



Impact of Information Systems on Innovation (Product Innovation, Process Innovation) - Field Study on the Housing Bank in Jordan

N. B. Bembade¹, Dr S.B.Thorat², Mr. S.B. Deshpande³

Assistant Professor,^{1,3} Director²

Department of Management

SSBES ITM College Nanded

bembde.nagesh@gmail.com¹, suryakant_thorat@yahoo.com², deshpandeshyam@hotmail.com³

Abstract

Today, an organization's success may be gauged in large part by how well it makes use of and actively promotes its information technology. As a result, many businesses today are working at full speed to discover, create, and reap the benefits of such systems in order to realize their goals. To accommodate the demands of businesses and help with the execution of administrative tasks, maybe the steady stream of technology advancements has facilitated faster and easier access to information. The research set out to prove that TPS, MIS, DSS, and ESS had an impact on product and process innovation. Housing Bank offices at all levels of management in the Irbid Governorate were included in the analysis. All Housing Bank of Irbid Governorat workers were included in the sample. There were around 160 survey forms sent out. The number of returned surveys is close to 152. Due to statistical inaccuracies, we had to throw away around 13% of the questions, bringing the total number of usable surveys down to 139, or 91%. The research concluded that there is a positive and statistically significant relationship between innovation (both product and process innovation) and the use of management information systems, decision support systems, and Executive Information Systems. There seems to be no link between the use of Transaction Processing Systems and new product/process development. The researcher suggested emphasizing the use of decision support systems due to the nature of the data which can be provided, as it depends on the internal and external data systems, which aid the organization in studying and analyzing the internal position of the organization that reflects on its external position, and thus increases the organization's competitiveness through the discovery of new services and products that better satisfy customer needs.

Keywords: acronyms: IT, TPS, MIS, DSS, ESS, P&I (product and process) innovation

Introduction

The constant changes seen by our public and commercial institutions have created a world in which we confront enormous and difficult issues. Particularly after the emergence of globalization and great development in technology, especially communications and information revolution, which forced the organizations to invest this technology and to use it in developing its business both inside and outside the organization in order to improve productivity and service operations that the organization has to keep up with to remain and face the competition. The modern economy is increasingly dependent on knowledge and information systems rather than the traditional means of production—capital, land, labor, and human resources—because in the information society, individuals transcend barriers of time and distance, limits, traditional and bureaucratic means, and collective efforts.

Permanent companies that strive for success and quality must always upgrade their resources to meet the changing demands of their clientele. This development calls for specialized personnel in

1. to the already existing infrastructure of cutting-edge technologies. The work was shaped and molded by the usage of information technology in a competitive global market. Cognitive Work (Al Wandawy, 2012) emerged as a result of the information revolution and the technologies that supported it. Only via the use of information systems, tools, and technology are contemporary business activities able to be carried out, and this is especially true if the business activities and other operations are optimized for the use of information technology. Companies in the banking,

insurance, transportation, and pharmaceutical industries, among others, come to a halt if their IT systems go down (Yassin, 2012). Today, an organization's success may be gauged in large part by how well it makes use of and actively promotes its information technology. As a result, many businesses today are working at full speed to discover, create, and reap the benefits of such systems in order to realize their goals. To satisfy the demands of companies and assist completing the administrative activities within (Khuraisat, 2009), it is possible that the advancement of technology has facilitated faster and easier access to information.

2. This research was undertaken to spread awareness of the importance of information systems and the four main categories of these systems (MIS, TPS, DSS, and EIS). The study's usefulness rises when we learn how such structures affect the organization's ability to realize its innovation-based initiatives (both procedural and product-based).

3. Theoretical Framework

3.1 Information Systems

Emerging powerful forces are altering the global economy and management structure. It calls for a drastic shift in the way the company operates as a whole. Globalization, intense rivalry, a high degree of complexity, novel technology, and shifting economic and political systems are all examples of such pressures (Vescoukis, Vassilios, Doulamis, Nikolaos, & Karagiorgou, Sofia, 2012). As a result, organizations of all kinds need to be nimble in their responses, adaptations, and leadership if they want to continue existing (Efrain Turban et al., 2007). In now, the Information Age of the Twenty-first Century, data and information are said to double in size every eighteen months. Given that many businesses now store vast amounts of data, this information must be mined effectively if it is to provide useful insights (Sommer, Richardson, & Gartner, 2004).

