Developing a concept of autonomy for defining the playing field for business development teams

Jérôme Gard[1], Guido Baltes[1], Bernhard Katzy[2]

[1]*Lake Constance University, Brauneggerstr. 55, D-78405 Konstanz, Germany*

jerome.gard@htwg-konstanz.de, gbaltes@htwg-konstanz.de

[2]*CeTIM @UniBw München, Werner Heisenbergweg 39, 88559, Neubiberg, Germany,*

bernhard.katzy@cetim.org

ABSTRACT

The paper builds on the argument that cross-functional teams require autonomy for developing a new business. The paper add on the ongoing discussion to develop a concept of autonomy that defines the playing field for those teams. It is argued that the concept of autonomy inheres functional, decision making and strategy making types of autonomy. We provide two in-depth case studies of high-tech companies that contrast the concept of autonomy in the context of project teams that engage in new business development activities. Based on these case studies we develop a new concept of autonomy and argue that our concept defines the playing field that cross-functional teams require for developing a new business.

Keywords

Cross-Functional Teams, Business Development, Functional Autonomy, Decision Autonomy, Strategic Autonomy

Innovative products are generated through new product development teams involving representatives from different functional areas (such as manufacturing, design or sales). Concurrent engineering is a broadly applied management philosophy for these cross-functional teams (Clark & Fujimoto, 1991; Gerwin & Moffat, 1997; Susman, 1992; Wheelwright & Clark). The basic requirement of concurrent engineering is that the team is able to work in an autonomous manner. The required level of autonomy can be described through two types. First, teams need to be functionally autonomous from the rest of the company. Second, teams need to be able to make job-related decisions autonomous from managers (Boyle, Kumar, & Kumar, 2005; Gerwin & Moffat, 1997; Gulowsen, 1972 ; Klein, 1991).

Such cross-functional teams are as well discussed in entrepreneurship literature. Similar to new product development teams, these teams require interdisciplinary functions such as R&D, marketing or sales for generating innovation. In contrast to new product development teams, innovation is however not limited to new product development but also includes business development activities. For example, a project team develops a new product for a new industry where collaborations, customer contacts or marketing concepts are not established. Therefore, the team has the challenge to develop a new product and to develop a business around the product. In other words, such teams ,called entrepreneurial teams, build

a business around existing or new technologies that is required for commercialization. Firms that provide adequate support to these entrepreneurial teams are able to exploit technology/market based opportunities and thereby leverage growth (Antoncic & Hisrich, 2001; Kuratko, 2010; Kuratko, Hornsby, Naffziger, & Montagno, 1993; Merrifield, 1993; Simsek & Heavey, 2011; Stopford & Baden-Fuller, 1994; Zahra & Hayton, 2008; Zahra, Jennings, & Kuratko, 1999).

Adequate support inheres more than money and people but also requires a certain level of autonomy that enables teams to behave in an entrepreneurial manner. The concept of autonomy is however complex because it is not simply existent or nonexistent and incorporates multiple facets. For example, functions of the base business (e.g. HR procedures or marketing concepts) might limit the flexibility and freedom of a new business. These functions might be beneficial for the team (due to experience and knowledge) but the teams should not be forced to implement them.
More recently it is criticized that the label autonomy is often "too simplified" (Andersen, 2004; Denison, 1984) and the types of autonomy in the context of entrepreneurial teams require deeper understanding (Lumpkin, Cogliser, & Schneider, 2009). This understanding is critical because growth can only be achieved when firms implement an adequate level of autonomy (Greiner, 1997).

In the following we first present a review of the literature highlighting the major types of autonomy and introduce the research methodology. We then present two in-depth case studies that contrast the level of autonomy in high-tech firms with stable and stagnating growth rates (in terms of employees). The first case describes a company within the photovoltaic industry (PV industry) that successfully leverages growth through a team developing a new business. In contrast, the second case is related to a firm within the information technology industry that successfully exploits existing businesses but is rather unsuccessful in pursuing the team to develop a new business. Based on these cases we develop a concept of autonomy that defines the playing field for teams that develop a new business within existing companies and conclude with recommendations for management.

