

“SOFT” PERSPECTIVE OF THE BUSINESS PROCESS ORIENTATION

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Abstract: *The purpose of this paper is to represent practical approach on the empirically evaluated business process orientation (BPO) of the Slovenian power supply business. Within the empirical investigation, the level of BPO maturity was measured in the 19 organizations of the power supply business. The survey was focused on the top, middle and lower managers. As a measuring instrument, a questionnaire for the extended concept of process orientation with nine elements was used. The results of the BPO measurement shows that, despite this long-standing preoccupation with processes, certified management system and the computerization of operations, process maturity is not very high. Results suggested the opportunities for improvement, particularly for better use and exploit of information technology. Presented research is the first one which considers the BPO maturity in the Slovenian power supply business and therefore contributes to understanding of the ‘soft or intangible factors’ which have impact on the introduction, implementation and maintenance of Business process management (BPM). As a result, it is found that contemporary literature acknowledges the importance of business process (BP), BPM and BPO maturity of the organization. Therefore, scope of used terminology comprises; BP is included by BPM, which is further embraced by BPO. This research makes significant contributions to the literature and above all to scholars and practitioners who work professionally in this field and will find useful guidance for a better understanding of applying BPO and suitable maturity models in different industries.*

Keywords: *Business process management (BPM), Business Process Orientation Maturity Model (BPOMM), Business process orientation (BPO), Business process reengineering (BPR), Process maturity*

1. INTRODUCTION

Among scholars is being discussed about four major schools of thought in management; Taylorism, human-resource orientation, operations research and systemic. However we view business process orientation (BPO) as a “fifth” school of thought in management, a perspective, or as a terminology, it is a fact that many successful companies are oriented toward business processes. The concept of process orientation promotes the identification of different organizational functions as well as an expanded role for various processes across organizations. This view promotes a “matrix-like structure” where recognition of key stakeholders is central to operations [1], [2].

BPO is extremely important for the success of business process management (BPM) efforts within organizations, e.g. McCormack and Johnson [7] research results indicate a surprisingly strong relationship between BPO and overall performance [8], [9], [10], [11]. Since both concepts are closely intertwined, surveys focusing on BPM and BPO are considered in the literature review [12], [13], [14].

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Owing to constantly changing business requirements and challenges, companies are forced to improve their processes in order to keep pace. As a consequence, BPM is among the most important managerial topics because it allows companies an agile adaptation. Choong's [15], [16] claim, that BPM-systems are the result of developments in both the business and IT-domain that focus on aligning all aspects of an organization with the expectations of customers.

Among the reasons for struggling to evolve and expand BPM practices across the organization are the lack of positive organizational culture, lack of support among senior management, the absence of clear roles and responsibilities in implementation, and insufficient budget and resources [17], [18], [19], [10], [20], [21].

From the BPO maturity research perspective the Slovenian power supply business organizations are interesting because of their engagement with process approach over many years. Most involved organizations have an ISO 9001 certified Quality Management System. One feature of their activity is that a lot of resources and efforts are directed to the automation and computerization of operations in the technical field, as clearly defined and documented processes are required in this business. The power supply business consists of all the installations and equipment for the generation, transmission and distribution of electricity, ensuring the maintenance of a balance between production (14.984 GWh) and consumption (82%) [3].

2. BUSINESS PROCESS ORIENTATION MATURITY

Process orientation enables organizations to think collectively as one unit about increasing their efficiency in meeting customer needs [14]. Davenport and Short [22] explicitly articulated 'process orientation' as a beneficial management practice. Hammer [23] identifies the development of a customer focused process-oriented way of thinking, enabled by information technology (IT) [24], [23], [25]. Both Business process reengineering (BPR) and BPM involve substantial organizational change, and hence require a long-period of time for both to materialize. By structuring BPR with BPM it will be possible to monitor and ensure the change is successful; BPM is considered a more holistic view of BPR in that the former includes the execution, measurement and control of processes, in addition to the modelling, improvement, and redesign of activities [26], [15].

