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Innovation-Based Change Management

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Abstract
The paper review introduction about the change management and innovation in general, then an overview of a selected definitions for innovation and change management from the point of view of some researchers. For the benefits of the readers the researcher prepared and tabulated these definitions into two tables, table (1) for change management definitions & table (2) for innovation definitions.Also there is a question arises that; is the innovation risky? Many researchers argued that yes it is risky but there is a large return on investment. Others say that "you can't innovate and grow unless you're willing to take risks".The paper also discussed the relationship between innovation and culture of the firm, Research has shown that a strong corporate culture can give a company a powerful advantage over its competitors; others say that; In order for innovative efforts to succeed, the firm's culture should be supportive of innovation.Then the relationship between incentives and innovation where found that there are a strong relationship between them as some authors say that a company needs to provide staff with an incentive to innovate. With no reward, there is no good reason for employees to suggest or try new ideas. Table (3) shows some change kinds that lead to innovations.Finally, a list of the top 20 countries of the world for innovation, as ranked by the Global Innovation Index (by overall score) in table(4), then in table(5) a list of some Arab countries according to their rank and their efficiency ratio out of 1.
Keywords: Change, Change Management, Innovation

1. Introduction

The business environment today, is going through continuous change, and is totally different from yesterday. What is appropriate today may not work tomorrow, therefore, the management of an organization should adapt to the changes in the environment, and accommodate accordingly. There are many reasons for change in organizations. Two important sources are: internal and external. Internal changes are controlled by organizations that can take the initiative in the change process. On the other hand, organizations only react to external changes and events that occur outside of their control.

In today's business environment, there are many factors that can lead to rapid and constant change such as: technological development, intense competition, globalization, the digital and knowledge economy, and visionary leaders. (Najm and Alhmeidiyeen, 2015)

Regardless of the type of change being pursued, firms' leaders must successfully manage change and innovation within their firms, and develop their capability to learn quickly to recognize the need for change and respond appropriately to it.

Innovation is a structured practice and process that precedes change, whereas change is the end result; the product of innovation. We have to keep in mind that; All innovation results in change…But not all change is innovation.

Whereas the effective change management will ensure that the individuals affected are aware of why the changes are necessary, how they will be implemented, their individual role in the change process and the benefits the change will bring. Any change needs to be well thought out, have the support of senior managers, the support of the majority of those affected and deliver something better than was there before (Lockitt, 2004) added.

When the present situation is not satisfying the desire, and change to a new status that matches future requirements is needed. The outcome of the change must rise to customer expectations, and achieve the objectives of our organization (Al hmeidiyeen, 2009).

Change comes from many sources, but when it comes to innovation, the main sources are incremental innovation and disruptive innovation. The change process can be equally effective in change efforts to reduce cost or enhance quality in the factory or supply-chain. Being innovative means being open to ideas about new products and processes, and having the capability to develop and introduce them successfully.

The study will be limited to the following articles:-

- *Innovation versus Change Management.* In this article compare the concept of change management versus innovation and some definitions prepared to help the reader to have some idea about these expressions, also some kinds of innovation and where it leads.
- *Innovation Risk.* In this article discussing is the innovation risky and we have to handle this risk and get its benefits.
- *Innovation and Organization's Culture.* The organization's culture has a strong effect on innovation; the culture of an organization is a reflection of leadership group.

- *Incentive to innovate.* The incentives are nervous system of the innovation.
- *Global Innovation Index.* A table that it contains first 20 top countries in innovation.
- *Arab countries and Innovation.* Table (5) shows a few Arab countries that have support the innovation.

2. Innovation versus Change Management

Change management is not an isolated concept that simply appeared out of thin air, nor is it the mere result of a simple decision taken at the top hierarchical levels. Change management can be defined; the art of leading an organization during a change process, to achieve the desired change, without harming the human dimension of the employees in the organization (Al hmeidiyeen, 2009). Also it is a systematic approach to deal with change, both from the perspective of an organization and on the individual level, proactively addressing adapting to change, controlling change, and effecting change. On the other hand, innovation can be defined as the outcome of a set of activities that use knowledge to create new value to those benefiting from its use (Sousa, 2006). According to Weiss (2003), change management is the discipline that ensures that both organizations and employees meet new performance targets rapidly and effectively.