2 Literature review

Autonomy is an established concept in engineering literature. There is consensus that cross-functional teams require high levels of autonomy for generating innovation and models describing the multiple types of autonomy are established (Breaugh, 1985; Breaugh, 1999; Gulowsen, 1972 ; Hackman, 1990; Sprigg, Jackson, & Parker, 2000). Compared to engineering literature, the concept of autonomy is relatively new in entrepreneurship research. Here, autonomy is traditionally discussed in the context of corporate venture teams that are rather functionally autonomous (e.g. with their own R&D, sales, marketing functions) from the parent organization (Alterowitz, 1988; Brazeal, 1993; Hill & Hlavacek, 1972). These rather functional autonomous venture teams have primarily been discussed in the context of large, multinational corporations (Hill & Hlavacek, 1972). Entrepreneurial teams in the context of smaller high-tech firms are however depending to a substantial degree on functions (such as marketing, sales or R&D) of the company (Andersen, 2004; Hill, Martin, & Harris, 2000). Entrepreneurial teams benefit from these functions because they are a source of technological knowledge and experience (Sathe, 1985; Sykes, 1986). It is shown that the level of functional autonomy is primarily determined through external

factors. Research indicates that the greater the technological and market difference between the entrepreneurial team and the base business (of the company) the lower the level of functional support that the company is able to provide (Drucker, 1985; Fast, 1979; Roberts & Berry, 1984). Vice versa this means that project teams focusing on a market or technology different from the base business need to be provided with the autonomy to develop required functions within the team or acquire (e.g. through collaboration) functions outside the organizational boundaries (Burgelman, 1984; Sykes & Block, 1989).

A further type discussed in entrepreneurial literature refers to decision making autonomy. This kind of autonomy is basically described as decision making latitude, the freedom from excessive control and the authority to pursue entrepreneurial projects (Hornsby, Kuratko, & Zahra, 2002; Kuratko, Ireland, Covin, & Hornsby, 2005). Decision making autonomy of entrepreneurial teams is seen as one major antecedence for entrepreneurial projects to emerge and thrive (Hornsby et al., 2002; Kanter, 1989; Kuratko et al., 2005; Lumpkin et al., 2009; Lumpkin & Dess, 1996). It is however shown that too much decision making autonomy increases the failure rate of entrepreneurial projects (Block & MacMillan, 1993; Simon & Houghton, 1999). Therefore, continuous review meetings between the project management and higher level managers outside the team are broadly implemented (Quinn, 1985; Sathe, 1985, 1989; Sykes, 1986; Sykes & Block, 1989). These review meetings keep higher level managers informed and provide a space for consensus seeking for prioritizing project and related resources (Sathe, 1989). However, negative impacts on project success is shown in case that outside management does not provide project managers with the autonomy to make operational decisions (Quinn, 1985).

More recently, it is argued that strategy making is a further type defining the concept of autonomy (Andersen, 2004). One stream in strategic management literature build on the argument that entrepreneurial projects stem from the managerial grassroots (e.g. project managers) (Bower, 1986; Burgelman & Grove, 1996; Mintzberg, 1973, 1978, 1994; Mintzberg & Waters, 1985) and need to emerge unhindered from the current concept of strategy (e.g. focus of the base business on specific industries or markets) (Burgelman, 1983). It is stated that such an approach requires decentralized strategic decision structures in order to enable strategic influences to emerge from project managers (Andersen, 2000; Hart, 1992). This is achieved through direct participation in strategy making or making strategic decisions without the knowledge of management (Andersen, 2004). Research shows that this keeps firms open for and aware of market- and technology-based opportunities (Kuratko et al., 2005).

The literature review shows that the concept of autonomy has multiple facets that can be further described through three types of autonomy (functional, decision making and strategic autonomy). We argue that these types enable to define the concept of autonomy in the context of entrepreneurial teams within existing firm. Thus our research contributes to develop the concept of autonomy which is recently criticized to remain somewhat anecdotal and requires further research (Lumpkin et al., 2009).

