significant profit dynamic and a small growth of employment. In conclusion, one has to state that the self-regulatory effectiveness indicator is a better criterion for the layering of the market because it allows to characterise the enterprises regardless of their economic potential in possession.

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