Appraising the significance of new product development team climate and idea support.

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Abstract

Present-day businesses implement tactical approaches to protect their market lead and corporate interests. Based on such logic, the current study presents an attempt to evaluate the significance of new product development team climate and idea support capability in a multinational scenario. The research survey is conducted on 30 team member's representing new product development (NPD) operations at three selected work locations of a European company (Finland, Norway and the UK). The results of our study identified scientifically, discrepancies in the current practices with in the areas, namely the management´s approach to acknowledging new idea generation potential of the subordinates, the potential of the company´s internal and external communication systems, the limitation of the capacity for the data collection and record keeping, the empowerment of employees, recognition of the employees' effort, etc. All such areas are critically significant for any organization in terms of shaping its NPD teams´ innovative capabilities and potential to harness their new product idea generation capability.

Keywords
New product development team climate, new product development idea support, new idea generation potential, empowerment of employees.

1. Introduction

Empirical studies for approximately three decades have focused on analyzing success factors linked to new product development (Cooper's and Kleinschmidt, 1995; Heskett, 2001; Sparke, 1983; Jevnaker, 1998; Leenders et al., 2007; Murray and O'Driscoll, 1996; Kazmi, Naaranoja, 2015). These studies have focused either on the internal organizational elements or the factors that influence NPD activity to gain competitive edge through reaching the market needs early. These parameters are actually the ones that can be influenced instantly with the support of the company's management. NPD success variables are classified according to the NPD process; organization, culture, role and commitment of the senior management as well as the overall corporate strategy (Kazmi, Naarananoja, 2014). Angle (1989) proposes that the new idea generation process is grounded in the organization´s creativity in addition to its ability to anticipate opportunities for innovation. The nature of an organizational setup is critical to NPD process, especially to bring the success factors into effect. The aim of the study is to unearth the potential of organizational culture that promotes ethical standards and guarantees conducive team climate. Such organizational potential will further ensures effective transformation of work teams into confident leaders, by inculcating the strength of strategically integrating new ideas from external as well as internal environments to harness organizational innovation initiatives. Hence, the current paper starts with the introduction of the core concepts and the need of the current research will touch briefly the literature review of the main subject areas i.e., New product development team climate and team support and New product development idea support. Later, the paper will through light on selected research methodology and proposed theoretical model. The study will be concluded with an in-depth analyses and discussion on the study results.

2. Literature Review

2.1 New product development team climate and team support
According to Cooper and Kleinschmidt (1995), while taking into consideration the concept of entrepreneurial or NPD team climate, the following aspects must be considered:
    i.   Opportunity for employees to spend part of their work time in developing their personal ideas,
    ii.   Company's support for the official projects, even if those projects were terminated by the management,

    iii.   Venture capital, structures to assist the realization of creative ideas.

Cooper's and Kleinschmidt (1995) recommended a holistic view, in connection with the requirements for success of NPD activity, covering the organizational perspective, as follows:

    i.   Strong and responsible project leader. This factor is considered on the basis of numerous studies. The emphasized logic is that the project leader must offer enough authority to manage individuals representing various areas of strengths. In addition the leaders must ensure high level of commitment towards the NPD project by motivating their teams.

    ii.   Cross functional NPD teams. This factor was introduced by Brockhoff (1994) as an efficient instrument to overcome organizational interfaces. Moreover, cross functional teams encourage inter-functional communication and cooperation to promote success (Balbontin et al. 1999; Maidique, and Zirger, 1984; Yap, and Souder, 1994).

    iii.   Dedicated NPD team for a project. Numerous studies have confirmed that the autonomy of NPD team ensures positive impact on the success of the project (Gerwin, Moffat, 1997; Thamhain, 1990).

    iv.   Commitment of NPD team for NPD project. The commitment of the project leader and his or her team may have significant influence on the success of NPD project (Balachandra, 1984; Thamhain , 1990).

    v.   Effective communication between the NPD team members during the process of NPD. This can be achieved by sharing information among the NPD teams and organizers in project meetings (Balachandra et al. 1996; Ebadi, Utterback, 1984; Rothwell et al. 1974; Souder, Chakrabarti, 1987; Thamhain, 1990)

The 'product champion' structures are identified as success factor for new product development. The 'product champion' principle implies that a dedicated team, with its members showing extensive personal commitment to the NPD project (Song and Parry, 1997).

