

Investigating Role of Perceptual Stimulants, Social and Hedonic Innovations in Implementing Innovation

(Study in Post Bank of Zanjan Province)

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Abstract: This research aims to investigate mediating role of perceptual stimulants and hedonic and social innovations on innovation implementation in Post Bank of Zanjan Province. Innovation strategy is one of the most stable development methods. Innovation in services and presenting new or modified products to market provides competition advantage for organization and if this trend continues, organization simply can become the leader of market. In this way, it seems that investigating mediating role of perceptual stimulants and hedonic and social innovations in innovation implementation can open some way to make innovative the system of organizations, thereby, creates higher levels of performance and productivity for organizations, especially banks, and competition advantageous for them. This research from two aspects: descriptive method and data gathering, is among survey studies. The method of this research is applicable, based on study usability. Morgan table is used for specify sample size in order to estimate sample size. Based on number of population, sample size was 181. In this research, method of sampling was casual. It is transient in time dimension, because required data would be collected for hypothesis tests in specific time interval. Kolmogorov-Smirnov test is used for investigate data normality, and Regression statistical test for data analyzing. Result of this tests shows that perceptual stimulants and hedonic and social innovations play a critical role in innovation implementation in Post Bank of Zanjan Province.

Keywords: Implementing Innovation; Perceptual Stimulants; Hedonic and Social Innovations.

Introduction

Current successful organizations must pursue innovation and in order to be survived, should continuously persuade people to be innovative and adopt change phenomenon. Success is always for organizations that have high flexibility, improve quality of their service and products and can resistant against competitors who steady supply new services and products. Organizations must always persuade their staffs to change and innovation, otherwise would confront with some problems and difficulties (Robbins, 2011).

Innovation strategy is one of the steadiest methods of development. Innovation in providing new or modified services and products brings new competition advantage for organization and if this trend continues, organizations can simply become the leader of market (Klomp L, 2010). Innovation is a process where entrepreneurs can transform opportunities into presentable ideas for market. By this tool, they accelerates changes (Pishvae et al., 2011). Innovation is applying modern ideas due to creativity. In fact, innovation is implementing the idea that is created from creativity as a product or service. Today, innovation is known as one of the most important economic growth factors. Innovation needs social room as a requirement. Often, social innovations and commercial innovations overlap each other (Dehghan et al., 2012). Innovation is a critical method, where organizations can respond to technologic and market challenges through it (Hosseini, Hajipour, 2011). All types of innovation can conduct companies toward stable competitive advantage (Zareebakhsh et al., 2014). Robins emphasized that innovation makes some changes, but every changes do not called "innovation". Innovation is a fresh and novel change that is created based on new though which has no previous record, however innovation is change but every change is not innovation (Alvani, 2011). Social innovativeness refers to the degree to which consumers are eager to adopt an innovation earlier compared to other members in their social system (Goldsmith & Hofacker, 1991). Therefore, consumers with high social innovativeness are eager to adopt new products before others (Bruner & Kumar, 2007). In his empirical study, Roehrich (2004) confirmed that social innovativeness positively influences the quantity of new products that were purchased. Similarly, results of Goldsmith & Hofacker (1991) provide empirical evidence for a positive relationship between social innovativeness and new product adoption. Thus, social innovativeness represents a precursor to new product adoption, which positively affects actualized innovativeness.