Computerized information systems are those that collect data and make it accessible to people inside an organization. It aids decision-making by providing historical, present, and prospective data to Organization Management (McLeod, Raymond, JR., & Schell, George, 2007). Stair & Reynolds confirmed this when they said an information system is "a collection of people and machines working together to gather information, analyze it, and organize it according to rules and procedures that have been determined for specific purposes so that it can be used by researchers, decision-makers, and other beneficiaries." According to another definition (Hassania, Salim (2011)), management information systems are a subset of information systems created to equip workers with the data they need to do their jobs effectively and make sound choices.

There were a plethora of information-systems-focused research papers. The sorts of information systems discussed in these reports tend to vary. However, the several kinds of information systems (TPS, MIS, DSS, ESS) have been addressed in this research. This research will focus on discussing such forms.

3.2 Transaction Processing Systems

It's a digital database run by computers. Basic transactions, including as purchasing and selling, paycheck reporting, and expense tracking, are performed often. Transaction processing systems help operational management by registering data instantly, which in turn aids in making sound structural choices. Inputs to other systems are the results of the transaction processing systems. Because it facilitates the efforts of upper and intermediate management without reporting to them (Louden & Louden, 2014). There is widespread agreement about the significance of transaction processing systems like those used for accepting and processing payments, taking and processing deposits, and making travel arrangements (Al-Zhrani, Saleh, 2010).

3.3 Management Information Systems

4. As one of the systems supporting the organization's (tactical) administration, it gives the organization's middle managers access to real-time data on things like performance and trends. While these systems rely on transaction processing systems and provide administrators with a variety of information on organizational trends, they allow for the execution of administrative tasks including planning, organizing, directing, regulating, and decision-making. Since it provides managers with weekly, monthly, and annual reports (Al Tahir, 2011).

4.11 Systems to Assist in Making Choices

Administrative decision-making procedures benefit greatly from the usage of computerized information systems. Whereas, both management approaches facilitate both semi- and non-structured decision-making at the top and at the middle levels of an organization, respectively (Oz, Effy, 2004). In the case of a private company, the decision support system's primary focus will be on the models, while in the case of a public company it will be on the data analysis, graphs, and simulations requested by the customer (McLeod, Raymond, & Schell, George, 2007). The purpose of the decision support systems is to help people make better choices. It's not a good method for reaching consensus in a group. As a result, there is a need for group decision support systems. Decision support systems, including computers, software, media, and tools for collaboration, have reached a new degree of sophistication in this age. These methods aid the decision-making process by tapping into the wisdom of the group. GDSS Electronic

Brainstorming (Yassin, 2012) is one tool used in such systems.

4.12 Administrative Computer Networks

Information systems, as opposed to the structured, operate to fulfill the information requirements of (strategic) executive management for the goal of decision making. Because these technologies affect the company's future, they need specialized analytics and resources. Uncertainty and risk are present to some extent. Management information systems, decision support systems, and transaction processing systems rely on information from the external environment, such as legislation, competitors, suppliers, consumers, and other (stair: 2012), in addition to short, deep, and comprehensive reports on the organization and its internal activities. This allows the organization to explore and anticipate opportunities and threats, analyze and competitively position itself.

5. Innovation

It's the act of coming up with novel concepts and putting them into reality, since the most successful businesses are those that can effectively implement their employees' bright ideas. That innovation, however, does not stop at the threshold of the new idea but crosses to the practical application in attaining the goals of the business in the market, is a basic tenet of the concept. According to Aboud, innovation is the company's capacity to reach what's fresh in the market that offers value more significantly and more quickly than its rivals. According to this definition, an innovative firm must beat out the competition in terms of developing new ideas and introducing novel products to consumers first (Aboud, 2012). According to Al Zoubi, the key to innovation is to add a novel component to an existing system in order to achieve previously unattainable outcomes. To gain an edge by devising novel approaches to completing the required tasks, you need an inventive leader with the intestinal fortitude to put such approaches into action. The creation of new services or goods, as well as novel approaches to their manufacturing or distribution, fall under this umbrella (Al Zoubi, 2005).

