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Compatibility Culture and Outcomes of Product / Service Innovation

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Abstract: *Purpose of the study: Compatibility culture has been widely used and defined as a relative static that includes a set of shared values, beliefs, hypotheses, and signs within the organization. Contrary to static viewpoint, dynamic systems viewpoint does not necessarily consider culture as mutual and internal values. However, since cultures are constantly getting environmental pressures, they need sustained compatibility having an intrinsic incentive for changes termed as compatibility culture. In this study, the effect of compatibility culture as an antecedent for the outcomes of innovation in the products and services production has been highlighted, because innovation requires the gradual development of shared values, assumptions and beliefs. Method: The study population consisted of 190 companies with sectors classified as having high technology, medium technology and low technology. Each company received a two-part questionnaire (HR managers and operational managers). The results of the main research were determined using the structural equation model with EQS 2.6 program, and were developed using mathematical models, structural equation models and multiple dependency relationships. Findings: There was a positive and significant relationship between compatibility culture and innovation. The correlation between learning - Innovation and structural flexibility - innovation was fully mediated and supported by the compatibility culture. The current study's results indicated that compatibility culture was considered as the basic method and structural flexibility and learning affected innovation. Conclusion: According to the cultural dynamics perspective, the current model confirmed that compatibility culture fully mediated the relationship between structural flexibility, reflective learning, and outcomes related to product and service innovation. The dynamic systems viewpoint assumed that culture evolved in response to the internal and external pressures faced by them. As the outcomes of product and service innovation resulted from organizational efforts entailing implementing changes and commitment to new projects, this study identified the characteristics of the organizational factors that facilitated the outcomes of product and service innovation.*

Keywords: *Compatibility Culture, Reflective Learning, Structural Flexibility, Innovation of Products and Services.*

INTRODUCTION

Organizational culture is described as the background to innovation characterized by various types of organizational culture and how these cultures support innovation. This research was based on the various types of culture. Typology suggested by Deal and Kennedy (1982) was one of the most influential typologies; the model explained that culture resulted from environmental pressures. In this regard, Quinn and Rohrbaugh (1983) suggested competing values framework characterized by four models of culture (human relations model, open system model, rational goal model, and internal process model, respectively) based on the two basic dimensions of the organization (control-flexibility and internal-external). Further,

Bausch et al., 2013 conducted a meta - analysis of culture and innovation and concluded that firms following a radical innovation strategy have to establish a developmental culture in their organization. In another study by Quinn and Rohrbaugh, a relationship was found between developmentalist' culture and cultures of hierarchical pattern and technological innovation. According to the attitude, organizational culture is conceptualized as shared beliefs and values within the organization contributing to the organizational immobility and often lead to a long - term stasis (stagnation). Contrary to the static culture viewpoint, a research path represented a dynamic system, suggesting that culture and human mutually shape each other. The author (2010) also found that although three elements of dynamism, creativity, and innovation develop in the culture context, it could be regarded as cognitive indicators of culture. Under this perspective, culture is not a static entity, but a product of organized elements such as meanings, operations, and processes, so that the individuals' behavior in the group (culture) is not necessarily determined by shared concepts and internal values. According to global group studies, dynamism viewpoint expand the relationship between the culture and compatibility to understand why multicultural groups in multinational companies helped to defuse the tensions rising in social structures. This level-group viewpoint of cultural compatibility reflect that firm culture is not static, but rather evolving, because they incorporate a constant feature for solving the structural problem. Kotter and Heskett (1992) investigated the features that strengthen the corporate culture and adapt it. In strong cultures, organizational culture is static and constant, defined by specific values, beliefs, assumptions, and signs, and internalized by organizational members, and organizations with stronger culture change very seldom. In contrast, the organizational culture is shaped by environmental change. Compatibility culture is a process of transforming culture with adaptation. This culture is very flexible and forms while the organizational strategic puts an emphasis on the external environment Zarnegar (2007). In the meantime, some authors have confirmed the four characteristics of organizational culture that are beneficial to the organization's efficiency (compatibility, sustainability, involvement, and mission). These studies have referred to the cultural compatibility feature and have described it as the degree to which an organization is able to change behavior, structures, and systems, so that it could have a positive impact on performance. Based on the dynamic viewpoint, compatibility culture is defined as a characteristic that is able to change cultures and respond to environmental conditions. However, static viewpoint assumes that culture is created and learned by individuals and is transmitted to their minds and behavioral patterns as a static template from the customer perception. Cultural evolution should be stressed when there is a general environmental instability making a lot of pressures for adopting innovation. This implies that the culture is not static; it changes and it refers to a situation that responds to the needs of innovation. According to Giorgi (2015), the environmental pressures for innovation requires us to understand the static nature of culture in changing organizations, because innovation demands resources movement. As suggested in the research by Abbasi's and Bagheri (2019), innovation should pass through a way of creativity and, innovation would not be possible without the presence of creativity. Innovation tends to emerge from new ideas and converting old ideas into practical applications. The dynamic perspective of culture has been considered very critical for understanding innovation processes, yet it is not clear what primary features have a contributing role in the cultural compatibility process and also the factors that foster and promote this feature. To find the roots of compatibility feature, enables the companies to effectively manage and change their cultures. A firm cannot operate by adopting a static perspective of culture. Since in dynamic perspectives, culture is considered to be a process of continuous change and improvement and is described at one stage of development. These perspectives help us identify the characteristics of the cultural compatibility that managers can handle. Therefore, organizational culture is a motive for change and evolution and can be managed. Unlike dynamic culture which results from a set of organizational elements, this study made an attempt to describe culture as an element characterized by different methods of thinking and organizational activities and were relevant to organizational and learning capabilities. The relationship between the variable of organizational learning culture and organizational innovation, as well as its direct impact on organizational effectiveness reflects the

