

# Organizational Culture and Innovative Work Behavior: A Case Study of a Manufacturer of Packaging Machines

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## Abstract

Companies need to occupy a unique market share to survive in a highly competitive business world. One of the possibilities to create a unique market share is innovation. The purpose of this study was to investigate the level of innovative work behavior, type of organizational culture and the relation between innovative work behavior and organizational culture. This case study was conducted at a manufacturer of packaging machines and could be used as an example for other companies that worked within a highly innovative work field. The employees perceived the current dominant culture as a market culture and were convinced they could improve their innovative work behavior as shown by the higher average scores on preferred innovative work behavior than the current level of innovative work behavior. The preferred organizational culture was a family culture. Even though the literature confirms that family and market cultures will enhance innovative work behavior, the results from the questionnaire only show a significant correlation between the market culture and innovative work behavior in the organization. It is concluded that a transition of the current market culture towards a more family culture is needed, but in the meantime the market culture should be preserved.

## Keywords

Human Resources Management (HRM), Organizational Culture, Innovative Work Behavior

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## 1. Introduction

In today's business world with globalization, companies face many opportunities worldwide, but also worldwide competition. To survive, companies are forced to be different. It has become necessary for organizations to im-

prove productivity and promote innovative work behavior to survive the declining market for products and services. Because of the rapid development in technology and globalization of most market shares, many organizations have been forced to develop and introduce innovative products [1]. To do so, organizations need to encourage innovative work behavior. Innovation however is not an action taken by individuals only. It is handled by a group. Research has shown the importance of a climate enhancing innovative work behavior. The culture or working climate in successful divisions of a large chemical producer differs from less successful divisions in the same organization [2]. In order to enhance innovative work behavior, the organizational culture and with that organizational values and leadership should focus on innovative work behavior [3].

This present study is a quantitative case study designed to investigate organizational culture in relation to the level of innovative work behavior. The research questions in this study are: 1) “What are the current dominant organizational culture and level of innovative work behavior at the company investigated?” and 2) “What is the preferred organizational culture that will enhance innovative work behavior?”. This study is conducted at a private sector organization in the manufacturing of packaging machines. The results are used to determine a plan of action towards a more innovative organization.

## 2. Organizational Culture

Culture is about human needs such as food, if and how to show feelings and activities, which enrich the human mind when learning to value. Social environment is the source of culture [4]. When researchers studied national culture they found that cultural differences in organizations were not caused by national values, but more by practices within organizations. Organizational culture refers to values that are granted such as a) values, b) underlying assumptions, c) expectations, d) collective memory, and e) definitions that are present in the organizations [5]. Organizational culture is an important factor on the performance of a company [5]. Culture informs and determines the strategy of an organization [6]. This can lead to success as well as failure.

### 2.1. Competing Values Framework

Several researchers [4] [5] indicated a deeper layer of assumptions and values is the core of an organization’s culture and thus the determining factor in behavior and actions. Values, behavior, and standards are similar to the underlying assumptions, but it is difficult to make these assumptions visible. To describe and diagnose an organizational culture focus is required on several dimensions of the culture simultaneously. The model Competing Values Framework focuses on two specific dimensions: content dimension and pattern dimension [5].

Content dimensions are signals by which individuals can recognize their organization’s culture values. To define the content dimensions of organizational culture six items can be used [5].

- Dominant characteristics.
- Organizational glue.
- Leadership.
- Management of employees.
- Strategic emphases.
- Criteria of success.

Pattern dimensions of organizational culture are described as the three most dominant dimensions [5]. Additional arguments for the importance of these dimensions were provided by research on the difference between excellently performing organizations and less well performing organizations. It was shown that the differences between these organizations were caused by the strength, congruence, and culture type. With excellently performing organizations, a culture type is found in which customers, stockholders, and employees are equally important [7]. The three pattern dimensions are culture strength, culture type and cultural congruence [5].

