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Information System Evaluation and Performance in the Hotel Industry in Morocco: An Empirical Study

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ABSTRACT: The growing importance of Information systems in optimizing the operations of organizations has led to a need for evaluating the performance of Information Systems. Consequently, there is an increasing demand for better performance from Information System resources in many organizations, including in the hotel industry. The focus of this study is on investigating the impact of information system evaluation on the performance of hotels in Morocco. The Delone and McLean model provides a robust framework for addressing our research question. Our analysis centers on how companies utilize technology and the performance of their systems. Our findings demonstrate that implementing a high-quality information system and service can enhance the performance of a company, as well as its relationship with the overall environment, by improving the productivity of users. As a result, users demonstrate an intention to use these systems and express satisfaction with their use of these solutions.

KEYWORDS: Information system, Information system use, User satisfaction, Evaluation, Hotel industry, Performance.

1 INTRODUCTION

The primary focus of this paper is to examine the evaluation mechanisms of information systems and their influence on SI performance in the hotel industry. In recent years, many organizations, including those in the hotel industry, have implemented information systems to enhance their performance and increase productivity. These systems have a significant impact on both society and organizations, affecting the performance of managers and organizations worldwide. Information Technology has revolutionized international trade and will continue to be a crucial aspect in the coming centuries, driven by electronic commerce, the exchange of electronic data, e-government, and telecommunications advancements. Information Systems provide a multitude of benefits, such as increased productivity, enhanced efficiency, improved security, heightened reliability, and long-term cost savings. This study aims to investigate the impact of information system evaluation on SI performance in Moroccan hotels, utilizing the McLean and Delone model (2016) [4], which provides a comprehensive framework to identify the factors that contribute to the successful evaluation of an information system. By analyzing the key dimensions that determine evaluation mechanisms for information systems in the hotel industry in Morocco, this study sheds light on the evaluation process for information systems performance in this industry.

2 THE IMPLEMENTATION AND USE OF INFORMATION SYSTEMS IN THE HOTEL INDUSTRY

The concept of an information system is a collection of interconnected subsystems that span the organization, operating in a network-like fashion. These subsystems are typically cross-functional and defined by departmental divisions. Evaluating a company's information systems involves examining the techniques used for information acquisition, storage, processing, and exchange within each subsystem. At every level of the organizational hierarchy, there is a repetitive pattern of decision-making, information management, and operation. To access information, every information area within the company must be linked to the central memory or contribute new data gathered from the operational level. As information moves towards the outer edges of the organization, it becomes increasingly specialized and organized into a network of knowledge and memory.

Therefore, information, decision-making, and actions are interdependent and continuously influencing each other. The information system relies on actors, methods, procedures, and tools, which are increasingly computer-based, although not exclusively. The information system can be viewed as the system responsible for transmitting and processing information required for management purposes.

In the past, most hotels relied on phone reservations, but today, Information Technology has surpassed this stage. Hotels now work with specialized reservation companies that receive bookings from customers through the Internet. The study conducted by has shown that a third-party online reservation system has a significant impact on hotel booking decisions. This enables hotels to advertise their rooms directly to potential customers, as well as avoid advertising expenses to attract clients. Recent research indicates that new technologies are experiencing unprecedented development in various functions related to the hospitality industry, such as reservation, accommodation, finance, marketing, human resources, technical operations, and procurement. While technology has traditionally been considered the key to productivity in manufacturing industries, in recent years, it has allowed service companies to innovate their service offerings in ways that increase the external value of the organization. From an internal perspective, Information Technology is an effective communication tool that enables better dissemination of information across different departments of a hotel. Information Technology contributes to the exchange of information between different services and departments. Therefore, note that all internal functions within a hotel use Information Technology instantaneously and optimize its use through employee motivation and stimulation.

