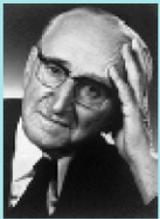




Ordnungspolitische Diskurse

Discourses in Social Market Economy



Viire Täks / Maaja Vadi

**Who and how do participate
in strategic planning?**

Diskurs 2019 - 3

Who and how do participate strategic planning?

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Abstract

The paper offers new insights into how concurrent combinations of different strategic planning participants is related to the usage of various management tools in the company. It shares the light to two areas with little empirical studies - concurrent involvement of strategic planning participants and the relation between strategic planning participants and use of management tools. Through this, it helps to explain strategic planning participants influence strategy implementation processes. The study is based on a dataset of 204 Estonian companies. To analyse relationships Bayesian networks is chosen and the dynamic networks illustrate the findings. Using this analysing method allows evaluating probabilistic relations between various combinations of strategic planning participants and use of management tools. The study shows that leading actors of strategic planning are owners, top and middle managers. Middle managers have a central role in involving lower positions in the company to strategic planning. When owners are involved in strategic planning, companies tend to use externally oriented management tools like customer relationship management. Involvement of top managers is related to internally oriented management tools, most probably with business process re-engineering. In case of concurrent involvement of top managers and owners, owner-related management tools are preferable in use. Middle managers are most often involved in strategic planning when benchmarking and first-level managers when business process re-engineering is in use. Bayesian network models were also composed of the involvement of specialists and blue-collar workers, while these networks did not show any relationships between strategic planning participants and management tools.

Keywords

Strategic planning; strategic planning participants; management tools, Strategy implementation, Estonia, Bayesian networks

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Who and how do participate strategic planning?

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1. Introduction

Strategic planning can be described as organizations' process of streamlining its strategy and creating a set of allocated resources to support this. Strategic planning has also been named as a "synonymous with responsible and accountable management" (Kenny, 2006, p. 355). Previous studies had shown the importance to involve different internal stakeholders in strategic planning (Berman *et al.* 1999). One part of the prior literature has been focused on various internal stakeholder groups, as managers (e.g. Vilà and Canales 2008) and employees (Hart, 1992) involvement into the planning process and do not look inside of these groups. The others are studying the participation of different managerial positions. There is more literature about the roles of managers in strategic planning. However, specialists' and blue-collar workers' involvement is less studied. Similarly, the concurrent participation of different positions in the strategic planning process has got little attention in previous studies. Therefore, it is not clear for example which position has the central role in involving others.

Many scholars emphasised the need for empirical studies about strategic planning participants and their impact. For example, Jamal and Getz (1996) named that there is a scarcity of attention to the strategic planning participants and a strong need for empirical studies in this field. They stressed the need to study the level and "concomitant issue of diffusion of power from the top management to other levels" (Jamal and Getz, 1996, p. 67). Vilà and Canales (2008, p. 275) emphasised a clear need to enlighten how strategy making enhances the awareness about strategy among the members of the organization.

To explain strategic planning participants relations with strategy implementation, their impact on the use of management tools is studied. Selection of suitable management

tools is an essential managerial decision what should support and implement organizational strategy. Explaining the involvement of participants from different positions may have a significant influence on the selection of management tools. Regarding their roles, work assignments, and personal experiences may use various management tools to implement the strategy. So far, it has been unclear what kind of effect the concurrent involvement of strategic planning participants has to the selection of management tools used by companies.

The article is divided into three main parts. The first chapter is focused on studying relations between strategic planning participants and the second one to management tools based on literature. Also, research questions to empirical study will set up in this part. The second section is an empirical study to detect patterns in the relations between strategic planning participants and management tools based on Bayesian networks.

2. Strategic planning participants

To remark strategic planning participants term “strategic actor” is often used in the literature. It remarks stakeholders who are influenced by or influencing the strategy but does not necessarily mean involvement in the planning process. According to this, the more precise term “strategic planning participant” is used in this article.

Some companies involve only owners and top managers; others include a wider variety of positions, for example, specialists and blue-collar workers as well. The right choice of strategic planning participants is one of the critical factors in the planning process. There are only a few empirical studies about the impact of concurrent involvement of different participants to strategic planning. *Owners’ and top managers’* participation in this process is almost obvious. Their involvement helps to gain top management team consensus in goals and sub goals, improve unity of directions and commands (Ketokivi & Castañer, 2004, p. 339). Owners and top managers have the best overview of the goals of the company and the ideas about how it needs to be managed. Their roles are, for example, strategic decision making, designing, managing and evaluating strategic planning, supporting and facilitating other strategic planning participants (Zabriskie, 1989), also to improve organizational learning (Kenny, 2006). Owners and top managers review companies’ mission and are involved in monitoring the internal and

external environment and trends (Kenny, 2006). They can decide if and who else should be involved in strategic planning and give guidance to other strategic planning participants and to build up a shared understanding of strategic planning and goals (Kenny, 2006; Zabriskie, 1989). However, even if owners and top managers agree in strategic plans and these implementations, there might be bias at other positions in the organization. Therefore, it is essential to look further from owners and top managers consensus and to study the involvement of different positions and their impact on the planning and implementation process.

Employee participation in strategic planning helps them to understand better companies' goals and helps to relate their tasks and goals with companies' ones. It facilitates the embracement of strategic goals and to understand how employee work will help to achieve those (Tannenbaum & Massarik, 1950). On the other hand, employees very likely have knowledge and experiences that are valuable in the planning process but what top-managers' may not have (Collis & Montgomery, 1998).

Middle and first-level managers are considered to make strategy more diversified and make it more focused on explaining clear priorities to participants and helping them to deliver results (Vilà and Canales, 2008). They are improving strategic planning by offering advice and support through new ideas (Draft, 1992), critical comments, and feedback to the planning process (Zabriskie, 1989). Their input and creative solutions do help to introduce new practices into corporations' daily life and support other participants in strategic planning (Zabriskie, 1989). Involvement of middle and first-level managers is associated with the better internalisation of strategy (Ketokivi & Castañer, 2004) and improvement of the common view of strategic plans and goals (Wooldridge and Floyd, 1997). Their participation is associated with increasing firm performance (Andersen, 2004; Wooldridge and Floyd, 1997) compared with a situation where only owners and top managers are involved.

There are fewer studies about *specialists and blue-collar workers* involvement and roles in strategic planning. Nevertheless, some theoretical works have been hinting about the importance of involving them into the strategic planning and explaining their roles in it (e.g. Al-Bazzaz and Grinyer 1980; Mintzberg, 1994; Kenny 2006). Specialists have a similar advisory and improving role in strategic planning as a middle, and first-

level managers do. They offer feedback based on their experiences and incorporation of change into practice. Also, they are offering new ideas, looking for improvements and finding creative solutions. Specialists could be an important asset to the company. For example, in knowledge-based companies, specialists do possess a particular knowledge, they could earn sometimes more than CEO and be the critical factor in business. Their knowledge is vital for companies, and their involvement in the planning process could be beneficial. Similarly, blue-collar workers have an advisory role in strategic planning. One crucial reason why specialists and blue-collar workers should be involved in strategic planning is the importance of knowledge sharing. As specialists and blue-collar workers are offering their comments and feedback based on their experiences, the involvement of them could bring strategic planning closer to everyday business (Zabriskie, 1989). Their involvement helps to add more soft data and tacit knowledge to the planning process. Therefore, middle and first-level managers, also specialists and blue-collar workers are associated with the better internalisation of strategy.

RQ 1: Who are engaged concurrently in the strategic planning process?