#### 2.1.1. Culture Strength

With cultural strength the dominance of a certain culture in an organization is meant. Research has shown associates of a strong organizational culture are clear focus and common vision. The environment of the organization determines the need for a dominant culture. Some organizations need a strong culture, for example in a high tech environment; a company needs a strong culture that reinforces cutting-edge high tech creativity. In some environments a more balanced culture can be more efficient for an organization. A car manufacturer can be successful in its competitive environment when it uses a balanced culture. In its manufacturing department, it will prefer

a highly developed hierarchic culture with a high level of internal focus on stability. It also needs a market culture to be efficient in a highly competitive car market. Next, an adhocracy is effective for innovative thinking in the product design department. While the car manufacturer needs the loyalty of its employees to keep the collective intelligence and innovative insight in house, a clan of family culture will make the organization effective [5].

### 2.1.2. Culture Type

Effective organizations were investigated using 39 indicators [8]. These 39 indicators were analyzed and two dimensions were posited [9]. One dimension focused on stability versus flexibility. The other dimensions focused on internal focus and integration on one side, and external focus and differentiation on the other side [5]. These two dimensions form four quadrants. In each quadrant a culture type is described that represents the culture type most effective for the combination of the dimensions. The culture type defines the core values of an organization that are valued as effective for an organization in that specific quadrant. The culture types in the quadrants are defined as Clan/Family culture, Adhocracy, Market culture and Hierarchy [5]. The model was named the Competing Values Framework [5].

The *adhocracy culture* is focused mainly on external flexibility. Within this culture type, the organization responds to environmental developments and opportunities and seeks to procure external support as expertise and resources. The mission statement of an organization with an adhocracy culture will mostly include entrepreneurship: opportunities are explored and risks are taken. The basic assumption within this culture is that innovations and pioneering lead to success.

In the second quadrant is the *market culture*. The name market refers to the type of organization, which functions as a market itself. It focuses on transactions with mostly external parties like customers, suppliers and contractors. This market primarily functions according economic market mechanisms with core values competitiveness and productivity. The major task of the management is to drive the organization towards productivity, results, and profits.

The next culture is the *hierarchy culture*, which focuses on internal control, on stability of tasks and functions, on consistency of quality, and on continuity in working methods. Management is focused on creating hierarchical organizations and bureaucracies because this leads to stability, efficiency and highly consistent products. Basic values are clear lines in decision-making, standard procedures, and control.

The fourth culture, the *family culture*, emphasizes on the concept of motivation, staff development, and personal relationships. This culture is focused mainly on internal flexibility. Organizations encourage the effort and dedication of all staff members, emphasizing on collaboration, staff morale coherence, and a healthy work environment. It seems more like an extended family than an economic entity.

### 2.1.3. Culture Congruence

An organization shows cultural congruence when most cultural values are aligned. That means that strategy, leadership style, the reward system, the approach to managing employees all seem to focus on the same cultural values [5]. Several studies showed that congruent culture is visible more with high performing organizations. Incongruence of culture is often a sign for the need for cultural change. Cultural incongruence often creates discomfort in an organization. Most of the time, cultural incongruence leads to differences in goals, in strategies, and differences in perspectives [5].

## 3. Innovative Work Behavior

Innovative work behavior is not only restricted to the development of new products in research and development environments, it involves the entire organization. Similar to the National Endowment for Science, Technology and the Arts (NESTA), a UK-based institution, defines innovation as *change associated with the creation and adaptation of ideas that are new-to-world, new-to-nation/region, new-to-industry or new-to-firm* [3].

The creativity to come up with new ideas depends partly on the management of an organization, but primarily depends on individuals generating new ideas. The ability to create innovative solutions is dependent on the knowledge, and even more on the experience of individuals to apply the knowledge to solve the novel problem [1] [10]. A study about the process to create innovative solutions showed that creative problems are often poorly defined. A solid problem definition process should be based on systematic screening and organizing the availa-

ble information [11]. Rearranging and combining existing creative concepts is one of the best predictors to achieve creative solutions [12].