Current universal community is subjected to continuous changes and transformation. To live in such a transient and variable environment, creative management is a necessity. According to experts, unpredictable and unobservable nature of affair trends and future changes is one of the most important and sensible features of software and information age where we live currently there. Under these conditions, only innovation and creativity of managers can create opportunities from ambiguity and open ways toward peak of victory. Today, almost all countries of the world follow innovation and creativity in order to promote productivity and improving economic status. And one the major reasons for increasing importance of creativity and innovation is creating competition between different under-development countries. Managers can influence on creativity of personnel, that results in a really innovative firm where innovator not only survives but also growth. Creativity is stated as a superior human need in all aspects of his/her life and extended changes and mutation in human thought and notion (Sabbaghchi et al., 2011). Based on organizational management perspective, innovation tends from introducing new and useful ideas toward general organizational processes and instructions in order to create and considering new insights and act based on these insights, subject to salient improvement in products, business, services or organizational internal processes. Now, speed of changes exceeded of predicted limits such that, innovation and creativity considered as a substantial principle of critical factors of organization survival and innovation is known as the most important resource of competitive advantage. Under these conditions, organizations could be succeeded subject to include innovative and creative workforce, and more important, include managers who can create creative and innovative space in organization (Shahhoseini & Salehi, 2011). Robins emphasized that innovation makes some changes, but every changes do not called "innovation". Innovation is a fresh and novel change that is created based on new though which has no previous record, however innovation is change but every change is not innovation (Alvani, 2011). Varking explained that, innovation is any revised case that is designed and realized, raising the strength of organization status against rivals, also facilitate a long term competitive advantage. In the case of human resources, innovative organizations actively encourage updated training and knowledge development of their members. They provide job safety for their employees in superior level to decrease fear of exclusion due to mistake and courage tem to be flexible (changeable). When a new notion evolved, pioneers will raise active and hunger change and support it, overcome problems, and ensure that innovation would be implemented (Keyhan, 2011). Realized innovation returns to adoption behaviors for new product. Initialization trend of innovation changes among participants and during time, for a participant, and innovation ideas of a contributing factor with higher initialization rate, have higher

relative value and implementing innovation promotes if it is the priority of other members. This reasoning is convictional respect to theory "popularity of idea is in its quality or value index" (Heidenreich, 2015).

Regarding the importance of issue and studies and research background, researcher are trying to find the answer of this question "What is the role of perceptual stimulants, hedonic and social innovations on innovation implementation in Post Bank of Zanjan province?"

Key definitions and concepts

Current successful organizations must looking for innovation and in order to be survive, must continuously encourage people to be innovative and adopt change phenomenon. Success is always for organizations that have high flexibility, improved the quality of their products and services and always be able to resistant against competitors through providing new products and services. Organizations should always encourage their staffs to be innovative and create changes, otherwise will confront with problems (Robbins & Stephan, 2011). Koontz believed that innovation is making new thought and notions, practical (applicable) (Alvani, 2011).

Innovation: Is a skill that comes with other cooperation. Major variations in technologic developments that are representative of the latest management notions or production methods called "innovation". Innovation is a really salient and controversial phenomenon. Generally, innovation is a rare phenomenon that exists in some people . There is long way from creativeness to innovation and transforming notion into new product or service spends a long time and severe efforts (Alvani, 2011).

Perceptual stimulants: Activation grade of individuals to receive input stimulants from every internal or external position of events, factors or even objects called "emotions". Perceptual stimulants are normally emotion size that is received by a person from various sources in a given time. In this way, people who experience very changes and new cases in their daily life have higher perceptual emotions compare with who have a fix routine (Steenkamp & Baumgartner, 1992).

Social innovation: Social innovation refers to passion grade of consumers to catch innovation earlier than other members of their community. Therefore, consumers with higher social innovation are more eager to catch new products before others. In practical studies, Rohenritch confirmed that social innovations have positive effect on amount of new purchased products. Social innovation is passion level of consumers to adopt innovations compared with other factors in social systems. So, consumers with higher social innovation are preferred than others in adopting new products (Bruner & Kumar, 2007).

Hedonic innovation: Consumers with hedonic innovation pursue more diversity interested on experiencing innovation and new products and joy to have a chance to buy unfamiliar products. Sometimes, change their buying behaviors to receive thriller experiences about consumption (Baumgartner & Kamp, 1996).

Actualize innovation: Realized innovations refer to adoption behavior for new products. For example, describes real comprehensiveness of ideas, information and products, especially recent adoptions: where consumers have relatively higher speed in adopting new products than others. Therefore, realized innovation is same real behaviors of consumers relative to features or attitudes of individuals, and implementation refers to rate of successful implementation of initial ideas in user innovation community. Procedure of innovation initialization among participants and during time, changes for a participant and innovation ideas from a contributing factor with higher initialization rate, have relatively higher value and innovation initialization would be promoted if was other's preference, an idea with high opinion in popular community. This reasoning is convictional respect to theory "popularity of idea is in its quality or value index" (Heidenreich, 2015).