According to many authors, the maturity and capability of business processes is acknowledged as a key determinant of an organization's ability to adapt and respond to emerging threats and opportunities, and thus its sustainability. Findings of several authors indicate that BPM involves many different aspects, ranging from process agility and performance measurement [27] to process-oriented organizational structure combined with industry-specific and IT expertise [28]. Along with the development of internet technology and applications, the associated network standardization, and a web services orientation, BPM started as the automation of a company's internal processes and then became more externally oriented towards the digitization of supply chains [16]. But it is the managerial processes that determine how this performance is sustained over time [29], [30], [10]. More importantly, the central notion of BPM is the requirement for managers to undertake the creation/addition of value for customers and for the organization [15].

Although many authors stress the importance of BPO [7], [14] or the organization's performance, extensive literature reviews on the subject indicate there remains a lack of comprehen-

sive studies that would clearly demonstrate the positive impact of BPO on performance [8], [9], [34], [35], [12], [10], [11], [13].

The process orientation and process maturity are two tightly related concepts. Organizations with increased process maturity have “higher levels of BPO”. From this perspective, process orientation can be viewed as a measure of organization-wide process maturity [31], [5].

The concept of process maturity stems from the understanding that the processes have their life cycle or development stages, which can be clearly defined, measured and managed over time. The higher the degree of maturity of any process resulting in improved forecasting goals, costs and operating efficiency, the greater are the presumed performance and achievement of goals [32], [33], [36], [6]. Maturity is therefore synonymous with standardization and business process improvement [35], [20]. Different organizations mature at different rates, depending on the nature of the business and the emphasis placed on process improvement [25]. Findings of Movahedi, Miri-Lavassani and Kumar [2] have shown that if the organizational goal is centered on achieving higher customer satisfaction benefits; this can be achieved through better management of business processes at intra-organizational level (indirect effect) as well as inter-organizational level (direct effect).

3. RESEARCH METHODOLOGY

Within the framework of an empirical study, and the selected survey instrument [7], [37], the level of BPO maturity was measured in the 19 organizations from the power supply business.

As a measuring instrument, a questionnaire for the extended concept of process orientation with nine elements (see Figure 1) and with 7 Likert-scale levels was used, (ranging from a rating of 1 (not true) through to a rating of 7 (absolutely true) and additional choice ‘I do not know’. To determine the level of maturity, McCormack’s [38] four development stages maturity model was used [7], [38], [6], [39]; the degree of Ad Hoc (maturity level boundary including 4), Defined (4.01 to 5.5), Linked (5.51 to 6.5) and Integrated (6.51 to 7) was taken into account. The survey comprised the top, middle and lower managers, thus representing the population of 450 managers.

Questionnaires were submitted to respondents in agreement and with the support of the top managers of organizations. Namely, 240 fully completed questionnaires were received, which represented a 53.33% response rate. The survey was conducted via an online portal EnKlikAnketa (1KA) between February and March 2016. The questionnaire was pre-tested on a test sample of 34 respondents.

Based on the replies to the questionnaires, descriptive statistics and testing of assumptions for normality and reliability for every element of the BPO’s questionnaire were calculated using the Statistical Package for Social Sciences (SPSS). The questionnaire included a control question: Do you agree with the statement ‘Our organization is very process-oriented’?

The research’s basic thesis is linked to the introduction of BPM and BPO, in which organizations management devote too little attention to ‘soft or intangible factors’ i.e. values, organizational culture [21] and behavior that promotes process functioning.

From here originates the first hypothesis, which was subjected to statistical assessment:

Hypothesis 1: Poor development of ‘soft’ elements associated with leadership, such as process oriented organizational culture, process oriented organizational structure and human resource (HR) management, reduces the level of an organization’s process maturity.

The second hypothesis relates to the perception of the BPO by the top, middle and lower management. Practice often points out that top management assesses the BPO maturity and performance of BPM more positively.

Hypothesis 2: Middle and lower management assesses the performance of realized business process orientation and business process management more critically than the top management.

4. FINDINGS AND DISCUSSION

Hypothesis verification

Hypothesis 1: First hypothesis H1 was tested in two steps. Firstly, the correlation analysis was performed, which established the dependence between ‘soft’ elements related to leadership and the level of the BPO maturity, and where, as a level of business process orientation, the responses of managers to the control question were taken into account.