Innovative work behavior can be divided over 3 stages: idea generation, coalition building and implementation [13]. In the first stage, innovation is initiated by problem recognition, problem defining and finding a solution to solve this problem. Finding the solution can be based on a new concept or based on a new arrangement of existing concepts [14]. In the next stage, the innovator looks for support of his ideas. The innovator may feel uncertain about his ideas and will need support to sell his idea. Innovation goes along with changes and resistance to change can be expected. The promoter of the innovation will have to create commitment for the innovation and often build coalitions [14]. In the final stage the innovation has to be implemented. The implementation needs an approach of perseverance. It is understandable that for the different phases to create innovative solutions the employees need different kind of attitude and skills [15].

## 4. Organizational Culture and Innovative Work Behavior

Although many organizations understand that innovative working behavior is essential for their future, they are reluctant to really enhance innovative work behavior. In order to enhance innovative work behavior the organizational culture and with that organizational values and leadership should focus on innovative work behavior [3]. The process of innovation is mostly unpredictable and therefore a risky process [14]. Resistance of supervisors and co-workers can be expected because innovative ideas for change can implement insecurity and stress due to a higher work-load [16]. The organizational culture type adhocracy focuses on entrepreneurship and risk taking. In that perspective adhocracy does enhance innovative work behavior. However research indicates family and market culture will enhance innovative work behavior more than other culture types: adhocracy and hierarchy.

### 4.1. Family Culture and Innovation

The possibility of an organization for innovative working highly depends on the quality of its employees. Family culture emphasizes the concept of motivation and staff development.

An organizational culture, focusing on internal flexibility and on the team (*i.e.* family culture) will enhance innovative work behavior [3] [17]-[19]. This organizational culture should have the following characteristics:

- Stimulate and coach team members to support innovative work behavior. The leader of the organization must actively participate in coaching team members. This will result in an open culture in which people exchange ideas and understand that innovative work behavior is valued and the expected practice in the organization.
- The organizational leader must practice innovative work behavior as an example. Team members will follow the good example of the leader.
- Creating a reward system that stimulates an innovative work behavior: rewards both tangible as intangible. Not all creative ideas become an innovation: a lot of ideas are needed to produce few innovations. Therefore, the rewards system must focus on idea creation. It should provide safety for taking risks and allowance for making mistakes.
- Hiring innovative people will stimulate an organizational culture that enhances innovative work behavior.

### 4.2. Market Culture and Innovation

Research showed that an organizational culture that promotes negotiating and convincing others within the organization will support innovation [20]. Organizational cultural conditions that promote this among middle managers are:

- Reporting to more than one boss; the middle manager is forced to sell his idea to more than one boss.
- Information is freely available and somewhat unstructured; the middle manager is pushed to find information in unexpected places and is pushed to combine the available fragmented information.
- Different centers of power and different available budgets exist; the middle manager is then stimulated to sell his idea in more departments to acquire resources.
- No strict task definition for the manager exists; managers without subordinates or line responsibility are forced to convince others to provide budget and resources to accomplish tasks.
- Stimulation of lateral relations rather than vertical relations; the middle manager is pushed to get support from peers before the approval of senior management.
- Reward system focusing on investment in people and projects above rewards for achievements in the past;

managers are stimulated to work on more risky projects.

Another factor that showed the link between market culture and innovation is absorptive capacity. Absorptive capacity of an organization is the ability to recognize the value of new information and use it for their commercial benefit [21]. The absorptive capacity of an organization increases when the organization has accumulated related knowledge. With this accumulated knowledge, organizational leaders recognize valuable information earlier and can better implement the new knowledge for commercial benefit [21]. Also an organizational culture that is open for learning from experiences externally from customers, suppliers, and competitors, and learning internally and by doing will enhance innovative work behavior [22].

## 5. Methodology

### 5.1. Participants and Procedure

The research strategy employed was an embedded case study according to Saunders, Lewis and Thornhill [23]. The case study strategy was chosen because a manufacturer of packaging machines is a typical case of production industry in the Netherlands. These types of studies can be used for different purposes, such as theory building and theory testing.