Today the importance and necessity of innovation and making change is known and managers cannot ignore it for a long time. Fast changing communities due to knowledge and technology, changed insights and people needs, changing human relationships, and changing all aspects of life and culture make major changes in organizations. Because if these fast changing, Bennis called systems "temporary systems". They are not same as before and later would not be same as today. This progress and changing requires sufficient knowledge and preparedness behalf of organizations managers to be coordinated with ever changing systems. Changing and innovation are components of natural human social life and during last period, this phenomenon is created so fast and in every context. What is new is identifying, importance and applying it extensively, especially for dynamic organizations relative to environment.

Innovation is a process where people can pitch their imagine ,then ground it back, engineering it in order to transform to idea, then convert these ideas to practical, useful and proper ideas through idea management. (Creativity) Follows it, transforms ideas to product, service and process and finally by commercializing new or developed products, services and process in market, innovation process terminates. In other word, creativity is perquisite of innovation but worth mentioning that from creativity to innovation is long way that often is facilitated

by entrepreneurs. This study is investigated the effect of resistance against innovation on implementing innovation by emphasize on mediating role of perceptual stimulants, social innovations and hedonic innovations ,respecting to importance of innovation and its dimensions (Study in Post bank of Zanjan province) .

Research objectives

- 1. Explaining effect of hedonic innovations on implementing innovation
- 2. Explaining effect of social innovation on implementing innovation
- 3. Explaining effect of perceived stimulants by staffs resistance against innovation

Research questions

- 1- Does perceived stimulants by employees have significant effect on implementing innovation?
- 2- Does social innovation have significant effect on implementing innovation?
- 3- Does hedonic stimulants have significant effect on implementing innovation?

Research assumptions

- 1- Social innovation has significant effect on implementing innovation
- 2- Perceived stimulants by employees have significant effect on implementing innovation
- 3- Hedonic innovation have significant effect on implementing innovation

Materials and Methods

This research is descriptive respect to objective and is a survey study, respect to data collection. Method of this research is applicable respect to research usability. And respect to time, is temporary, because data required for hypothesis tests would be collected in specific periods (2015 October to 2015 February). In this research the most important data collection methods are:

1) **Librarian studies:** in this part, librarian resources, articles and required books are used for collecting information in theoretic basics and literature, and research fish is used for collecting information.

2) **Field researches:** in this section, survey method and questionnaire tools are used for collecting information. After transparently forming concepts and hypothesis of research, and providing initial and necessary information relative to them, it is turn to prepare questionnaire. In this research, among different available spectrums related to questionnaires, Likert five score spectrum is used (1 to5) where '1' means lowest score and '5' means highest score.

Population and sample: All people who have at least one or more common attributes, called "population" (N). In sampling, defining and specifying population is precedence.

Parameter: A measurement that describe traits of a population.

Population is among customers (client) of Post Bank of Zanjan. Stochastic method is used. Morgan Table is used for determining sample size and according population number, sample size is 181.

Research model

Figure1 presents conceptual model of study.

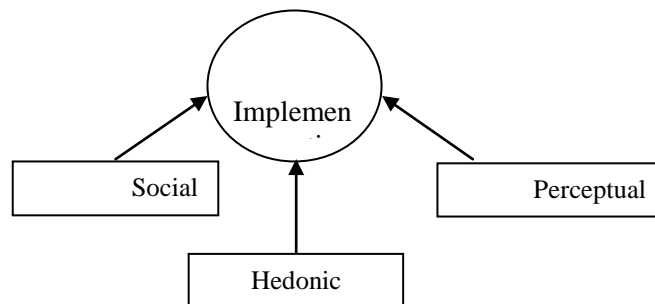


Figure 1. Conceptual model .Source (Sven Heidenreich & Tobias Kraemer, 2015)

As this figure shows, effect of independent variable of three factors: perceptual stimulants, hedonic innovation and social on dependent variable (implementing innovation) is investigated.

