

Organizational Culture and Innovation among Malaysian Employees

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ABSTRACT

In a globalized business setting, a national culture that inculcates innovation is of utmost importance especially in developing countries that want to improve income levels and compete globally on a level playing field. Since organizational culture is embedded in national culture, studying culture at the organizational level is apt especially when organizational culture and innovation have been found to increase performance. Thus this study examines cultural traits of Empowerment, Team Orientation, Capability Development, Creating Change, Customer Focus and Organizational Learning on Innovation. The respondents include 249 Malaysian employees in both the private and public sectors. Creating Change and Organizational Learning were found to be significant contributors to Innovation new to the organization and Innovation new to the industry. Implications and future recommendations are also discussed in this paper.

INTRODUCTION

An organization's culture is its DNA with its own uniqueness. To succeed today, organizations are challenged to instil the kind of culture that will not only ensure survival but excellence in the global marketplace. Innovation being an element of organizational culture does help steer the organization to maintain competitive advantage. In fact, innovation is central to building a proactive and entrepreneurial organization (Johannessen *et al.*, 2001) that has become widely recognized as a key to competitive success (Francis and Bessant, 2005).

Culture plays an important role in enhancing innovation within organizations, as indicated by some researchers. For example, strong cultures ranked higher in new product development and expected to grow more in the future, based on growth assumptions in their stock prices. A balanced culture on the other hand, can help an organization be innovative (Ashley and Bryan, 2009). Some have also found that traits of involvement and adaptability are important to execution and implementation resulting in innovation (Denison, 1990; Denison and Mishra, 1995; Kotter and Heskett, 1992; Sorenson, 2002).

In this study, we investigate the relationship between organizational culture and innovation; specifically it aims to determine the impact of organizational culture on innovation. Organizational culture will be examined by referring to Denison Organizational Culture Model as it is rooted in research that has already established key traits of organizational culture as major drivers of increased levels of performance in organizations (Denison, 1990). Identifying and applying aspects of culture that might positively improve innovation is relevant towards developing a better understanding of organizational culture in all sectors. Examining culture with innovation in the Malaysian setting, as explored by this study, is apt due to the importance placed by the government to realize a high income economy.

LITERATURE REVIEW

Organizational Culuture

Organizational culture is an important vehicle for implementing organizational change (Yeung, Brockbank and Ulrich, 1991). Though not all organizational change involves innovation, all innovation involves change (King, 1990). Definitions of organizational culture abound in the literature and one of the widely accepted definitions of organizational culture was offered by Schein (1992). According to Schein, organizational culture is a pattern of basic assumptions that are created and at times discovered by individuals within an organization. These assumptions come to be through individuals' ability to cope with problems of external adaptation and internal integration. As assumptions become ingrained within individuals, it transforms into values and beliefs that individuals are no longer conscious of thus making up their deepest level of culture.

In a sample of United States firms, O'Reilly *et al.* (1991) identified the following seven dimensions of organizational culture using an instrument they developed, the Organizational Culture Profile (OCP): innovative, stable, respecting of people, outcome oriented, detail oriented, team oriented, and aggressive. These culture dimensions are quite similar to Hofstede's *et al.* (1990) dimensions generated from an international sample of firms, the OCP dimensions also resemble two of the four types of cultural knowledge that Sackmann (1992) found generalized across a single organization. Cameron and Quinn (1999) suggest organizational culture as taken-for-granted values, the underlying assumptions, expectations, collective memories, and definitions present in the organization. It represents how things are around here and reflects the prevailing ideology that people carry inside their heads. It conveys a sense of identity and provides unspoken guidelines for how to get along and enhances the stability of the social system to which they belong. Further, Deshpande, *et al.* (1993) suggest that organizational culture reveals "why things happen the way they do".

The Denison organizational culture model is suitable for this study because it examined differences in performance and effectiveness of organizations (Sparrow, 2001). Furthermore, Denison (1996) argued that behavior being the outcome of underlying assumptions, values and beliefs, drives results. Behavior being the most obvious dimension of culture is a practical and appropriate approach to explore when one's research interest is on how culture drives results. Here, we want to explore one particular behavior, which is innovation, which when applied effectively, especially in processes, brings huge strategic gains (Rosenbusch, *et al.*, 2011).