fact that the organization can greatly improve innovation through utilizing knowledge acquisition and making cognitive and behavioral changes, and it plays a critical role in enhancing organizational effectiveness (Bonyadi Naieni and Valie, 2017). Since the company's operations affect the organizational values and identity, managers are able to transform the organizational culture by implementing the operation. Similarly, changing learning structures influences organizational culture. This study contributed to the existing literature in two dimensions. One was related to production, product and service innovations, and the other was related to the organizational culture theory. Firstly, by adapting the dynamic viewpoint of culture, the production, product and service innovation were considered as a product of several factors. In addition, organizational culture played an important role among other factors through the values and behaviors of those operating in the company. The results of the study by Zarnegar (2005) indicated that organizational culture and organizational climate were closely related to each other. He maintained that a strong organizational culture could significantly affect employee commitment and enhance their behavioral strength, and replace them with the existing formal laws and regulations. It was even shown to be more effective than organizational formal control systems. It has been shown that compatibility culture was a very important factor for the issues of innovation in the production, product and service innovation areas. For an organization to achieve the innovation easily, it needed to internalize its value of change and transformation. Although some studies have recognized the importance of cultural compatibility, this feature has received less attention from researchers. Akbari (2011) believed that culture is a double-edged sword. On the one hand, it is a platform that facilitates the achievement of organizational goals; on the other hand, it can create a barrier to making changes in the organization. By managing the cultural feature explaining the ability to evolve and change over time, the managers are able to implement compatibility as a feature that facilitates the innovation outcomes. Secondly, some compatibility culture records have been discovered so as to improve and understand its evolution process and ultimately, its variability nature taking place at the cognitive and applied levels. At the cognitive level, reflective learning in companies provides the ground for describing and establishing shared values according to the environmental needs. Thus, it explains how the culture evolves over time. In this respect, the results of the study by Mousavie (2005) revealed that learning occurred only when a person behaved differently in different situations and when he was able to do something which was impossible before. At the practical level, structural flexibility helped to shift values beyond the cognitive level. Frequent practical changes facilitate and promote the evolution and transformation of shared values and persuades employees to presume change as a routine element in their occupational task. The dynamic model of change has been presented as a superior model for guidance, improvement and development within the organizations (Hojjat, 2018). As suggested by Cooke and Rousseau (1988), the cognitive and applied factors enable managers to create a culture that may have a direct beneficial impact on the product innovation outcomes. In addition, there was a significant relationship among studied factors including having knowledgeable leaders in an organization, dynamic structure, encouragement to creativity and innovation, shared insight, teamwork and cooperation, empowerment, continuous relationship with the environment and the willingness of employees to transform their organization into a learning organization with a confidence level of 35% (Eskandari & Farahani, 2018). This paper have been organized as follows. Hypotheses have been proposed for building a theoretical model, innovation variable has been explained through compatibility culture, details and results of empirical study have been presented and finally, theoretical and applied theories have been developed.