2.2   New product development idea support

The culture in NPD organization supports how new product development ideas or propositions are handled within the company. This principle was referred by Cooper and Kleinschmidt (1995) as NPD team climate. However, organizations, while working on new product development (NPD) projects, to cultivate new product ideas by involving team members representing separate departments, often experience serious failures either due to unsuccessful new products or poor relations between the functional specialists (Souder, 1981, 88). Organizational behavior is one subject that has focused extensively on explaining the concepts of organizational culture and team climate (Patterson et al, 2005; Schein, 1990; Sparrow, 2001; Kazmi, Naaranoja, 2013; Kazmi, Takala, Naaranoja, 2014; Kazmi, Takala, Naaranoja,2015) as the two are referred interchangeably by the researchers in literature. The logic to explain the overlap of the two referred concepts is that both (i.e. organizational culture and team climate) are closely related to the employee's experiences within their organization and the resultant behavioral pattern formulation (Deshpande and Webster, 1993: Patterson et al, 2005; Sparrow, 1996; Kazmi, Naaranoja, 2015).

The main difference between organizational culture and team climate is that organizational culture installs the appropriate states of mind that shape the employees' behavioral patterns in accordance with their shared values and beliefs (Mohr and Nevin, 1990; Moorman, 1995; Kazmi, 2012; Kazmi, Takala, Naaranoja, 2015; Kazmi, Naaranoja, Takala, 2013) and can be measured by employing qualitative techniques (e.g. interviews, case studies and observation) since their outcomes are descriptive in nature (Deshpande and Webster, 1993; Sparrow, 2001). Team climate, on the other hand, is behaviorally oriented, and can be understood by qualitatively measuring (Ouchi and Wilkins, 1985) the impact of feelings and perceptions of the employee about their organization on their behavior (Mohr and Nevin, 1990; Moorman, 1995; Barclay, 1989). The above clarifies that though the concepts of organizational culture and team climate share strong similarities, extensive research has defined them as parallel and non-overlapping concepts (Schneider, 2000). In brief, team climate is referred as surface manifestation of culture, reflecting the obvious, explicit and observable facets of behavior. One example of this is when an organization tries to create conducive climates for creativity or safety within the context of its overall organizational culture (Patterson et al, 2005; Schein, 1990; Sparrow, 2001).

2.3 Research question
Research Question: How adaptive is the target organization towards designing NPD idea support and team climate supportive new product development processes?

3. Methodology

3.1. Sample and Data Collection

This study involves three specialized groups, having 10 professionals each (i.e. representing new product development related work operations and roles) from three globally different locations of a European multinational company; Finland, the UK and Norway on the basis of their professional expertise and operational relevance. A specialized feature of the selected work locations is that each one of the unit is engaged in different types of product manufacturing i.e., Finland – Power engines, The United Kingdom – Green energy solutions, Norway- Marine products and service solutions. The selected quantitative approach is the survey methodology which is performed through an email based questionnaire having 50 fixed ended items. Evaluation of the subject company´s new product development culture is carried out by combining quantitative and qualitative research methodologies. The qualitative approach, on the other hand, is involved with putting together an organizational case study through in person and email based interview questionnaire. Finally the feedback obtained from those 30 respondents were analyzed by employing statistical analyses.

3.2 Construction of survey tool

In research literature new product development (NPD) idea support refers to the desirable characteristics of team leaders and members who are involved in new product development operations. We have distributed the conceptual inventory items into two separate categories i.e. NPD idea support and NPD team climate (Sun, Xu, Shang, 2012). In this survey, the concept refers to an organization´s capacity to offer supportive practices to its work teams, involved in new product development operations. The selected indicators seek feedback to reveal organizational practices in relation to new product development idea generation team potential. In total, twenty six questions were designed/ modified while following the strategic thinking characteristic introduced by Sun, Xu, Shang (2012) in their research inventory. Table 1 below shows the details.

Table 1.Survey instrumentation on NPD idea support and NPD team climate

Questions: 01-16 and 25 to 34	*Indicator*	*Reference*
Q1: New products developed at our unit are very different to our existing products.	Product innovativeness capability	
Q2: Our flexible production capability allows us to modify our products faster.	Product innovativeness capability	
Q3: We remain in contact with our key clients during the product development process.	Early client involvement	
Q4: We take advantage of all forms of media to connect with potential stake holders during NPD process.	Early client involvement	
Q5: Management encourages us to develop something novel instead of just a new shape of the product.	Management´s NPD idea initiatives	
Q6: Management constantly looks for options to connect with external stake holders for NPD ideas.	Management´s NPD idea initiatives	
Q7: I feel very comfortable if external stake holders give new ideas for NPD project.	NPD Team initiative aspect	
Q8: We select NDP ideas based on their technical feasibility to design, develop and manufacture.	NPD Team initiative aspect	Bass and Avolio (1990; 1992),
Q9: Our business strategy focuses on aligning NPD process with market needs.	Customer value aspect	Sun , Xu, Shang (2012).
Q10: We focus on all types of customers (i.e. purchasers, influencers and end users) during NPD projects.	Customer value aspect	
Q11: Our success in NPD idea generation is due to our ability to reach potential stake holders.	Target reach aspect	
Q12: There is a good fit between what the market needs and what we provide.	Target reach aspect	
Q13: Our market intelligence strategy combines- customer needs assessment, price sensitivity, supplier capabilities,	Market intelligence aspect	