Correlation analysis showed that between process oriented organizational culture, process oriented organizational structure, HR management and the organization’s business process orientation, there is a positive medium-strong correlation (correlation range from 0.599 to 0.649). From the results it was noted that underdeveloped ‘soft’ BPO elements, reduce the level of the organization’s business process maturity.

Secondly, the influence of ‘soft’ elements of BPO associated with leadership (independent variables), on the level of the organization’s business process orientation (dependent variable) was analyzed using multiple regression analysis. A histogram and graph of standardized regression residues demonstrated that the residues were normally distributed.

Multiple regression analysis results (Table 1) showed that dependent variable BPO is positively affected by all three ‘soft’ elements associated with leadership.

Model	Unstandardized coeff.		Standard. Co-eff. Beta	R ²	t	Sig.
	β_i	Std. error				
Constant	-0.119	0.396		0.525	-0.300	0.765
Process oriented organizational structure	0.252	0.121	0.164		2.081	0.039
Process oriented organizational culture	0.493	0.112	0.391		4.419	0.000
HR management	0.298	0.114	0.236		2.616	0.010

Note: Business process orientation is dependent variable.

Table 1: Regression coefficients for H1 [6]

The regression model explained 52.5% of the variability of business process orientation of 19 surveyed organizations (Table 1). Consequently, the first hypothesis was accepted.

Hypothesis 2: For the verification of the second hypothesis and analysis validation the three (top, middle and lower) surveyed groups of managers were divided into two:

- First group: top management (CEO or general manager, director of the company, member of the management board, deputy CEO or deputy director of a company, director or executive director of the organizational unit);
- Second group: middle and lower-level management (head of department, head of unit, project manager).

Hypothesis H2 was tested with T-test for independent samples. Results indicate that evaluation of BPO elements' averages cannot be seen as statistically significant (Table 2) between the two groups of respondents. On average, both groups relatively equally assessed individual elements of business process orientation maturity (Table 2). Based on this finding the second hypothesis was rejected.

Elements	Group	N	Average	Sig.
Strategic perspective	Top management	33	4.91	0.931
	Middle and lower management	158	4.93	
Determination and documenting of processes	Top management	32	5.23	0.943
	Middle and lower management	165	5.20	
Measurement and management of processes	Top management	32	4.76	0.543
	Middle and lower management	183	4.95	
Process oriented organizational structure	Top management	31	4.93	0.351
	Middle and lower management	171	4.73	
HR management	Top management	33	4.53	0.139
	Middle and lower management	192	4.39	
Process oriented organizational culture	Top management	31	4.75	0.165
	Middle and lower management	184	4.58	
Market orientation	Top management	32	4.54	0.085
	Middle and lower management	140	4.63	
Suppliers' perspective (business partners)	Top management	31	4.53	0.080
	Middle and lower management	141	4.45	
Process oriented information technology	Top management	31	3.97	0.312
	Middle and lower management	115	4.29	

Note: Nine elements from a questionnaire (see Figure 1).

Table 2: BPO elements T-test results for H2 [6]

Hypothesis verification confirmed that managers should put much more emphasis on developing the soft elements of the BPO and that there is still much room for improvements.

Analysis of results and discussion

Research of the Slovenian power supply business showed that BPO maturity is not high. This may be due to the fact that BPM is often understood very narrowly only by completing the ISO 9001 requests, sometimes also very technically. Including that sometimes the BPM-system is regarded as a software application, which should be further investigated. However, the

BPM-system should be rather considered as the basis for a new paradigm in the BPO context. In practice, BPM confirms itself as an appropriate way to innovate and transform organizations and develop their agility.

Regarding the questionnaire's control question, managers on average agreed, with a score of 4.73 on the Likert scale, which was also obtained by statistical evaluation of measured values of the nine individual BPO elements (average = 4.68; Figure 1).

Top-rated BPO elements were the Determination and documenting of processes (5.21), Strategic perspective (4.92) and Measurement and management of processes (4.92). The lowest evaluated elements were Process oriented information technology (4.22), HR management (4.41) and Suppliers' perspective (4.46). The lowest score for information technology represents a surprise, which, within individual power supply organizations deserves a more detailed analysis and appropriate action (Figure 1).