The employees were asked to fill in the questionnaires about organizational culture and innovative work behavior. The respondents consisted of a large group of employees in the office and a large group from the assembly. The total number of respondents was  $N = 53$  (current culture) and  $N = 51$  (preferred culture). Due to the size of the organization and the number of employees, the population used for the research was limited. Through a power analysis (alpha 0.05; statistical power 0.80), it was determined that a sample size of  $N = 50$  was deemed sufficient to find a medium sized effect [24]. The respondents were informed about the research subject and anonymity of the respondents was ensured. There was no differentiation between fixed contracts or temporary contracts because this would not have influence on how people perceived culture. In the group, a small differentiation was shown, based on age, length of employment, education and position in organization; however due to the size of the company this differentiation cannot be extensive, otherwise the anonymity could not be granted.

### 5.2. Measurements

Organizational Culture was measured using the Organizational Culture Assessment Instrument (OCAI) [5]. The questionnaire was designed to describe the present culture of an organization and provides a framework to describe the preferred culture. The OCAI is based on six dimensions of an organization: Dominant characteristics; Organizational leadership; Management of employees; Organizational glue; Strategic emphasis; and Criteria of success. Using the Competing Values Framework, the OCAI can be used to describe the culture profile in four quadrants: family culture, adhocracy, market culture, and hierarchy. The OCAI has been used frequently and has been validated in research over the last 20 years in a variety of industries [25]. It also showed to be very reliable [26] [27]. The Cronbach alpha for each culture type varied between 0.71 and 0.79 [26]. The first questions of the questionnaire focused on the employee: age, education, length of employment, and function. Following were the 24 questions of the OCAI. To be able to use standard statistic tools, the questionnaire used a 5-point Likert scale. The respondents were asked to fill in what fits best to the organizational culture of the organization as they perceived it with a scale of 1 to 5; 1 totally agree to 5 totally not agree.

Innovative work behavior was measured using a validated measurement scale that uses a questionnaire with nine questions divided over 3 categories: idea generation, idea promotion and idea realization [28]. Examples of items included: a) I generate original solutions for problems; b) I acquire approval for innovative ideas; and c) I introduce innovative ideas into the work environment in a systematic way. The answers were measured with a 7-point scale, ranging from 1 = never to 7 = always. The questionnaire showed a high reliability with Cronbach's Alpha of 0.98 [29].

## 6. Results

### 6.1. Current Organizational Culture

The results, shown in **Table 1**, show that the most dominant perceived organizational culture is market (mean 2.7; SD = 0.23). The least dominant perceived culture is hierarchy (mean 3.6; SD = 0.31). The respondents va-

**Table 1.** Results current organizational culture.

	Family		Adhocracy		Market		Hierarchy	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Overall	3.2	0.21	3.0	0.24	2.7	0.23	3.06	0.31
<i>Age (in years)</i>								
20 - 30	2.7		3.0		2.6		3.2	
30 - 40	3.4		3.0		2.9		3.8	
40 - 50	3.1		3.1		2.8		3.4	
≥50	3.1		3.0		2.6		3.4	
<i>Length of employment (in years)</i>								
<1	2.8		3.0		2.6		3.3	
1 - 5	3.1		2.9		2.6		3.4	
5 - 10	3.2		3.1		2.8		3.8	
>10	3.4		3.1		2.8		3.6	
<i>Level of education</i>								
Bachelor or higher	3.1		3.1		2.8		3.6	
Other education	3.3		3.0		2.6		3.6	
<i>Function group</i>								
Office	3.1		3.0		2.7		3.6	
Workshop	3.4		3.2		2.7		3.7	

lued the family, adhocracy and market culture very close to 3. This could indicate that the majority of the team did not perceive a dominant culture. It could also indicate that the culture was not clear to the team.