Sumita (2008) stated that "Almost one century ago, Dr Schumpeter originally defined the word of “innovation” as “a new fusion” or “a creative destruction.”

Also Schumpeter proposed a list of various types of innovations:

· Introduction of a new product or a qualitative change in an existing product;
· Process innovation new to an industry;
· The opening of a new market;
· Development of new sources of supply for raw materials or other inputs;
· Changes in industrial organization.

The word “innovation” does not only mean technological progress, but it includes the renewal of business models as well. One of the important elements of innovation is creation of some kind of new knowledge and wisdom through the fusion of different ones, as Dr Schumpeter mentioned “new fusion”. Usually, knowledge and wisdom exist in intangible assets (Sumita, 2008).

Sousa (2006) argued that Sustainable innovation is achieved by successfully managing this positive feedback loop of stimulating innovation, through the sharing and creation of knowledge and using the new knowledge resulting from the innovation process to feed into the organizational knowledge base.

On the other side Innovation is not a competitive strategy in itself, but can enhance any competitive strategy once the strategy has been articulated. Also Innovation can enhance how a firm conducts day-to-day operations, increase the rate at which all employees generate ideas for new products and services, and facilitate quick and efficient commercialization of new product (Susman, et al, 2006).

Susman et al,(2006) added that " Becoming more innovative means increasing the rate at which new products and services that customers value are successfully brought to market each year".

On other hand Innovation should reinforce the basis on which the firm chooses to compete, i.e., price or differentiation. Ideally, innovation enhances a core competence that permits the firm to surpass its competition on dimensions that its customers value.

The main key role of innovation to be in the incremental improvements of existing products and the consistent effort of introducing new ones, is that organizations could become stronger and have the ability to compete effectively in the long term to achieve the following goals:

(1) To increase profitability levels in the short term and give organizations the ability to deliver consistently the type of returns which shareholders expect;

(2) To achieve a dominant position in the marketplace by raising market share and having the edge over competitors in terms of uniqueness or strength of products and services in those features which the customer values most as Zairi (1995) argued.

Table 1. Main Definitions of Change Management

Definition	Source
The discipline that ensures organizations and employees meet new and existing performance targets rapidly and effectively.	Weiss, 2003
An area of professional practice.	Nickols, 2006
The art of leading an organization during a change process, to achieve the desired change, without harming the human dimension of the employees in the organization.	Al hmeidiyeen, 2009
Source: Al hmeidiyeen,M. (2009),p31.	

Table (1) above shows selected definitions of change management.

For this study, change management means as operational definition" The art of leading an organization during a change process, to achieve the desired change ".

Table 2. Main Definitions of Innovation

Definition	Source
The outcome of a set of activities that use knowledge to create new value to those benefiting from its use.	Sousa, 2006
Innovation as a new fusion or a creative destruction.	Schumpeter cited in Sumita, 2008
Application of a newly created valuable wisdom or knowledge through fusion of existing ones to the real world in the way it has a destructive impact on the existing system or rules.	Sumita, 2008
A series of activities to create a new knowledge or wisdom by utilizing both its own intellectual assets and outside resources, and to appeal it to the market.	Sumita, 2008
The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.	Tiwari, 2008
* Prepared by Researcher	

Table (2) above shows selected definitions of innovation which focus on some kinds of innovations adopted in this paper. This study adopted the following definition of innovation as operational definition" The outcome of a set of activities that use knowledge to create new value to those benefiting from its use (Sousa, 2006).