3 INFORMATION SYSTEM EVALUATION AND INFORMATION SYSTEM PERFORMANCE

As information systems usage becomes more widespread, they have demonstrated various advantages, such as increased competitiveness, enhanced operational efficiency, and higher customer satisfaction. Nevertheless, it is crucial to assess the influence of these systems on different business facets, including financial performance, guest satisfaction, and employee morale, to guarantee that they deliver the desired benefits. The existing literature indicates that information systems have a positive effect and will remain crucial in the future.

To ensure an information system's continued relevance, effectiveness, and success within a company, it is crucial to evaluate its performance. Below are some important factors to consider while assessing information systems in companies:

- Assessing the availability and reliability of an Information System is critical to ensure that it is consistently operational with minimal downtime when required
- Data accuracy and completeness: An IS's effectiveness depends on the accuracy and completeness of the data it processes. It is important to regularly check the quality of data input and output to ensure that the IS is delivering the intended results
- Cost-effectiveness: The cost-effectiveness of an Information System is also crucial in evaluating its performance. The benefits provided by the system should outweigh its costs, which may include hardware, software, and maintenance expenses
- Security and privacy: The protection of sensitive information is a significant concern when implementing an IS. The system must be designed to prevent unauthorized access, maintain data confidentiality, and comply with applicable regulations and standards
- Integration with other systems: An IS may need to integrate with other systems to ensure efficient data flow and avoid data duplication. The ability to integrate with other systems is an important factor to consider when evaluating an IS's performance
- Scalability: An IS should be scalable to accommodate growth and changes in business requirements. It should be able to handle an increase in data volume, users, or transactions without compromising performance
- Usability: An IS should be easy to use and navigate, with an intuitive interface that requires minimal training. Usability is a key factor in determining user satisfaction and overall system effectiveness

4 THE MCLEAN AND DELONE MODEL

The DeLone and McLean model, which was revised in 2016, is a well-supported framework that covers six categories of variables that are likely to contribute to the success of Information Systems (as shown in Figure 1). These categories include system quality, information quality, service quality, intention to use and actual use, user satisfaction, and the net impact of the IS. Researchers have conducted empirical studies that have yielded important insights into using this model in both academic and practical contexts. This framework has also encouraged organizations to evaluate the quality of their information, systems, and services, as well as user satisfaction and perceived net advantage, in order to determine the success of their IS.

The latest version of the DeLone and McLean model replaced two previous dimensions (organizational impact and personal impact) with the "Net Impacts" aspect. DeLone and McLean assert that the most critical aspect of assessing success for administrators, designers, and users is to measure the final outcome of the IS deployment and usage . The "net impact" measurement gauges the system's performance against its intended goals, making it the most context-specific, dependent, and diverse of the six success dimensions in the DeLone and McLean model. Therefore, the D&M model remains the most comprehensive and effective approach for evaluating the success and performance of an Information System.