Almost 10,000 companies on organizational culture were investigated using the OCAI [5]. The different companies were categorized to their main activity. The current dominant organizational culture of the organization investigated in this study fits the average of manufacturing companies. The plot of the organizational culture of manufacturing companies (N = 38) shows a preference to the market culture. The other culture types are almost equally valued.

**Table 1** also shows the average values of the different culture types between different age groups, the length of employment, the level of education or the position in the company. The results show that the respondents perceived the current organizational culture and market culture in a similar way not depending on age, length of employment, level of education, or position in the company. The low standard deviation per culture type also indicated only small variations in the way the team members perceived the current organizational culture.

## 6.2. Preferred Organizational Culture

The respondents were clearer in their vision about how the preferred organizational culture should look. The preferred organizational culture is family culture as shown **Table 2**.

As shown with the results of the questionnaire concerning the perceived current organizational culture, the differences between employees based on age, length of employment, level of education, and of function group were small. The group value preferred organizational culture: family culture, but with a small difference to adhocracy.

## 6.3. Difference in Current and Preferred Organizational Culture

The differences in responses on the different culture types within the current and preferred organizational culture

**Table 2.** Results preferred organizational culture.

	Family		Adhocracy		Market		Hierarchy	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Overall	1.7	0.25	1.8	0.79	2.3	0.28	2.0	0.17
<i>Age (in years)</i>								
20 - 30	1.6		1.6		2.2		1.8	
30 - 40	1.6		1.8		2.3		2.0	
40 - 50	1.9		2.0		2.7		2.1	
≥50	1.8		1.8		2.3		2.1	
<i>Length of employment (in years)</i>								
<1	1.7		1.6		2.5		1.9	
1 - 5	1.8		1.8		2.1		2.1	
5 - 10	1.5		1.8		2.4		1.9	
>10	1.7		1.8		2.4		2.0	
<i>Level of education</i>								
Bachelor or higher	1.7		1.7		2.3		2.1	
Other education	1.7		1.8		2.3		1.9	
<i>Function group</i>								
Office	1.6		1.8		2.2		2.0	
Workshop	1.8		1.8		2.5		2.0	

were small ( $\Delta$  between 0.4 and 1.6). Also, within the culture types, the standard deviation was small showing that employees valued the current as well as the preferred organizational culture similarly.

The employees perceived the current dominant organizational culture as market culture, but also in the preferred organizational culture type the employees valued the market culture type high to enhance innovative work behavior. Regarding the small difference of the market culture type, employees wanted to keep the market part of the culture in the preferred culture at almost the same level as in the current culture, however, not the dominant organizational culture, but the preferred organizational culture is defined as family culture. Looking at the difference in how the employees perceived the family part of the current organizational culture and how the employees valued the family part of the preferred organizational culture, a transition towards a more family culture should be considered.

The largest difference was found with hierarchy. In that perspective, the employees showed that the hierarchical part of the organizational culture must be developed the most, however, not to become the dominant organizational culture.

Adhocracy was the valued second dominant organizational culture type in the current culture. Also, in the preferred organizational culture adhocracy was valued as the second dominant culture type. Entrepreneurship is important in this kind of organizational culture. The employees valued adhocracy high in both the current culture and in the preferred culture. This company acts in a highly competitive market and the results showed that the employees understand entrepreneurship is important for the success of the company.

#### 6.4. Innovative Work Behavior

In the questionnaire, the employees were asked to judge their own innovative work behavior in the current situation and what they perceived as the preferred Innovative Work Behavior suitable for the organization to be successful in their market. The results are shown in [Table 3](#).

**Table 3.** Innovative work behavior.

	Current situation	Preferred situation
	Mean	Mean
<b>Idea generation</b>	<b>4.2</b>	<b>5.1</b>
<b>Idea promotion</b>	<b>4.2</b>	<b>5.2</b>
<b>Idea realization</b>	<b>3.5</b>	<b>5.4</b>

In both situations, the group showed a balanced structure of the team to realize innovative work behavior: the three innovation stages (idea generation, idea promotion and idea realization) were represented as almost equal. The difference between the three different innovation stages was small, in the current situation, values between 3.6 and 4.2. In the preferred situation, the values are between 5.1 and 5.4.