Table 3. Innovation Kinds

Change type	Description
Organizational Change leading to innovation	Organizational change counts as innovation only if there is a measurable change in output, such as increased productivity or sales.
Cultural Change leading to innovation	Research has shown that a strong corporate culture can give a company a powerful advantage over its competitors, especially in highly competitive and commodity-like markets. Also the organizational culture is directly linked to the organization's productivity and profitability.
Technological Change leading to innovation	Technological product and process innovations comprise implemented technologically new products and processes and significant technological improvements in products and processes.
Knowledge Assets Change leading to innovation [1]	The tangible asset or what so called solid asset and the second part is the intangible asset which is mainly based on the intellectual properties, patents, trademarks, goodwill names, and positioning. Also what is available or kept in the brain of the key persons.
Reengineering leading to innovation	Radical change, top down, new organizational structure
* Prepared by Researcher	

Table (3) above shows some kinds of innovation presented by the researchers, and then there are many kinds of change such as: organizational, cultural, technology, and knowledge change.

3. Innovation Risk

Risk management is a way to deal with uncertainty, yes innovation is risky, because the problem with innovation is you don't know the outcome until you try something**.** The results will fall somewhere between total failure and complete success; Here where the risk lies.

Ashford, (2000) argued that Innovation is risky, but large returns on investment can be realized only with some risk taking. Also added, for some regulated firms that have lost their innovative capabilities, these risks are too large to take.

Encouraging new entrants and competitors will not be welcomed by firms whose technology or products are likely to be displaced or replaced. Others like Wince-Smith, (2005) stated that you can't innovate and grow unless you're willing to take risks.

The innovation process involves risk both for the firm running the process and employees participating in the process. The firm must invest resources in the process and it must be willing to implement creative ideas which have the potential to become innovations. Creative ideas are inherently more risky than incremental improvement ideas. Unless the firm is willing to take on this risk, its innovation investment will bring only incremental results.

Loewe, and Chen, (2007) said that innovation is inherently risky and always involves making big bets on unproven concepts. But most of the risks can be reduced by systematically testing the key questions about a new opportunity using focused experiments in the marketplace.

The key finding by Borgelt and Falk (2007) is that the accurate application of, and interaction between leadership and management releases the social capital, along with related identity and knowledge resources that helps address the tension between risk management and innovation.

4. Innovation and Organization's Culture

The culture of an organization is a reflection of the personality of the leader or the personalities of the leadership group; therefore, organizational transformation always begins with the personal transformation of the leaders. The most important component of the informal organization is the firm's culture. Organizational culture includes the norms, values and beliefs that organizational members share (Schneider, 1990), and is shaped by opinion leaders, history, and by work that is valued and rewarded in the company.

Research has shown that a strong corporate culture can give a company a powerful advantage over its competitors, especially in highly competitive and commodity-like markets (Kotter and Heskett 1992; Burt et al., 1994). In order for innovative efforts to succeed, the firm's culture should be supportive of innovation. An innovation-supportive culture is one that values creativity and cooperation; further an innovative culture should seek to conquer barriers to innovation (Susman et al, 2006).

Others see that an innovative culture should value experimentation and should understand that sometimes you'll need to "Fail early and often to succeed sooner" (Kelley, 2001).

Also employees should understand that learning from failures is often a key to success.

Tippelt and Amoros (2012) argued that the basic principles of change to an organization's culture as follows:

- The organizational culture is directly linked to the organization's productivity and profitability.
- Basically, organizational culture can be defined as "the sum of all customs which distinguish a corporation from other businesses in the same industry".

5. Incentive to Innovate

Top management needs to adopt a clear approach to change management that can motivate all organization' employees to participate and encourage them in its change programs.

Organizations must involve everyone in the innovation process. Everybody in the company must contribute, and for the lower-level employees, their contribution must be more than just manual labor (Tucker 2001).

Tippelt and Amoros (2012) see that a company needs to provide staff with an incentive to innovate. With no reward, there is no good reason for employees to suggest or try new ideas. The first step in creating an innovative organization is to include change in an employee's goals, performance management process, and compensation plan. This needs to be implemented throughout the organization.

Also they added that successful companies realize that, on one hand, the key to their success lies in the high level of motivation, commitment and effort of their staff members and, on the other hand, in their capacity to generate new knowledge and to incorporate it in their products and services.

