

# Key Characteristics of Innovation Culture – Case Study of Polish Lingerie Company<sup>1</sup>

Katarzyna Krot<sup>1</sup> and Dagmara Lewicka<sup>2</sup>

<sup>1</sup> Białystok University of Technology, Management Department, Kleosin, Poland

<sup>2</sup> AGH University of Science and Technology, Management Faculty, Kraków, Poland

**Abstract.** An organisational culture open to creativity and innovation, is a key determinant of company competitiveness. Being a multidimensional phenomenon, innovation cultures can vary widely from one company to another. The survey which was conducted for the purpose of this paper aimed at analysing the pro-innovation organisational culture of Gaia (a Polish producer of lingerie). It was also designed to examine the different ways in which particular groups of employees perceived this culture. The obtained results indicate that the innovation culture of Gaia is market-oriented and customer-focused.

**Keywords:** Innovation Culture, Market Orientation, Poland

## 1. Introduction

Innovation is a source of sustained competitive advantage of a firm and a contributory factor of its market success. Innovating companies are more flexible, quick to recognise changing conditions and adapt to them; they are open to new modes of thinking and to visionary concepts. As Drucker said, a firm should create new opportunities and exploit existing ones to a greater extent than the competition (Drucker, 1985). This situation has led to increased interest among researchers and businesses to gain a better understanding of how to improve the capacity to innovate (Damanpour, 1987; Koc and Ceylan, 2007; Mayondo and Farrell, 2003). Many of them focus on factors which are on the organisational and social interface, such as organisational culture.

## 2. Theoretical background

In an organisation environment, innovation is the implementation of ideas surrounding new product/services or modifications to existing ones (product or market focus), restructuring or cost savings initiatives, enhanced communications, personnel plans (process related), new technologies (technology/research and development based), unique employee behaviours (behavioral based), or organisational responses to opportunities (strategic) and unscripted situations (Martins and Terblanche, 2003; Jimenez-Jimenez et al. 2008).

Innovativeness in an organisation could be broadly defined – ranging from the intention to be innovative, to the capacity to introduce some new product, service or idea through to the introduction of processes and systems which can lead to enhanced business performance. Cultural openness to innovation is a prerequisite for building the innovation advantage of enterprises (Dobni 2008).

Therefore, generating innovation requires an organisational culture that continually encourages organisation members to seek novel solutions and that fosters a climate conducive to creativity. It means that, besides individual and environmental factors, organisational culture is an important determinant of innovation (Naranjo Valencia, Valle, Jimenez Jimenez). Numerous authors have undertaken research into the relationship between organisational culture and innovation. They have noticed strong links between certain types of organisational culture and the level of innovation (Chang and Lee, 2007; Jaskyte, 2004; Lau and Ngo, 2004; Mayondo and Farrell, 2003; Miron et al., 2004; Obenchain and Johnson, 2004).

---

<sup>1</sup>Research study financed from funds for science in the years 2011-2013 as research project “*Organizational trust and innovations*”  
Corresponding author. Tel.: +48857469808; fax: +48 85 663-19-88; E-mail address: katarzynakrot@gmail.com

According to Cameron and Quinn (1999), the type of organisational culture which most favours innovation is the adhocracy, since its two most characteristic values are flexibility and external orientation (Naranjo-Valencia, Valle and Jimenez Jimenez). This kind of attitude can be regarded as the innovation culture of an organisation. Innovative culture is considered in the literature to be one of the factors that can most stimulate innovative behaviour among all members of an organisation. First and foremost, it impacts the behaviour patterns of employees, increases their involvement and puts innovation at the forefront of company policy (Hartmann, 2006).

Additionally, the results of the research suggest that characteristics of adhocracy cultures which enhance innovation are: creativity (Miron et al., 2004; Scott and Bruce, 1994), empowerment (Ahmed, 1998; Gudmundson et al., 2003), freedom and autonomy (Martins and Terblanche, 2003), and risk taking (Jamrog et al., 2006). Moreover, other authors claim that a culture supporting innovation engages behaviours that would value teamwork, be value seeking and solutions oriented, communicative, instill trust and respect, and be quick on the uptake in making decisions (Dobni 2008).