Innovation

Innovation is vital as it puts an organization at a competitive advantage (Thamhain, 1990). For example, new product development, one form of innovation is an important indicator of organizational performance and competitive advantage especially in times of stiff competition in turbulent markets (Berthon *et al.*, 2004; Sengupta and Bushman, 1998). Other examples of innovation in an organizational environment, include the implementation of ideas of restructuring, or saving of costs, improved communication, new technology for production processes, new organizational structures and new personnel plans or programmes (Robbins, 1996).

West and Farr (1990) defined innovation as "the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, group, organization or wider society". Apart from introducing new and improving existing technologies and processes, enhancing management

practices are also viewed as innovation (Johannessen *et al.*, 2001). Innovation tops the list of organizational interventions especially in challenging business settings like price wars, shorter product cycles and entry of big players from different industries with huge resources. This is because innovation is seen as a platform to improve competitiveness, increase profits, enhance productivity (Nemeth, 1997; O'Regan and Ghobadian, 2005) and advance new product development outcomes (Brockman and Morgan, 2003).

Innovation is also regarded as newness, as suggested by Johannessen *et al.* (2001) in which case these researchers inferred; firstly, newness provides the beginning of employing innovation concepts. Secondly, newness can be an indicator of establishing organizational competitive advantages that are sustainable when intellectual capital is the outcome that inspire creativity and improve organizational performance.

Organizational Culture and Innovation

Since studies have found innovation to improve performance (Rosenbusch *et al.*, 2011), organizations have been aggressively instilling innovation in its culture, especially high-tech companies. However, even in non-tech industries such as the insurance industry, Lee and Yu (2004) found that an innovation orientated culture help insurance firms improve growth in business (annual premium and sum insured).

Being innovative requires an organization to not only be creative but also to implement those creative ideas. However successful implementation of creative ideas demand for a certain set of behaviours, norms and values which differ from merely producing creative ideas. In other words, generation of creative ideas alone does little for the organization, what is highly important is the effective implementation of those creative ideas (Flynn and Chatman, 2001). Moreover, high involvement and adaptive cultures help foster creativity in terms of generation of ideas and implementation (Dennison, 1996).

Based on the various cultural dimensions within the literature, one obvious question arises. What are the cultural dimensions that would promote innovation? This study explored cultural dimensions to answer this question and in particular, within the setting of firms in Malaysia. Amongst the many cultural dimensions, six have been selected in this study. They include empowerment, team orientation, capability development, creative change, customer focus and organizational learning. Empowerment enables individuals to have the authority, initiative, and ability to manage their own work, which creates a sense of ownership and responsibility toward the organization (Denison, 1996). The results seen in an empowered workforce is higher quality products and services, less absenteeism, lower turnover, better decision making, and better problem solving which, in turn, result in greater organizational effectiveness, which includes innovation (Dennison, 1984). Therefore, it is hypothesized: *H1: There is a significant correlation between empowerment and innovation.*

A team-orientated culture emphasizes cooperation toward common goals for which all employees feel mutually accountable. This is highly important as effective collective effort increases organizational performance (Denison and Mishra, 1995). Co-operative teams are identified by some researches as having an influence on the degree to which creativity and innovation take place in organizations. Well-established work teams which allow for diversity and individual talents that complement one another should promote creativity and innovation (Arad *et al.*, 1997; Mumford *et al.*, 1997). Thus, it is hypothesized: *H2: There is a significant correlation between team orientation and innovation.*

Capability development is another trait of an organization that helps innovation. An organization that continually invests in the development of employees' skills tends to stay competitive and meet on-going business needs (Denison and Mishra, 1995). This is seen as shaping the building blocks of key resources in organizations. Internally developing human capital helps firms realize the benefits of these

employees in terms of their value-creating potential. Because employees in this skill group possess abilities that are both valuable and unique, we can view them as core employees, who may serve as a source of competitive advantage (Thompson *et al.*, 2012). Thus it is hypothesized that: *H3: There is a significant correlation between capability development and innovation.*