Ferreira, et al, (2012) argued that private firms take more risks, invest more in new products and technologies, and pursue more radical innovations. Private firms are more likely to choose projects that are complex, difficult to describe and untested.

Conversely, public firms choose more conventional projects. They find it difficult to pursue complex projects that the market does not appear to understand well. Public firms go private after adverse shocks, when it is clear that their business models are no longer working, and there is a need for restructuring.

Others said that innovation is an outgrowth of the people and the culture of the firm. If people are encouraged to innovate and compensated and motivated appropriately, the culture and processes will follow (Hering and Phillips 2005).

6. Global Innovation Index

The latest index was published in 2014. To rank the countries, the study measured both innovation inputs and outputs. Innovation inputs included government and policy, education and the innovation environment. Outputs included patents, technology transfer, and other R&D results; business performance, such as labor productivity and total shareholder returns; and the impact of innovation on business migration and economic growth. Global Innovation Index aims to capture the multi-dimensional facets of innovation and provide the tools that can assist in tailoring policies to promote long-term output growth, improved productivity, and job growth. (www.globalinnovationindex.org)

Table 4. Global Innovation Index

Rank	Country	Overall score	Innovation Input	Innovation Output	Efficiency Ratio
1	Switzerland	66.59	66.52	66.65	1.0
2	Sweden	61.36	67.86	54.86	0.81
3	United Kingdom	61.25	68.20	54.30	0.80
4	Netherlands	61.14	64.18	58.09	0.91
5	United States of America	60.31	69.19	51.42	0.74
6	Finland	59.51	66.67	52.35	0.79
7	Hong Kong	59.43	70.65	48.21	0.68
8	Singapore	59.41	72.27	46.56	0.64
9	Denmark	58.34	66.34	50.35	0.76
10	Ireland	57.91	64.09	51.73	0.81
11	Canada	57.60	64.76	50.45	0.78
12	Luxembourg	56.57	59.95	53.20	0.89
13	Iceland	56.40	59.65	53.14	0.89
14	Israel	55.98	59.82	52.14	0.87
15	Germany	55.83	59.78	51.88	0.87
16	Norway	55.64	63.39	47.88	0.76
17	New Zealand	54.46	62.76	46.15	0.74
18	South Korea	53.31	62.10	44.53	0.72
19	Australia	53.07	64.15	41.99	0.65
20	France	52.83	59.03	46.64	0.79
www.globalinnovationindex.org					

The above is a list in table (4) of the top 20 countries for innovation, as ranked by the Global Innovation Index (by overall score):

7. Arab Countries and Innovation

Table 5. Global Innovation Index for some Arab Countries

Rank	Country	Overall score	Efficiency Ratio
38	Saudi Arabia	41.6	0.74
47	Qatar	40.3	0.68
62	Bahrain	36.3	0.57
64	Jordan	36.2	0.56
69	Kuwait	35.2	0.52
75	Oman	33.9	0.48
77	Lebanon	33.6	0.46
78	Tunisia	32.9	0.46
84	Morocco	32.2	0.42
99	Egypt	30.0	0.31
133	Algeria	24.2	0.07
141	Yemen	19.5	0.01
143	Sudan	12.7	0.00

Table 5 above shows that, the Arab countries come in low order of the Global Innovation Index, and the efficiency ratio is weak in all Arab countries.

8. Conclusions

The paper reached to the following conclusions:-

- All innovation results in change…But not all change is innovation.
- An innovative firm must move ideas from the concept stage to the evaluation stage, and then launch a new product or service.
- Innovation is risky, as you are dealing with uncertainty.
- You can't innovate and grow unless you're willing to take risks.
- A strong corporate culture can give a company a powerful advantage over its competitors.
- With no reward, there is no good reason for employees to suggest or try new ideas.
- Arab countries are lagging in innovation as shown in table (5) Saudi Arabia ranked 38 then Sudan ranked 143.
- Jordan scored the rank 64 with overall score 36.2 and efficiency ratio 0.56

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