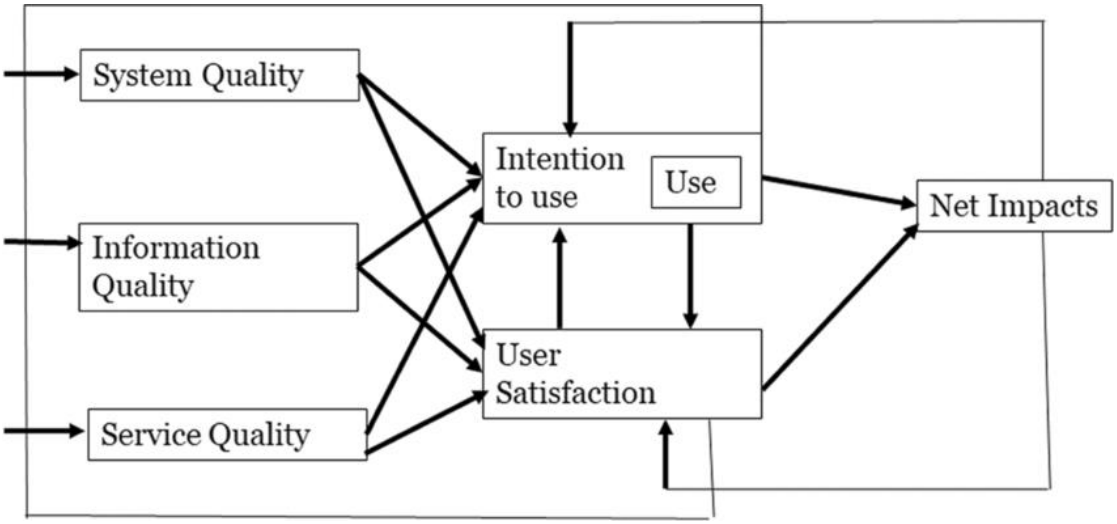

Fig. 1. Re-update of DeLone et McLean model (2016)

4.1 THE DIMENSIONS OF THE DELONE AND MCLEAN MODEL

Before presenting the different items of our analysis, it is considered necessary to present the definitions of the dimensions of the DeLone & McLean model, as follows:

4.1.1 SYSTEM QUALITY

This dimension pertains to measuring the information processing system itself, specifically its performance . The perceived ease of use is considered as the primary measure of "system quality" in this dimension, given the extensive research on the technology acceptance model (TAM). DeLone and McLean, after conducting a comprehensive literature review, proposed a diverse set of measures for system quality, which were categorized based on the progression of information system success measurement over the years.

4.1.2 INFORMATION QUALITY

The research community considers the quality of information as a measure of the success of information systems, given that these systems aim to provide accurate, timely, and relevant information to stakeholders. Therefore, information quality is crucial for measuring the success of the system's output. argue that "information quality" not only contributes significantly to improving "user satisfaction," but it also serves as a dimension for measuring success.

4.1.3 SERVICE QUALITY

The addition of this third dimension for measuring the success of information systems was made to the D&M model during its update in 2003. By incorporating this dimension into their original model, argue that the quality of the IS service contributes to the individual performance of the user, and therefore deserves to be integrated as a dimension of IS success. The IT organization's service quality was added to the updated D&M model. The authors used the *SERYQUAL* tool developed by to measure the quality of IT support service. The tool assesses the contribution of the IT team that creates and supports information systems.

4.1.4 USE AND INTENTION TO USE

This dimension of measuring the success of information systems focuses on several aspects of their use. In the original version of the D&M model, identified these aspects: the first concerns the use of information and reports provided by the system. The second aspect relates to the actual use of the information system, although this interpretation is only valid in a context of optional or voluntary use and not mandatory. The third aspect emphasizes the question, "who uses the system?"

In the literature, several levels of use of information systems are also distinguished. Ginzbeg, cited by, mentions, on the one hand, the use that stems from managerial actions, on the other hand, the use that creates change, and finally, the recurring use of the system. also distinguish between the use of the information system to obtain instructions, the use to record data, the use for control, and the use for planning. According to, use and its results (i.e., net impacts) should be the main objective of measuring the success of information systems within organizations.

4.1.5 USER SATISFACTION

According to the D&M model, if the use of the information system is essential and mandatory, previous measures become less relevant. In this case, the priority is to measure user satisfaction. However, it is important to make a clear distinction between the measurement of "user satisfaction" and "attitude towards the computer tool", which are two distinct concepts. According to, the "user satisfaction" dimension evaluates the user's overall opinion of their experience with the system, and they recommend using a global measure of satisfaction.

4.1.6 NET IMPACTS

This particular dimension has undergone significant changes and updates within the D&M model. Initially, presented this dimension in two variables: "Individual Impact" which measures the impact of information on the receiver's behavior, and "Organizational Impact" which measures the impact of information on organizational performance. However, the authors believed that information systems could affect other levels beyond the individual and organizational levels. Thus, the success of the information system impacts individuals, groups, and even organizations. In the 2003 model update, the authors replaced the variables "Individual Impact" and "Organizational Impact" with the variable "Net Benefits," which explains gains at multiple levels of analysis. In 2016, the authors suggested renaming the variable "Net Benefits" to "Net Impacts" in their update of the D&M model. They argued that "Net Impacts" measure the results of the system in relation to the system's predefined objectives. As such, the variable "Net Impacts" is the most contextual, dependent, and varied of the six dimensions used to measure the success of the D&M model.