Based on the traditional division of roles mostly owners and top managers are involved in strategic planning. Involvement of only owners and top managers in strategic planning is, on the one hand, cheap and less time-consuming for companies. According to owners and top managers' roles, they may use primarily management tools that are oriented to business results. Here is followed the assumption that actions and processes form the patterns what can be described as the management tools. To test this, we stated the second research question.

RQ 2: What are the main management tools when the traditional roles of strategic planning are involved?

On the one hand, the involvement of higher management is one-sided approach; they often fail to communicate strategic planning to other stakeholders (Colville and Murphy, 2006) and therefore cause the situation, where employees cannot understand relations between firms' strategy and daily decisions. This bias could be a threat to the companies' strategic plans (Vilà and Canales, 2008). Many scholars have emphasised the need to involve participants from various positions to strategic planning because of

their different experiences, knowledge and abundant source of ideas (e.g. Dyson and Foster, 1983; Gopalakrishnan and Bierly 2001). It improves knowledge sharing and internalisation of strategy. Therefore, the involvement of other organizational members than only owners and top-managers has been recommended.

Scholars (e.g. Hosmer, 1994; Jamal and Getz, 1996 and Freeman *et al.*, 2010) emphasise the need to involve all the positions in the organization to strategic planning. Hosmer (1994) found that strategic planning brings the best performance when it involves all the people directly affected by it, including specialists and blue-collar workers. Mintzberg (1994) pointed out that the strategic plans have value only if people from lower positions in the company had also contributed also to the planning process. It is also indicated that strategic vision, what is an essential part of strategic planning, cannot be formed without the active involvement of the stakeholders (Jamal and Getz 1996). Involvement of all the stakeholders is also supported by the stakeholder theory. Freeman *et al.* (2010) stressed the importance of two-way relationships between a firm's management and its stakeholders. He wrote that „strategic management requires abandoning the idea, that shareholder value maximization is the unique or the predominant purpose of the corporation, and embracing the idea that the interests of specific stakeholder groups (i.e. those who can affect or are affected by the corporate activities) have to be considered in defining the purpose of the corporation” (Freeman *et al.*, 2010, p 242). Stakeholder theory stresses the importance of taking into account the interests of the internal stakeholders. Therefore, the firm should involve in the strategic planning process all the stakeholders, who are influenced by it. As strategic plans are the base of most activities, in the company, these affected all the members of the company, and they all should be involved in the planning process. Through using their knowledge, different stakeholders can improve the quality of strategic plans. According to this, a third research question will be raised for empirical analysis.

RQ 3: What are the main management tools when all members of an organization are involved in strategic planning?

Involvement of all the positions also has some threats to strategic planning. Participants may need the training to be able to give their input to strategic planning; this could be expensive and time-consuming. Usually, people from lower positions in the

company do need more training, and therefore their involvement may take more resources. The costs of blue-collar workers involvement are usually higher and more time-consuming than involvement planners from other positions. Involvement of strategic planning participants may also encourage them to stand for their personal goals and not to the companies' ones. It has been found that this risk is more likely when people from lower positions are involved in strategic planning. (Cyert and March 1992) Thus, blue-collar workers involvement may have negative or no impact on strategic planning. Based on this, the fourth research question is formulated.

RQ 4: What are the main management tools when all the members of an organization except blue-collar workers are involved in strategic planning?

3. Strategic planning relations with management tools

Management tools need to comply with strategic planning participants to be used in the best way to support and implement strategic plans (Collis & Montgomery, 1998). Involvement in the planning process is associated with a better ability to understand organizational goals and to adjust participants' own goals with those. Unfortunately, there are no previous studies associate strategic planning participants with the use of management tools. Due to strategic planning participants working tasks, roles, skills, knowledge and experiences, they attend influence selection of different management tools. As follows, nine frequently used management tools are shortly described (Table 1). These are learning organization, total quality management, self-managed teams, business process re-engineering, balanced scorecard, value-based management, customer relationship management, supply chain management and benchmarking.

All these management tools are helping to mediate strategic planning to everyday business but at the same time should support companies' strategic plans. One possibility for differencing management tools comes from these main orientations to in- or external environment.

Table 1: Management tools according to their main orientation, characteristic, pros for company, participants

Management tool	Orientation	Characteristics	Positive effects to strategic goals
Learning organization (Baker and Sinkula, 1999; Day, 1994; De Geus, 1988; Egan <i>et al.</i> , 2004; Senge, 1996)	Internal	Knowledge sharing Organizational learning Joint trainings Business environment written rules Discussions about vision, mission, future developments	Better performance Higher job satisfaction Higher flexibility Faster acquirement of new knowledge
Self-managed teams (Cohen and Bailey, 1997; Paulus, 2000; Wageman, 1997)		Independent work management Share skilled and managerial tasks Idea generation Knowledge sharing Organizational learning	Better effectiveness Higher productivity Better performance
Business process re-engineering (Hammer & Champy, 1993)		Processes analysis and reorganization Organizational learning Knowledge sharing Empowerment Process redesign	Improving quality Effective time management Better performance Improving business model
Total quality management (O'Neill <i>et al.</i> , 2013; 2003; Huang <i>et al.</i> 2011; Schonberger, 1992)		Quality implementation Organizational learning Process redesign	Focused to long-term success Better performance Improving quality
Balanced scorecard (Kaplan and Norton, 1996a; Kaplan and Norton, 1993)		Financial and non-financial measures integration Association of departmental and stakeholder goals to company's strategy Measurement and strategic control system	Better performance Better strategic control
Value based management (Copeland <i>et al.</i> , 1994; Ittner and Larcker, 2001; Yu, 2004)		Measuring business value Knowledge transformation	Improving decision making process Better firm performance
Customer relationship management (Law <i>et al.</i> , 2003; Bolton, 2004)	External	Collecting clients' information Company-customer relationship Information management Organizational learning	Customer satisfaction Better performance
Supply chain management (Saunders, 1995; Croom <i>et al.</i> 2000; Helper and Sako 2010)		Planning, managing and controlling the supply cycle Logistic activities	Better performance
Benchmarking (Zairi, 1998; Voss <i>et al.</i> , 1997; Parast and Adams, 2012)		Comparing companies Knowledge sharing Organizational learning	Better performance

Rather internally oriented management tools

Following six management tools can be described as oriented rather into the company. These tools are primarily aimed at internal processes and internal stakeholders. The *learning organization management tool* supports knowledge sharing within the organization. Peter Senge (1996) firstly used the discipline of the learning organization in 1990. He revealed five main features of the learning organization - system thinking, mental practices, personal mastery, shared vision, and team learning (*ibid.* 1996). Other important characteristics are joint training for the employees and sharing information to everyone who needs it in his/her work. Therefore, both individual and collective learning are the core of the learning organization discipline. In practice, the learning organization is often reflected in the written rules of the business environment and used for supervision of the information of competitors and clients. Common discussions about vision, mission, and future developments in the company characterize learning organization relations with Strategic planning. Also, this management tool has been found to be a key variable in the enhancement of firm performance (Baker and Sinkula, 1999) and has a strong impact on job satisfaction (Egan *et al.*, 2004). Likewise, firms, where information sharing is frequently used, are more flexible than others (Day, 1994; Slater, 1994). These companies can acquire new knowledge much faster, and therefore have a better challenge in dealing with competitors and being more innovative (De Geus, 1988). This could help to build up long-term competitive advantages (Dickson, 1996). During facilitating and developing organizational learning and knowledge sharing, middle and first-level manager's role from top managers and owners' viewpoint is to support learning through formal training. At the same time specialists, and blue-collar workers can share their everyday experiences. Hereby, it is essential to distinguish learning organization management tool and the much broader concept of organizational learning. Scholars (e.g. De Geus, 1988; Watkins and Marsick, 1992) have emphasized that every company, which is making plans, should deal with organizational learning and knowledge sharing. Learning organization management tool is most effective when all the employees are involved in it.