3 Method

This paper builds on two cases of high-tech companies within the photovoltaic and information technology industry. High-tech companies are chosen because they need to generate continuously innovation and therefore engage frequently in new business building

activities in order to commercialize developed products. Both companies survived longer than ten years in these innovation driven industries and are therefore supposed to be rather successful in conducting business development. The companies provide a solid base to observe the phenomenon of autonomy because innovation and aligned growth is facilitated when an adequate level of autonomy is established (Greiner, 1997).

Our study describes entrepreneurial teams (one team in Company A and two in Company B) that are contrasting in terms of autonomy. These cases serve for an empirical study focused on the three types of autonomy. An exploratory research design is chosen because in this context the phenomenon of autonomy remains ambiguous in the scientific discussion. This means that the multiple and interrelated aspects of the autonomy phenomenon are only partly described. Qualitative research methods enable to investigate this phenomenon through a rather holistic lens in real-life settings (Yin, 2009) and generate an in depth and detailed understanding by focusing on the perception of people (Patton, 2002; Ticehurst & Veal, 2000). Cross-case analysis reveals relevant differences concerning the types of autonomy and helps to develop a concept of autonomy that defines the playing field for entrepreneurial teams.

Data was collected from May until September 2011 through a series of personal interviews (three in Company A and two in Company B) with a time frame between 1 to 2,5 hours. The interviews were transcribed as well as analyzed and coded in iterative sessions between the authors. Interviews were conducted with the CEO of each company which where member of the company since the foundation. The interviewee in Company A was the project manager in the described project and became CEO afterwards. The interviewees were personally involved in the described projects and therefore provide first hand data. Generalization of the findings is limited through the sample size and the perception of the interviewees

4 Case Studies

4.1 Case Study of Company A

Founded in 1999 as a university spin-off, the company had highly developed competences related to production processes within the photovoltaic (PV) industry. However, competences to develop quality management equipment on the basis of this knowledge were low. Therefore, an industrial partner with adequate product development competences was identified in a related industry. Both companies engaged in a collaboration in order to combine their competences (production process and product development). The outcome of this collaboration yield quality management equipment that was implemented in the production processes (wafer, cell and module production) within the PV-Industry. This equipment was successfully commercialized in the German market.

One of the employees (interviewee) recognized that the knowledge of the end-customers related to quality management equipment was low. This was also the case for third-party equipment (e.g. scales or microscopes). He therefore developed a new business model that basically comprised different kinds of quality management equipment (own and third party) that was required within production processes. Several major activities were necessary to develop this business model. First, contracts with manufacturers of third-party equipment (e.g. Carl Zeiss AG) were established by the project manager. Second, a concept was developed to train end-customers in handling the equipment. Third, a team was bguild with

the ability to train end-customers and provide adequate service. Fourth, a marketing concept was established that contained different sets of quality management equipment. These activities were conducted through the team members. This business model was unique in the PV industry and the project manager established contracts with all providers of turnkey solutions (ready for operating production facilities).

In 2006 the demand for turnkey solutions in Europe was decreasing. Therefore, the providers of turnkey solutions entered the Asian market. Immediately when the project manager recognized the opportunity to conduct projects together with these partners in Asia, he composed a small team of experienced employees (with know-how related to sales and service, production processes, project management etc.). The first projects were conducted in Taiwan in cooperation with the turnkey partners. The team implemented the quality management equipment in three production facilities at the same time, trained the customers and provided the required service.

When these projects were implemented the team engaged in further sales activities and was able to sign contracts with customers without the support of turnkey providers. The project manager stated that “we would have never managed to enter the Asia markets without the turnkey partners. We have not even been present on a single trade fair”. However, sales increased significantly in 2006. The team needed to be expanded due to the increased number of customers and the related service effort. There was the possibility to build a sales and service organization or to outsource sales and service to one of the local organizations specialized on these issues. When first projects were implemented, the project manager recognized that it was of significant importance to guarantee good service because the equipment was complex and must work in order to guarantee production process stability. He therefore decided to build a sales and service organization through the existing team. Today, the company generates its major revenue in Asia.