11.1 New Product Development

Product innovation is the process of enhancing, creating, or generating a new or different commodity or service by altering its physical and performance qualities and components. According to Al Taher and Al Ghalibi, product innovation is the introduction of new features or enhancements to existing items via alterations to their physical properties. According to Frank T. rothermel, product innovation entails "the processes involved in creating new commodities and services or enhancing existing ones" (Rothermel, 2013).

11.2 New Methods of Procedure

Change, improvement, or development in the organization's production, distribution, and management processes constitutes this kind of innovation. According to (Satish and Srinivasan, 2009), the procedure

The capacity to create new processes and the introduction of novel processes constitute innovation. According to Al Shaar and Al Nagar (2015) and Seng, Yusof, and Abidin (2011), process innovation occurs every time a company modifies its production procedures to reflect an improvement in those procedures. Definition of process innovation according to Rothaermel (Rothaermel, 2013): activities that improve or transfer processes used in the production of goods and services, resulting in reduced costs, decreased production times, and increased quality and flexibility.

11.1 The New and the Informational System

As O'Brien, James A., et al. (2000) point out, "information plays a vital role in the organization because through it, organizations can achieve a high competitive advantage; particularly when you concenter the information as one of the organization's resources; which in turn enables managers to predict the future; which encouraged managers to use information systems in the organization that helps to motivate employees and extract their creative potential; which in turn, leads to stay and excellence."

Organizations may boost their competitiveness with the help of their information systems. From innovative product creation to superior customer service, any number of factors can set a company apart from its rivals, but what really sets them apart is access to relevant information (Kenneth C. Laudon and Jane P. Laudon, 2014). In light of this, it follows that spending money on knowledge may help foster inventiveness and originality. where research has shown a link between knowledge and originality. They aid in freeing people from mundane tasks and fostering an environment conducive to innovation, One such study is altabishat (examine the function of information systems in attaining innovation), in which the author draws the conclusion that information technology may be used to foster innovation and creativity in the workplace.

According to Alserafi (2005), an information system is defined as "a computer-based system that processes the data that flows from internal sources or from the external environment surrounding the organization, in an appropriate manner, in order to provide information to beneficiaries in the form and at the right time." In addition to assisting organizational decision-makers, In addition, he verifies that the system is able to perform the duties of planning and controlling processes, which are important in every field of endeavor. Forecasting, establishing objectives, and formulating policies all benefit from the information system's ability to control human activity and coordinate duties.

Organizations' fixation on IT is based on these factors (Masa'deh, 2013). High processing power of information helps to deliver innovations and new creations for the leadership of the organization to survive and succeed (Masa'deh, R., & Obeidat, B., 2015). This is because the organization relies on information from various sources, both internal and external, such as sources of information on competitors and customers. Diversity in Innovation allows the Organization to adapt to the many internal and external factors that impact its operations. Through an environmental survey to understand opportunities and threats, information systems significantly contribute to innovation by guiding the innovation process and helping management solve organizational problems and make decisions that move the organization closer to its goals. This includes, for example, providing products and services for new designs and entering new markets. Connecting business strategy with the innovation process aids in the development of new goods, services, and ways of doing business. the enhancement of the brainstorming process via collaboration and the encouragement of original thought. It's also trying to gather inspiration for brand new services, goods, and business strategies (R.B. and Ferreira, M.A.T., 2001).

In (the relationship between the use of information systems and innovation), Al-Khawalde and Al-Hunaiti made clear that the use of information systems significantly contributes to facilitate the process of innovation, as it allows people to forego a great deal of routine work in order to complete their tasks more quickly, with greater accuracy and precision, and at lower cost. Organizations are increasingly focusing on information systems as a means of gaining a competitive edge (Al-Khawaldeh Riyad A. and Al-Hunaiti Mohammad F., 2008), and this has led to a rise in investments in R&D, training, and employee development.