competitors NPD strategies and geo-political know-how aligned with new product specifications.	
Q14: NPD teams regularly travel to remain in contact with potential influencers in search of NPD ideas.	Market intelligence aspect
Q15: Our NPD projects are supported through extensive internal and external communication.	Communication aspect
Q16: Our teams quickly share, NPD ideas with each other that they have received from outside.	Communication aspect
Q25: Team members display agreement with the team´s objectives	NPD team climate
Q26: Team members feel understood and accepted	NPD team climate
Q27: Team members keep each other informed	NPD team- internal communication
Q28: Team is capable of making real attempts to share information	NPD team- internal communication
Q29: Team is strong in searching for new ways of looking at product development problems	NPD team- idea generation capacity
Q30: Team is cooperative in developing and applying new ideas in collaboration with key individuals from other departments	NPD team – idea generation capacity
Q31: We, as a work team, are capable of cooperating with other work groups	NPD team collaboration
Q32: In our organization, work performance is considered as an overall and combined phenomenon.	NPD team collaboration
Q33: We, as a work team are able to complete work targets on time.	NPD team responsiveness
Q34: The team´s ability is considered "quick" while responding to problems.	NPD team responsiveness

The NPD idea support construct variable consists of sixteen items/questions to obtain respondents' feedback on the quality of work environmental support and the clues for future refinement. The questions are divided into two sets to offer focused and reliable data analysis relating to the construct. Question items 1, 2, 5, 6, 13, 14, 15 and 16 investigate the level of organizational effectiveness in terms of the external environment specific innovation boosters while question numbers 3, 4, 7, 8, 9, 10, 11 and 12 explore the effectiveness of organizational internal environment specific innovation boosters. Question numbers 25 to 34 are linked to NPD team climate construct variable.

The detailed plan of both the construct variables i.e. new product development (NPD) idea support and NPD team climate in the quantitative survey tool may be referred to below for better understanding. Below is the sequence of the referred construct items placement in the survey tool.

3.2.1 Cronbach Alpha and related statistics for construct items: NPD idea support - external environment specific innovation boosters

Table 2. Cronbach Alpha and related statistics - NPD idea support construct (external environment specific)

Items	Cronbach Alpha	Std. Alpha	G6(smc)	Average R
All items	0.78	0.782	0.8045	0.3096
Q1 excluded	0.7356	0.7511	0.762	0.3012
Q2 excluded	0.7622	0.7726	0.7903	0.3268
Q5 excluded	0.7898	0.7962	0.7989	0.3582
Q6 excluded	0.7413	0.748	0.7696	0.2978
Q13 excluded	0.735	0.748	0.7713	0.2977
Q14 excluded	0.7453	0.7579	0.7741	0.3091
Q15 excluded	0.7414	0.7522	0.7622	0.3025
Q16 excluded	0.7252	0.7345	0.7576	0.2832

The table 2 above confirms that all the construct items are reliable and acceptable due to their having `Alpha` values over 0.7. Therefore, all the construct items maintain good internal consistency and must be retained.

Table 3. Cronbach Alpha and related statistics - NPD idea support construct (internal environment specific)

Items	Cronbach Alpha	Std. Alpha	G6(smc)	Average R
All items	0.80	0.7957	0.8318	0.3274
Q3 excluded	0.8158	0.8139	0.8416	0.3846
Q4 excluded	0.7617	0.7577	0.7743	0.3088
Q7 excluded	0.7915	0.7894	0.8197	0.3487
Q8 excluded	0.7562	0.7508	0.7854	0.3009
Q9 excluded	0.7449	0.7427	0.7829	0.292
Q10 excluded	0.7724	0.7671	0.8006	0.32
Q11 excluded	0.7909	0.7879	0.8159	0.3467
Q12 excluded	0.7694	0.7649	0.8068	0.3173

Table 3 above confirms that all the construct items are reliable and acceptable with Cronbach Alpha values over 0.7.