When comparing the outcome of the questionnaires of the current innovative work behavior and the preferred innovative work behavior, the employees valued innovative work behavior higher in the preferred status than in the current status. With these values the team showed that, in general, innovative work behavior could be improved.

Similar research in the province Limburg in the South of the Netherlands amongst 361 employees among different kinds of industries showed the following averages on innovative work behavior [30]: Idea generation 3.48; Idea promotion 3.34; Idea realization 3.14. The respondents of this case study valued their own innovative work behavior slightly higher than the 361 employees from the other industries. The difference is understandable knowing that this organization is active in one highly competitive industry of packaging in which companies can only differentiate with innovation.

### 6.5. Correlation between Organizational Culture and Innovative Work Behavior

The literature showed a relation between family culture and market culture to stimulate innovative work behavior. The statistical analysis showed a significant correlation between Market culture and innovative work behavior (idea generation  $r = 0.417$ ; idea promotion  $r = 0.301$ ; idea realization  $r = 0.441$ ). The statistical analysis does not show a significant correlation between Family culture and innovative work behavior (idea generation  $r = 0.036$ ; idea promotion  $r = 0.151$ ; idea realization  $r = 0.221$ ). The results are shown in **Table 4**. This is an interesting avenue for future research.

## 7. Discussion and Conclusions

Companies need to occupy a unique market share to survive in a highly competitive business world. One of the possibilities to create a unique market share is innovation. The purpose of this study was to investigate the level of innovative work behavior, type of organizational culture and the relation between innovative work behavior and organizational culture within a packaging company. This case study can be used as an example for other companies that work within a highly innovative work field.

The employees of the company investigated in this case study perceive the current dominant culture as a market culture. The current level of innovative work behavior is average compared with other companies in the south of the Netherlands. The employees are convinced that they can improve their innovative work behavior as shown by the higher average scores on preferred innovative work behavior than the current level of innovative work behavior.

The preferred organizational culture, according the respondents, is a family culture. The literature confirms that a family culture will enhance innovative work behavior. However, the results from the questionnaire do not show a significant correlation between the family culture and innovative work behavior in the organization. The employees perceive the current organizational culture as a market culture. Literature shows that market culture will enhance innovative work behavior. Also, the results of the questionnaire show a significant relation between market culture and innovative work behavior.

Based on these results and the results of previous research as stated in the literature, it is concluded that a transition of the current organizational culture towards a more preferred organizational culture is needed. However, this transition will focus on two different culture types. In one aspect, a transition towards family culture



**Table 4.** Correlation between innovative work behavior and organizational culture.

	Family		Market	
	r	p	r	p
<b>Idea generation</b>	0.036	0.800	0.417	0.002**
<b>Idea promotion</b>	0.151	0.280	0.301	0.029*
<b>Idea realization</b>	0.221	0.112	0.441	0.001**

Note: \*  $p < 0.05$ , \*\*  $p < 0.001$ .

will be defined, and in a second aspect, actions will be defined about how to preserve the market culture. The actions with a focus on changing the organizational culture towards family culture will mainly focus on the employees. Training, and involvement and commitment of the team members are key words in this transition process. Actions to preserve the market culture will mainly focus on interaction with external parties such as key customers and key suppliers, but also the main competitors. Involvement and commitment of customers and supplier are the key words.

## 8. Biographical Notes

Jol Stoffers is a professor of Employability (lector) at Zuyd University of Applied Sciences (Faculty of Management & Law) in the Netherlands. He leads the Research Centre of Employability, and his research focuses on Employability (HRM), Leadership and Innovative Work Behavior. Next to that, he is academic program manager of the master of Personal Leadership in Innovation and Change. Jol Stoffers holds a PhD in Management Science from the Radboud University (Institute for Management Research), and an executive MBA (Master of Business Administration) of Maastricht University. More than fifteen years he worked as a manager and senior HRM consultant in the insurance and recruiting industry.