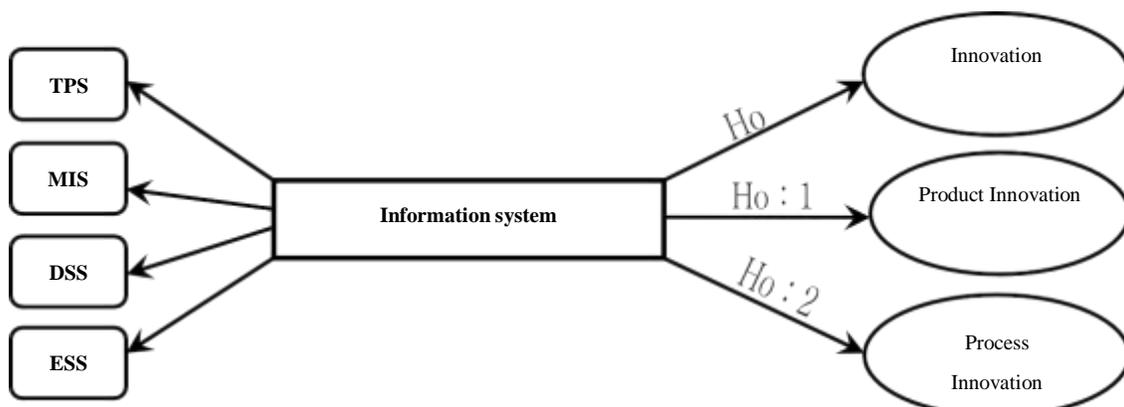
The process of expanding technical knowledge via research and development is essential to the invention and creativity that drive technological progress. There are more potential for new creative procedures because of the improved communication and collaboration between administrative levels made possible by information technologies. It is also important to discover the creators' skilled divisions and provide them with the technology they need to perform tests, inspire them to propose novel ideas, and support them both financially and emotionally.

them. It's a major factor in the realization of ideas and the coming into existence of new things (Al-Khawaldeh Riyad A. & Al-Hunaiti Mohammad F., 2008).

According to research by Licht G. and Moch D. (1997), organizations can foster a more innovative and creative environment by encouraging employees to come up with and implement novel ideas and methods for the manufacture and distribution of products and services; developing economically and technologically beneficial new areas of work; capitalizing on emerging marketing and distribution channels; and shortening the time required to create essential products and services. According to Louden and Louden (2014), "the development of goods and services, processes, and methods of production and distribution is facilitated by information systems" (Louden and Louden, 2014).

6. Methodology and Procedures

7. Descriptive research methods and analytical field research were used to accomplish the study's aims. The office survey served as the descriptive study; theoretical and field studies and research were reviewed in the area of topic literatures to establish the foundation and beginning points for the theoretical framework. An exploratory survey of the study population was administered, with participants being asked to fill out questionnaires with specially-written paragraphs. The questionnaire data was then processed using SPSS (Statistical Package for the Social Sciences). (Following data analysis and preliminary findings, the study's hypotheses—formulated to facilitate the attainment of



the study's goals—were put to the test using suitable statistical techniques. *Study Model*
 Figure 1. The research model
 DSS, ESS) on Innovation

process.

16.1 Research Subjects and Sample

Housing Bank offices at all levels of management in the Irbid Governorate were included in the analysis. All Housing Bank of Irbid Governorat workers were included in the sample. There were around 160 survey forms sent out. The number of returned surveys is close to 152. Due to statistical inaccuracies, we had to throw away around 13% of the questions, bringing the total number of usable surveys down to 139, or 91%.

16.2 Traits of Research Sample

According to Table 1, a total of 148 workers filled out the study's questionnaire. These workers came from all levels of management (lower, middle, and upper), and their gender distribution was slightly more male (109 out of 148) than female (39 out of 148, or 73.6% to 26.4%), and their age distribution was younger (117 out of 148, or 79%).