3.3 Results and analysis

To respond to research question of the study on the basis of quantitative data analysis, the author referred to the combined study results for the referred constructs displayed in table 1. The items in the categories of `new product development (NPD) idea support` and team climate in Table 4 below presents the question statements receiving predominantly neutral or clear disagreement. It reflects the trend that the said items which were based on leadership approach mixed with strategic thinking are either not understood in their true spirit or such trends are not much encouraged in the targeted environment. To explain further, the author takes the results of one question item as an example (e.g. Question No. 1, of the closed ended survey tool), "new products developed at our unit are highly different from our existing products". To examine the linkage among the concepts of transformational leadership, strategic thinking and new product development embedded in the above question statement, the author proposes that the targeted new product development teams can actually utilize the associated logic, even in cases when the targeted locations are involved in manufacturing heavy duty equipment with less or in a few instances, no room to be altered extensively. One strategic solution is to replace the feature of "highly different products" with "innovative after sales service offerings" referred to as "strategic service leadership" or the introduction of "novel ways of selling their heavy duty products or services" may be referred to as "strategic marketing leadership".

Table 4.   Connection between the concepts of leadership and strategic thinking to support NPD team climate and team support.

Question items -	Key items	Averages	Response trends
Question No. 01.	New Products developed at our unit are highly different from our existing products.	3.26	Neutral 46% response rate.
Question No. 02.	Our flexible production capability allows us to modify our products faster.	2.8	Disagreed with 40% response rate
Question No. 04.	We take advantage of all forms of media to connect with potential stake holders during NPD process.	2.9	Neutral with 53% response rate.
Question No. 14.	NPD teams regularly travel to connect with potential influencers in search of NPD Ideas.	2.56	Disagreed with 53% response rate.
Question No. 15.	Our NPD projects are supported through extensive internal and external communication.	3.1	Neutral with 43% response rate.
Question No. 11.	Our success in NPD idea generation is due to our ability to reach potential stake holders.	3.36	Neutral with 50% response rate.
Question No. 06.	Management constantly looks for options to connect with external stake holders for NPD ideas.	3.2	Neutral with 50% response rate.
Question No. 30.	Team is cooperative in developing NPD ideas with members from other departments, if required	3.46	Agreed with 46%.
Question No. 31.	We, as a work team, are capable of cooperation with other work groups.	4.06	Agreed with 53%
Question No. 33.	We, as a work team, are able to complete work targets on time.	3.5	Agreed with 40%

All the above items included in Table 4 reflect obvious connection between the concepts of leadership and strategic thinking and their underlined logic in supporting the cognitive process of novel idea generation and its strategic

utilization. In addition, Table 5 below, displays contradictory trends (i.e. highly agreed response ranges) as compared to the related trends reflected in Table 4 since all the items in both tables were responded to by the same set of respondents. To explain the above statement clearly, we refer to the response patterns in the instances of question items 04, 14, 15, 11, and 06 included in Table 4 for cross comparison with the response patterns in the case of items 09 and 12 mentioned in table 5 below. The results reveal weaknesses in the areas of "flexible manufacturing" processes (cf. respondents' rate of disagreement while responding to Q1 and 2 of the closed ended questionnaire), "team initiatives" to gain "market intelligence" (cf. Respondents' high rate of disagreement while responding to Q14 of closed ended survey tool) and considerable margin for process improvements in the areas of "early client involvement, target reach, management initiatives and effective communication" (cf. high rate of neutral responses while responding to Q4, Q6, Q11 and Q15 of the closed ended questionnaire).

The above referred gaps are related to NPD team climate and transformational leadership (i.e. management initiatives and effective communication) strategic thinking (i.e. team initiatives to gain market intelligence) and NPD idea support (i.e. early client involvement, target reach). A leader's capability is to engage his/ her followers and team members in inspirational talks and positive communication to help them achieve inspirational goals (Bass, 1985; Yukl, 1981; Kazmi, 2012; Kazmi, Naaranoja, 2013; Kazmi, Naaranoja, 2015). The presence of gaps in the areas of customer value, early client involvement and target reach are additionally highlighted through the feedback gathered in interview sessions. A few responses are detailed below as the evidence;

Another respondent responded to the related question by saying that, "(The company's targeted location is) not very strong at engaging with either customer or suppliers. Competitor knowledge is also subjective".

The weaknesses in the target organization's communication scenario are revealed through the feedback gathered in the interview sessions as well. Some of the examples are mentioned below.

When responding to the questions relating to the company's information systems and communication handling to support new idea generation process:

The response was "I don't know". At one instance the response was: "The way of handling new ideas is too bureaucratic". One team member pointed out that "The information available at the internal information systems is outdated."

And one response was that "Currently there is no common internal communication system available in working condition". A respondent additionally reported that "As far as I know, we do not have any structured way of storing ideas for later utilization. The best ideas and technologies are implemented into the new products according to what is considered suitable without too high risk taking (technology readiness level), but there is no structured way of storing the "left over ideas" that it could be feasible to utilize later on (after technology validation)".