5 METHODS

5.1 RESEARCH AIM AND SCOPE

Our research work aims to investigate the issue of information system evaluation, specifically in the hotel sector in Morocco. We have used the Delone and Mclean model, which provides a strong theoretical foundation for evaluating information systems, to examine the use of information systems by hotels and the mechanisms for assessing their performance."

5.2 THE SAMPLE

The focus of our research is on the hotel industry. Therefore, we will be conducting the interview questions that make up the interview guide for this initial phase of the study via an interview guide. In order to ensure the relevance of the information we are seeking and to maintain coherence in the framework that is supposed to guide the respondents' answers, the type of information we are seeking will determine the profile of the individuals we will be recruiting. Thus, we have recruited two groups of informants for our study. To investigate our research problem both at the strategic and operations levels, we conducted semi-structured interviews with a total of 40 respondents (20 decision-makers and 20 users):

- Decision-makers: They have an overall view of the hotel establishment, and are able to provide information on investments made, the general organization of the hotel, and the overall impacts of adopting information systems.
- Users: These are the individuals who belong to the operational center of the hotel, and they are the ones who use the tool. They are likely to provide us with information on how IT is being used, or to provide other useful information for our description of the phenomenon we are studying.

5.3 DATA COLLECTION

The collection of information is based on semi-structured interviews carried out with a sample of 40 informants in different hotel structures in Morocco. These were in-depth interviews that lasted an average of one hour.

The selected sample consists of 20 decision-makers and 20 users. These interviews took place in the informants' offices. In terms of content, the interviews make it possible to understand the mechanisms of use and evaluation of information systems in hotel structures and to gather information on strategies while verifying the impact of SI performance on these units.

5.4 DATA ANALYSIS

The interviews were transcribed into their original language. We then adopted an analytical method that aligns with the objectives of our study, "thematic analysis". For this purpose, we used the TROPES Software to perform data analysis. Thematic analysis is an approach based on thematic analysis of data in qualitative research. In our case, the hierarchical coding was done initially when we pre-designed our semi-structured interviews, considering the dimensions, categories and themes that emerged from our conceptual model. The coding procedure took the form of closed coding. Closed coding relied on our predefined theoretical framework to identify essential categories. Thus, closed coding is based on a well-defined pattern.

6 RESULTS

The thematic analysis is a continuation of the horizontal and vertical analysis, its objective is to explore in depth the words of the respondents, not only based on the axes of the interview guides which aimed at opening according to the logic of the funnel but based on the references and terms used and on the categories of meaning that we can find from the text and the transcription resulting from the opening of the interviews.

In order to have more openness and to discover the specificities of the research context, we opted for the Tropes software which allows to carry out an analysis based on the propositional analysis. The results of the thematic analysis logically follow the reference universes that the Tropes software has provided us and revolve around four major themes. For decision-makers, the themes are as follows: the evaluation of the information system, the qualities of the information system, the satisfaction and impacts of the information system. The topics related to users are as follows: the use of the information system, the quality of the information system, satisfaction with the information system and the performance of the information system.

6.1 AT THE DECISION MAKERS' LEVEL

6.1.1 INFORMATION SYSTEM EVALUATION

The evaluation of an information system is necessary for a company. This helps to increase the company's performance, and promotes progress in the organization, with organizational learning. The evaluation of the IS also aims to motivate and guide the actors by situating them in a perspective of continuous improvement. The first evaluation is carried out during the design phase of the information system in order to allocate material, software and personnel resources to the project of setting up a new system.

