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THE COMPREHENSIVE PERSPECTIVE ON PMS – THE STRATEGY IMPLEMENTATION MEASUREMENT AND INTRA- ORGANIZATIONAL FACTORS

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Abstract

Although the performance measurement system has been a subject of many studies, there are still not many research results where the strategy implementation as a part of PMS was investigated. To fulfil that research gap, the article presents the comprehensive perspective on PMS, where the results of strategy execution would be considered. Based on the EFQM concept, the intra-organizational factors that hinder the process of strategy implementation, were defined and further analyzed. The research sample contained 150 entities listed on the stock exchange, different in size and industry. As indicated by the research results effective strategy implementation system should be focused on coherent relationship with the processes designed in the organization. Moreover, it is highly recommended to include strategy implementation measurement into performance measurement system to enhance their flexibility. Such an overall perspective would demand, in some cases, redesigning the existing PMS and improving the measures as well as processes and tools used.

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1. Introduction

The importance of performance measurement systems for management (Unahabhokha, Platts, & Tan, 2006) and its impact on business results was discussed in several studies (Sharma, Bhagwat, & Dangayach, 2005). It is perceived as a facilitator integrating the overall development concept and goals established with the results of business processes designed (Taticchi, Balachandran, & Tonelli, 2012).

Although the positive relationship between the performance measures (including the area of strategy) and financial performance was already confirmed by many authors (Banker, Chang, & Pizzini, 2004; De Geuser, Mooraj, & Oyon, 2009), there are different recommendations of the type of measures analysed. Some authors recommend focusing on financial perspective (Franco-Santos, Lucianetti & Bourne, 2012) while according to others, the usage of non-financial performance measures is desired (i.e. Gunasekaran & Kobu, 2007) and therefore that usage is increasing (Taticchi, Tonelli, & Cagnazzo, 2010). However, in that case there is no clear evidence that it is linked to the company's strategy and measuring its effectiveness (Pinheiro de Lima, Gouvea da Costa, & Angelis, 2009). It's worth mentioning that in some cases, providing the link to the strategic objectives is strongly recommended (Forza & Salvador, 2000). Nevertheless, it is still difficult to investigate the extent to which organizations are integrating the strategic priorities with the performance measures chosen (Banker, Janakiraman, & Konstans, 2001). Therefore, an approach integrating the performance measurement system (PMS) with the strategy implementation management process, and its measurement system following and controlling that process, seems to be important. That argument was supported by Amaratunga and Baldry (2002).

2. Literature Review and Theoretical Framework

According to Tangen (2005), among the requirements of performance measurement system we may distinguish fully integrated character, which demonstrates the possibility to explain different relations. Therefore, the main challenge is to ensure the integration of all reporting systems at all hierarchical levels, which could mean the incorporation of strategy implementation reporting. That integration should be also demonstrated by ensuring relevant and updated organizational context (Paranjape, Rossiter, & Pantano, 2006) where the strategy and strategic goals are integrated with operational processes. According to Franco-Santos and Bourne (2005) it is demonstrated by the alignment and integration of information structure. To obtain such integration, analysis of intra-organisational factors is required, as those are the most important barriers influencing the strategy implementation process (Desroches, Hatch, & Lawson, 2014). In that approach, strategy implementation becomes one of the components of performance measurement system and the relationship between those two systems has an important impact on basic operations. The main advantage of such perspective, it providing the specific measurable expectations that would reveal employees their role and influence on strategic goals achievement (Choong, 2013).

Except the employees, the leadership should also be considered. It is worth mentioning that leadership has a bilateral function. It is considered as a factor significantly influencing the strategy execution process and, at the same time, crucial for implementing performance measurement model. There are different perspectives of the organizational source of these responsibilities i.e. finance department (Robinson, Anumba, Carillo, & Al-Ghassani, 2004), quality control department or the responsibility shared among board members (Robinson, Anumba, Carillo, & Al-Ghassani, 2005).

Among the characteristics of performance measurement system identified by Gomes, Yasin & Lisboa, (2004) we can mention two recommendations confirming the postulated integration – the PMS should articulate strategy to be able to assess the business results and should dynamically follow the strategy. Moreover, as mentioned by some authors, its role is to create organizational alignment (Hanson, Melnyk, & Calantone, 2011) as well as to translate strategy into action (Micheli & Manzoni, 2010). Therefore, we may state that the PMS has a strategic function as it transmits the strategy and long term plans into operational activities, where the efficiency and effectiveness can be measured and observed (Henry, 2006). For that reason, the integration of PMS and strategy implementation measurement system (SIMS) is highly recommended. Based on the definition of PMS originally proposed by Neely, Gregory & Platts, (1995) where it is defined as “the process of quantifying the efficiency and effectiveness of action”, we may assume that identifying the action as the process of strategy execution, we may define the strategy implementation measurement system using the same concept.

This paper is focused on the understanding of the strategy implementation measurement system role, as a part of performance measurement system. It is important to investigate its influence on factors hindering strategy implementation. Therefore the holistic perspective on performance management system would be analysed.