Self-managed teams are working groups, which have the independence to manage their work. They can choose the way, how to solve problems and perform their functions. These teams do share and rotate both- tasks based on their main expertise and

labour divisions. Self-managed teams have been associated with decentralization, better effectiveness and higher productivity (Cohen and Bailey, 1997; Paulus, 2000). These are often used as idea-generating groups (Paulus, 2000) of managers and specialists. Like the learning organization approach, self-managed teams support knowledge and information sharing and are associated with better performance (Wageman, 1997).

Business process re-engineering is defined as “the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in contemporary critical measures of performance such as cost, quality, service and speed” (Hammer and Champy, 1993:p.32). The primary purposes of this management tool are usually a better quality and time management, better performance and need to change the business model. Through the help of these purposes, business process re-engineering should support strategy implementation. As this management tool includes a fundamental redesign of business, it needs to be initiated by owners and top managers. Often re-engineering process is influencing the entire company and all the employees need to participate in this process.

Total quality management has been named as one of the most critical developments in management disciplines (Prajogo and Sohal, 2003). It is a systematic way to implement quality requirements for the activities within the organization and redesign the process (Prajogo and Sohal, 2003). At the same time, increasing quality is related with organizational learning (Huang *et al.* 2011) long-term success of the company and better firm performance and has, therefore, positive impact to strategic goals (O'Neill *et al.*, 2016). The initialization for using total quality management comes from management. However, scholars have been emphasising the importance of involving all the organization members who are infected by the changes. (e.g. Guimaraes and Armstrong, 1998).

The *balanced scorecard* is a management discipline that integrates financial and non-financial performance measures (Kaplan and Norton, 1996a). According to Kaplan and Norton (1996b, p. 75) “Scorecard addresses a serious deficiency in traditional management systems: their inability to link a company’s long-term strategy with its short-

term actions". The balanced scorecard requires goals and metrics of organization activities, vision and strategy. Central issues in this management system are finances, clients, organizational processes, employees and a development (Kaplan and Norton, 1993). The balanced scorecard helps to focus on departmental and stakeholders' personal goals and associate these with companies' overall strategy. This management tool is not only a measurement system but also a strategic control system. It is initiated by top-managers regarding getting a comprehensive and fast overview of the business.

Value-based management is a strategic and financial approach to management. It requires measuring the business value as the effectiveness of business strategies (Yu, 2004). Because of that purpose, the service or product of the firms, its strategy, processes, systems, analytical tools, performance measurements, and culture will be used (Ittner and Larcker, 2001). Also, the strategic plans of the company should be consistent with its value-based management. This tool is used as a measure of strategic plans and helps to improve the decision-making process (Copeland *et al.*, 1994) and is associated with better financial and non-financial performance.

Management tools with the main external orientation

As follows, three management tools oriented rather out of the company are shortly described. *Customer relationship management* is a systematic way to collect information about clients. As the name says, this management tool is oriented to relationships with customers. It relates to organizational learning by getting a better knowledge of customers. At the same time, customer relationship management is also used for the knowledge sharing process where companies should act as consultants to customers, rather than take the leading role in this relationship. The critical moment, when a customer would like to have contact with the company, this is when they need any help and firms could use it for relationships development (Law *et al.*, 2003). Also, customer relationship management allows customers to choose, what kind of canals they would like to use to get information about products or services (Law *et al.*, 2003). Customer relationship management is aimed to have a positive impact on the customer satisfaction and therefore helps to achieve companies' strategic plans. Using this tool is usually initiated by managers, but all the organization members should be involved. Customer relationship management should be a shared business model and reach every part of an organization to bring performance (Bolton, 2004). People from lower positions than

owners and top managers may know clients better, they know well the process of making the product or offering services; and their shared role is the incorporation of change into usual practice.

Different *supply chain management* definitions have been concluded by Saunders (1995, p. 479) “/.../ they orientation on the external environment of an organization, with the boundaries of the latter defined conventionally regarding an entry identified legally as a company or some other form of business unit/.../”. The supply chain includes effective planning, managing, and controlling the process. It is associated with logistic activities, planning, control of material, and information - both, between, and within the companies (Croom *et al.*, 2000). Supply chain covers the entire supply cycle from R&D, raw materials, and production to the marketing of finished products or services. Using supply chain management tool is often initiated by middle and first-level managers who are responsible for the supply chain. Offshoring services and tasks included in business processes are standard practice in supply chain management (Day *et al.*, 2015). A well-developed supply chain management could give a significant competitive advantage and better performance (Croom *et al.*, 2000) to the company.

Benchmarking is the process of comparing companies' business processes and performance to the industry's best firms. Zairi (1998, p. 2) has described: “/.../ the essence of benchmarking is to encourage continuous learning and to lift organizations to higher competitive levels.” Therefore, knowledge development and organizational learning have a significant role here. Usually, the quality, time, and cost are baselines of the comparison. Benchmarking has been described as a useful tool for managers in planning and implementing strategy (Voss *et al.*, 1997), it helps to assess business strategy by comparing it with the best companies. Also, the use of benchmarking has been associated with remaining competitiveness and improving companies' performance (Parast and Adams, 2012).

The previous discussion shows that it is possible to find common characteristics of management tools. The described nine management tools have a positive effect on supporting strategic goals. For example, all of them relate to better firm performance (Table 1). Five of the nine management tools (learning organization, self-managed teams, total quality management, customer relationship management, supply chain

management and benchmarking) have a common characteristic of organizational learning. As a learning organization management tool is based on organizational learning, it let to assume that this has a central role in using other management tools. Also, management tools may be grouped based on their internal and external orientation. As name said the use of management tool is mostly initiated by managers but in many of these (like learning organization, total quality management and value-based management) involvement in all positions are needed. We can assume that as top-managers are mostly involved in the strategic planning process, and they have an essential role in selecting management tools. As stated previously in the following analysis we are interested in what are the management tools used by companies when different positions are concurrently involved in strategic planning.

4. Empirical study

Dataset

To analyse relationships between management tools and strategic planning participants the dataset of the survey “Eesti juhtimisvaldkonna uuring 2011” (*Estonian management field study*) is used. This study was ordered by Enterprise Estonia (government agency providing a support system for entrepreneurship) and conducted in cooperation with the University of Tartu, Tallinn University of Technology, and Estonian Business School. The survey aimed to map management practices in Estonian companies.

The sample was composed of stratified random sampling and based on the number of employees. Size of the company was asked by three groups- 10-49 employees, 50-249 employees and 250 or more employees. According to Statistics Estonia in 2010 was 6649 active companies. 82% of them were small companies (10-49 employees), 16% medium-sized (50-249 employees) and 2,2% large companies with 205 or more employees. In the sample, numbers of medium and large companies increased in the proportionally with the small size companies. The sample was made by using the SAS program from all the active Estonian companies who have at least 10 employees by using random sample command “survey select”. The sample included 600 companies (9% of the overall sample), 300 of them were small sized, 250 middle and 50 large sized companies. (Tartu Ülikool, Tallinna Tehnikaülikool, EBS, 2011)

Responses were collected by web questionnaires collected by e-formula. The questionnaire was piloted with three people, who filled the questionnaire and gave their feedback about questions. (Tartu Ülikool, Tallinna Tehnikaülikool, EBS, 2011) In small and medium companies' CEO or member of the board was asked to answer the survey. In large companies' member of the board and two middle managers were asked to answer. The final sample includes responses from 204 managers. 32,8% (67 respondents) from small companies, 36,3% (74 respondents) from middle size, and 21,1% (43 respondents) from large companies. Participated companies were from different industries: 5 from agriculture (2,5%), 45 from production (26,5%), 116 from services (56,9%), 11 were active in multiple industries (5.4%), and 18 companies did not specify the industry.