The first post-implementation assessment is conducted six months after system implementation and annually thereafter to ensure optimal alignment of processes with the new software. On the other hand, we need to analyze functionality and profitability. It is possible to discover new ways to better use the software or the resulting information. It is essential to integrate review procedures into the planning cycle. We also recommend that you conduct regular checks one to two months before your annual strategy and budget planning to make sure your software is working properly.

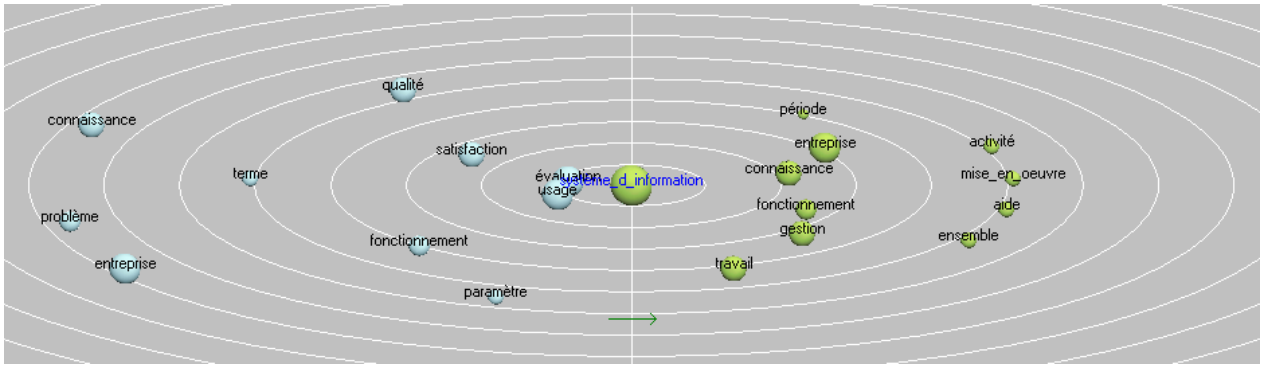

Fig. 2. Representation of Information System Evaluation

According to the graph above, the theme we analyze is the one located in the center "evaluation of the information system", to the left of the main theme we have the actants and to the right the acted, in accordance with the logic of presentation of the results of Tropes, on the left we list the existence of the terms: satisfaction, use, quality, functioning. On the right, we have the acts or consequences of the evaluation of information systems, which are a better functioning of the IS and a better evaluation of the quality of management acts and the use of resources.

The variable "Evaluation of the IS" is thus a new variable that emerged as a result of our interviews with our decision-making informants who showed unanimity on this item specifying that the monitoring of the IS must ensure the continuous and correct functioning of the information system:

"Whether in terms of operating management or analysis of the results all this of course with the aim of setting up a reliable information system but also which allows us to help us make decisions and at the end to establish an update of our competitive strategy and the realization of an upgrade also of our marketing policy which concerns our establishment". Interview Excerpt from Informant 1

This variable recalls the dimensions of the "quality of the IS" variable of McLean and Delone's model, namely learning, use, operation, quality, management and use of resources.

6.1.2 INFORMATION SYSTEM QUALITY

The use of a quality information system is a real source of motivation for company leaders, in the sense that they are obliged to work more efficiently and generate important results in order to be able to anticipate any failure of the organization. Informants 3 and 4 believe that the information system, in terms of knowledge, must be able to carry out the different missions:

"to keep the machine running but also to be able to make decisions and accurately redirect our priorities our gains". Interview Excerpt from Informant 3

Informant 19 considers that several factors can be cited to show the proper use of the information system:

"The most important in my opinion are the effective contribution in decision-making by managers, the satisfaction of its use, the achievement of objectives and the increase in the company's profits." Interview Excerpt from Informant 19

Thus, the information collected should be:

- Intelligible: the user of the IS must be able to understand the activity of the organization by simply reading organizational information
- Relevant: Useful to leaders, it allows them to better understand a situation. The information must enable the user to make appropriate decisions
- Mastered: information should only be disclosed if it provides useful elements for decision-making. This materiality threshold depends on the judgment of the decision-maker
- Accurate: validates and describes reality well and comes from a trustworthy source
- Fast: meets the need and is easily accessible to decision-makers. Finally, information must be reliable, useful, and usable. These key indicators make it possible to assess the effectiveness of the IS that achieves the performance of the organization