An innovation culture has been defined as a multi-dimensional concept which encompasses the intention to be innovative, the infrastructure to support innovation, operational level behaviours necessary to influence a market and value orientation, and the environment to implement innovation (Dobni 2008). These elements have a two-fold influence on innovation. First, the process of socialisation allows employees to discover the fundamental values of their firm; and, second, the principles, procedures and strategies help firms to formally support innovation and creativity (Tesluk et al., 1997; Chatman and Jehn, 1994).

### **3. Methodology**

The observed impact of organisational culture on the innovation performance of enterprises, and, even more importantly, the identification of a new type of innovation supporting culture (Dobni 2008; Martins and Terblanche, 2003), have inspired many authors to further research into the subject. In order to enhance the innovative capability of an organisation, it is essential to promote the spirit of innovation among employees, and subsequently to provide consistent support to their ideas and initiatives (Dobni 2008). This 'spirit' will be present in those organisations which ensure appropriate conditions, systems, management processes, leadership and mechanisms encouraging desired behaviour, employee constituency and customer focus (Martins and Terblanche, 2003). It stems from the above that (Ahmed 1998). Multi-dimensional measures are certainly more consistent with a balanced organisational manifestation of innovation (Dobni 2008). According to Dobni (2008) There are three dimensions to innovation culture: the intention to be innovative, the infrastructure to support innovation, operational level behaviors necessary to influence a market and value orientation, and the environment to implement innovation.

Therefore, the survey conducted by the authors of the present study intended: (i) to provide a description of the organisational culture of an innovative enterprise (in terms of the above-mentioned dimensions), and (ii) to investigate the diverse perceptions of this culture among company employees.

Gaia, the enterprise selected for the survey, is a lingerie producer, based in Białystok in North-Eastern Poland (Podlaskie Voivodeship). Lingerie production is a branch with a high level of technological and product innovation ([www.obserwatorium.pl](http://www.obserwatorium.pl)). Moreover, the competitive position of firms from this sector largely depends on the qualifications and commitment of the personnel.

The analysed enterprise manufactures high quality women's underwear targeted at middle-to-low and middle-to-high market segments. Apart from co-operating with Polish retailers, the firm also exports to Europe (Czech Republic, Lithuania, Russia, Ukraine, Denmark, Finland and Greece), Asia and the USA ([www.gaia.com.pl](http://www.gaia.com.pl)). Frequent changes in fashion make it imperative for the firm to maintain a market-oriented attitude. Besides, Gaia specialises in plus size lingerie. So far this market segment has been neglected as this customer group is fairly difficult to cater for. Finally, the

studied company updates its products not only by introducing new designs, but also by employing modern technologies. It has launched the ‘silver collection’, which uses fabrics containing silver ions embedded in polymer fibre, thereby obtaining antibacterial protection (Trevira Bioactive® technology). Gaia has obtained ISO quality certification, as well as other certificates attesting to the company’s integrity and financial transparency (www.gaia.com.pl).

The firm employs 120 persons, the vast majority of whom are women working in the capacity of tailors, sewing machine operators, corset-makers, designers and sewing technologists. A shortage of skilled workers, felt particularly in the peripheral regions of Poland, is hampering the growth of the lingerie industry. In Podlaskie Voivodeship, the problem has been further exacerbated by the fact that many vocational schools have ceased to exist. It was only three years ago that one of the city’s secondary school extended its vocational offer by opening a class for clothing technicians specialising in lingerie. Experienced designers, however, are still in high demand. Because the business environment is undergoing constant changes and because the success of the final product closely depends on the experience and, frequently, on ‘hidden’ competencies of staff, it is the human resources that make a difference for companies from this sector, being either the greatest asset, or the greatest hindrance to development.