Table 1. Characteristics of study sample

Variable	Frequency	Percent
Sex		
Male	109	73.6
Female	39	26.4
Total	148	100%
Age		
Less than 30	52	35.1
30 - less than 40	65	43.9
40 – less than 50	17	17.5
50 – over	14	9.5
Total	148	100%
Educational Level		
High school and diploma	23	15.5
Bachelor	108	73.0
Master	15	10.1
PhD	2	1.4
Total	148	100%
Experience		
1 year less than 5	56	37.8
5 year less than 10	49	33.1
10 year less than 15	17	11.5
15 year more than	26	17.6
Total	148	100%
Position		

Lower management	119	79.7
Middle management	19	12.9
Top management	11	7.4
Total	148	100%

7.1 Study Tools and Obtaining Information Sources

Many books, periodicals, papers, and theses on the topic serve as resources for the theoretical side of things. The researcher's primary data collection instrument was a questionnaire consisting of the following sections: The demographics of the study population are described first, including (age, sex, education, experience, and administrative level). Paragraphs in the second section attempt to quantify the range of the independent variables. Paragraphs 1-4 cover the total quality score (TPS), paragraphs 5-8 cover the total implementation success score (MIS), paragraphs 9-12 cover the total delivery success score (DSS), and paragraphs 13-16 cover the total execution success score (ESS). The third section includes two types of paragraphs that together measure the dependent variable: product innovation. Paragraphs 17-20 were used to determine its length. Paragraphs 21-26 evaluated the degree to which the method was novel. According to LIKERT's fifth scale, the responses varied from 1 to 5. The highest possible score is 5, followed by 4, neutral 3, disagreement 2, and disagreement 1.

16.2 Validity of Measurements

Professors and experts in the area of administrative sciences were asked for their thoughts on the questionnaire. Whereas, consideration has been given to the feedback they provided on the wording of the same. The study's paragraphs have been updated where required. Some of the study's paragraphs have been revised and updated.

16.3 Accuracy of Measurement Tools

The results show that the reliability coefficient of all dimensions is greater than or equal to (0.60), indicating that the reliability coefficient of the study tool (questionnaire) is reliable. The reliability coefficient (Cronbach Alpha) has been used to show the extent of the internal consistency of the phrases forming the standards which were adopted by the study. All the questionnaire sections had a reliability value of 0.84. What this indicates is that the learning resource is reliable. In studies of the humanities, this is generally accepted.

16.4 Testing of Hypotheses

The researchers used both basic and multivariate linear regression to check their hypothesis. The major conjectures are: Information system (TPS, MIS, DSS, ESS) does not have a statistically significant effect on innovation (H0).

Table 2. The results of multiple regression analysis indicate that the Information system (TPS, MIS, DSS, ESS) affects the Innovation

Information system	(B)	(β)	T	p-value
TPS	0.243	0.143	3.215	0.430
MIS	0.284	0.245	3.460	0.000
DSS	0.233	0.377	3.145	0.000
ESS	0.275	0.365	4.465	0.000
R			0.634	
R ²			0.423	
F			78.174	
P-value			0.000	

*The effect is statistically significant at the level of ($\alpha \leq 0.05$).

Table 2 presents the findings of a multivariate examination of the effect of information systems on innovation at the level of its constituent parts (product innovation and process innovation). The value of the coefficient of determination is shown in Table 2 as (R² = 0.423). This accounts for 42.3% of the effect that IT has on innovation (including product and process innovation). R = 0.634, and F = 78.175%, both significant numbers, show a high degree of correlation. The probability value (P-value = 0.000) was much lower than the conventional cutoff (0.05). Therefore, we conclude that information systems do have a substantial effect on creativity and so reject the null hypothesis H0. We alternate hypothesis: there is a statistically significant effect of IT on innovation, which we should embrace.