Retrospectively, the strategy to enter Asian markets was related to a combination of decisions such as the decisions to develop solutions for turnkey providers, to build a training team or the decision to build a local service and sales organization in Asia. These decisions were primarily made by the project manager. He stated that one of the major success factors in this project was that the CEO was a “visionary leader” who let him make project related decisions within the projects without any influence. The CEO was only involved when strategic issues were discussed in a dialog between them. But even in these situations, the interviewee had the feeling that the decisions were made by himself.

4.2 Case Study of Company B

Until 2000, the CEO trained and established managers for different business units. He trained the individual competences (such as sales, controlling, management) that these managers required to manage their business unit themselves. They learned how to manage their own business with the consequence that at least two of these managers left the company and founded their own business. These firm are today in competition to Company B. The CEO stated“ I have invested quite a bit in management training with the effect that several firms in the region were founded”. As a consequence of these events, the CEO decided to cut the competences of his employees. For example, only competences at the core of the job (such as sales) were developed and the access to the intranet, in which business relevant knowledge and business processes (according to the DIN Norm) were documented, was reduced to a minimum. Consequently, employees were not able to

contribute to business development in the way they did before. The following statement illustrated the outcome of this decision. “I seriously cut the competences of my employees with the result that the company lost its ability to multiply growth. This was simply too extreme”.

The economic outcome of this shortcut came into full effect during the economic crisis in 2008. The major business area that continuously generated value over the past 10 years stagnated. The CEO was not surprised because he recognized that standard solutions (the company focuses on individualized solutions) gained more and more market share and prices for specialized developers dropped continuously during the last years. Already before the crisis, he realized the necessity to implement a cash-out strategy for this business area and new business areas needed to be developed. Therefore, he pushed employees to develop new businesses. But as he stated “I failed. I seriously tried everything but the company was neither moving forward nor backwards. I would never believe this but I saw it with my own eyes... Everybody was used to come to work and to have work … The company needed that shock if you ask me today.” The shock was that the company was not able to find enough projects for around 25 specialized programmers. Consequently the CEO was downsizing the company over a two year period from around 75 to 30 employees without generating losses. The result was however surprising because the company generated exactly the same return (absolute) with 30 employees than with 75 employees before. Since these days, the CEO managed every project himself.

He recognized however that new business will not be developed by employees when he is managing the projects because employees do exactly what they are told and new ideas do not emerge. He therefore established two project team in Ingolstadt and Stuttgart (Germany) in order to provide them with more freedom. These project teams consisted of a project manager and several specialized programmers. They were provided with one major customer within the automotive industry and had the challenge to develop their own business. The teams were able to implement projects with these customers without support from the company. In order to develop the business the teams had the challenge to acquire new customers and engage in human resource development in order to develop required project members. The CEO argued that they also examined the accounts of revenue and expenditure and this was the major motivation because they could see how well or weak they managed. However, every other function (e.g. R&D, marketing, controlling) was provided by the company.

The CEO stated further that the two project managers were leading their teams and he was leading the project managers. During the interviews it became clear that basic decisions such as which commercial should be utilized, when and where to make an offer, which customer to contract etc. were made by the CEO. Similarly, the influence of the team members on the current concept of corporate strategy was rather low. The CEO stated that he discussed strategic issues with three employees (chief of development, chief of product management, chief of finance). These employees were however not part of the two project teams.

5 Discussion and Conclusion

The case of Company A shows the successful development of a new business that was pursued through a project team. Due to the activities of this project team a sustained

competitive advantage was achieved. This is indicated through the fact that the company established continuous growth rates in contrast to the rest of its competitors and against the industry trend. In contrast, Company B was not able to develop a new business. 10 years ago, the company developed a highly individualized product lifecycle management (PLM) solution. Since these days, the existing business continuously generated revenue. In the following years standardized products were more and more established and the demand for individualization decreased. The CEO recognized this trend and was pushing employees to engage in new business development activities. However, new businesses were not developed. The CEO stated that this happened because the employees did not have sufficient freedom. Therefore, in 2008 two project teams were established in two distinct regions in Germany in order to provide them with more freedom to develop their own business. However, it was argued that "somehow this didn't work".
In our eyes, this can be explained through the level of freedom provided to the project teams in both companies. We define freedom as the concept of autonomy which comprises three types of autonomy that we discuss in the following for the two cases.