Hypotheses

Compatibility culture and innovation

According to Hurley and Hult (1998), approximately all industries implement sustainable innovations periodically because innovation is critical for competitive advantage. According to the study by Hossein Zadeh Shahri and Shahinie (2018) on 101 companies, dimensions of innovation capability have a positive and significant effect on the dimensions of competitive advantage. Some research put an emphasis upon the culture and organizational status as innovation records. For example, Metickanen considered the role of communication culture as a means for achieving successful business of new products. Further, in another study, Wang and Rafiq (2014) suggested that the outcomes of new products innovation depend on a strong corporate culture. Similarly, the analysis of gradual and basic records of product innovation showed that organizational culture is a key component which interacts with other organizational elements. Since many studies have focused on the typology of organizational culture, which is designed to facilitate innovation, the cultural dynamics perspective makes an attempt to analyze the compatibility feature of culture and its impact on the production, product and service innovations. Organizations with compatibility culture require members to initiate cultural transformation in accordance with the environmental needs. Innovation refers to the successful introduction of new products and services and enhancing new and better things and qualities. On the other hand, compatibility involves introducing changes needed by external pressures, economic crises and business organizations, or cultural diversity. The compatibility culture helps to assimilate change, and creates the capacity to continuously innovate. The assimilated culture encourages the creation of new values, beliefs and innovation in products and services. Research on a dynamic viewpoint suggested that some cultures change even faster than previously expected. Cultures change as a result of tension between the organization's pressure to halt and environmental pressures for productivity and sustainable production. They assimilate services and stabilize them in order to enhance their cultural compatibility, and then facilitate the outcomes of innovation in products and services. These discussions led to the development of H1.

H1. The compatibility culture is positively associated with the innovation of products and services.

Indirect, mediating and adjusting role of compatibility culture between reflective learning and innovation.

The dynamic system viewpoint deals with the adaptive nature of culture, suggesting that the changes have generated mental patterns and experiences for the people operating within the organization based on the thinking and action dimensions. In addition, the viewpoint that how organizations or business learn their needs can influence their cognitive processes in a sustainable way. However, this paper analyzed organizational learning from two different reflective capabilities: single loop learning and double loop learning. In double loop learning, rules, procedures, and objectives also need to be addressed and modified to improve research and reach better solutions. Double loop learning focuses on the reflexive learning, and directly affects culture, modification of established values, and individuals' behavior. Learning methods practiced within the company have a central role in the formation of culture, because they can evolve while generating new norms and goals. Companies that focus and invest on reflectivity are able to increase culture compatibility by developing a learning system and generating new cultural and organizational patterns and designing tests and errors and reflections. Integrating continuous reflection learning activities into the company may foster cultural change and allow the company to move forward the organizational culture into a continuous path and protect the organizations to go through gradual stages of organizational formation. Self-enhancement mechanisms regard the change as a constant component of the rules and values contributing in the determination of compatibility culture. Since reflective learning supports innovation in the organization and positively influences innovation, the compatibility culture acts as a mediator for both variables and establishes the behavioral norms and organization's values. Based on the compatibility culture, learning leads to a new behavior and directs the organization into a complete innovation process. In this respect, Mousavie (2005) have suggested that learning occurs only when a person behaves differently in different situations and is able to do something that was impossible before. Reflective learning creates an equilibrium in culture and

facilitates innovation through improving flexibility and decreasing tension. Such a culture has the ability to convert reflective learning into action by assimilating changes and taking into account values while bringing innovation and changing it into their products and services.

H2. The compatibility culture positively and fully mediates the relationship between reflective learning and the innovation of products and services.

The mediating role of compatibility culture between structural flexibility and innovation

The cultural dynamic system perspective organizes practical changes into the cultural compatibility. When the organizations replace old measures with new successful ones, it is expected that practical changes occur systematically. As the firm changes its daily routines and makes some measurements to overcome its structural immobility, the firm begins to change its bases for organizational designs. Markus and Kitayama, (2010) concluded that both culture and self are dynamic and go through a recursive process. People are able to increase the potentialities for shifts in organizational institutions, norms and values embedded within the firm if they change their daily activities. Innovation of products and services requires firm to improve their flexibility and competence, and the ability to respond quickly to business opportunities creates an excellence for the company. Therefore, organizations must be flexible to maximize their opportunities and their structures and be able to create a compatibility among their different structures (function of members, roles and relationships). Irvani, Van Oyen and Sims (2005) maintained that structural flexibility could be created using multi-purpose resources, such as cross-trained labor and through having multiple capabilities. In this paper, the structure was theorized in two ways: structural evolution and human evolution. Both types increased the common cultural transformation. Human capital has a direct and significant relationship with the product innovation, process innovation and organizational innovation (Gahanian and Haddadi, 2016). It was also shown that the company's activities were deeply rooted in the daily routine of organization. Thus, organizations must make substantial changes to their main internal structures. Daily activities and operations of the organization continuously change in response to internal and external pressures. This can allow to create other alternatives and bring structural flexibility to be adapted to the environment. The change in day-to-day operations of the organization brings cohesion and reintegration of information and awareness. Therefore, it provides the capacity required for creating innovation and facilitates competitive advantages. Since it is necessary for organizations to adapt their dynamic and flexible structures to appropriately generate new services and products, innovation requires successful implementation of an effective process. As a result, the compatibility culture mediates the relationship between innovation and structural flexibility. When innovating, the compatibility culture supposes some risks and internal changes for the successful implementation of creative ideas and innovations. Therefore, based on the above descriptions, the third hypothesis has been formulated.