A culture that is flexible and agile thus adaptable translate the demands of the organizational environment into action. An adaptable culture sees employees taking risks, learning from their mistakes, and has the capability and experience at creating change (Senge, 1990). An organization that creates change is able to read the business environment, react quickly to current trends, and anticipate future changes (Denison, 1995). Thus it is hypothesized that: *H4: There is a significant correlation between creating change and innovation.*

Customer focus is another cultural dimension that is important for innovation. Customer focus organizations tend to learn ways to understand and react to their customers and anticipate customers' future needs (Denison, 1995). Hence innovation is embedded within such a culture. Thus it is hypothesized that: *H4: There is a significant correlation between customer focus and innovation.* Most studies consider that learning injects new ideas into the organization, increases the capacity to understand new ideas and strengthens creativity and the ability to spot new opportunities. In other words, it favours the presence of innovation (Damanpour, 1991). Thus it is hypothesized that: *H6: There is a significant correlation between organizational learning and innovation.*

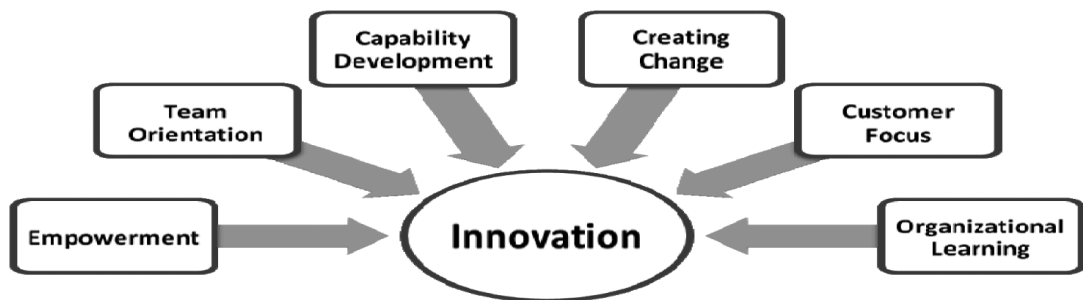


Figure 1: Conceptual framework

Figure 1 depicts the conceptual model of this study. Six dimensions of organizational culture – Empowerment, Team orientation, Capability development, Creating change, Customer focus and Organizational learning are proposed as predictors of Innovation.

METHODOLOGY

In this study, the survey questionnaire comprised of three parts. Part 1 comprised Organizational Culture variables, Part 2 depicted the Innovation variables and Part 3 covered statements on the Demographic Profile of respondents. The organizational culture questionnaire, which was adopted from Denison (1996) comprised of six dimensions with 30 items. The innovation questionnaire was adopted from Johannessen *et al.* (2001), which comprises of 12 items to assess the innovation level of that organization. The innovation variable includes two dimensions, namely innovation perceived to be new to the organization (innovation in the past three years) and innovation perceived to be new to the industry (innovation in the past three years).

Both the organizational culture and innovation measures used a 5-point Likert scale – from 1 – *Strongly Disagree* to 5 – *Strongly Agree*. This study used convenient sampling in which the respondents

comprised of part-time MBA students as well as peers and industry contacts of the researchers. The data was collected using emails and personally administered questionnaires. About 250 emails were sent out to the researchers' contacts. A total of 122 completed questionnaires were returned via mail after sending out two reminders. Approximately 300 copies of the questionnaire were given out to part-time MBA students at the Graduate School of Business, University of Malaya, Malaysia.

The questionnaire was administered over a two-week period via email and paper whereby 139 hard copies were received. The response rate was 47.5% with 12 incomplete questionnaires. Therefore the total respondents for this study were 249. The data was analyzed using the SPSS software version 16.0.

RESULTS

The profile of the respondents is depicted in Table 1 below. A large number of the respondents are less than 29 years old (46.4%) and between 30 – 39 years old (44.2%), as shown in Table 1. Most of the respondents had a degree or a professional qualification (67.5%) and quite a substantial number of belong to the services industry (28.9%). Majority of the respondents represent multinationals (33.7%) and they belong to the private sector (28.9%). First and middle management represent most of the respondents (62.7%). Most of the respondents are from sales, marketing or customer service (27.3%) and have been with the current organization between 2 – 5 years (44.2%).