To solve the problem stated, it is necessary to answer the main research question whether there is a correlation between performance measurement system that would consider the strategy execution progress and intra-organizational factors hindering successful strategy implementation. Those factors were grouped into five areas – processes, resources, strategy content, leadership and employees. Therefore, the specific research question was formulated:

Is there a relationship between the improper strategy implementation measurement system (as a part of PMS) and the area of processes/resources/strategy/leadership/employees?

The main purpose of this study is to investigate the relationship between the performance measurement system that would consider and measure the strategy implementation results and other intra – organizational factors that have negative impact on effectiveness of strategy execution process. The results of the study conducted would enable to reveal the necessity to include the measures of strategy implementation progress into the PMS and, as a result, would enable to propose the holistic perspective on that phenomenon. Therefore, the presented approach could be used as a guideline for managers willing to improve the performance measurement system that would allow to integrate different measures and various assessment options.

3. Research Method

The research aimed at recognising the strategy implementation (its effectiveness measured by SIMS) and exploring the intra – organizational factors hindering that process. Based on the EFQM concept (Fundamental Concepts of Excellence, 2013), 6 areas were determined – leadership, strategy, employees, resources, processes, and measurement system. The EFQM concept was chosen because the criteria proposed could be used as a guidance in creating the management control system (Otley, 1999) and treated as an alternative for Balanced Scorecard where the measures are directly focused only on strategy implementation measurement (Wongrassamee, Simmons, & Gardiner, 2003). Moreover, the factors that

could be identified in that concept are of both – financial (measurable) and non-financial (unmeasurable) nature.

3.1. Sample and data collection

The research sample contained 150 entities listed on the Warsaw Stock Exchange and on the alternative New Connect market, different in the size and branch in which they run their activity. The presence on the stock exchange requires precise specification and determination of a strategy and strategic goals as well as progress reporting. The respondents were responsible for strategy formulation and implementation i.e. CEOs, Owners, Strategy Managers and Board Members.

3.2. Analyses

The study was conducted by a direct questionnaire interview – the survey was carried out with the use of PAPI. The probability of a given factor (its occurrence) and the assessment of its impact (influence), coded to scale 1–5, was investigated. The 5-point Likert scale was used. In the case of the probability of occurrence the scale of answer was: (1) very low probability (5%), (2) low probability (25%), (3) medium probability (50%), (4) high probability (75%), (5) very high probability (more than 90%). In case of the impact the following scale was used: (1) very low impact (5%), (2) low impact (25%), (3) medium impact (50%), (4) high impact (75%), (5) very high impact (more than 90%). The data collection allowed for the study of the perception of respondents, not the actual features of strategy, which could be considered as a limitation of the study. Those latent variables represent qualities that are not directly measured (Tabachnick & Fidell, 2001) and the constructs operating in the mental world of individuals (Borsboom, Mellenbergh, & van Heerden, 2003). The relationships between the variables were determined using the Pearson's correlation.

4. Findings

To analyse the data obtained, the Pearson's correlation was calculated. The research results were presented in following tables (01-04) and further investigated.

Table 01. Correlation between the area of measurement system and other intra-organizational areas – probability of occurrence (N=150)

	Leadership	Strategy	Employees	Resources	Processes
Pearson's correlation	0,537	0,615	0,575	0,709	0,659
Significance	0,00	0,00	0,00	0,00	0,00

The first part of the analysis included investigation of the relationship between all distinguished research areas. As presented in Table 01, there is a medium (0,537 – 0,659) and strong (0,709) positive correlation between the measurement system and other intra-organizational areas. The strongest relationship could be observed in the case of resources (0,709) and processes (0,659). Therefore, a particular relation could be defined – with the increase of the probability of occurrence of an improper measurement system, the more likely resources and processes would affect the strategy implementation process.

However, other areas are also related and for that reason their mutual relationship should be revealed. To check that influence, further analysis was performed. The results are presented in Table 02.

Table 02. Correlation between the area of measurement system and other intra-organizational areas – influence on unsuccessful strategy implementation (N=150)

	Leadership	Strategy	Employees	Resources	Processes
Pearson's correlation	0,753	0,740	0,709	0,732	0,801
Significance	0,00	0,00	0,00	0,00	0,00

As it could be observed, in case of the impact on unsuccessful strategy implementation, the correlation level is significant (all cases with the correlation level above 0,7). In case of the processes, the level is the highest (0,801) which demonstrates that with the higher negative impact of improper strategy implementation of the measurement system, the negative influence of the processes grows. That result unveils that the relationship between processes and measurement system (which includes measures and processes as well) seems to be an important factor when analysing the reasons of strategy execution failures. Positive correlation between all areas investigated proves that the strategic awareness based on the mutual relationships is highly recommended. Further analyses aimed at checking the importance of transverse relations between the probability of occurrence and the impact of research areas.