Data analysis method

In current research, following statistical software and test are used respecting hypothesis natures and variable types. Descriptive statistic such as exact frequency distribution tables and frequency percentage are used for explaining population traits, Kolmogorov-Smirnov test is used for investigating data normality and correlation and regression tests are implemented.

Results

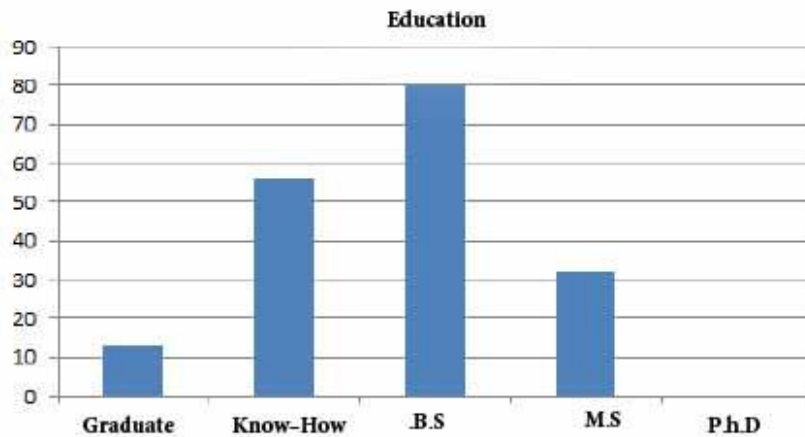
Descriptive statistics of respondents' traits

Table 1. Frequency distribution based on education.

Education	Frequency	Frequency percentage
Graduate	13	7
Know-how	56	31
B.S	80	44
M.S	32	18
PhD	0	0
Total	181	100

According to table of respondent frequency distribution based on education, 13 graduates, 56 know-how, 80 B.S, 32 M.S and 0 PhD where frequency of graduates =7%, know-how =31%, B.S= 44%, M.S =18% and PhD= 0%.

Diagram2: frequency distribution of respondents based on education



Data normality test

Because observation distribution is a determinant in statistical technique, this research utilizes Kolmogorov-Smirnov test for data normality test. Its results are presented in following table.

Table 2. Data normality test.

ρ	Kolmogorov-Smirnov		
	results Calculation	Freedom	Significance indicator
Implementing innovation	0.13	181	0.01
Hedonic innovation	100	181	1
Perceptual stimulants	110	181	0
Social innovation	121	181	0

Typically, if significance level is higher than 0.05 in Kolmogorov-Smirnov test that is shown in Table 2 as significance index (indicator), data can be assumed normal in high confidence. Otherwise, cannot say that data distribution is normal. Respecting above table and values of resistance against innovation, innovation initialization, perceptual stimulants, hedonic innovations and social innovation it is obvious that data are not normal.

Research hypothesis tests

H1: correlation between social innovation and implementing innovation

Results of correlation tests between social innovation and implementing innovation are presented in following tables.

Table 3. Result of Spearman correlation test between social innovation and implementing innovation.

	Social innovation	Implementing innovation
Social innovation	Spearman correlation	1
	Significance indicator	0
	number	181
Implementing innovation	Spearman correlation	0.583
	Significance indicator	0
	number	181

In table 3, correlation coefficient between two variables 'social innovation' and 'implementing innovation' is 0.583 and its significance level is 0.000. because significance level is less than 0.01 then correlation between two variables 'social innovation' and 'implementing innovation' is acceptable and test results show that H2 is confirmed, therefore there is a significant relation between social innovation and implementing innovation.

Regression model for 'social innovation' and 'implementing innovation': following tables present results of regression test.

Table 4. Summary of regression test.

model	regression coefficient	explanation coefficient	standardized regression coefficient	standard error	significance indicator	Dorbin-Watson indicator
1	0.521	0.271	0.355	6.875	0	1.768

As above table shows, Durbin-Watson value is 1.768, then the assumption of independency of data error for regression test is confirmed and regression results are valid and acceptable.