- Completes: includes the main facets of the research defining the subject of the research. Provide several answers to make an informed decision
- Recent: up to date and still valid

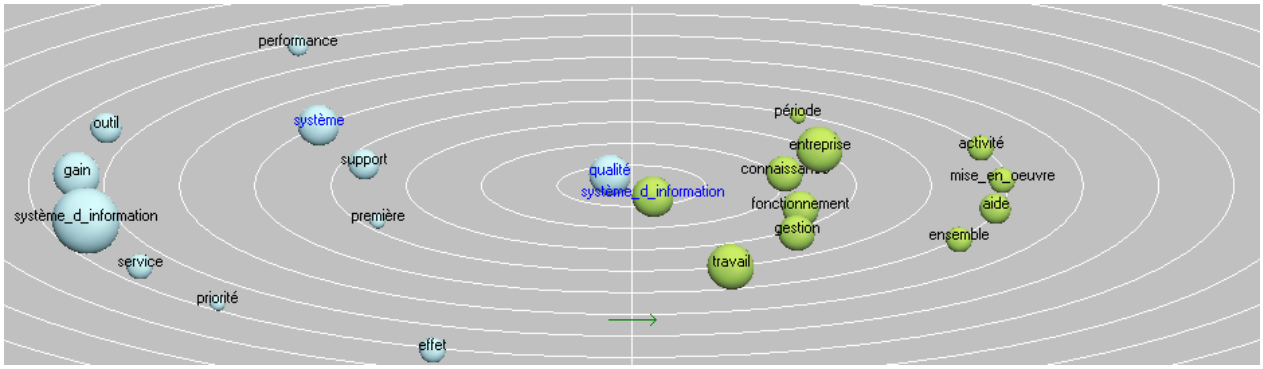

Fig. 3. Representation of the qualities of the information system

The graph above illustrates the relationship between the references "quality" and "information system". We clearly observe that there is a strong relationship between these so-called references. The actors and the acts observed at the level of the results imply the dimensions used to measure the quality of the information system according to our model, namely: performance, profitability, management, knowledge and operation. On the basis of the informants' responses, we note the appearance of items as a brand image and notoriety.

6.1.3 Satisfaction With The Use Of The Information System

One of the key success factors of an information system is user satisfaction. Satisfaction assessment is an important exercise in measuring the value and effectiveness of investing in the information system. In the past, user satisfaction has been used to replace the success of the information system. It is an assessment made by a user, along a continuum from positive to negative, on certain qualities of information systems. In addition, various determinants of user satisfaction were assessed and studied on how users perceive their acceptance rate in relation to the characteristics of the information system and the needs of users. Informant 4 adds better visibility as a satisfaction criterion:

" We are an establishment that has to spend money to welcome, host and restore. We have the right to demand extreme visibility from him, to guide us to the trend, to open our eyes to our bad spending, that's what we need" *Interview Excerpt from Informant 4*

Informants 2, 7, 11, 12 and 16 summarize the main criteria for meeting an IS as follows:

- Must be incompliance with our obligations
- Secure;
- Easy to use;
- Reliable;
- Adaptive;
- Available;
- Efficient;
- Profitable