The study included questions about planning and management activities. Within the survey, strategic planning is defined as long-term plans aimed to at least a five-year period. Respondents were asked to evaluate who are involved in the strategic planning in their company in a 5-point Likert scale. The study included questions about using different management tools. Respondents were asked to mark if their company is using or have used previously mentioned management tools or not. It is important to notice that recorded answers are a reflection of respondents' personal understanding of using management tools at that moment. Added to this, it is not measured how comprehensively or widely management tool is used within the organization and how participants are involved in the planning process.

According to our analysis, all the positions are involved in strategic planning (Table 2). Owners are most often engaged in the planning process. Although owners participate most often in strategic planning, top managers tend to be involved in a higher degree. The involvement of blue-collar workers is expectedly the lowest. Surprisingly, first-level managers are less involved than middle managers and specialists', but as standard deviation is highest in case of first-level managers, we can say that they are involved in very different scope in various companies. We compared strategic planning involvement in different industries', but these did not show a significant difference. Comparison of companies by size showed that in small companies' owner participation in the planning process is higher than in larger firms. It means that in smaller companies

planning process and developments depend much more on owners' knowledge than in larger firms.

Table 2: Sample according to participants' involvement to Strategic Planning

Position	Number of responses (response rate)	Mean	Standard deviation
Owners	198 (82.5%)	4.47	0.965
Top managers	196 (81.7%)	4.70	0.807
Middle managers	192 (80%)	3.58	1.213
First-level managers	185 (77%)	2.59	1.248
Specialists	191 (79.6%)	2.71	1.217
Blue-collar workers	189 (78.7%)	1.82	1.019

Note: the scale varied from 1 (not involved) to 5 (highly involved).

The analysis shows that companies consciously used all the management tools (Table 3). Results show that supply chain management and self-managed teams are the most often used management tools, more than half of the respondent in this study stated to using those. At the same time, business process re-engineering was less used but still more than a quarter (26.5%) of respondents stated to using it.

Table 3: Utilization of management tools (N, %)

Management tool	Have not been used	Have been used
Supply chain management*	51 (25%)	130 (63.7%)
Self-managed teams	78 (38.2%)	104 (51%)
Balanced scorecard	86 (42.2%)	97 (47.5%)
Learning organization	101 (49.5%)	87 (42.6%)
Value based management	98 (48.0%)	78 (38.2%)
Customer relationship management*	105 (51.5%)	77 (37.7%)
Benchmarking*	111 (54.4%)	75 (36.8%)
Total quality management	115 (56.4%)	71 (34.8%)
Business process reengineering	130 (63.7%)	54 (26.5%)

Note: "yes" or "no" options were posed to respondent

Method of data analysis

To get answers to previously stated research questions, we used Bayesian networks. To do so statistic package, GeNIe 2.0 was used. Bayesian analysis uses conditional

probabilities to identify the best fitting models to describe relationships between management tools and strategic planning participants' involvement. Bayes' rule is stated as, "The posterior probability can be explained regarding the joint probability" (Savakis *et al.*, 2007, p 129). This rule can be described as a formula (1) where S denotes semantic task and E the evidence. For example, if chickenpox (S) is the illness and red dots on skin (E) are the symptom of it, then Bayesian network shows graphically the probability of the symptom E (red dots) is caused by illness S (chickenpox). The basic idea of a Bayesian network "is to compare the relative plausibility of two models rather than to find the absolute deviation of observed data from a particular model" (Powers and Xie, 2000, p 106). It presents a visualised probabilistic network, with causal relationships

$$P(S|E) = \frac{P(S,E)}{P(E)} = \frac{P(E|S)P(S)}{P(E)}. \quad (1)$$

A Bayesian network has been defined as follows (Russell *et al.*, 2010, p. 437):

1. Nodes of the network are formed by a set of random variables. Both, continuous and discrete variable may be used.
2. Arrows or links connect pairs of nodes. A node that has an arrow directed to another node is said to be a parent.
3. Each node has a conditional probability distribution that quantifies the effect "that the parent has on the node."
4. "The graph has no directed cycles (and hence is a directed, acyclic graph, or DAG)."

To take account of all the relations in the mode, we are using dynamic influences in Bayesian networks. Dynamic influences account all indirect influences in the model (Russell *et al.*, 2010). It means that the strength of a specific arrow or link is influenced by other relations. For example, in the relation strength between nodes, top managers and owners (0.227) are influenced by the relationship between nodes middle managers and top managers (0.297). Therefore, the strength of links is often weaker compared to static influences between the same nodes. Compared to abovementioned example, static influence between middle and top managers is 0.37 and between owners and top managers 0.413. According to Russel and Norvig (Russell *et al.*, 2010), a dynamic method is suitable to signify the actual behaviour in the current situation.

Therefore, it is appropriate to use dynamic influences to explain what the management tools used by strategic planning participants are. To find answers to previously raised research questions more than 40 different Bayesian network models with varying combinations of strategic planning participants were analysed. All the Bayesian models were made to the entire sample, according to company size and industry. The result shows that size and industry did not have a significant influence on patterns of Bayesian networks.

Relations between strategic planning participants

To answer, the first research question (RQ 1, p.5) we used responses about who are involved in strategic planning according to positions. We made a Bayesian network model with strategic planning participants to describe relations between their involvements. A network (Figure 1) shows that at the beginning of the graph are middle managers. It points out that middle managers have a crucial role in involving other positions than owners in the strategic planning process. If middle managers are involved, there is the highest possibility for the participation of different positions as well.

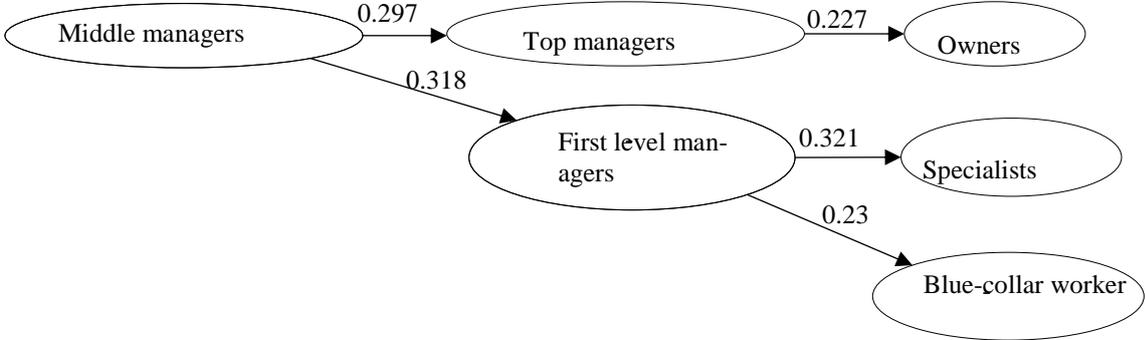


Figure 1. Concurrent relations between Strategic Planning participants (Bayesian network with dynamic influences)

For example, when middle managers are involved in strategic planning, there is 29.7% probability that top managers are involved and 31.8% probability that first-level managers are involved. Top managers’ involvement, in turn, is related to owners’ participation. More specific analysis of Bayesian network shows that owners involvement is highest when top managers involvement was valued with 1 (0.881) or with 5 (0.713). Based on this we can argue that owners tend to replace top managers role in strategic planning or top managers are involved next to them. At the same time, when owners

participate in strategic planning without top managers, it is not probable that any other positions are involved actively. Middle managers were involved in the strategic planning in 80% of the companies, but their scope of involvement is not very high (mean 3.58 on the 5-point Likert scale). Together with the Bayesian network, these results indicate that middle managers are not very highly involved to the planning process, but their involvement has the crucial role if any other positions than owners participate in the strategic planning process.