Table 5. Variance analysis table.

model	SS	df	MS	calculated F	significance indicator
regression	2494.706	1	2494.706	52.766	0

Table 6. Regression test results to determine model coefficients.

model			standardized coefficient	calculated t- student	significance indicator
	regression coefficient	standard error	Coefficient		
fixed number	35.945	4.477		8.028	0
innovation social	0.34	0.047	0.602	7.264	0

Errors have normal distribution with average '0' therefore, normality assumption of errors is confirmed, thereby, this regression test is valid and its results are acceptable. According to above table, social innovation with 99% confidence is a relevant variable for implementing innovation. In Table 6 value of calculated explanation coefficient is presented. Calculated explanation coefficient shows that independent variable of this assumption can predicate about 27% of dependent variables. Now we can present regression model.

$$Y=35.945+0.340X$$

In this model, Y= implementing innovation, X= social innovation and fixed number of equation= 35.945.

H2: correlation between perceptual stimulants and implementing innovation

Results of correlation tests between perceptual stimulants and implementing innovation are presented in following table.

Table 7. Result of Spearman correlation test between perceptual stimulants and implementing innovation.

	perceptual stimulants	implementing innovation
perceptual stimulants	correlation Spearman	1
	indicator significance	0.036
	number	181
implementing innovation	correlation Spearman	123
	indicator significance	0.036
	number	181

In Table 7, correlation coefficient between two variables 'perceptual stimulant' and 'implementing innovation' is 0.123 and significance level is 0.036. As significance level is less than 0.05, so correlation between two variables 'perceptual stimulant' and 'implementing innovation' is acceptable and result of correlation test shows that H4 is confirmed. Therefore, there is a significant relation between perceptual stimulants and implementing innovation.

Regression model: The following table presents result of regression test for perceived stimulus and implementing innovation.

Table 8. Summary of regression test.

model	regression coefficient	explanation coefficient	standardized regression coefficient	standard error	significance indicator	Durbin- Watson indicator
1	723	522	231	5.236	0	1.932

As above table shows, Durbin-Watson value is 1.932, then the assumption of independency of data error for regression test is confirmed and regression results are valid and acceptable.

Table 9. Variance analysis table.

model	SS	df	MS	calculated F	significance indicator
regression	2094.722	1	2094.722	52.126	0

Table 10. Result of regression test to determine model coefficients.

model			standardized coefficient	calculated t-student	significance indicator
	coefficient regression	error standard	Coefficient		
fixed number	33.652	3.230		8.028	0
Perceptual stimulants	0.300	0.022	0.501	8.325	0

Errors have normal distribution with average '0' therefore, normality assumption of errors is confirmed, thereby, this regression test is valid and its results are acceptable. According to above table, social innovation with 99% confidence is a relevant variable for implementing innovation. In Table 10 value of calculated explanation coefficient is presented. Calculated explanation coefficient shows that independent variable of this assumption can predicate about 52% of dependent variables. Now we can present regression model.

$$Y=33.652+0.300X$$

X= social innovation and fixed number of equation= 33.652.

H3: correlation between hedonic innovation and implementing innovation

Following tables present the result of correlation tests between hedonic innovation and implementing innovation.

Table 11. Result of Spearman correlation test between hedonic innovation and implementing innovation.

	hedonic innovation	implementing innovation
hedonic innovation	Spearman correlation	1
	significance indicator	0.016
	Number	181
implementing innovation	Spearman correlation	0.365
	significance indicator	0.016
	Number	181

In Table 11, correlation coefficient between two variables 'hedonic innovation' and 'implementing innovation' is 0.365 and significance level is 0.016. As significance level is less than 0.05, so correlation between two variables 'hedonic innovation' and 'implementing innovation' is acceptable and result of correlation test shows that H6 is confirmed. Therefore, there is a significant relation between hedonic innovation and implementing innovation.

Egression model for hedonic innovation and implementing innovation: following tables present the result of regression test:

Table 12. Summary of regression test.

model	regression coefficient	explanation coefficient	standardized regression coefficient	standard error	significance indicator	Dorbin- Watson indicator
1	0.332	0.110	0.496	4.963	0.000	2.452

As above table shows, Durbin-Watson value is 2.452, then the assumption of independency of data error for regression test is confirmed and regression results are valid and acceptable.