Information systems have an effect on both product and process innovation, as shown in Table 2. Management information systems were shown to have a significant influence on innovation on all the aspects tested (= 0.245). The result (t = 3.460, P 0.05) indicates statistical significance. Statistical significance is indicated for decision

support systems with a value of ($r = 0.377$) due to the fact that their t-test result is ($t = 3.145, P 0.05$). While the data showed no effect of Transaction Processing Systems on innovation (both product and process), executive systems with a value of ($r = 0.365$) are statistically significant since their value is ($t = 4.465, P 0.05$).

Sub-Hypotheses: this hypothesis's use of basic linear regression analysis; identifying the information system types (TPS, MIS, DSS, ESS) that have an impact on innovation.

H0:1 There is no impact with statistical significant at ($\alpha \leq 0.05$) of Information system (TPS, MIS, DSS, ESS) on Innovation product.

Table 3. The results of multiple regression analysis indicate that the Information system (TPS, MIS, DSS, ESS) affects the Innovation product

Information system	(B)	(β)	T	p-value
TPS	0.422	0.257	4.562	0.230
MIS	0.456	0.246	5.432	0.002
DSS	0.364	0.233	4.422	0.000
ESS	0.354	0.244	5.342	0.000
R			0.642	
R2			0.434	
F			14.67	
P-value			0.001	

*The effect is statistically significant at the level of ($\alpha \leq 0.05$).

Table 2 gives us the findings of multiple regression analysis to the influence of information systems with its four dimensions as independent variable in the innovation by its components or dimension product innovation. Table 3 reveals that the value of the coefficient of determination is ($R^2 = 0.434$). This explains a proportion of (43.4%) of the influence of information systems on product innovation. The coefficient correlation has achieved ($R = 0.642$), while the value is ($F = 14.67$). The potential value was ($P\text{-value} = 0.001$); consequently, it is lower than the accepted significance threshold (0.05). Accordingly, we reject the null hypothesis H0, which claims that there is no statistically significant influence of information systems on product innovation. We accept alternative hypothesis, which implies the existence of a statistically significant influence of information systems on product innovation. Table 2 also indicates the influence of each dimension of information systems on product innovation. Where the findings suggested that the dimension that have a statistical significance and influence on product innovation which is management information systems that achieved ($\beta = 0.246$). This has a statistical significance, since the value is ($t = 5.432, P \leq 0.05$). The decision support systems whose value has achieved ($\beta = 0.244$), this is a statistical significance, since the value is ($t = 4.422, P \leq 0.05$). The executive systems whose value has achieved ($\beta = 0.365$), this is a statistical significance, since the value is ($t = 5.342, P \leq 0.05$), whereas the findings did not demonstrate any trace of Transaction Processing Systems on product innovation.

H0:2 There is no influence with statistical significance at ($\alpha < 0.05$) of Information system (TPS, MIS, DSS, ESS) on Innovation process.

Table 4. The results of multiple regression analysis indicate that the Information system (TPS, MIS, DSS, ESS) affects the Innovation product

Information system	(B)	(β)	T	p-value
TPS	0.452	0.246	5.443	0.345
MIS	0.354	0.238	4.397	0.000
DSS	0.478	0.231	4.132	0.000
ESS	0.364	0.249	4.323	0.000
R			0.654	
R2			0.524	
F			17.456	
P-value			0.000	

*The effect is statistically significant at the level of ($\alpha \leq 0.05$).

8. The findings of a multivariate study of the influence of information systems on innovation by element or dimension (process innovation) are shown in Table 4. The value of the coefficient of determination is shown in Table 2 as (R² 0.524). This accounts for a significant proportion of the effect that information systems have on process innovation (52.4%). R = 0.654, and F = 17.456, are both excellent values for the correlation coefficient. The probability value (P-value = 0.000) was much lower than the conventional cutoff (0.05). Therefore, we conclude that information systems do indeed influence process innovation, thereby rejecting the null hypothesis H₀. The alternative hypothesis that information systems have a substantial effect on process innovation is one we embrace.
9. Information systems have an effect on both product and process innovation, as shown in Table 2. Management information systems were shown to have a significant influence on innovation ($\beta = 0.238$), and the associated aspects were found to be statistically significant. The result ($t = 4.397$, $P < 0.05$) indicates statistical significance. When the value of a decision-making aid reaches ($\beta = 0.231$), it is considered statistically significant because ($t = 4.132$, $P < 0.05$). While there was no detectable difference between the two groups, statistical significance was attained for the executive systems with a value of ($\beta = 0.249$) ($t = 4.323$, $P < 0.05$). Impact of Transaction Processing Systems on Creating New Procedures