H3. The compatibility culture positively and fully mediates the relationship between structural flexibility and the outcomes of products and services innovation.

Methodology

Data

The study population consisted of 190 companies with sectors classified as having high technology, medium technology and low technology. Each company received a two-part questionnaire. The human resource manager has been selected as an advisor for sectors related to compatibility culture, reflective learning and structural flexibility, because this manager was best suited for evaluating the quality of the culture's compatibility, practices, and learning processes. In addition, manager operations has been selected for sectors related to product and services outcomes. A total of 110 questionnaires have been received from HR directors and 190 questionnaires have been received from operational managers. However, it was available to use only

data gathered from respondents of 190 companies, with a response rate of 8.7% from genuine responses, 63 companies with high technology, 91 companies with medium technology and 67 with low technology. These companies had the same population and no biased answer was received from the respondents. Moreover, the response bias has been checked and the characteristics of the responses were compared to the sample with the first and last respondents. There were found no significant difference based on the type of business. The average age of respondents was 40.5 and their medium tenure for management was estimated 9.26 years. Overall, 55.3% of the respondents were male. Average company lifespan was 22.74 years, with an average of 773.66 employees. The common bias method was controlled by estimating the size of the innovation variables from the operational managers and the predictive variables of the HR managers. In order to minimize bias and variance, value-point questionnaire (Likert scale from 1= strongly disagree, 0= strongly agree) was utilized. The confirmatory factor analysis confirmed the validity of the questionnaire ($\alpha = 77\%$) and the composite validity of the one-dimensional variable (CR = 90%). Control variables: three variables used in the previous research may had influenced the outcomes of product and service innovations.

Table 1. Means, standard deviations and correlations

		Mean	standard deviations	1	2	3	4	5	6	7
1	Innovation	4.66	1.11	1	0.58	0.50	0.47	-0.17	-0.01	0.12
2	Compatibility culture	4.49	1.16		1	0.61	0.49	-0.02	-0.02	-0.09
3	Reflexive flexibility	4.51	1.15			1	0.48	-0.12	0.01	-0.06
4	Structural flexibility	4.42	1.29				1	-0.03	0.04	0.11
5	Industry	7.49	3.91					1	-0.37	-0.06
6	Age	22.74	17.73						1	0.18
7	Size	773.66	46.01							1

Note:

Industry: As industries made progress at different rates, the innovation orientation could be the same. According to R & D intensity criteria, the three sectors of studied company have been categorized as high technology, medium technology and low technology (direct and indirect indicators). The number of employees was determined over three years and its mean was calculated. The control variable was also necessary because small and large companies differed in their D & R investment capability and thus differed in terms of innovation outcomes. Further, the company's lifespan was controlled as the company's establishment year. The company's lifespan affected the introduction of new products. Companies with years of experience built strategies that were more creative and could prevent the culture cease.

Measurements

Product / Service Innovation: Measurement was made using four sections of the innovation scale developed by Miller and Frison (1983) in Likert scale (1= strongly disagree, 7= strongly agree). To see these sections, refer Appendix section. The current study's results confirmed the validity and stability indicators ($\alpha = 0.78$) and composite reliability (CR = 11). Moreover, the one-dimensional scale was validated using the confirmatory factor analysis.

Compatibility culture: The variable was evaluated using the measurement introduced in the study by Kettle and Hessel (1992) including four sections. To see these sections, refer Appendix section. The current study's results confirmed the validity and stability indicators ($\alpha = 0.77$) and composite reliability (CR = 78). The one-dimensional scale was also validated using the confirmatory factor analysis.

Reflective Learning: The variable was assessed using the four scales introduced by Liu et al (2008). The items were listed in the appendix and measured using Likert scale (1= strongly disagree, 7= strongly agree). This study's results confirmed the validity and stability indicators ($\alpha = 0.77$) and composite reliability (CR = 81). The one-dimensional scale was also validated using the confirmatory factor analysis.