Functional autonomy

We adapt the point of view of Hill and Hlavacek 1972 and argue that functional autonomy is defined through the functional specialists that are members of a cross functional team. We further differentiate functional autonomy in terms that functional specialists are required for conducting implementation (1) projects and (2) develop a business (Hill & Hlavacek, 1972). (1) *Functional project autonomy* means that the team is able to implement projects without utilizing functional specialists outside the team. Simply, this was the case for the projects described in both cases which is however a prerequisite for every cross-functional engineering team (Boyle et al., 2005; Gerwin & Moffat, 1997; Gulowsen, 1972 ; Klein, 1991).

Differences are however shown in terms of (2) *functional business development autonomy*. This means that a team is functional autonomous when it is able to develop a business without functional specialist outside the team. In the case of Company B, employees were trained in all functions (e.g. sales, business unit controlling etc.) that enabled them to manage a business unit themselves. When two of these employees left the company and founded their own business the CEO cut the functional competences of managers to a minimum. This means in the case of the two project teams (Stuttgart and Ingolstadt) that the functions of the team related to business development were reduced to sales and HR. Other functions (such as marketing, R&D, controlling etc.) were provided through the company. We argue that these functions provided through the base business influence the new business development. These functions such as marketing (e.g. commercials) might be adequate for the base business but not for the new business. This limits the ability to generate a business different from the base business.

In contrast, the case of Company A shows that the team developed the business autonomously. For example, the team members established a marketing concept, engaged in sales activities with the aim to make contracts with turnkey providers and third-party manufacturers, adapted the product design of the equipment to the new conditions in Asia and established a sales and service organizations in Asia. The team had all functional specialists to conduct these business development activities that enabled the team to develop

the business without the influence of the rest of the company. Based on these insights we argue that the level of functional autonomy (related to business development) from the base business influences the ability to develop a new business in adaptation to new conditions.

Decision making autonomy

The case of Company B shows that the level to make decisions related to business development autonomously from the CEO was rather low. The CEO stated that he is leading the project managers of all projects, even those in distinct geographical regions. This basically means that he makes decisions related to business development. These decisions are for example related to sales (such as making an offer or contracts) or marketing (choice of commercials). Project managers were able to make HR-related decisions. In contrast, decision autonomy in the case of Company A is high. The project manager stated that the CEO was a rather "visionary leader". The CEO gave him full autonomy to make decisions within the project. For example, he decided to develop a new business model and made all decisions that were required to develop this new business autonomously from the CEO. In the same manner decisions were made when the team conducted their first projects in Asia and developed a new sales and service organization.

In order to define *decision autonomy*, we adapt the definition provided by Hornsby et al. 2002 and define this type of autonomy as the authority to make decisions related to business development activities autonomously from the CEO (Hornsby et al., 2002). It is shown that decisions related to new business development are based on intuition and bounded rationality because they are related to high levels of uncertainty and limited information (Sathe, 1989). We therefore argue that decisions should be made by the project manager because he is closest to the market and has the best feeling for what is good and what is bad for developing a business. It is shown that firms providing more decision autonomy to these project managers have better ability to recognize market and technological changes (Teece, 2007). We therefore argue that decision autonomy increases the ability of project teams to develop a new business in adaptation to market changes.

Strategy making autonomy

The strategy to generate value on the Asian market is a basic part of the corporate strategy of Company A. The initial step towards this strategy was that the project manager developed the new business model (turnkey solution for quality management equipment). Due to this business model contracts were signed with turnkey partners which later enabled the team to enter the Asian market. This phenomenon is described as emergent strategy in strategic management (Mintzberg, 1978; Mintzberg, 1983). In other words, strategies emerge from the managerial grassroots which are the project managers in the described cases. In order to enable strategies related to new business development to emerge, project managers require the ability to influence the current concept of corporate strategy (Burgelman, 1983). This influence is described through a continuum that we define through three types in the following.