The above statement is relevant to the work of Davenport and Prusak (1998) on the concept of working knowledge with reference to how organizations manage their knowledge bases.

The view of an interviewee on the company's internal communication system was that, "(The) Company has a homepage …... i.e. design guidelines and standards can be found there but a lot of information is outdated". Another response received on the area was that, "(The) Company has a document management system in which information should be stored. It may not always be so easy to find what you are looking for there".

Furthermore, a respondent suggested that "today information is stored on a server with limited possibilities for searching and indexing files and reports". One respondent notified that "The knowledge sharing is always difficult. It is difficult to know what channels to use".

However, the results reflect a collaborative environment within the target locations (cf. Rate of agreement shown while responding to Q30, Q31 and Q33 of the closed ended survey tool).

The above trend supports the current management practices of the target company in the field of team climate. Organizational climate is referred to the recurring patterns of behaviour, attitudes and feelings that portray life in the organization. It is also described as the shared perception of "the way things are around here" (Isaksen, and Ekvall, 2007; Reichers, and Schneider, 1990). The point to be noted here is the contradictory patterns of the responses by the same set of respondents for similar or associated item themes. For example, the survey respondents rated the

company´s business strategy as `well designed` or their new product development process as well aligned with the market needs, suggesting they are a `good fit` (i.e. the response trends displayed in Table 5 below.
However, the associated trends supported through item numbers 04, 14, 15, 11, and 06 in Table 4 were not picked as `agreed` or `strongly agreed` with a similar ratio.

Table 5.   Contradictory response trends

Question items - closed ended survey tool	Key items	Averages	Response trends
Question No. 09.	Our business strategy focuses on aligning NPD process with market needs.	4.36	Agreed and strongly agreed by 43% and 46% respectively.
Question No. 12.	There is a good fit between what the market needs and what we provide.	4.2	Agreed and strongly agreed by 50% and 36% respectively.

An in-depth feedback analysis, conducted through quantitative analysis and duly supported by qualitative data analysis revealed that the targeted survey environments are heavily dependent on either their customer´s feedback, routed through sales and service departments, or the periodical legislative amendments, as being the core motivators and sources of new product or service development idea generation process. These trends cannot fully support the efforts of any highly innovative company to create a perfect market fit and market leadership in terms of the customer's requirements, no matter what the nature of products or services there may be. In fact, it displays a reactive approach, which is in itself contrary to the very concept of innovation. Innovative solution providers usually depend on `out of the box thinking` to trigger surprise elements in the form of new products and service solutions, while most customers or their representatives, who approach the sales and maintenances desks bring in either their problem specific information routine service matters. However, customers may provide some clues for future innovations, especially in the case of `inside the box thinking`, but since they are not the technical solution specialists therefore they may not be considered the sole innovation drivers.
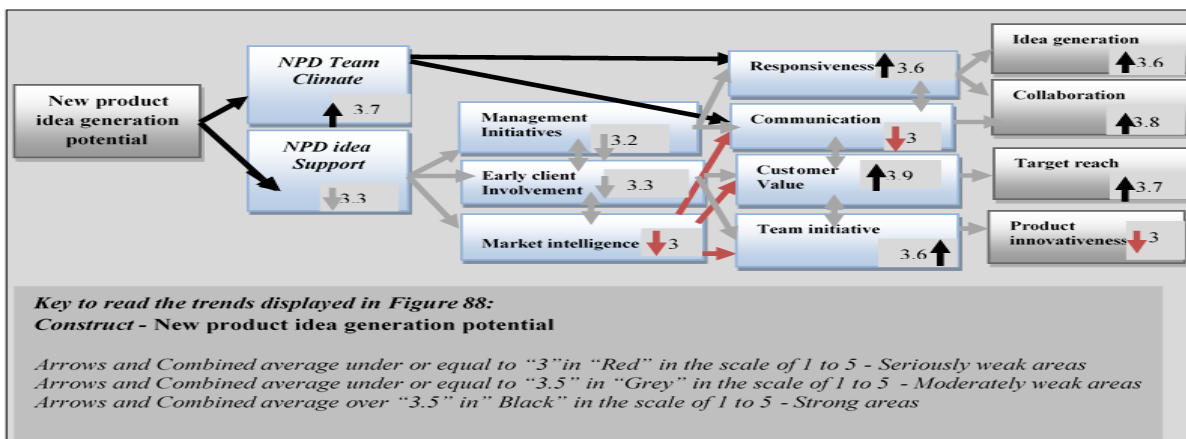

Figure 1. Study results on NPD team climate and team support based selected variables (source, Kazmi, 2016)