Table 2: Measurement results

Variables	Items	Measurement indicators	T-Value	Alpha Cronbach's Coefficient	Composite reliability (Cr)	Average variance extracted (Ave)
Innovation	INNO1	0.68***	9.52	0.78	0.77	0.50
	INNO2	0.68***	9.32			
	INNO3	0.64***	8.86			
	INNO4	0.73***	10.49			
Compatibility culture	ADAP1	0.78***	11.96	0.77	0.78	0.50
	ADAP2	0.78***	9.88			
	ADAP3	0.50***	6.77			
	ADAP4	0.76***	11.55			
Reflective Learning	RLEAR1	0.70	10.56	0.87	0.87	0.63
	RLEAR2	0.76	11.93			
	RLEAR3	0.89	15.06			
	RLEAR4	0.82	13.25			
Flexibility	FLEX1	0.66***	8.06	0.77	0.81	0.68
	FLEX2	0.97***	10.79			

Results

The results of the main research were determined using the structural equation model via EQS 6.2 program. Multiple dependency relationships were created through mathematical models including structural equation models. Table 1 shows descriptive analysis of variables including control variables and appropriate correlation between them. Model measurements have been presented in Table 1. The current research's results confirmed the satisfactory levels of convergent validity with favorable outcomes for CA, CR, and AVE. Fit indicators derived from confirmatory factor analysis showed goodness-of-fit of current study's variables. To confirm the divergent validity (average variance), the AVE of each structure was compared with the correlation squared between the two structures. All AVE values were greater than the correlation squares. In addition, the confidence interval of (2 times standard errors) was calculated for each pair of structures. These did not contain value 1, so the divergent validity of our model was approved (Table 3).

Table 3: Validation

Variables	1	2	3	4
Innovation	0.50	0.34 ***	0.25 ***	0.09 ***
Compatibility culture	(0.08;0.88)	0.50	0.37***	0.20***
Reflective Learning	(0.50;0.74)	(0.71;0.88)	0.63	0.14***
Flexibility	(0.08;0.52)	(0.42;0.71)	(0.27;0.56)	0.68

The gradient line shows the mean of the obtained variance. The upper slope of the gradient line shows the correlation squares. The lower slope indicates the confidence level for factor estimation. Note: $p < 0.001$ ***

In addition to the practical solutions presented in the research plan, the common method bias was checked via Harman's test and all of the variables observed in single unit were computed using a confirmatory factor analysis. The current study's results showed a poor fit suggesting that there was no bias in the current research data. To analyze the mediatory role of compatibility culture, the method introduced by Tippins and Sohi (2003) have been utilized: first, the direct correlation between structural flexibility and reflective learning in innovation was used. Second, the mediating model correlations in which the compatibility culture mediated the relationship between these two variables and innovation was used. To make mediation, this method must meet four conditions. First, the value of the mediation model should explain greater variance

than the direct model. Current study`s data revealed an R2 for the first model (0.43), which may not hold true for the mediating model (0.63) (Table 4).

Table 4: Variance ratio of the research model

Direct result of R2 model
Innovation: Reflective Learning, Structural Flexibility 0.43
Mediation Effect Model
Innovation: Acceptable Culture, Structural Reflection, Reflective Learning 0.63
Acceptable Culture. Structural Flexibility, Reflective Learning.

Table 5: Results of direct relations

$INNO = 0.49 * RLEAR + 0.25 * FLEX$ (t = 4.47) (t = 2.36)
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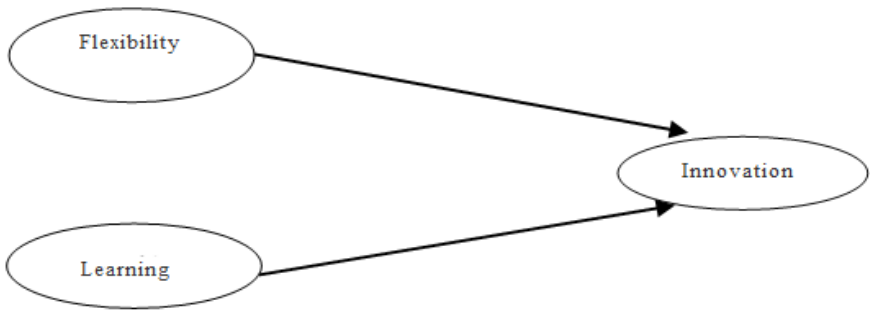


Figure 5. Direct impact model

Secondly, the independent variables in the relationship model must had a significant correlation with the dependent variable. In addition, the correlation between structural flexibility and innovation was positive and significant (P <0.05, $\beta = 0.25$). The same thing occurred with reflective learning and innovation (P <0.001, $\beta = 0.49$) (Table 1, Figure 5). Thirdly, in the first stage, the direct relationships should have explained the significant reduction or elimination when the culture was considered as a mediating variable of this model; there should be a significant relationship between both variables of structural reflection ($\beta = 0.15$) and reflective learning (01 / 0- = β) (Table 6, Figure 2).