In involvement non-managerial positions in the planning process, first-level managers have a crucial role. When first-level managers are involved in the planning process, they involve 32.1% probability specialists and 23% probability blue-collars to it.

Relations between management tools and strategic planning participants

As for following, relationships between management tools and involvement of strategic planning participants are brought out, based on research questions. Each analysis model contains a variable of selected position(s) and all the management tools to show relations between them. To study relations between concurrent positions involvement in strategic planning and management tools, some new variables of grouped positions were made. Therefore, groups like owners and top managers, all the positions, and all the positions except blue-collar workers were built. As GeNIe 2.0 does not apply a grouping option, this was made by using Stata software.

Strategic planning is the traditional role of owners and top managers. Therefore, to answer the second research question (RQ 2RQ 2, p.5), three separate Bayesian network models with owners; top-managers; and owners and top managers' concurrent involvement and their relations with management tools were tested.

Figure 2 is showing the model to describe the selection of management tools when only owners are participating in strategic planning. Their involvement in the planning process is mainly related to the utilisation of customer relationship management. When customer relationship management is exploited, there is 15.5% probability that owners are involved in strategic planning. Another interesting aspect of this graph shows that customer relationship management (with 29.2% probability) relates to value-based management and through this with benchmarking, learning organization and supply

chain management. Three of the four before mentioned management tools are externally oriented (Figure 2). These results give ground to say that owners' focus is primarily related to externally oriented management tools and value-based management. The strongest causal probability in the model is between benchmarking and learning organization. It means that when owners are involved in strategic planning, there is 32.3% probability that benchmarking and learning organization are used at the same time. It shows that the involvement of participants from certain positions stands with the need for some management tools on the one hand. On the other hand, usage of one management tool can trigger the utilisation other tools as well.

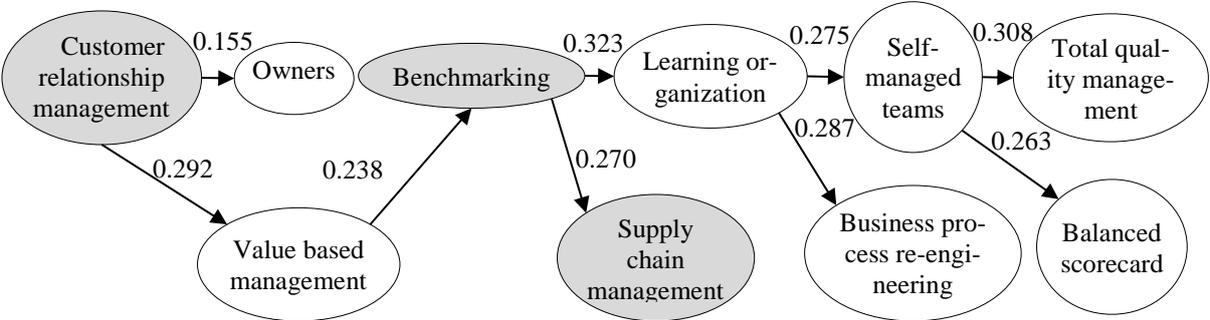


Figure 2. Relations between owners' involvement to Strategic Planning and usage of management tools. (Bayesian network with dynamic influences).

Note: shadowed nodes denote externally oriented management tools

Inversely to owners, top managers involvement in strategic planning is primarily related to management tools, which are mainly internally oriented (Figure 3). In the case of only top managers involvement in strategic planning most probably (in 20.8%) business process re-engineering is used. It shows that top managers relation with using their most preferred management tool is 0.3% stronger than owners. In turn, using business process re-engineering is influenced by using a learning organization (probability 27.4%) management tool. Differently, from the model with owners' internal tools like value-based management and management tools bunch up the end of the graph. It means that these are the least related management tools with top managers' involvement in strategic planning. Top managers participation is primarily related to internal oriented management tools, and they are most probably involved in the case of fundamental changes in the company.

Based on previous we can say that in the case of owners or top managers participation in the strategic planning usage of management tools are different. Owners are more oriented to the external environment if top managers participation relates to rather internally oriented management tools. Owners are primarily focused on customer relations, top managers to fundamental changes in the company. Therefore, the involvement of both positions should complement strategy implementation as participants are paying their attention to different areas.

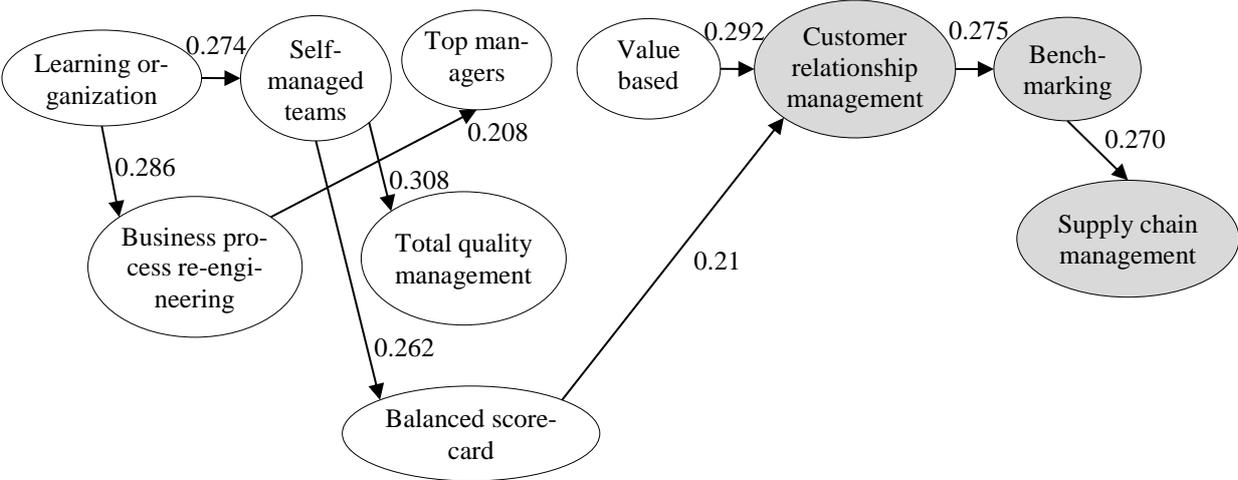


Figure 3. Relations between top managers’ involvement to Strategic Planning and usage of management tools. (Bayesian network with dynamic influences)

Note: shadowed nodes denote externally oriented management tools

However, in case of concurrent participation of owners and top managers, the selection of management tools may not be that clear. To explain it, the model with owners and top managers simultaneous involvement in strategic planning and use of management tools were made. Bayesian networks (Figure 4) shows that the pattern of using management tools resembles the previously described owners’ pattern. Like then, owners and top managers are most often involved in strategic planning when customer relationship management is in use. Similarly, like the model with only owners’ involvement, management tools oriented out of the company and value-based management are primarily related to owners and top managers’ concurrent involvement. Tools preferred by top managers (as business process re-engineering) are replaced at the end of the graph. This shows that when owners participate in the planning process, they will lead the strategy implementation by choosing management tools what they prefer and focus more on the external environment.