Figure 1 above confirms that the theoretical testing identified "NPD idea support" as a weak area (i.e. with low combined average scores of 3.3), further effecting adversely the associated construct variables "management initiatives" (i.e. with low combined average scores of 3.2), early client involvement (i.e. with low combined average scores of 3.3), market intelligence (i.e. with low combined average scores of 3), communication (i.e. with low combined average scores of 3) and finally product innovativeness (i.e. with low combined average scores 3). While analyzing the construct results, it is worthwhile to understand that "product innovation activity can take any form out of the following three or the combination; incremental innovation - it can be reflected through industrial product improvement; variety innovation - it can be viewed as product styling or restyling; and finally, in the case of a radical innovation new capability it can be seen as introduction of a new version of the product or service (Jevnaker, 2005). Furthermore, "market intelligence" supported through effective communication is the core ingredient for the success of NPD innovation activity. Communication in an organization is defined as a process of one-to-one or interpersonal communication, between individuals. Such communication may take several forms. Messages may be verbal (that is,

expressed in words), or they may not involve words at all but consist of gestures, facial expressions, and certain postures (i.e. also termed "body language"). Nonverbal messages may even stem from silence (Johnson, 1976). Market intelligence is the information relevant to a company's markets, gathered and analyzed specifically for the purpose of accurate and confident decision-making in determining strategy in areas such as market opportunity, market penetration strategy, and market development (Cornish, 1997). Hence, the overall innovative activity associated with the process of new product idea generation is always associated with an individual´s knowledge base. Hence, it is also possible that a designer (or, perhaps, an observer during the overall product development process) will identify a new area of research while focusing on his own (Weisberg, 1999; Dorst and Cross, 2001). An individual's creativity is considered a process of producing novel and worthwhile products (Mumford, 2003).

In addition, to further support the NPD innovation process, modern theorists believe that "bringing the product design team(s) into direct contact with potential users at the initial stages of product development process instead of merely hearing or reading about them through human intermediaries, is highly significant (Gould and Lewis, 1985; Kazmi, Takala, 2011; Kazmi, Takala, 2012). However, customer value (i.e. with low combined average scores of 3.9) and team initiative (i.e. with low combined average scores of 3.6) were the two potential variables that provided support to normalize rather improve the overall negative trend. In addition, the NPD team climate (i.e. with high combined average scores of 3.7) and associated variable, responsiveness (i.e. with high combined average scores of 3.6) provided additional support to help the subject organization to cope with the weak areas mentioned above and gain positive standing in areas like idea generation (i.e. with high combined average scores of 3.6), collaboration (i.e. with high combined average scores of 3.8) and target reach (i.e. with high combined average scores of 3.7).

The above analysis once again revealed that the subject company has not devised a strategic new product development plan to ensure effective work leadership practices to support new product idea support initiatives. A reactive approach is obvious to trouble shoot the issues when and where they arrive. In the present case, the process of new product development team climate initiatives were seen as the balancing factors to counter the weaknesses in new product idea support activities. Furthermore, with the analysis of the study results linked to the new product idea generation construct based on transformational leadership and strategic thinking perspectives, it is concluded that the theory testing of the proposed extended framework supported through the devised study tools is successful in identifying the linkages among the construct variables and the weak and strong areas.

4. Conclusion

This study has offered an opportunity to formulate a theoretical framework long with the construction of a statistically valid tool to evaluate the required aspects of the organizational aspects i.e, NPD team climate and idea support potential. Such aspects are critical in terms of overall organizational innovative potential. The study results revealed considerable imbalances based on the empirical framework's desired state and the practical realities. The research inferences were based on the actual NPD idea support potential as well as NPD team climate present within the three work groups of the same organization operating in three different global locations (i.e. Finland, Norway, and the UK), as well as across various organizational work roles (i.e. general management, design, engineering, research and development etc.). The central objective of the current empirical inquiry was to evaluate the existing new product development idea support potential and the overall team climate to identify gaps, if any, revealed through the survey recipients' feedback. This would further offer the opportunity to suggest refinement within their existing framework. The empirical investigation revealed that in general, the current new product development team climate and idea support areas are sufficiently supported in terms of technology infrastructure to ensure effective communication and data storage capability. However, the implementation of the specialized survey tool revealed discrepancies in the current practices with in the areas, namely the management´s approach to acknowledging new idea generation potential of the subordinates, the potential of the company´s internal and external communication systems, limitation of the capacity for the data collection and record keeping, the empowerment of employees, recognition of the employees' effort, etc. All such areas are critically significant for any organization in terms of shaping its NPD teams´ innovative capabilities and potential to harness their new product idea generation capability.