(1) We term the one extreme of this continuum *strategic autonomy* which is described as the autonomy to experiment with a new business without the intention and awareness of the CEO. This kind of autonomy was neither observed in Company A nor in Company B. The absence of this type of strategic decision autonomy might be explained through the fact that both companies are managed through a rather flat hierarchical structure.

(2) The moderate level between the extremes describes the possibility of project managers to pursue new business development but informing the CEO and providing him with the ability to influence the business development. This was the case in Company A. Even when the interviewee had the feeling that he was developing the business autonomously from the CEO. The CEO was at least informed and had the possibility to influence activities related to business development. The case further shows that the strategy to enter the Asian market was not planned when the new business model was developed. It was uncertain whether the new business model or the first projects conducted in Asia would be successful. This indicates that the business development was rather an experimental approach. We term this type of autonomy *experimentation autonomy* and argue that project managers should be able to experiment with new business development activities in order to promote their ideas to the CEO.

(3) The other extreme of the continuum is observed in Company B. The CEO stated that he is making strategic decisions related to new business development and the team was not able to experiment with new businesses. We define this as *no autonomy* and argue that this does not provide an adequate playing field for project teams to develop new businesses.

6 Conclusion and future research

The paper contributes to the ongoing discussion to develop a concept of autonomy for entrepreneurial teams within existing firms. It is recently criticized that this concept remains somewhat anecdotal in the scientific discussion (Lumpkin et al., 2009). We define the concept of autonomy through the three types of autonomy: functional autonomy, decision making autonomy and strategy making autonomy. Our research shows that these types of autonomy define the playing field for entrepreneurial teams and influences the ability of these teams to develop a new business. As a conclusion, we provide a summery of our concept of autonomy in the following table.

Type of autonomy	**Definition**
Functional autonomy	
Functional project autonomy	The ability of teams to implement projects without utilizing functional specialists outside the team
Functional business development autonomy	The ability of teams to develop a business without functional specialists outside the team
Decision making autonomy	
Decision autonomy	The ability to make decisions related to business development activities without commitment of the CEO
Strategy making autonomy	
Strategic autonomy	The ability of teams to experiment with a new business without the intention and awareness of the CEO
Experimentation autonomy	The ability of teams to experiment with new businesses and providing the CEO with the ability to influence business development
Operational autonomy	The team has not the ability to experiment with new businesses

Managers pursuing new business development should provide an adequate playing field for project teams. We argue that managers should define this playing field through the concept of autonomy. The following managerial recommendations can be seen as reference points for the three types of autonomy defined in our concept.

First, teams should not be forced to rely on functional experts of the base business. These experts provide knowledge and experience that might be adequate for the base business but might be inadequate for developing a new business. They further influence development of the new business in the manner of the base business thus limit the flexibility and freedom of project teams. Second, decisions that are related to uncertain conditions should be left to the project manager because he has the best feeling for what is good for the business. Furthermore, high levels of decision autonomy enable the team to react quickly to changes in the environment and to adapt the new business development to changing conditions. Third, managers should provide the space for new strategies to emerge. Therefore, they should enable managers to experiment with a new business and evaluate related ideas through the achieved outcomes and the potential of these business activities.

References

Alterowitz, R. 1988. ***New Corporate Ventures***. New York: Wiley.

Andersen, T. J. 2000. Strategic planning, autonomous actions and corporate performance. ***Long Range Planning***, 33(2): 184-200.

Andersen, T. J. 2004. Integrating Decentralized Strategy Making and Strategic Planning Processes in Dynamic Environments. ***Journal of Management Studies***, 41(8): 1271-1299.

Antoncic, B., & Hisrich, R. 2001. Intrapreneurship: Construct refinement and cross-cultural validation. ***Journal of Business Venturing***, 16(5): 495-527.

Block, Z., & MacMillan, I. 1993. ***Corporate venturing, creating new businesses within the firm***. USA: Harvard Business School Press.

Bower, J. L. 1986. ***Managing the resource allocation process : a study of corporate planning and investment***. Boston, Mass.: Harvard Business School Press.

Boyle, T. A., Kumar, U., & Kumar, V. 2005. Organizational contextual determinants of cross-functional NPD team support. ***Team Performance Management***, 11(1-2): 27-39.