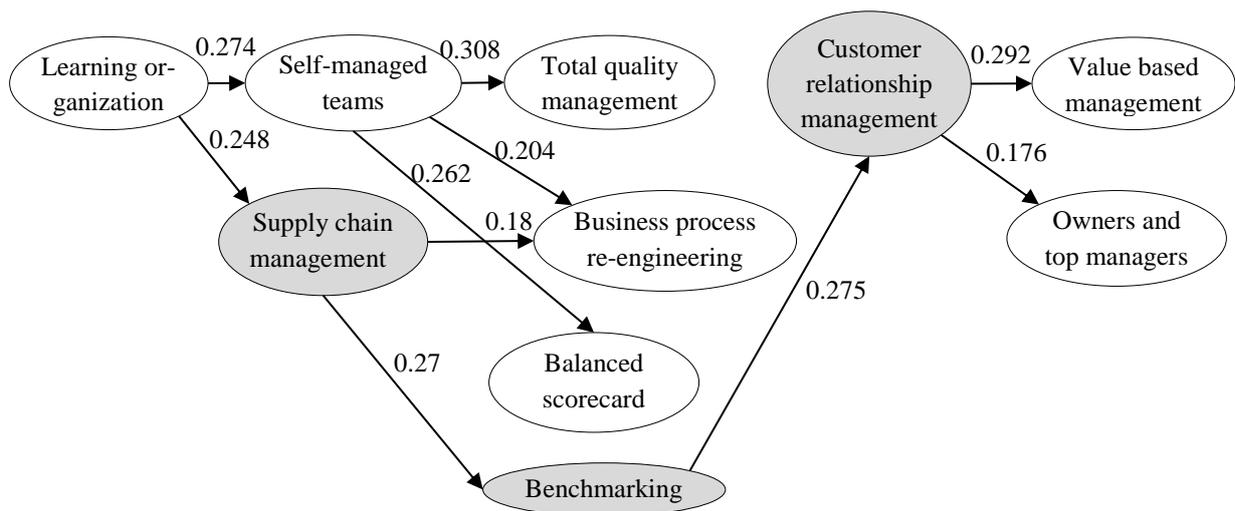


Figure 4. Concurrent relations between owners' and top managers' involvement to Strategic Planning and usage of management tools. (Bayesian network with dynamic influences)

Note: shadowed nodes denote externally oriented management tools

To find an answer to the last two research questions (RQ 3, RQ 4, p.7) models with strategic planning participants from various positions were analysed. Results show that only managerial positions are related to selected management tools. Along with the previously described owners and top managers, also middle and first-level managers were analysed through the lens of the utilisation of management tools.

The pattern of management tools when middle managers are involved in strategic planning resembles owners' participation. This research shows that middle managers involvement is primarily related to management tools oriented outside of the company, but the order of management tools is different than owners. Middle managers are most often involved in strategic planning when (probability 16.9%) benchmarking is in use and this, in turn, is related to using customer relationship management and supply chain management. Compared with owners' participation, middle managers are not very involved with the value-based management tool.

First-level managers' involvement relations with management tools are similar to both the owners' and the top managers' relationships. Both top managers and first-level managers are directly involved in business process re-engineering. This means that first-level managers are most probably (16.1%) involved in strategic planning when

business process re-engineering is in use. There is also a similar tail to the top managers' involvement that combines: learning organization, self-managed teams, total quality management and balanced scorecard.

The most important relations between strategic planning participants and management tools are listed in Table 4. It shows strategic planning participants main relations with management tools used in the company. When owners are involved in strategic planning, externally oriented management tools such as customer relationship management, benchmarking and internally focused value-based management are in use. Inversely, when top managers are involved all the most used management tools are with rather internal focus. When both, owners and top managers participate in strategic planning concurrently owner-related external management tools are primarily in use. Despite our initial expectation, value-based management tools tend to appear on figures together with externally oriented management tools. Probably, value-based management tools are used for giving or getting further insights into externally oriented management tools such as customer relationship management, balanced scorecard and benchmarking.

Table 4: Usage of management tools

Position	1st management tool	2nd management tools	3th management tools
Owners	Customer relationship management*	Value based management	Benchmarking*
Top managers	Business process re-engineering	Learning organization	Self-managed teams
Owners and top managers	Customer relationship management*	Value based management Benchmarking*	Supply chain management*
Middle managers	Benchmarking*	Customer relationship management* Supply chain management*	Business process re-engineering Value based management Self-managed teams
First-level managers	Business process re-engineering	Value based management Learning organization Customer relationship management*	Self-managed teams Benchmarking*

*Rather externally oriented management tools

Bayesian network models were also composed of the involvement of specialists and blue-collar workers in strategic planning and their relations with management tools. These networks did not show any relationships between strategic planning participants and management tools. Similarly, there were no relations between using management tools and involving all the positions in strategic planning when they were added to the model at the same time. Based on this, we can say that the selection of management tools is only influenced by various managerial positions. Specialists and blue-collar workers' and their concurrent in strategic planning do not have an influence on a variety of management tools. Furthermore, if specialists and blue-collar workers are involved in strategic planning in combination with all the other positions in the organization to SP, their influence appears to be so significant that there are no relations with management tools at all.

5. Discussion

In this paper, the relationship between strategic planning participants and management tools used by companies were studied. For that purpose, we used a dataset of 204 Estonian companies' management practices. We raised four research questions about the concurrent participation of different positions in strategic planning and their relations with the use of management tools. To find answers to these, we use a Bayesian network analysis.

It was possible to detect relations between strategic planning participants from different positions and their connections with the use of various management tools. Our analysis shows that owners are most often involved in the planning process. However, middle managers have a central role in involving any other participants than owners. Middle managers are not very strongly involved but if they are there is a possibility that top and first level managers are involved as well. In turn, non-managerial positions participation seems to depend on first-level managers involved in the strategic planning process. These results are in compliance with previous studies that have shown the integrative and mediating role of middle and first-level managers' (Wooldridge & Floyd, 1997; Vilà & Canales, 2008) and their reducing impact to position bias (Ketokivi & Castañer, 2004).

Our results indicate owners' involvement in strategic planning is primarily related to the use of external management tools and value-based management for strategy implementation. They are more likely involved in strategic planning when externally oriented management tools are in use. The research has shown that owners are primarily focused on customer needs by using customer relationship management. They fulfil an essential role in monitoring external and internal environment trends (Kenny, 2006) to ensure that positive developments become the standard practice of everyone employed at the company.

Inversely to owners', top managers' involvement in strategic planning is primarily related to management tools which are rather oriented into the company. They are most probably involved in planning when there are fundamental changes in the company. Use of process re-engineering is directly related to the top-level managers' involvement in strategic planning. This indicates to one of their roles- designing and developing new processes and restructuring the organization (Kenny, 2006). Management tools that are externally orientated appeared to have little relationship with top-level management. The relationship between external management tools and top-level management was placed at the end of the Bayesian network graph. That big difference between owners and top managers relations with management tools was unexpected as top managers usually need to deal a lot with the external environment as well, especially with customer relations. In case of concurrent involvement of owners and top-level managers, it appears that owners are leading the section of management tools. Owner preferred externally oriented management tools are primarily in use and tools more related to top-managers participation are the less used.

Like owners, middle managers participation is more related to externally oriented management tools, but the order is different. If owners are primarily related to customer relationship management, middle managers are to benchmarking. Benchmarking is an analytical tool to compare company business and performance with other companies in the same industry. Using it may support middle managers in their mediating role and help to clarify strategic priorities and explain these to other participants (Vilà & Canales, 2008; Tannenbaum & Massarik, 1950). First-level managers' involvement in strategic

planning and management tools is a mix of management tools primarily used by owners and top managers. Like owners, they are most probably related to the use of customer relationship management.

Relationships between specialists, blue-collars and management tools were also tested, but the analysis did not show any relationship with management tools. Similar models were tested with all levels except blue-collar workers and with all the employees and did not find any relations with management tools. Findings allow us to argue that concurrent involvement of all the levels in the company does not have any impact on the selection of management tools.