The aforementioned survey took the form of a questionnaire developed on the basis of the literature review but adjusted to Polish conditions. The questionnaire consisted of 39 items, which are structured according to the five-point Likert scale (1= strongly disagree, 5= strongly agree). The items corresponded with the dimensions proposed by C.B. Dobni (2008).

All of the staff members were asked to participate in the survey, but the questionnaires were completed and returned by 84 persons, that is 70% of those employed in the firm Gaia. The characteristics of the study sample are reported in Table 1.

Table 1. Demographic profile of respondents

Sex		Education		Seniority	
female	95.3	compulsory	2.4	up to 3 years	11.3
male	4.7	vocational	43.5	4-8 years	35.0
Age		A levels	43.5	9-13 years	37.5
<25	2.3	university degree	10.6	14-18 years	12.5
25-35	25.9	Type of contract		more than 19 years	3.7
36-45	40.0	indefinite term contract	71.4	Position	
44-55	29.4	fixed term contract	27.4	non-executive	77.6
>56	2.3	probationary contract	1.2	executive	22.4

Source: Author's own research.

#### 4. Discussion

The 39 items used in the survey were divided into 5 dimensions of innovation culture: innovation context (13 items), market orientation (3 items), infrastructure for innovation (6 items), employee creativity and empowerment (10 items) and intention to innovate (7 items). Cronbach’s alpha for reliability, as well as the arithmetic mean, were calculated for each of the dimensions (Table 2).

Table 2. Dimensions of innovation culture

Dimensions	Cronbach’s alpha	Arithmetic mean
Innovation context (13 items)	0.91	3.38
Market orientation (3 items)	0.76	3.53
Infrastructure for innovation (6 items)	0.80	3.06
Employee creativity and empowerment (10 items)	0.86	3.37
Intention to innovate (7 items)	0.81	3.38

Source: Author's own research.

Based on the respondents' answers, it was possible to create a preliminary profile of the innovation culture in the studied enterprise. The survey demonstrated that the members of that culture rely on knowledge gained from the market. It is the firm's customers who are the main providers of this knowledge, and thus an important resource for the company. They are an inspiration source, testers of new products and problem solvers. As a result, the innovations implemented by Gaia are created as a response to market demand and closely follow the changing trends in fashion. The idea of innovation permeates the company culture, from strategic aims and objectives, through to tolerance of failure, and the autonomy and commitment of employees. As far as access to knowledge and information is concerned, the situation is not so good.

Next, the arithmetic mean was calculated for each item in order to determine the factors which most and least influenced the respondents' opinion of their firm's involvement in creating the innovation culture. The results of the survey showed that the culture of innovation in the studied company primarily depended on people, their creativity, attitude to work and to organisational changes, their awareness of the role they played in the firm, as well as empowerment. According to those surveyed, the employees were expected to be flexible and quick to adapt to changing circumstances (arithmetic mean: 3.96), be capable of creative thinking and acting in an innovative and unconventional manner (arithmetic mean: 3.61), all of the above being the key attributes of innovating firms. Besides, the respondents considered themselves creative (3.69) and open to changes (3.63). Other personnel-related factors of innovation culture in the analysed enterprise include: close ties among staff members (3.81) and management's trust in employees (3.79). The last group of factors is associated with the company's philosophy of innovation, that is orientation on the market (3.64) and the ability to convert fresh ideas into profitable ventures (3.62).

Table 3. Items with highest arithmetic mean

Statement	Mean
My firm expects employees to be flexible and adaptable to changes	<b>3.964</b>
The members of my department are a close-knit team.	<b>3.807</b>
My firm trusts that employees act in the firm's best interest, with minimum supervision on the part of the executive managers.	<b>3.795</b>
I consider myself to be an innovative and creative person.	<b>3.687</b>
My firm is prompt to respond to customers' suggestions and to competition by improving the quality of products.	<b>3.643</b>
I believe that uncertainty is an opportunity, not a risk.	<b>3.626</b>
My firm can convert ideas into profitable business results.	<b>3.619</b>
My firm expects staff to be creative, ingenious and innovative.	<b>3.614</b>

Source: Author's own research.