Brazeal, D. 1993. Organizing for internally developed corporate ventures. ***Journal of Business Venturing***, 8(1): 75-90.

Breaugh, J. 1985. The Measurement of Work Autonomy. ***Human Relations***, 38(6): 551-570.

Breaugh, J. A. 1999. Further Investigation of the Work Autonomy Scales: Two Studies. ***Journal of Business and Psychology***, 13(3): 357-373.

Burgelman, R. 1983. A Model of the Interaction of Strategic Behavior, Corporate Context, and the Concept of Strategy. ***The Academy of Management Review***, 8(1): 61-70.

Burgelman, R. 1984. Designs for Corporate Entrepreneurship In Established Firms. ***California Management Review***, 26(3): 154-166.

Burgelman, R. A., & Grove, A. S. 1996. Strategic Dissonance. ***California Management Review***, 38(2): 8-28.

Clark, K., & Fujimoto, T. 1991. ***Product Development Performance***

Boston, MA: Harvard Business School Press.

Denison, D. R. 1984. Bring corporate culture to the bottom line. ***Organizational Dynamics***, 13: 4-22.

Drucker, P. F. 1985. ***Innovation and Entreprneurship***. New York: Harper & Row.

Dutton, J. E. 1995. Understanding strategic agenda building and its implications for management

change In D. J. Hickson (Ed.), ***Managerial Decision Making***. Dartmouth: Aldershot.

Dutton, J. E., & Ashford, S. J. 1993. Selling Issues to Top Management. ***The Academy of Management Review***, 18(3): 397-428.

Dutton, J. E., Ashford, S. J., O' Neill, R. M., Hayes, E., & Wierba, E. E. 1997. Reading the wind: how middle managers assess the context for selling issues to top managers. ***Strategic Management Journal***, 18(5): 407-423.

Fast, N. 1979. The future of industrial new venture departments. ***Industrial Marketing Management***, 8(4): 264-273.

Gerwin, D., & Moffat, L. 1997. Withdrawal of Team Autonomy during Concurrent Engineering. ***Management Science***, 43(9): 1275-1287.

Greiner, L. 1997. Evolution and Revolution as Organizations Grow: A company's past has clues for management that are critical to future success. ***Family Business Review***, 10(4): 397-409.

Gulowsen, J. 1972 A measure of work-group autonomy In L. E. Davis, & J. C. Taylor (Eds.), ***Design of jobs***: 374–390. Penguin: Harmondsworth.

Hackman, J. R. 1990. Creating More Effective Work Groups in Organizations. In J. R. Hackman (Ed.), ***Groups That Work (and Those That Don't),***: 479-504. San Francisco, CA: Jossey-Bass.

Hart, S. L. 1992. An Integrative Framework for Strategy-Making Processes. ***The Academy of Management Review***, 17(2): 327-351.

Hill, R. M., & Hlavacek, J. D. 1972. The Venture Team: A New Concept in Marketing Organization. ***Journal of Marketing***, 36(3): 44-50.

Hill, S., Martin, R., & Harris, M. 2000. Decentralization, Integration and the Post-Bureaucratic Organization: The Case of R&d. ***Journal of Management Studies***, 37(4): 563-586.

Hornsby, J., Kuratko, D., & Zahra, S. 2002. Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale. ***Journal of Business Venturing***, 17(3): 253-273.

Kanter, R. 1989. ***When Giants Learn to Dance***. New York: Touchstone.

Klein, J. A. 1991. A Reexamination of Autonomy in Light of New Manufacturing Practices. ***Human Relations***, 44(1): 21-38.

Kuratko, D. 2010. Corporate Entrepreneurship: An Introduction and Research Review. In Z. Acs, & D. Audretsch (Eds.), ***Handbook of Entrepreneurship Research***, Vol. 5: 129-163. New York: Springer.

Kuratko, D., Hornsby, J., Naffziger, D., & Montagno, R. 1993. Implement Entrepreneurial Thinking in Established Organizations. . ***SAM Advanced Management Journal***, 58(1): 28-39.