This study gives many new insights into the literature and allows us further understanding of strategic planning participants and their relations with strategy implementation through management tools. The significant finding of the research is the central role of the middle manager in the involvement of other positions than owners to the strategic planning process. Strategic planning participants are related to choosing management tools for strategy implementation. The main variation of management tools appears between internal or external orientation. From the research, it seems that owners control the direction and division of power relationships when both owners and top-level managers are involved in strategic planning. The pattern of the selection of management tools replicates the owners' preferences rather than the managers' patterns. These are new insights that have been not studied in the literature.

Some limitations according to the data should be outlined. Results of the survey may be influenced by cultural and historical factors, specific to Estonia. The collected data is self-reported by the companies. Involvement of participants with strategic planning, consequently, it is not entirely understood how people from various positions are involved in strategic planning. Instead, it shows how each company interprets everyone's participation in strategic planning. Similarly, the usage of management tools was measured from the respondents' understanding of the use of management tools. It is unclear how each company uses each management tool. As there were difficulties getting responses from companies, researchers were forced to use personal contacts within companies, which may affect the answers.

This study is only the first step to an empirical analysis of relationships between management tools and strategic planning participants; therefore, it should be understood as an introduction rather than a more comprehensive analysis of the research. For example, in further studies, it would be important to explain the relationship between strategic planning participants and management tools according to the industry and size of the company for a more comprehensive explanation as to the variables in the situation. It would also be interesting to study the relationship between management tools and the company's financial performance. This could help to describe management tools that could lead to better performances.

6. References

- Al-Bazzaz, S., & Grinyer, P. H. (1980, August).** How planning works in practice- A survey of 48 U.K. companies. *Long Range Planning*, 13, 30-42. doi:10.1016/0024-6301(80)90076-X
- Andersen, T. J. (2004).** Integrating Decentralized Strategy Making and Strategic Planning Processes in Dynamic Environments. *Journal of Management Studies*, 41(8), 0022-2380. doi:10.1016/j.emj.2004.04.008
- Armstrong, J. S. (1982).** The Value of Formal Planning for Strategic Decisions: Review of Empirical Research. *Strategic Management Journal*, 3, 197-211. Retrieved from <http://www.jstor.org/stable/2486124>
- Baker, W. E., & Sinkula, J. M. (1999).** The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of The Academy of Marketing Science*, 27(4), 411-427. Retrieved from <https://link.springer.com/content/pdf/10.1177/0092070399274002.pdf>
- Berman, L. S., Andrew, W. S., Kotha, S., & Thomas, J. M. (1999).** Does Stakeholder Orientation Matter? The Relationship Between Stakeholder Management Models and Firm Financial Performance. *Academy of Management Journal*, 42(5), 488-505. Retrieved from <http://www.jstor.org/stable/256972>
- Bolton, M. (2004).** Customer centric business processing. *International Journal of Productivity and Performance Management*, 53(1), 44-51. doi:10.1108/17410400410509950
- Cohen, S. G., & Bailey, D. E. (1997).** What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite. *Journal of management*, 23(3), 239-290. doi:10.1177/014920639702300303
- Collis, D. J., & Montgomery, C. A. (1998).** *Corporate strategy: A resource-based approach*. New York: Irwin McGraw-Hill.
- Colville, I. D., & Murphy, A. J. (2006).** Leadership as the enabler of strategizing and organizing. *Long Range Planning*, 39, 663–677. doi:10.1016/j.lrp.2006.10.009
- Copeland, T., Koller, T., & Murrin, J. (2010).** *Valuation: Measuring and Managing the Value of Companies (Fifth ed.)*. New York City, New York: John Wiley & Sons, Inc.
- Croom, S., Romano, P., & Giannakis, M. (2000).** Supply chain management: an analytical framework for critical literature review. *European Journal of Purchasing & Supply Management*, 6(1), 67-83. doi:10.1016/S0969-7012(99)00030-1
- Cyert, R. M., & March, J. G. (1992).** *A Behavioral Theory of the Firm (2. ed.)*. Cambridge: Blackwell.
- Day, G. (1994).** The Capabilities of Market-Driven Organizations. *Journal of Marketing*, 58(October), 37-52. doi:10.2307/1251915
- Day, M., Lichtenstein, S., & Samouel, P. (2015).** Supply management capabilities, routine bundles and their impact on firm performance. *International Journal of Production Economics*, 164, 1-13. doi:10.1016/j.ijpe.2015.02.023
- De Geus, A. P. (1988).** Planning as Learning. *Harvard Business Review*, 66(2), 70-74. Retrieved from <http://www.sims.monash.edu.au/subjects/ims5042/stuff/readings/de%20geus.pdf>

- Dickson, P. R. (1996).** The static and dynamic mechanics of competition: a comment on Hunt and Morgan's comparative advantage theory. *Journal of Marketing*, 60(4), 102-106. doi:10.2307/1251904
- Draft, R. L. (1992).** *Organization Theory and Design*. St Paul: West Publishing.
- Dyson, R. G., & Foster, M. J. (1983, December).** Making planning more effective. *Long Range Planning*, 16(6), 68-73. doi:10.1016/0024-6301(83)90009-2
- Egan, T. M., Yang, B., & Bartlett, K. R. (2004).** The Effects of Organizational Learning Culture and Job Satisfaction on Motivation to Transfer Learning and Turnover Intention. *Human Resource Development Quarterly*, 15(3), 279-301. doi:10.1002/hrdq.1104
- Freeman, R. E., Harrison, J. S., Wicks, A., Parmar, B. L., & de Colle, S. (2010).** *Stakeholder Theory. The Stake of the Art*. Cambridge: Cambridge University Press.
- Gopalakrishnan, S., & Bierly, P. (2001, June).** Analyzing innovation adoption using a knowledge-based approach. *Journal of Engineering and Technology Management*, 18(2), 107-130. doi:10.1016/S0923-4748(01)00031-5
- Guimaraes, T., & Armstrong, C. (1998).** Empirically testing the impact of change management effectiveness on company. *European Journal of Innovation Management*, 1(2), 74-84. doi:10.1108/14601069810217257
- Hackman, J. R., & Oldham, G. R. (1980).** *Work Redesign*. Reading: Addison-Wesley. doi:10.1037/0735-7028.11.3.445
- Hammer, M., & Champy, J. (1993).** *Reengineering the corporation: A manifesto for business revolution*. London: Nicolas Brealey Publishing. doi:10.1016/S0007-6813(05)80064-3
- Hart, S. L. (1992).** An Integrative Framework for Strategy-Making Process. *The Academy of Management Review*, 17(2), 327-351. doi:10.5465/AMR.1992.4279547
- Helper, S., & Sako, M. (2010).** Management innovation in supply chain: appreciating Chandler the twenty-first century. *Industrial and Corporate Change*, 19(2), 399-429. doi:doi:10.1093/icc/dtq012
- Hosmer, L. T. (1994).** Strategic Planning as if Ethics Mattered. *Strategic Management Journal*, 15, 17-34. doi:10.1002/smj.4250151003
- Huang, R. Y., Lien, B. Y.-H., Yang, B., Wu, C.-M., & Kuo, Y.-M. (2011, April).** Impact of TQM and organizational learning on innovation performance in the high-tech industry. *International Business Review*, 20(2), 213-225. doi:10.1016/j.ibusrev.2010.07.001
- Ittner, C. D., & Larcker, D. F. (2001).** Assessing empirical research in managerial accounting: a value-based management perspective. *Journal of Accounting and Economics*, 32(1-3), 349-410. doi:10.1016/S0165-4101(01)00026-X
- Jamal, T. B., & Getz, D. (1996, March).** Does strategic planning pay? Lessons for destinations from corporate planning experience. *International Journal of Tourism Research*, 2(1), 59-78.
- Kaplan, R. S., & Norton, D. P. (1993, September-October).** Putting the Balanced Scorecard to Work. *Harvard Business Review*, 135-147. doi:10.1016/B978-0-7506-7009-8.50023-9
- Kaplan, R. S., & Norton, D. P. (1996a).** *The Balanced Scorecard-Translating Strategy into Action*. Boston: Harvard Business School Press.