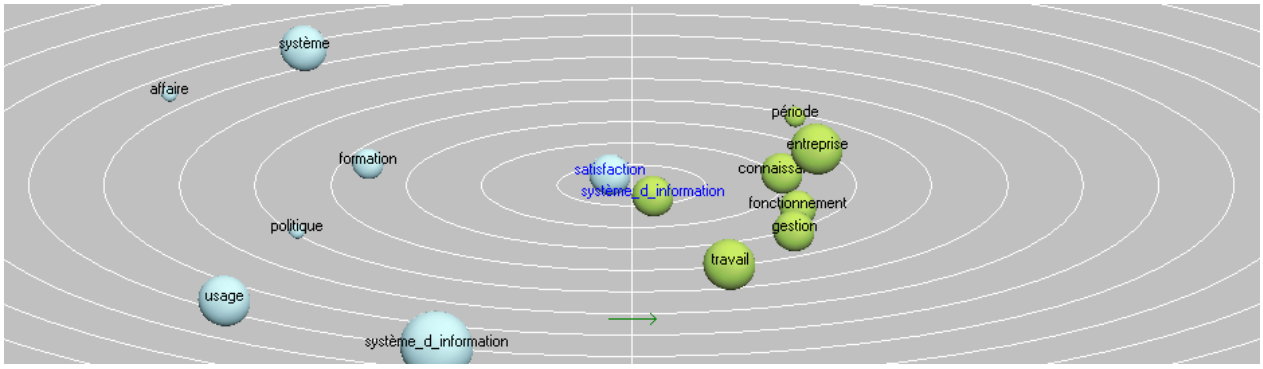

Fig. 4. Representation of the decision-maker's satisfaction with the information system

According to the graph above, the theme we analyze is the one located in the center "satisfaction with the information system". We deduce from this that the information system largely satisfies decision-makers by enabling them to achieve their objectives. We thus observe that the measurement dimensions of the satisfaction variable are present in our results and are consistent with our model. According to our respondents, the information system must be better structured and used to develop digital relationships between job trades and users. To improve satisfaction, it is necessary to adopt an attitude of enchantment:

"*We seek to set up a culture to delight the customer. Through this culture, we will also be able to delight the motivated user who plays with his tool instead of considering tasks as tedious*". Interview excerpt of Informant 3.

In addition, customer satisfaction will also go through employee satisfaction:

"*Happy employees will be more involved in customer relations* ". Interview excerpt of Informant 8

6.1.4 THE IMPACTS OF THE INFORMATION SYSTEM

Information systems have a greater impact on an organization. It can be affected in several ways. Both economically and organizationally. Decision-maker (E3) argues:

"The impact of these gains on the image of our company will be seen above all in terms of consistency with the general environment in our field and our hotel needs to appear harmonious with the phases and current events we are going through". Interview excerpt of Informant 3

From an economic point of view, three types of changes can be observed.

- The relative cost of capital and the cost of information are changed by computer science
- Information technology is seen as a factor of production that can replace traditional capital and labour
- Information technology also affects the cost and quality of information

From an organizational point of view, the impacts are as follows:

- IT flattens organizations
- Understanding organizational resistance to change
- Internet and organizations
- Implications for the design and understanding of information systems

Finally, the decision-maker 19 states that thanks to the gains generated, the company can have a better reputation, which will have a positive effect on all these components:

"More quality, more quality partners, better customers, more gain." Interview excerpt of Informant 19