Table 1: Demographic profile of respondents (N=249)

Characteristic	N	%
Age Bracket (years)		
20-29	116	46.4
30-39	110	44.2
40-49	19	7.6
Over 50	4	1.6
Highest Education Level		
Secondary	1	0.4
Certificate / Diploma	21	8.4
Degree / Professional	168	67.5
Post-graduate	59	23.7
Type of Industry		
Services	72	28.9
Pharmaceutical / Medical Device	22	8.8
Manufacturing	42	16.9
NGO (non-governmental organization)	83.2	
Banking	18	7.2
Government / government agency	15	6.0
Construction	15	6.0
Other	57	22.9
Type of Organization		
Sole proprietor	5	2.0
Partnership	8	3.2
Private limited	72	28.9
Public limited	53	21.3
Multinational company (MNC)	84	33.7
Government / government agency	22	8.8
Other	5	2.0
Current job position		
Top management (CEO, MD, GM, Director)	11	4.4

1 st and middle management (senior manager, manager, executive)	156	62.7
Skilled professional (doctor, lawyer, etc)	239.2	
Technical employee (technician, electrician, etc)	16	6.4
Administration	34	13.7
Own business	1	0.4
Other	8	3.2
Current job function		
General management	46	18.5
IT / technical / production	56	22.5
Sales / marketing / customer service	68	27.3
Human resources	18	7.2
Accounting / finance	31	12.4
Legal / compliance	4	1.6
Other	26	10.4
Years in the current organization		
Less than 2	78	31.3
2 – 5	110	44.2
6-10	50	20.1
Over 10	11	4.4

The mean scores for the culture variables ranged from 3.74 to 3.18 suggesting that the respondents, as a group, believe each culture variable to be at least moderately descriptive of their organization. Among the culture variables, the mean score for team orientation (3.74) was the largest. Customer focus was rated below the team orientation with a mean score of 3.50. The mean score for creating change was the lowest among the six variables. The mean score for the innovation variable of new to the organization, 3.51 is slightly higher than the variable of innovation new to the industry, which is 3.33.

Table 2: Descriptive analyses of all variables

Mean	Range	Std. Deviation	
Empowerment	3.46	1.0 – 5.0	0.52
Team Orientation	3.74	1.0 – 5.0	0.50
Capability Development	3.46	1.0 – 5.0	0.46
Creating Change	3.18	1.0 – 5.0	0.38
Customer Focus	3.50	1.0 – 5.0	0.46
Organizational Learning	3.49	1.0 – 5.0	0.48
Innovation New to Organization	3.51	1.0 – 5.0	0.67
Innovation New to Industry	3.33	1.0 – 5.0	0.83

Kaiser-Meyer-Olkin (KMO) test and Bartlett's test were examined before fulfilling EFA. The KMO index ranges from 0 to 1, with 0.6 suggested as the minimum value for a good factor analysis (Tabachnick and Fidell, 2001). On examining KMO values (0.763) and Bartlett's test (0.000, $p < .01$), the results indicated the construct validity of the instruments.

The validity of all constructs was examined using EFA and all items of the organizational culture constructs were retained as the factor loadings were more than 0.4. Innovation new for the organization items was factor analyzed resulting in six distinct factors. The EFA results were similar for innovation new for the industry items whereby six factors emerged.

The reliability of the instruments indicated Cronbach's alpha of the coefficients of the six cultural constructs ranged from .585 to .836, as shown in Table 3. Kline (1999) notes that when dealing with psychological constructs, values below 0.7 can, realistically, be expected because of the diversity of the

constructs being measured. Therefore the low coefficients of empowerment and capability development are still acceptable.

Table 3: Reliability statistics of the variables

Variables	Items	Cronbach's Alpha (α)
Empowerment	5	0.585
Team Orientation	5	0.709
Capability Development	5	0.642
Creating Change	5	0.806
Customer Focus	5	0.833
Organizational Learning	5	0.836
Innovation New to Company	5	0.734
Innovation New to Industry	5	0.849

The multiple regression analysis in Table 4 shows the R^2 of 0.105, which means the model explains 10.5% ($p < .01$) of the variance in innovation. The largest beta coefficient is 0.168, shown in Table 5 which is for Creating Change. This means that Creating Change makes the strongest unique contribution to explaining innovation, when the variance explained by all other variables in the model is controlled for. The Beta value for Organizational Learning was slightly lower (0.139), indicating that it made less of a contribution.