- Kaplan, R. S., & Norton, D. P. (1996b).** Using the balanced scorecard as a strategic management systems. *Harvard Business Review*, January-February, 17-85. Retrieved from https://s3.amazonaws.com/academia.edu.documents/46833152/Kaplan_Norton_Balanced_Scorecard_-_3_articles.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1520728414&Signature=3JwVB3YjfHwBt2QYjgvc%2Bi9Ro34%-3D&response-content-disposition=inline%3B%20filename%
- Kenny, J. (2006).** Strategy and the learning organization: a maturity model for the formation of strategy. *The Learning Organisation*, 13(4), 353-368. doi:10.1108/09696470610667733
- Ketokivi, M., & Castañer, X. (2004).** Strategic Planning as an Integrative Device. *Administrative Science Quarterly*, 49(3), 337-365. doi:10.2307/4131439
- Law, M., Lau, T., & Wong, Y. H. (2003).** From customer relationship management to customer-managed relationship: unraveling the paradox with a co-creative perspective. *Marketing Intelligence & Planning*, 21(1), 51-60. doi:10.1108/02634500310458153
- Lovas, B., & Ghoshal, S. (2000).** Strategy as guided evolution. *Strategic Management Journal*, 20(9), 875–896. doi:10.1002/1097-0266(200009)21:9<875::AID-SMJ126>3.0.CO;2-P
- Mintzberg, H. (1994, January-February).** The Fall and Rise of Strategic Planning. *Harvard Business Review*, 72(1), 107-114. Retrieved from https://s3.amazonaws.com/academia.edu.documents/45072183/1._Auckland_The-Fall-and-Rise-of-Strategic-Planning.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1520728950&Signature=FC7kec8cVJp8ZnlnNbWpD5B74Zw%3D&response-content-disposition=inline%3B%20filen
- O'Neill, P., Sohal, A., & Teng, C. W. (2016).** Quality management approaches and their impact on firms' financial performance – An Australian study. *International Journal of Production Economics*, 171, 381-393. doi:10.1016/j.ijpe.2015.07.015
- Parast, M. M., & Adams, S. G. (2012).** Corporate social responsibility, benchmarking, and organizational performance in the petroleum industry: A quality management perspective. *International Journal of Production Economics*, 139, 447-458. doi:10.1016/j.ijpe.2011.11.033
- Paulus, P. (2000, April).** Groups, Teams, and Creativity: The Creative Potential of Idea-generating Groups. *Applied Psychology*, 49(2), 237-262. doi: 10.1111/1464-0597.00013
- Powers, D. A., & Xie, Y. (2000).** *Statistical Methods for Categorical Data Analysis*. Academic Press.
- Prajogo, D. I., & Sohal, A. S. (2003).** The relationship between TQM practices, quality performance, and innovation performance. An empirical examination. *International Journal of Quality & Reliability Management*, 8, 901-918. doi:10.1108/02656710310493625
- Russell, S. J., Norvig, P., & Davis, E. (2010).** *Artificial Intelligence: A Modern Approach* (3rd ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Saunders, M. J. (1995).** Chains, pipelines, networks and value stream: the role, nature and value of such metaphors in forming perceptions of the task of purchasing and supply management. In M. J. Saunders, *First Worldwide Research Symposium on Purchasing and Supply Chain Management* (pp. 476-485). Tempe, Arizona.

- Savakis, A., Lou, J., & Kane, M. (2007).** Bayesian Networks for Image understanding. In A. Mittal, & A. Kassim, *Bayesian Network Technologies: Applications and Graphical Models* (pp. 128-150). New York: IGI Publishing. doi:10.4018/978-1-59904-141-4.ch007
- Schonberg, R. J. (1992).** Total quality management cuts a broad swath—through manufacturing and beyond. *Organizational Dynamics*, 20(4), 16-28. doi:10.1016/0090-2616(92)90072-U
- Senge, P. (1996, December).** Leading Learning Organizations. *Training & Development*, 50(12), 36-4. Retrieved from [http://bryongaskin.net/education/Quality%20Management/Senge_\(1996\)_Leading_Learning_Organization.pdf](http://bryongaskin.net/education/Quality%20Management/Senge_(1996)_Leading_Learning_Organization.pdf)
- Shrader, C. B., Mulford, C. L., & Blackburn, V. L. (1989).** Strategic and operational planning, uncertainty, and performance in small firms. *Journal of Small Business Management*, 24(4), 45-60. Retrieved from <https://search.proquest.com/openview/e5be810a31997824396e59d48df8c099/1?pq-origsite=gscholar&cbl=49244>
- Slater, S., Narver, J. N., & Narver, J. C. (1994, January).** Does Competitive Environment Moderate the Market Orientation- Performance Relationship? *Journal of Marketing*, 58, 46-55. doi:10.2307/1252250
- Tannenbaum, R., & Massarik, F. (1950).** Participation by Subordinates in the Managerial Decision-Making Process. *The Canadian Journal of Economics and Political Science*, 16(3), 408-418. Retrieved from <http://www.jstor.org/stable/137813>
- Tartu Ülikool, Tallinna Tehnikaülikool, EBS. (2011).** Eesti juhtimisvaldkonna uuring. 259. (M. Vadi, Ed., M. Vadi, M. Tepp, A. Reino, M. Ahonen, T. Kaarelson, E. Killumets, . . . K. Türk, Compilers) EAS. Retrieved from https://www.eas.ee/images/doc/sihtasutusest/uuringud/ettevotlus/EAS_juhtimisvaldkonna_uuring_Civitta_EBS_Final_2015_08_17.pdf
- Wageman, R. (1997, Summer).** Critical Success Factors for Creating Superb Self-Managing Teams. *Organizational Dynamics*, 26(1), 49-61. Retrieved from <http://leadingchangeproject.usmblogs.com/files/2013/09/Critical-success-factors-for-creating-superb-self-managing-teams.pdf>
- Watkins, K. E., & Marsick, V. J. (1992).** Building the learning organisation: a new role for human resource developers. *Studies in Continuing Education*, 14(2), 115-129. doi:10.1080/0158037920140203
- Vilà, J., & Canales, J. I. (2008, June).** Can Strategic Planning Make Strategy More Relevant and Build Commitment Over Time? The Case of RACC Original Research Article. *Long Range Planning*, 41(3), 273-290. doi:10.1016/j.lrp.2008.02.009
- Wooldridge, B., & Floyd, S. W. (1997).** Middle management's strategic influence and organizational performance. *Journal of Management Studies*, 34(3), 464-185. doi:10.1111/1467-6486.00059
- Voss, C. A., Åhlström, P., & Blackmon, K. (1997).** Benchmarking and operational performance: some empirical results. *International Journal of Operations & Production Management*, 17(10), 1046-1058. doi:10.1108/01443579710177059
- Yu, C.-C. (2004).** Value Based Management and Strategic Planning in e-Business. (K. Bauknecht, M. Bichler, & B. Pröll, Eds.) *Lecture Notes in Computer Science*, 3182, 357-367. doi:10.1007/978-3-540-30077-9_36

Zabriskie, N. B. (1989). Involving middle-level line managers in building strategic planning information. *The Journal of Business and Industrial marketing*, 4(1), 38-48. doi:10.1108/EUM0000000002723

Zairi, M. (1998). *Effective Management of Benchmarking Projects: Practical guidelines and examples.* Oxford: Butterworth-Heinemann.

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