Petra Neessen is an independent researcher affiliated with the Research Centre of Employability at Zuyd University of Applied Sciences. Her research mainly focuses on Employability, Work Ability and Vitality. She is also an expert in Human-Animal Interaction. Petra Neessen holds a Master of Science degree in Work and Organizational Psychology from Maastricht University in the Netherlands and a Master of Science degree in Animal Sciences from Wageningen University and Research Centre in the Netherlands in cooperation with the Swedish University of Agricultural Sciences in Sweden.

Pim van Dorp has extensive experience as (senior) manager in international companies in the packaging industry and in the steel industry. He successfully managed several professional teams and led them to achieve innovation: innovation as in new products and innovation in work processes. Pim van Dorp holds a Bachelor Degree in Mechanical Engineering from Zuyd University of Applied Sciences and an executive MBA (Master of Business Administration) of Maastricht School of Management in cooperation with Cologne Business School.

## References

- [1] Mumford, M.D. (2000) Managing Creative People: Strategies and Tactics for Innovation. *Human Resource Management Review*, **10**, 313-351. [http://dx.doi.org/10.1016/S1053-4822\(99\)00043-1](http://dx.doi.org/10.1016/S1053-4822(99)00043-1)
- [2] Nystrom, H. (1990) Organizational Innovation. In: West, M.S. and Farr, J.L., Eds., *Innovation and Creativity at Work: Psychological and Organizational Strategies*, Wiley, New York, 143-162.
- [3] Patterson, F., Kerrin, M., Gatto-Roissard, G. and Coan, P. (2009) *Everyday Innovation: How to Enhance Innovative Working in Employees and Organizations*. NESTA, London.
- [4] Hofstede, G. and Hofstede, G.J. (2004) *Cultures and Organizations: Software of the Mind*. McGraw-Hill, New York.
- [5] Cameron, K. and Quinn, R. (2011) *Diagnosing and Changing Organizational Culture, Competing Values Framework*. Jossey-Bass, San Francisco.
- [6] Johnson, G., Scholes, K. and Whittington, R. (2008) *Exploring Corporate Strategy*. Pearson Education Limited, Essex.
- [7] Kotter, J.P. and Heskett, J.L. (1992) *Corporate Culture and Performance*. Free Press, New York.
- [8] Campbell, J., Brownas, E., Peterson, N. and Dunnette, M. (1974) *The Measurement of Organizational Effectiveness: A*