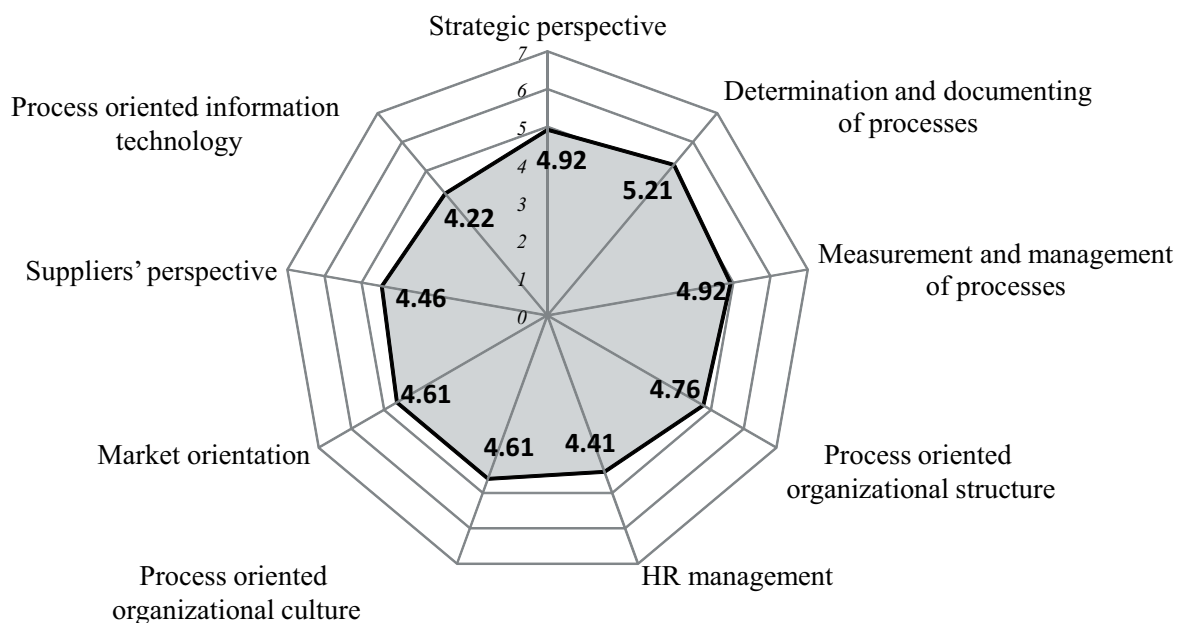


Figure 1: Statistically evaluated estimates of BPO elements [6]

Based on the calculated average value of BPO, the power supply business is located on the 2nd level as defined in McCormack's Process Orientation Maturity Model (BPOMM). This level is characterized by the defined and documented processes [38].

Analysis of the results points to the need for better communication with employees. Lowest estimates of the individual elements are for statements concerning the acquaintance of employees with strategic objectives, indicator results and achievement of processes and the expected changes. The power supply business is a highly technical activity, which is dominated by managers from technical sciences. Employees are unfamiliar with methods for processes improvement and are not stimulated for process improvement proposals, which may represent a serious obstacle to the further improvement of the processes' effectiveness and efficiency. Namely, 29.2% of respondents think that they do not have special organizational units for process management. Here is an opportunity for managers to devote more attention to organizational culture [21] and behavior that promotes process orientation deployment [31], [14].

5. CONCLUSIONS

Presented research is the first one which considers the business process orientation maturity in the Slovenian power supply business. Therefore, makes significant contributions to the literature and above all to managers, scholars and practitioners who work professionally in this field and will find useful information and guidance for a better understanding of the business process orientation and maturity models (i.e. McCormack and Johnson's BPOMM).

Based on the lowest estimated statements and BPO elements [6], [39], a definite improvement programme can be planned for the implementation of BPO and transition to the third stage of maturity. For faster implementation of BPO, leaders will have to pay more attention to the implementation of relevant values and organizational culture.

Further impetus in this direction may also represent the discussed insight into the relationship between the development level of BPO and the business performance of power supply chain organizations.

Given the observed deficiencies in the HR management perspective, especially with communication, checking the differences between the estimates of managers and employees could provide an opportunity for future research. Future research should involve conducting investigations in different industries in order to gain further insight on the factors supporting or preventing the use of BPMs in practice.

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