Acknowledgements

References

Angle, H. L. (1989). Psychology & organizational innovation. In A. H. Van de Ven, H. L. Angle, and M. S.Poole (Eds.), Research on the management of innovation: the Minnesota studies (pp. 135–170). New York: Ballinger/Harper and Row.

Balachandra, R. (1984). Critical signals for making go/no go decisions in new product development. Journal of Product Innovation Management, 1, 92–100.

Balbontin, A., Yazdani, B., Cooper, R. & Souder, W.E. (1999). New product development success factors in American and British firms. International Journal of Technology Management, 17, 259–279.

Barclay, (1989). Interdepartmental Conflict in Organizational Buying: the Impact of the organizational Context. Journal of Marketing Research. 28(2), 145-59.

Brockhoff, K. (1994). Management organisatorischer Schnittstellen – unter besonderer Berücksichtigung der Koordination von arketingbereichen mit Forschung und Entwicklung, Berichte aus den Sitzungen der Joachim Jungius-Gesellschaft der Wissenschaften e.V., 12(2), Hamburg.

Cooper, R. G. & Kleinschmidt E. J. (1995a). Benchmarking the Firms Critical Success Factors in New Product Development. Journal of Product Innovation Management. 12: 374-391.

Deshpande, R., Farley, J.U., & Webster, F. ., (1993), Corporate culture, customer orientation, and innovativeness in Japanese firms: A quadrad analysis, Journal of Marketing, 57 (1), 23-37.

Ebadi, Y.M. & Utterback, J.M. (1984). The effects of communication on technological innovation. Management Science, 30, 572–585.

Gerwin, D. & Moffat, L. (1997). Withdrawal of team autonomy during concurrent engineering. Management Science, 43, 1275–1287.

Heskett, J. (2001). Past, present and future in design for industry. Design issues 17(1), 18-26.

Jevnaker, B. H. (1998). Building up organizational capabilities in design. In: Management of design alliances: sustaining competitive advantage. M. Bruce and B. H. Jevnaker (eds): 13-37.

Kazmi, S. A. Z., & Kinnunen, T. (2012). Deep leadership coaching effectiveness in a corporate scenario, constitutes proactive leadership solution for `Optimal Team formation`, European Journal of Social Science (EJSS). Vol. 31, Issue 2, June 2012. pp 166-189 - ISSN: 1450-2267

Kazmi, S. A. Z., & Naarananoja, M. (2014). Overpowering Environmental Inconsistencies during NPD Activity Ensures Sustainability-Part of courage is simple consistency. Peggy Noonan. Journal of Engineering Technology (JET), 2(2). http://dl6.globalstf.org/index.php/jet/article/viewFile/787/807

Kazmi, S. A. Z., & Naaranoja, M. (2015). Cultivating Strategic Thinking in Organizational Leaders by Designing Supportive Work Environment! Procedia-Social and Behavioral Sciences, 181, 43-52.

Kazmi, S. A. Z., & Naaranoja, M. (2015). Fusion of Strengths: T-style Thinkers are the Soul Savers for Organizational Innovative Drives and the Allied Change Processes. Procedia-Social and Behavioral Sciences, 181, 276-285.

Kazmi, S. A. Z., & Naaranoja, M. (2015). Innovative Drives Get Fuel from Transformational Leadership's Pied Pipers' Effect for Effective Organizational Transformation! Procedia-Social and Behavioral Sciences, 181, 53-61.

Kazmi, S. A. Z., & Takala, J. (2011). Aiming for effective Industrial Operational Management through Transformational Leadership-Quest for the best fit as an Optimal Team!, proceedings of the 10th International Conference of the Academy of HRD (Asia Chapter), Malaysia.

Kazmi, S. A. Z., & Takala, J. (2012). Entrenching Strategic Competitive Advantage through Transformational Leadership! in proceedings of the 3rd International Conference on Industrial Engineering and Operational Management (IEOM-2012), July 3-6, Istanbul, Turkey. Pp.2517-2526.

Kazmi, S. A. Z., (2012). Conquering environmental inconsistencies during the New Product Development (NPD) activity lead to corporate sustainable success`, in proceedings of the 3rd International Conference on Industrial Engineering and Operational Management (IEOM-2012), July 3-6, Istanbul, Turkey. pp 2552-2559.

Kazmi, S. A. Z., Naaranoja, M., & Takala, J. (2013). Diverse workforce supported through transformational leadership ensures higher operational responsiveness. Global Business Review, 2(4). (Print ISSN: 2010-4804, E-periodical: 2251-2888) DOI: 10.5176/2010-4804_2.4.253

Kazmi, S. A. Z., Naaranoja, M., (2013). Comparative approaches of key change management models – a fine assortment to pick from as per situational needs! Presented in the 3rd Annual International Conference(s)

organized by Business Strategy and Organizational Behavior (BizStrategy 2013), Print ISSN: 2251-1970, E-Periodical ISSN: 2251-1989 : DOI: 10.5176/2251-1970_BizStrategy13.41.