Fourth, there should be a relationship between the compatibility culture and innovation (See Figure 1). Table 6 shows the results of the standardized parameters of the mediating model and the model with and without the control variables. The utility of the fit model was improved using control variables. The current results supported H1, suggesting a positive and significant relationship between the compatibility culture and innovation. The second hypothesis was also supported by the research`s results; the compatibility culture positively and fully mediated the relationship between reflective learning and the innovation of products and services. The results of this study also confirmed the third hypothesis, indicating that the structural reflection and innovation were fully mediated by organizational culture. Figure 1 shows the positive and significant relationship between reflective learning and innovation. However, this relationship was not significant related to compatibility cultures variable (Figure 1). Thus, the primary results of this study supported the mediating roles of the compatibility culture, reflective learning and structural flexibility. These results indicated that the compatibility culture was a basic approach and that structural flexibility and learning affected innovation. For achieving more stability for this model, different assumptions for the nesting model have been utilized. See Table 1. Table 9 shows the results. It seems that the theoretical model was the best indicator of the data.

Table 6: Model with and without control variables

		Without control variables	With control variables
Utility of fit indices	RMSEA	0.08	0.06
	SRMR	0.06	0.05
	NFI	0.89	0.89
	NNFI	0.92	0.92
	CFI	0.94	0.94
	IFI	0.94	0.95
$\overline{R^2}$	Innovation: compatibility culture,	0.61	0.64
	structural flexibility, reflective learning	0.69	0.70
Results	Compatibility culture: Innovation		(t = 4.13) 0.80***
	structural flexibility: compatibility culture	(t=4.08) 0.80***	(t = 3.90) 0.29***
	reflective learning: compatibility culture	(t=3.89) 0.29 ***	(t = 7.18) 0.67***
	structural flexibility: innovation	(t= 7.23) 0.68 ***	(t = -1.25) -0.15
	reflective learning: innovation	(t= -1.14) -0.11	(t=0.01) -0.01
	industrial: innovation	(t= -0.04) -0.01	(t=2.50) -0.17
	age: innovation		(t=-1.14) -0.08
	size: innovation		(t=1.78) 0.12

Table 7: Comparative results of nesting models

	Description	X ²	ΔX^2	RMSEA	SRMR	NFI	NNFI	CFI	IFI
1	Theoretical model	150.35		0.06	0.05	0.89	0.92	0.94	0.95
2	Model without the relationship between reflective learning-Innovation	150.38	0.03	0.07	0.06	0.88	0.93	0.94	0.94
3	Model without the relationship between structural flexibility -innovation	153.18	0.19	0.06	0.06	0.87	0.92	0.94	0.84
4	Model without relationships between reflective learning - innovation	153.41	0.23	0.06	0.06	0.87	0.92	0.94	0.84
5	Model without the relationship structural flexibility- culture	168.11	14.71	0.07	0.06	0.86	0.90	0.93	0.93
6	Model without relationship between reflective learning - culture	210.94	42.82	0.09	0.07	0.83	0.85	0.89	0.89
7	Model without relationships between reflective learning-culture	287.67	76.76	0.11	0.18	0.77	0.76	0.82	0.59