10. Results Discussion: Results and Discussion

The research found that TPS, MIS, DSS, and ESS all have an effect on product and process innovation. This research was consistent with Malkawi's (2007) because it highlighted how information technologies have helped commercial banks in Jordan, a key provider of both financial and advisory services, innovate. The research found that Jordanian commercial banks need highly developed information systems that meet regulatory criteria. Where Jordanian commercial banks are making efforts to appropriately supply the technical needs for information systems, the degree of innovation in these banks has grown high as a consequence of the interest of these banks with the technological requirements of information systems. In addition, the findings were consistent with those of a study by Al Jady (2008) that sought to examine the potential of computerized management information systems to foster a culture of innovation within organizations and found a positive correlation between the two. Information offered by contemporary systems is highlighted for its value in fostering and facilitating individuals' innate capacities for creativity and innovation, and for raising awareness of this value within the workforce. The results of this research are consistent with those of a previous study by Irtemh et al. (2013), which found a strong correlation between intelligent information systems and organizational creativity. In addition, the research found that information systems (TPS, MIS, DSS, ESS) had a statistically significant effect on new product development. This is in line with research by Muhammad Al Quraishi (2013), which demonstrated that information systems have become an immediate requirement in the process of developing and manufacturing goods owing to the short life of the product as a result of fierce rivalry between firms. Organizational goods have benefited greatly from the implementation of information systems, which have also facilitated the creation of brand-new products and their subsequent release into the market. It is consistent with the findings of Al Shaar (2014), who discovered a causal link between IT and new product development. The fact that upper management recognizes the importance of IT is seen in the favorable correlation between IT and new product development. The final null hypothesis, that information systems have a beneficial effect on process innovation, was likewise supported by the data. This finding is in line with research by (Khandakja, 2005), (JCReal, et al., 2006), (Supattra, 2007), (Najar and Malkawi 2010), (Dima Qawasmi 2011), and (Al Qurashi, 2014), all of which demonstrated and clarified that information systems function to supply information and knowledge of for employees, leading to an increase in their learning that would contribute to the development of innovation management. As a result, it will increase the items' worth to the greatest extent possible. In addition, timely information delivery aids businesses in developing manufacturing processes and satisfying client demands at a faster clip than rivals. The success of the Bank's operations is directly tied to the methods followed to make the information system function properly. This is evidenced by the Bank's dedication to performing periodic maintenance inspections of the information system and by the fact that it relies on providing a procedures guide of the information system, which is retained by the employee during his work in order to decrease the percentage of errors and mistakes, and to ensure that the right and unified procedures of the information system function are followed.

Recommendations

Attracting, hiring, developing, motivating, retaining, and investing in people with information systems expertise—people who can use hardware and software creatively and efficiently to complete their assigned tasks—and regularly assessing and improving their performance is essential if businesses are to realize their full potential. Such personnel help shape the method through which technological data is integrated with the company's many functions. Using and expanding on information technologies to help businesses, and the Housing Bank in particular, attain a position of leadership via the use of creativity and innovation in order to provide high-quality results. An organization can improve its competitiveness by studying and analyzing its internal position, which is reflected in its external position and contributes to the discovery of new services and products, the increase in the satisfaction of the customer's desire, and

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the assistance in raising the level of employees' job satisfaction. This is made possible through the use of decision support systems, the nature of the data which can be provided depending on internal and external data systems. It is suggested that more research be done on information systems, and in particular smart information systems like Decision Support Systems and Executive Information Systems, to determine the effect of its sub-systems like AI, expert systems, data mining, and knowledge management on the growth of the Organization's performance.

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