Kuratko, D., Ireland, R., Covin, J. G., & Hornsby, J. 2005. A Model of Middle-Level Managers' Entrepreneurial Behavior. ***Entrepreneurship Theory and Practice***, 29(6): 699-716.

Lumpkin, G. T., Cogliser, C. C., & Schneider, D. R. 2009. Understanding and Measuring Autonomy: An Entrepreneurial Orientation Perspective. ***Entrepreneurship Theory and Practice***, 33(1): 47-69.

Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. ***The Academy of Management Review***, 21(1): 135-172.

Merrifield, B. 1993. Intrapreneurial corporate renewal. ***Journal of Business Venturing***, 8(5): 383-389.

Mintzberg, H. 1973. Strategy-Making in Three Modes. ***California Management Review***, 16(2): 44-53.

Mintzberg, H. 1978. Patterns in Strategy Formation. ***Management Science***, 24(9): 934-948.

Mintzberg, H. 1983. ***Structures in Five: Designing Effective Organizations.*** . Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. 1994. The Fall and Rise of Strategic Planning. ***Harvard Business Review***, 72(1): 107-114.

Mintzberg, H., & Waters, J. A. 1985. Of strategies, deliberate and emergent. ***Strategic Management Journal***, 6(3): 257-272.

Patton, M. Q. 2002. ***Qualitative research and evaluation methods***: Sage Publications.

Quinn, J. 1985. Managing innovation: controlled chaos. ***Harvard Business Review***, 63(3): 73-84.

Roberts, E. B., & Berry, C. A. 1984. Entering new businesses : selecting strategies for success: Cambridge, Mass. : Massachusetts Institute of Technology.

Sathe, V. 1985. Managing an Entrepreneurial Dilemma: Nurturing Entrepreneurship and Control in Large Corporations. ***Frontiers in Entrepreneurial Research***: 636-657.

Sathe, V. 1989. Fostering Entrepreneurship in The Large, Diversified Firm. ***Organizational Dynamics***, 18(1): 20.

Simon, M., & Houghton, S. M. 1999. Succeeding at Internal Corporate Venturing: roles needed to balance autonomy and control. ***Journal of Applied Management Studies***, 8(2): 145.

Simsek, Z., & Heavey, C. 2011. The mediating role of knowledge-based capital for corporate entrepreneurship effects on performance: A study of small- to medium-sized firms. ***Strategic Entrepreneurship Journal***, 5(1): 81-100.

Sprigg, C. A., Jackson, P. R., & Parker, S. K. 2000. Production teamworking : The importance of interdependence and autonomy for employee strain and satisfaction. ***Human Relations***, 53: 1519-1543.

Stopford, J., & Baden-Fuller, C. 1994. Creating corporate entrepreneurship. ***Strategic Management Journal***, 15(7): 521-536.

Susman, G. I. 1992. Integrating Design and Manufacturing for Competitive Advantage. New York: Oxford University Press.

Sykes, H. B. 1986. The anatomy of a corporate venturing program: Factors influencing success. ***Journal of Business Venturing***, 1(3): 275-293.

Sykes, H. B., & Block, Z. 1989. Corporate venturing obstacles: Sources and solutions. ***Journal of Business Venturing***, 4(3): 159-167.

Teece, D. J. 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. ***Strategic Management Journal***, 28(13): 1319-1350.

Ticehurst, G. W., & Veal, A. J. 2000. ***Business research methods: a managerial approach***: Longman.

Wheelwright, S. C., & Clark, K. B. 1992. Competing through development capability in a manufacturing-based organization. ***Business Horizons***, 35(4): 29-43.

Yin, R. K. 2009. ***Case Study Research: Design and Methods***: Sage Publications.

Zahra, S., & Hayton, J. 2008. The effect of international venturing on firm performance: The moderating influence of absorptive capacity. ***Journal of Business Venturing***, 23(2): 195-220.

Zahra, S., Jennings, D., & Kuratko, D. 1999. The Antecedents and Consequences of Firm-Level Entrepreneurship: The State of the Field. ***Entrepreneurship: Theory & Practice***, 24(2): 47-67.