A number of organisational factors were identified as detrimental to innovation culture. Most notably, the respondents stated that they had little opportunity to become involved in the firm's strategic planning process (2.70) and, consequently, had limited access to information on the strategic policies of the firm (2.98). Apart from that, they observed that the company did not provide its employees with sufficient opportunities to contribute innovative ideas and solutions (2.92). Finally, they claimed that employees were not willing to take any risky decisions (2.99).

Table 4. Items with lowest arithmetic mean

Statement	Mean
I am involved in my firm's strategic planning process.	<b>2.698795</b>
All employees receive equal treatment.	<b>2.891566</b>
My firm welcomes the ideas of all employees.	<b>2.915663</b>
Information on the firm's mission, objectives and principles regarding innovation are easily accessible to all employees.	<b>2.976190</b>
My firm's employees are ready to take risks.	<b>2.987952</b>

Source: Author's own research.

An indicator was identified in order to evaluate the perceived 'intensity' of innovation culture among particular groups of employees. Each respondent's scores on the 39 items were added, so the value of the indicator could range from 39 (lack of innovation culture) to 195 (advanced innovation culture). The studied company's indicator reached an average of 129.7, with 81 being the lowest score, whereas 179 – the highest. At this stage of research it is difficult to conclude whether this can be regarded as a high indicator or not, as no points of reference are available. When the same survey is conducted in other companies, it will be possible, by means of a comparative analysis, to determine the strength of the innovation element in the organisational culture of the firm. The calculated indicator allows one, however, to compare the propensity to innovate among particular employee groups. This relationship was analysed using single factor ANOVA.

The obtained results revealed slight differences in the assessment of innovation culture between the less educated employees (with primary and vocational education) and those with high school and university education. However, the differences were statistically negligible ( $p=0.147$ ). Among the former group, the innovation culture indicator stood at 126.07, and was below the overall average. Meanwhile, in the case of the latter group, it amounted to 132.12. Statistically negligible differences were also found in terms of respondents' age (although employees aged 35-46 were more inclined to see the firm's culture as innovation-oriented), and in terms of job seniority.

A statistically significant relationship can be demonstrated between persons in executive positions and other employees ( $F(1, 81)=27,727$ ;  $p=0,0000$ ). For executive officers, the organisational culture of the company could definitely be regarded as one that is conducive to innovation (arithmetic mean: 150.5). Whereas non-executive staff saw the company culture as only moderately supportive to innovation (123.67).

## 5. Conclusion

Organisational cultures can be oriented on many different values. Nevertheless, it seems that nowadays, innovation and creativity supporting business culture is the most effective factor of business success. Being multifaceted, the culture of innovation can vary from one firm to another. For instance, some companies can attach particular importance to modern infrastructure, while others prefer to rely on employee commitment. In Gaia – a Polish lingerie production company – the innovation culture is based on market orientation and customer focus. Gaia's customers are treated as a source of knowledge, inspiration and ideas. They also fulfil such roles as reviewers, product testers or brand ambassadors. All the employees of Gaia are aware of the significance of innovation for the firm's development, whereas the organisational culture is permeated with the conviction that creativity and innovation should be promoted. There is, however, a dearth of practical solutions which could reinforce this atmosphere.

The survey results have also revealed that the 'spirit' of innovation is variously perceived by different groups of workers. The executive staff regard the firm as more pro-innovative than the other employees. Perhaps some of the initiatives aimed at fostering the culture of innovation are not made known to the frontline staff. Regular employees are also less often informed about the strategic planning goals or invited to participate in innovation processes. Although they see themselves as creative and ingenious, they complain about not always being allowed to contribute their own ideas for improvements. This appears to be an area which would benefit from organisational change.