Table 4: Standard Multiple Regression between organization culture and innovation

Model	R	R ²	Adjusted R ²	F	Sig
1	0.324 ^a	0.105	0.083	4.719	0.0001 ^a

a Dependent Variable: Innovation
N = 249

Table 5: Coefficients between organization culture and innovation

Model		Unstandardized B	Coefficients Std. Error	Standardized	t	Sig.	Collinearity Tolerance	Statistics VIF
				Coefficients Beta				
1	(Constant)	21.093	4.188		5.036	0		
	Empowerment	0.207	0.173	0.088	1.194	0.234	0.687	1.455
	Team Orientation	-0.122	0.183	-0.050	-0.664	0.507	0.657	1.521
	Capability Development	-0.0002	0.185	-0.0001	-0.001	0.999	0.747	1.338
	Creating Change	0.537	0.220	0.168	2.447	0.015	0.788	1.270
	Customer Focus	0.223	0.190	0.084	1.174	0.242	0.724	1.382
	Organizational Learning	0.354	0.189	0.139	1.877	0.062	0.679	1.473

Note: a Dependent Variable: Innovation

TESTING OF HYPOTHESES

This section reports the results of the hypotheses tests, which was conducted through a series of analyses. The hypotheses are as follows:

- Hypothesis 1: There is a significant correlation between empowerment and innovation.
- Hypothesis 2: There is a significant correlation between team orientation and innovation.
- Hypothesis 3: There is a significant correlation between capability development and innovation.
- Hypothesis 4: There is a significant correlation between creating change and innovation.
- Hypothesis 5: There is a significant correlation between customer focus and innovation.
- Hypothesis 6: There is a significant correlation between organizational learning and innovation.

Table 5 indicates that empowerment does not correlate significantly with innovation ($\beta = .088$, $p > 0.05$); and team orientation does not correlate significantly with innovation ($\beta = -.050$, $p > 0.05$). Although the relationship is not significant, however the negative score suggests that less team orientation facilitates innovation.

The results from Table 5 show that capability development does not correlate significantly with innovation ($\beta = -.0001$, $p > 0.05$). Although the relationship is not significant, however the negative score suggests that less capability development facilitates innovation.

The findings also show that creating change does correlate significantly with innovation ($\beta = .168$, $p < 0.05$). In other words, creating change does facilitate innovation. On the other hand, customer focus does not correlate significantly with innovation ($\beta = .084$, $p > 0.05$). However, the hypothesis test showed that organizational learning does correlate significantly with innovation ($\beta = .139$, $p < 0.10$). In other words, organizational learning does facilitate innovation.

DISCUSSION AND CONCLUSION

Among the findings of this study, only two variables were related to innovation – creating change, and organizational learning. Hence our statistical results provided a partial support for the relationship between organizational culture and innovation of Malaysian employees in this study.

The weak correlation between organizational culture and innovation was unexpected. There are no significant relationships between empowerment, team orientation, customer focus, capability development, with innovation, respectively. Thus, these results did not support earlier studies, which found organizational culture to be positively associated with innovation (Ashley and Bryan, 2009). One possible explanation is that majority of the respondents (28%) were from the services sector thus innovation may exist, but may not be recognized as such instead it is seen as mere changes made by management. However, compared to the manufacturing sector, innovation is easily recognized.

The percentage of multinational companies (MNCs) was merely 33.7%, whereas 66.3% of the respondents were attached to locally-owned organizations. One can anticipate that foreign-owned organizations, especially MNCs are generally more aggressive in developing innovation as opposed to locally-owned companies. Combining these companies in the statistical analysis may have confounded the results leading to an insignificant finding. Western MNCs are superior to Asian companies in product and process innovation and technological development (Luo, 2001). Western MNCs have been more innovative, transferred more technologies to local firms, and have made greater commitments to quality control and adapting technology to suit the needs of local consumers (Luo, 2001). Local companies, by contrast, generally make fewer commitments of product and market development in the local market and tend to produce more labor-intensive products.