Note: n = 190

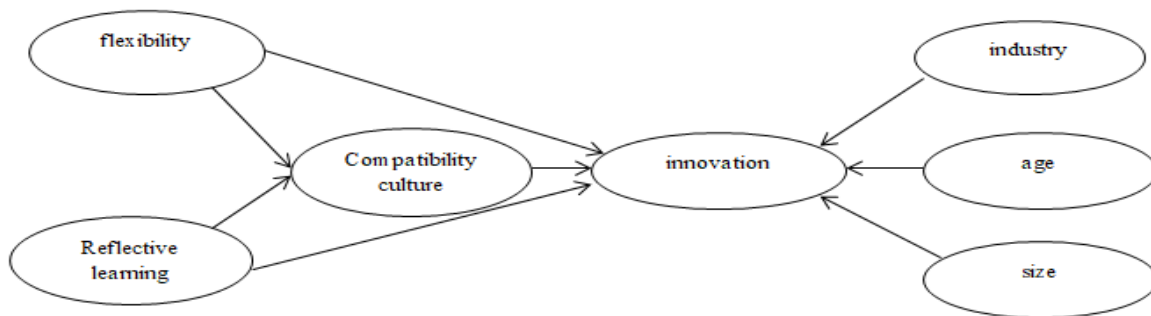


Figure 1. Theoretical model

Discussion and Conclusion

According to the cultural dynamics, the current model confirmed that the compatibility culture fully mediated the relationship between structural flexibility, reflective learning, and outcomes of product innovation. The cultural dynamics system assumed that culture was evolved in response to the internal and external pressures faced by organizations. As product and service innovation arises from the organizational efforts that entail changes and sustained commitment to new projects, this research identifies the organizational factors that facilitate the outcomes of product and service innovation. Therefore, this research may contribute to the existing literature regarding organizational innovation by increasing organizational and innovation results from cultural perspective. Organizations should continually develop new products and designs to introduce to the market. Achieving these innovations requires the cultivation of a priori creativity in an organization where changes take place and benefits are taken from re-modeling capabilities. The compatibility cultures strengthen their self-enhancing mechanisms for making change and transformation, and challenge the established beliefs and create situations that replicate consistently with the environments. They consider organizations as alternatives for avoiding their paths in the formation stage. The theory of compatibility attempts to prorate culture as a phenomenon, which is constantly changing the values, hypotheses and beliefs. While many cultural studies classify the dominant culture in the organization, culture management presses may benefit from this study's findings because these results showed that culture was able to develop and improve its change quality, and identified the firms with more and less acceptable positions in the business. As culture offered sustainability values for shaping the future path of organization, the compatibility culture had the ability to make some changes in the daily routine and analyzed the passive learning methods. It integrated culture, values, and intellectual and practical approaches into the basic components of the organization. The majority of company members believed that making some fundamental changes was a conventional action taken by many organizations. Organizations are changing rapidly, and evidence suggested that the underlying challenges put the old management hypothesis into cultural values. In many corporate technologies such as Google, Apple, or Samsung, the employees try to achieve a high-level position. From the outset, they have entered the culture, which viewed change as an essential part of their job. In cultural research, flexible culture has been identified as a kind of culture that benefits from corporate innovation. Flexible cultures focus on the outward orientation. Flexible values facilitate the introduction and success of innovation. As the structures provide convenient frameworks for transformation, companies need to establish flexibility norms and values for making changes. The compatibility culture goes beyond the idea of flexibility as a value for adaptation, because the values change through the development stages. This view can be considered as a complementary for the old concept of culture, which is based on unchanged values. The dynamic system perspective assumes that values can be changed at the development stage. In fact, values can change due to the introduction of new measures and reflective learning systems. These records are able to transform the values and assumptions of a culture. Environmental pressures directly affect how we learn and think and what we do in the organization. As the changes can put pressure on organizations to make some practical changes and use reflective learning for change cultures, it seems that internal environments facilitate the innovation process for replicating the change. In this study, it was found that the compatibility culture characteristic required special learning processes and activities to facilitate the change process. For example, when Steve Jobs joined Apple Company, he asked some questions regarding the activities, norms, and objectives of TMT and changed the corporate culture. Similarly, in the early 1990s, the president of Samsung Company, Lee Kun-hee, changed the main company's direction through adding capital of innovation and global networks for design and shifted the company's culture to focus on the consumer and quality. This helped Samsung Company to surpass Sony Japan Company rival. Therefore, the compatibility culture was founded on reflective learning that analyzed activities, goals and norms, and the hypothesis for risk, the transfer and self-leadership was an effective way to understand the company. Additionally, reflective learning identified organizations for sustainable change and set up a series of activities to ceases it. The current study's result was consistent with the dominant definition of culture, where the innovation was a combination