- Review of Relevant Research and Opinion. Navy Personnel Research and Development Center, Personnel Decisions, Minneapolis.
- [9] Quinn, R. and Rohrbaugh, J. (1983) A Spatial Model of Effectiveness Criteria: Toward a Competing Values Approach to Organizational Analysis. *Management Science*, **29**, 363-377. <http://dx.doi.org/10.1287/mnsc.29.3.363>
- [10] Mumford, M.D. and Gustafson, S.B. (1997) Cognitive Thought: Cognition and Problems Solving in Dynamic Systems. In: Runco, M.A., Ed., *Creativity Research Handbook*, Hampton, Cresskill.
- [11] Mumford, M.D., Reiter-Palmon, R. and Redmond, M.R. (1994) Problem Construction and Cognition: Applying Problem Representations in Ill-Defined Domains. In: Runco, M.A., Ed., *Problem Finding, Problem Solving and Creativity*, Wiley, New York, 3-39.
- [12] Mumford, M.D., Baughman, W.A., Maher, M.A., Costanza, D.P. and Supinski, E.P. (1997) Process-Based Measures of Creativity Problem-Solving Skills: IV. Category Combination. *Creativity Research Journal*, **10**, 59-71. [http://dx.doi.org/10.1207/s15326934crj1001\\_7](http://dx.doi.org/10.1207/s15326934crj1001_7)
- [13] Scott, S.G. and Bruce, R.A. (1994) Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *Academy of Management Journal*, **37**, 580-607. <http://dx.doi.org/10.2307/256701>
- [14] Kanter, R.M. (1988) When a Thousand Flowers Bloom: Structural, Collective and Social Conditions for Innovation in Organization. *Research in Organizational Behavior*, **10**, 169-211.
- [15] Puccio, G.J., Treffinger, D.J. and Talbot, R.J. (1995) Exploratory Examination of the Relationships between Creative Styles and Creative Products. *Creativity Research Journal*, **8**, 157-172. [http://dx.doi.org/10.1207/s15326934crj0802\\_4](http://dx.doi.org/10.1207/s15326934crj0802_4)
- [16] Janssen, O. (2003) Innovative Behaviour and Job Involvement at the Price of Conflict and Less Satisfactory Relations with Co-Workers. *Journal of Occupational and Organizational Psychology*, **76**, 347-364. <http://dx.doi.org/10.1348/096317903769647210>
- [17] Sauermaun, H. and Cohen, W.M. (2008) What Makes Them Tick? Employee Motives and Firm Innovation. NBER Working Paper N.14443, NBER, Cambridge.
- [18] West, M.A. and Richter, A.W. (2008) Climates and Cultures for Innovation and Creativity at Work. In: Zhou, J. and Shalley, C.E., Eds., *Handbook of Organizational Creativity*, Taylor & Francis Group, New York, 211-236.
- [19] Russell, R.D. (1988) The Role of Organizational Culture in Fostering Innovation in the Small Business: How Can the Entrepreneur Create a Culture of Innovation? Small Business Institute Director's Association (SBIDA), Chapter 21, Clinton.
- [20] Pavitt, K. (1990) What We Know about the Strategic Management of Technology. *California Management Review*, **32**, 17-26.
- [21] Kanter, R.M. (2004) The Middle Manager as Innovator. Best of HBR—Harvard Business Review, July-August 2004, 150-161.
- [22] Cohen, W.M. and Levinthal, D.A. (1990) Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, **35**, 128-152. <http://dx.doi.org/10.2307/2393553>
- [23] Saunders, M., Lewis, P. and Thornhill, A. (2012) *Research Methods for Business Students*. Pearson Education Ltd., Harlow.
- [24] Cohen, J. (1988) *Statistical Power Analysis for the Behavioral Science*. Lawrence Erlbaum Associates, Hillsdale.
- [25] Cameron, K. and Freeman, S. (1991) Cultural Congruence, Strength, and Type: Relationships to Effectiveness. *Research in Organizational Change and Development*, **5**, 23-58.
- [26] Quinn, R. and Spreitzer, G. (1991) The Psychometric of the Competing Values Culture Instrument and an Analysis of the Impact of Organizational Culture on Quality of Life. In: Woodman, R.W. and Pasmore, W.A., Eds., *Research in Organizational Change and Development*, Vol. 5, JAI Press, Greenwich, 115-142.
- [27] Yeung, A., Brockbank, J. and Ulrich, D. (1991) Organizational Culture and Human Resources Practices: An Empirical Assessment. In: Woodman, R.W. and Pasmore, W.A., Eds., *Research in Organizational Change and Development*, Vol. 5, JAI Press, Greenwich, 59-81.
- [28] Janssen, O. (2000) Job Demands, Perceptions of Effort-Reward Fairness, and Innovative Work Behavior. *Journal of Occupational and Organizational Psychology*, **73**, 287-302. <http://dx.doi.org/10.1348/096317900167038>
- [29] Janssen, O. and van Yperen, N.W. (2004) Employees' Goal Orientations, the Quality of Leader-Member Exchange, and the Outcomes of Job Performance and Job Satisfaction. *Academy of Management Journal*, **47**, 368-384. <http://dx.doi.org/10.2307/20159587>
- [30] Stoffers, J., Vreugdenhil, K. and de Vries, R. (2011) Innovatie en het Proces van Innovatie. Dagblad De Limburger 26-07-2011.