Table 03. Correlation between invalid strategy implementation measurement system (occurrence) and negative influence of other intra-organizational areas on strategy implementation (N=150)

	Leadership	Strategy	Employees	Resources	Processes
Pearson's correlation	-0,336	-0,367	-0,327	-0,391	-0,400
Significance	0,000	0,000	0,000	0,000	0,000

As presented in Table 03, the transverse relation could also be confirmed, although their strength is lower. The negative correlation shows that the growth of probability of the occurrence of invalid strategy implementation of the measurement system (defined as inefficient or incorrect) reduces the negative impact of other areas. Although that correlation could be considered as medium level (-0,3 – -0,4), it demonstrates the significance of the measurement system analysed and the importance of its complexity which should reflect the aspects distinguished. Especially, the relation with processes (-0,4) seems to be important. Therefore, the proper design of the system, as well as intended and organized process of its implementation could be considered as crucial for strategy execution. That conclusion was further confirmed by the last part of the analysis conducted. The results are presented in Table 04.

Table 04. Correlation between invalid measurement system (influence on strategy implementation) and occurrence of other intra-organizational areas (N=150)

	Leadership	Strategy	Employees	Resources	Processes
Pearson's correlation	-0,191	-0,368	-0,371	-0,373	-0,412
Significance	0,000	0,000	0,000	0,000	0,000

The presented research results indicated medium and negative correlation (-0,368 – -0,412) between research areas except the area of leadership where the correlation is the lowest

(-0,191). However, the area of processes showed again the highest level of correlation (-0,412). The presented relations could be interpreted in the following way – the higher the influence on strategy implementation caused by an improper measurement system, the lower the probability of occurrence of other intra-organizational areas that could also induce the drop of strategy effectiveness. That confirms the already mentioned importance of proper construction of the strategy implementation measurement system to avoid the factors identified as barriers significantly influencing the final result of strategic management process.

5. Conclusion and Discussions

As indicated by the research results, the performance measurement system should include the strategy implementation measurement. The study also confirmed that it plays an important role in the strategy execution which has already been stated by Chatha and Butt (2015). However, although developing and using the comprehensive and coherent set of performance indicators in the strategy implementation process was already recommended (Busco & Quattrone, 2015), there was no research investigating the influence of measurement system on factors perceived as barriers in strategy implementation process, which could also be used as a part of PMS. That was the research gap identified in this paper.

The correlation with different intra-organizational areas was revealed. In most cases, the strongest relationship with the area of processes was presented, which confirms the necessity of ensuring proper infrastructure in the organization as well as designing the measurement system according to the processes that are a part of overall management system (Neely & Bourne, 2000). What is more, the research indicated the interrelationship (cause and effect relation) between the area of processes and strategy implementation measurement which would require precise recognition of business processes and their effectiveness. That idea was supported by Bourne, Mills, Wilcox, Neely & Platts, (2000) and Cohen (1998) who recommended that action in order to accomplish the “knowing – doing” gap in the areas analysed.

Moreover, the research results indicated the mutual relationship with the leadership factor which confirms the observations provided by Bititci, Mendibil, Nudurupati, Turner & Garengo, (2004) where the leadership style impacts the measurement system implementation and the successful implementation of performance measurement system encourages the more participative management style. The main contribution of the study presented is, therefore, the confirmation of the thesis that comprehensive PMS including the strategy implementation measurement is highly recommended which supports the previous claims presented by Homburg et al. (2012). Moreover, the greater consideration of the types of performance indicators should be given, as stated by Micheli and Mura (2017), but the novelty of the research conducted would be the inclusion of the intra-organizational factors that could be perceived as barriers of successful strategy implementation. Thanks to that comprehensive perspective an impact on company’s performance is expected.

There are some managerial implications that could be proposed. Firstly, as confirmed by the research results, effective strategy implementation system should be focused on coherent relationship with the

processes designed in the organization. The process approach based on integration of processes designed for operational and strategic activities was originally proposed by Platts, Mills, Neely, Gregory & Richards (1996). However, it hasn't been confirmed yet that such integration requires including the aspects of measurement, which was revealed in this study. That relationship would be aimed at ensuring that all the necessary data is related, consistent and linked with the strategy and strategic goals formulated. Secondly, it is highly recommended to include strategy implementation measurement into performance measurement system and enhance their flexibility. That implication confirms the conclusions presented by Neely (2005). Such an overall perspective would demand, in some cases, redesigning the existing PMS and improving the measures as well as processes and tools used. However, as stated by Bourne et. al (1999), we may expect a positive impact of such actions on overall performance.

The main limitation of the study presented was the perspective of analysis chosen. It is worth investigating whether the strategy implementation measurement system should include the specific features of industry, which was also confirmed by Jääskeläinen et. al (2012). Moreover, as indicated by Taticchi et. al (2010) the specific research for companies of various sizes is needed. Because of distinctive constraints in large organizations and SMEs, diverse models are developed and adapted. Therefore, it would be highly recommended to include the size of the company in further analyses. Another limitation was the usage of perceptions of the managers which may not be objective and reflective to actual use of the practices described. However, as the study investigated the impact and probability, only the perceptions could be analysed.

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