of change, growth, and natural risk. The second organizational factor led to the emergence of the compatibility culture and structural flexibility setting the routine work of organizations involved in a social interaction. Structural reflexivity allowed the organizations to make progress and releasing themselves from their history through fostering the compatibility feature that aligned transformation with core corporate value and treated changeability as a self-enhancing value mechanism. This research's findings indicated that implementing the compatibility culture required the implementation of previous flexible structures. These findings already contributed to the culture's current viewpoint based on a typology approach assuming that culture could determine how we see and manage our activities and how learning could take place. According to Lin et al. (2013), when the organization's members instilled cultural values, they engaged individuals in the shared activities in terms of organizational learning and established a link among the companies. "Culture heavily influence learning and corporate compatibility activities. Giorgi et al. (2015) summarized the cultural impacts of activities based on the old social research work on the culturally determined actions. These studies adopted a widely accepted hypothesis in the past that cultures were made of static characteristics and continued unchanged over time. In another study, Durisin and Todorova (2012) found new organizational units, which replicated the old organizational culture and reinforced their learning processes and structures. The concept of path dependence developed by Sydow et al. (2009) suggesting that the culture could easily develop at this stage and affect the others variables. The results of this study based on the dynamic system perspective on culture suggested that organizational culture was able to shape new structured behaviors and meanings over time and guided the group in the path of liberation and adaptability. This research suggested that the compatibility culture boosted the direct relationships between learning processes, business activities and products and services outcomes. Integrating structural flexibility and reflective learning may affect the outcomes of product and service innovation via the compatibility culture. Both reflective learning and structural flexibility alone had little impact on the product innovation outcomes. The mediating role of compatibility culture in the relationship between reflective learning and structural flexibility for achieving the innovation might have several practical implications (for example, Zara Company empowers its employees to facilitate the customer-driven co-creation including the creation of a permanent change culture for adaptation suited for the customer requirements ranging from design to implementation). This study's results revealed that the product and service innovation outcomes entailed setting special conditions to provide the members with the ability to produce and introduce new products and services in the market. Some researches suggested that the success or failure of product and service innovation affected the company and organization management. All educational researchers and specialists were in agreement regarding the importance of innovation. However, managers failed to manage the innovation process effectively. Since actions and learning processes affected cultural adaptation, managers must firstly invest their time and energy on these issues so that they indirectly change the company's values. Therefore, the results implicated the management of organizational culture. They also indicated that organizational managers who were inclined to implement culture must firstly focus their attention on reflective learning and structural flexibility. Reflective learning facilitated the organization's potential for modifying activities and objectives for choosing better alternatives. Structural flexibility provided some effective adjustments for immobility difficulties involved in the company and promoted quick coordination for performing activities. Both factors were critical to management activity. This study had some limitations: it put an emphasis on the cross-sectional nature of data collection. However, making conclusion mitigated this limitation because of its dependency on variables. Moreover, since the used variables and measurements were not matched in terms of the duration of the data collection, the causal effects were not contingent on time. The second limitation in our review was related to the perceptual variables evaluated by managers, because managers are members of the top management team and have an influential role in decision-making. Therefore, the choice of two informers significantly reduced the evaluation of culture. Additionally, accessing two important informers might minimize the bias involved in the current approach when collecting perceptual data. The third constraint of

the dependent variable in this model was attributed to the product and service innovation outcomes and the lack of financial performance originated from the introduction of innovation. Although measuring the financial performance could increase the likelihood of successful innovation, this article had extensively reviewed the effects of innovation on organizational performance. Therefore, this research indirectly dealt with financial performance by introducing new products and services. Future research could focus on the compatibility culture, which is full of the ability of organizational processes to generate competitive advantages. The compatibility culture feature is inherent in all kinds of organizational cultures, and is therefore linked to the central role played by this feature and the different types of culture. In addition, increased focus on organizational variables to put the leadership styles make it possible to analyze the mediating role between the management and organizational immobility measures. The analysis of the compatibility culture domain of this research significantly contributed to the existing literature regarding the dynamic view for the development of organizational culture. In the end, this research yields more effective results if it provides a deep understanding about the development and sustainability of organization compatibility culture.

Appendix x: Questionnaire

Questionnaire items

Innovation

INNO1. (Rivals). The introduction of new products and services in the market has significantly increased

INNO2. (Rivals); the solutions that you find for market needs, have greatly increased

INNO3. In your organization; the growth in the product and service innovation outcomes has increased rapidly

INN04. (Organization); the changes made to products, methods / delivery of services have rapidly raised

Structural flexibility

FLX1 (company); employees are able to carry out a wide range of possible activities that may increase the individual rotation and boost the functionality of exchange operations

FLX2 (company); multi-disciplinary teams have been created to carry out projects with a clear vision of market requirements

Reflective learning

RLEAR1. Your organization's members often take initiatives to change the ordinary ways to solve the problems

RLEAR2. People in your organization are free to make suggestions and criticisms, and replicate studies for achieving new solutions.

RLEAR3. Your organization promotes solutions to new problems using new methods

RLEAR4. People in your organization experience new ways to solve problems when faced with known problems

Compatibility culture

ADAP1. In your organization, many managers attach value for individuals and processes that can make changes.

ADAP2. Many managers make changes to provide better services to consumers, even if these changes are risky.

ADAP3. In your organization, you can change the values, assumptions, and symptoms that you think that they are not consistent with the environmental needs

ADAP4. Leaders in the organization make changes in values according to external signs.

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