Kazmi, S. A. Z., Takala, J., & Naaranoja, M., (2014). Creating optimal teams through transformational leadership! 4th International Conference on Industrial Engineering and Operations Management, Bali, Indonesia.

Kazmi, S. A. Z., Takala, J., & Naaranoja, M., (2015). Sustainable solution for competitive team formation. Journal of Global Strategic Management. 9(1). 5-16.

Kazmi, S. A., Naarananoja, M., & Kytola, J. (2015). Fusing theory to practice: A case of executing analytical strategic leadership tool. International Journal of Strategic Decision Sciences (IJSDS), 6(4).

Kazmi, S. A., Naarananoja, M., & Kytola, J. (2015). Harnessing New Product Development Processes through Strategic Thinking Initiatives. International Journal of Strategic Decision Sciences (IJSDS), 6(3), 28-48. doi:10.4018/ijsds.2015070103

Kazmi, S. A. Z., (2016). Fusing Strategic Thinking and Transformational Leadership to Harness New Product Development (NPD) Team Dynamics for Innovation (Doctoral dissertation). ISBN: 978-952-476-663-0. Retrieved from http://www.uva.fi/en/research/publications/orders/database/?julkaisu=822

Leenders, R. T. A. J., van Engelen, J. M. L., & Kratzer, J.,(2007). Systematic design methods and the creative performance of new product teams: Do They Contradict or Complement Each Other? Journal of Product Innovation Management, 24(2): 166-179.

Madique, M.A., & Zirger, B.J. (1984). A study of success and failure in product innovation: The case of the U.S. electronics industry. IEEE Transactions on Engineering Management, 31(4), 192–203.

Mohr, J., & Nevin, J. R., (1990). Communication strategies in marketing channels: A theoretical perspective, Journal of Marketing, 50 (4), 36 - 51.

Moorman, C., (1995). Organizational market information processes: Cultural antecedents and new product outcomes, Journal of Marketing Research, 32(3), 318-335.

Murray, J. A. & O'Driscoll, A. (1996). Design as strategy. In: strategy and process in marketing, Murray J.A. and A. O'Driscoll (eds.) Hemel Hempstead, Prentice Hall Europe..

Ouchi, W., & Wilkins, A. L., (1985). Organizational culture, Annual Review Social, 11, 457-83 .

Patterson, M. G., West, M. A., Shackleton, V.J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L., & Wallace A. M., (2005). Validating the organizational climate measure: links to managerial practices, productivity and innovation. Journal of Organizational Behavior. 26, 379-408

Rothwell, R., Freeman, C., Horlsey, A., Jervis, V.T.P., Roberston, A.B. & Townsend, J. (1974). SAPPHO updated – project SAPPHO phase II. Research Policy, 3, 258–291.

Schein, E. H., (1990). Organizational culture, American Psychologist, 45, 2, 109-119.

Schneider, B., (2000). The psychological life of organizations, In: Handbook of Organizational Culture and Climate, Ashkanasay, N. M., Wilderom, C. P.M., Peterson, M. F. (eds). San Francisco, Jossey-Bass Inc., xvii – xxii

Song, X. M. & Parry, M. E., (1997). The determinants of Japanese new product success. Journal of Marketing Research .34 (February): 64-76.

Souder, W. E., (1981). Disharmony between R&D and marketing, Industrial Marketing Management, 10, 67-73

Souder, W. E., (1988). Managing relations between R&D and marketing in new product development projects, Journal of Product Innovation Management, 5, 6-19

Souder, W.E. & Chakrabarti, A.K. (1978). The R&D/Marketing interface: results from an empirical study of innovation projects. IEEE Transactions on Engineering Management, EM- 25, 88–93Sparke, 1983;

Sparrow, P. R., (2001). Developing diagnostics for high performance organization culture, In: The International Handbook of organizational culture and climate, Cooper, C. L., Cartwright, S., Earley C. P. (eds.). Chichester, John Wiley and Sons, 85-106.

Thamhain, H.J. (1990). Managing technologically innovative team efforts toward new product success. Journal of Product Innovation Management, 7, 5–18.

Weisberg R. W. (1999). Creativity and knowledge: A challenge to theories. In R. Sternberg (Ed.), Handbook of creativity (pp. 226-250), Cambridge: Cambridge University Press.

Yap, C.M. & Souder, W.E. (1994). Factors influencing new product success and failure in small entrepreneurial high-technology electronic firms. Journal of Product Innovation Management, 11, 418–432.

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