## 6. References

- [1] P. K. Ahmed. Culture and climate for innovation. *European Journal of Innovation Management*. 1998, 1 (1): 30–43.
- [2] K.S Cameron and R.E. Quinn. Diagnosing and Changing Organizational Culture. Based on the Competing Values Framework. Addison-Wesley. Reading, MA. 1999
- [3] S.C. Chang, M.S. Lee. The effects of organizational culture and knowledge management mechanisms on organizational innovation: an empirical study in Taiwan. *The Business Review*. 2007, 7 (1): 295-301.

- [4] J.A. Chatman and K.A. Jehn. Assessing the relationship between industry characteristics and organizational culture: how different can you be? *Academy of Management Journal*. 1994, 37 (3): 522-53.
- [5] C. B. Dobni. Measuring innovation culture in Organizations. The development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management*. 2008 11 (4): 539-559.
- [6] P.F. Drucker. The discipline of innovation. *Harvard Business Review*. 1985, 63 (3): 67-72.
- [7] D. Gudmundson, C. Tower, and E. Hartman. Innovation in small businesses: culture and ownership structure do matter. *Journal of Developmental entrepreneurship*. 2003, 8 (1): 1-18.
- [8] A. Hartmann. The role of organizational culture in motivating innovative behaviour in construction firms. *Construction Innovation*. 2006, 6 (3): 159-72.
- [9] J. Jamrog, M. Vickers, and D. Bear. Building and sustaining a culture that supports innovation. *Human Resource Planning*. 2006, 29 (3): 9-19.
- [10] K. Jaskyte. Transformational leadership, organizational culture, and innovativeness in nonprofit organizations. *Nonprofit Management & Leadership*. 2004, 15 (2): 153-68.
- [11] D. Jimenez-Jimenez, R. Sanz Valle, M. Hernandez-Espallardo. Fostering innovation. The role of market orientation and organizational learning. *European Journal of Innovation Management*. 2008, 11 (3): 389-412.
- [12] T. Koc, C. Ceylan. Factors impacting the innovative capacity in large-scale companies. *Technovation*. 2007, 27 (3): 105-14.
- [13] C.M. Lau, H.Y. Ngo. The HR system, organizational culture, and product innovation. *International Business Review*. 2004, 13 (6): 685-703.
- [14] E.C. Martins, and F. Terblanche. Building organizational culture that stimulates creativity and innovation. *European Journal of Innovation Management*. 2003, 6 (1): 64-74.
- [15] F. Mayondo, and M. Farrell. Cultural orientation: its relationship with market orientation, innovation and organizational performance. *Management Decision*. 2003, 41 (3): 241-9.
- [16] E. Miron, M. Erez, and E. Naveh. Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete with or complement each other? *Journal of Organizational Behavior*. 2004 (25): 175-99.
- [17] J. C. Naranjo Valencia, R. Sanz Valle and D. Jimenez Jimenez. Organizational culture as determinant of product Innovation. *European Journal of Innovation Management*. 2010, 13 (4): 466-480.
- [18] J.C. Naranjo-Valencia, D. Jimenez-Jimenez and R. Sanz-Valle. Innovation or imitation? The role of organizational culture. *Management Decision*. 2011, 49 (1): 55-72.
- [19] A. Obenchain, W. Johnson. Product and process innovation in service organizations: the influence of org. *Journal of Applied Management and Entrepreneurship*. 2004 9 (3): 91-113.
- [20] S.G. Scott, R.A. Bruce. Determinants of innovative behavior: a path model of individual innovation in the work place. *Academy of Management Journal*. 1994, 37 (3): 580-607.
- [21] [http://www.obserwatorium.up.podlasie.pl/uploads/upload/analizy\\_\\_badania\\_prognozy\\_projektowe/startery\\_podlas\\_kiej\\_gospodarki/pwbielizna\\_a4.pdf](http://www.obserwatorium.up.podlasie.pl/uploads/upload/analizy__badania_prognozy_projektowe/startery_podlas_kiej_gospodarki/pwbielizna_a4.pdf) [Accessed 12th February 2012]
- [22] <http://www.gaia.com.pl/o-firmie.html> [Accessed 10th February 2012]