There were 31.3% respondents working for their organization less than two years, and 68.7% respondents working more than two years. The longer an employee works for a company, the greater resistance he or she may have to change in the status quo that implicitly alters the psychological contract (Kolb, 1998). Also, a study on attitudes toward one popular innovation, quality circles, found that senior employees had less favorable attitudes than junior ones, in part, because they had less of a stake in supporting changes that affected the organization's future (Agocs, 1997).

It is also shown that the relationships between team orientation as well as capability development and innovation are negative, respectively. This may be explained as in the local context, innovation is

driven by hierarchical decision of authority rather than team decision. Most of the local organizations stress control on internal functions with specified policies and procedures to which must be adhered.

Local organizations may have known intuitively that their future lies in the strength of capability development, and that these have inherent value. However, few have placed the same amount of attention to understanding and tracking these resources as they do consistently and regularly in the tracking of financial and physical assets. It is also likely that innovation within the organization was added value by the same old group of talent without developing new talent or increasing their capability development. It may come to a stage people become static, doing what they did yesterday, with the same level of competence. They can add value to the business day by day, but it may be (on average) the same value. Or people can be incrementally different each day, as they learn, innovate and contribute more progressively increasing their ability to increase added value and to contribute at a higher and/or different level in the future.

From the findings, significant correlations exist between creating change, organizational learning with innovation, respectively. The dimensions of Creating Change and Organizational Learning fall under the category of adaptability. Highly adaptive organizations respond to external demands by actively creating changes which at the same time involve some risks that they willingly take and when faced with obstacles learn to find ways to go around it. In situations where mistakes are made, highly adaptive cultures view them as feedback and learn from it to respond to demands from the external environment. As adaptive cultures experience changes, newly created norms and beliefs arise inline with receiving input and translating it into action that enables the organization to grow. Obviously in such a culture, the organization is in a better position to continually respond to and meet the demands of its customers, which is part of innovation. Hence organizations that insist on cultures with strong adaptability usually experience sales growth and increased market share (Denison and Mishra, 1995).

In sum, creating change and organizational learning contributed significantly towards Innovation and may be served as a good reference for organizations in Malaysia. This study has served to provide empirical evidence for the importance of organizational culture in predicting innovation despite the fact that the proposed framework was partially validated.

LIMITATIONS OF THE STUDY

The study has several limitations. It was limited to six culture variables; the relationship of organizational culture and innovation may not be fully explored and explained. Additionally, culture data were gathered for the study through respondents' self-assessments. Assessments were provided by one person in the organization. The culture literature, however, suggested using more than one respondent as a basis for discussing organizational culture (Cameron and Quinn, 1999).

SUGGESTIONS FOR FUTURE RESEARCH

Beyond the limitations and scope of this research, several opportunities for research exist. Future studies examining Organizational Culture should include multiple participants representative of the critical positions in the organizations. Inclusion of department heads, directors, presidents and various vice presidents will enhance the efforts to obtain a meaningful assessment of organizational culture.

Lastly, opportunities exist for understanding the effect of other cultural types. It is worthwhile to include other culture types in future studies to further explore the influence of other cultures on Innovation. It is also valuable to take local concerns or constraints into consideration when developing the questionnaire.

IMPLICATIONS

As was established in the introduction of this paper, many organizations can benefit from creating and sustaining a culture that supports innovation. Some of the elements of an organizational culture that support innovation may be enhanced through different initiatives.

In Malaysia, due to lack of research, the nature of organizational culture and its relationship with innovation is not explicitly one that tops the list of priorities of executives. According to organization development practitioners, being unfamiliar with organizational culture makes organizations' resistance to change extremely difficult to overcome especially when the focus of the change involves changing existing processes, policies and technologies that would see changes in behavior of employees, which could mean delayed profits. Resistance exists more so when just doing things the same way would seem fit because of less risks even though profits may be lesser with more wastes but instant financial outcome. As such, this study makes a contribution to the research by applying a culture model and survey to better understand organization culture's relationship to innovation. This study helps managers not only to understand the culture of their organizations, to lead them to enact clear and effective strategies, and to improve their ability to innovate, but also to further strengthen their successful competitiveness in their market.

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