Table 13. Variance analysis table.

Model	SS	df	MS	calculated F	significance indicator
regression	2325.12	1	2356.25	49.235	0.000

Table 14. Result of regression test to determine model coefficients.

model			standardized	calculated t- student	significance indicator
	regression coefficient	standard error	Coefficient		
fixed number	22.652	3.325		7.953	0.000
Hedonic innovation	0.365	0.039	0.496	7.369	0.000

Errors have normal distribution with average '0' therefore, normality assumption of errors is confirmed, thereby, this regression test is valid and its results are acceptable. According to above table, social innovation with 99% confidence is a relevant variable for implementing innovation. In Table 14 value of calculated explanation coefficient is presented. Calculated explanation coefficient shows that independent variable of this assumption can predicate about 11% of dependent variables. Now we can present regression model.

$$Y=22.652+0.365X$$

In this model, Y= implementing innovation, X= social innovation and fixed number of equation= 22.652.

Conclusion based on research findings Spearman correlation test is used for investigating hypothesizes, where Spearman correlation test showed that:

H1: correlation between social innovation and implementing innovation

Result: correlation coefficient between two variables 'social innovation' and 'implementing innovation' is 0.583 and its significance level is 0.000. because significance level is less than 0.01 then correlation between two variables 'social innovation' and 'implementing innovation' is acceptable and test results show that H2 is confirmed, therefore there is a significant relation between social innovation and implementing innovation.

H2: correlation between perceptual stimulants and implementing innovation

Correlation coefficient between two variables 'perceptual stimulants' and 'implementing innovation' is 0.123 and its significance level is 0.036. Because significance level is less than 0.05 then correlation between two variables 'perceptual stimulants' and 'implementing innovation' is acceptable and test results show that H4 is confirmed, therefore there is a significant relation between perceptual stimulants and implementing innovation.

H3: correlation between hedonic innovation and implementing innovation

Result: correlation coefficient between two variables 'hedonic innovation' and 'implementing innovation' is 0.365 and its significance level is 0.016. because significance level is less than 0.05 then correlation between two variables 'hedonic innovation' and 'implementing innovation' is acceptable and test results show that H6 is confirmed, therefore there is a significant relation between perceptual stimulants and implementing innovation.

Conclusion

In H1(first hypothesis) relative to significance of relation between variables of this hypothesis, it could be concluded that ,because in a similar environment like Bank, respecting to nature of organization working and high job stress, personnel tend to be more conservative and continuously try to control situations, and relative to total space of organization, and common belief among personnel, a single organization like 'Bank', staffs act in one side and often try to adopt and implement innovation and thereby, bring more confidence for them, for example, all operators may welcome to installing CCTV cameras in booths whereas, they may ignore the size of new technologic innovations. In H2, it is clear that more positive or negative stimulants and more comprehensive ratio of personnel received information to any new technology functionality, result in more influence on implementing innovation.

In H3, correlation test also showed that hypothesis and significance relation between hedonic innovation and implementing innovation are confirmed and considering all aforementioned issues, makes possible to explain the effect of adoption with hedonic innovation level in personnel on implementing innovation. It shows that personnel who are looking for innovation, adopt it faster and try severe to implement it.

Practical suggestions

H1-based suggestions

- 1- It suggests to bank managers to get approaches in order to protect innovations
- 2- It suggests to bank managers to provide proper organizational space in order to create innovations and use protective rules in presenting innovations.

H2-based suggestions

- 1- It suggests to bank managers to implement exact control method and monitoring their staff such that personnel do not be pessimist and have independence and freedom in their jobs.
- 2- It suggests to managers and decision makers that use the latest technologic products in line with hedonic innovation.

H3-based suggestions

- 1- It suggests to managers and decision makers that increase value among consumers through continuous innovation.
- 2- It suggests to managers and decision makers to plan for changing personnel tasks in order to experience different tasks during their service.

Conflict of Interest

The authors declare no conflict of interest.

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