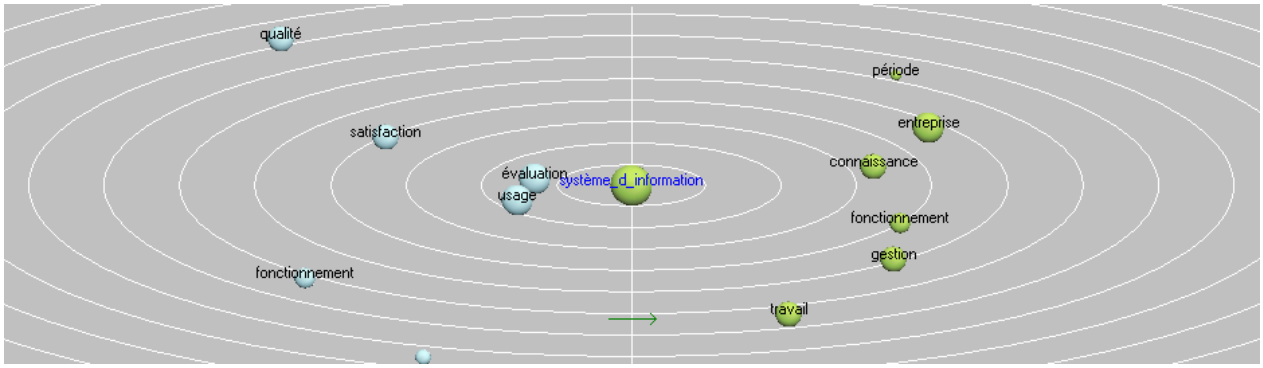

Fig. 5. Representation of the impacts of the information system

We analyze the impact of the information system. In accordance with the logic of presentation of the results of Tropes, to the left of the central theme we identify the existence of the terms: use, evaluation and satisfaction. On the right, we have the acts which are the proper functioning of the company, better knowledge of the environment as well as better work management.

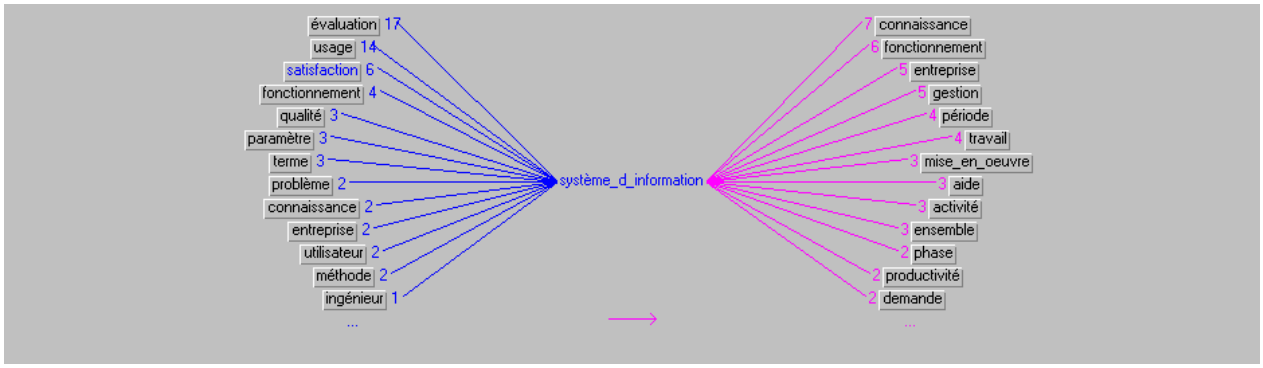

Fig. 6. Representation of relationships between dimensions

The star chart displays the relationships between references. The numbers that appear on the graph indicate the number of relationships that exist between references.

This type of graph is used to analyze the environment of a reference or category. The references displayed to the left of the central theme are its predecessors, those displayed to its right are its successors. We note that the central theme "information system" is strongly linked to the references "evaluation", "use", "satisfaction", "knowledge" and "functioning".

We can say that the dimensions of our model are verified, with the appearance of a new variable which is that of "evaluation". The success of an information system thus depends on the establishment of a system for evaluating the quality of the information system and the information itself, which guarantees its proper functioning and use, two antecedents of the satisfaction of decision-makers and users who subsequently demonstrate better productivity, this thus impacts the company's performance and its consistency with its global environment.

6.1.5 At The Users' Level

6.1.6 Use Of The Information System

An information system saves resources while finding a way to streamline operations. Companies that implement an information system to collect, store, and transfer information can improve operational decision-making, problem solving, and resource planning. Use 1 indicated:

"Salespeople they are obliged to view the platforms of tour operators that are available on the Internet". Interview excerpt of Informant 1.

Users 4, 9, 12, 13, 14 17 and 20 also highlighted the importance of these Microsoft office tools. For the user 1, the information system makes it possible to perform a set of tasks that are all related to the management of reservations, in this case:

"Confirmation of a reservation contract; price reduction proposal; Proposal of a hosting price for a new product; consultation of established contracts and their modality. » Interview excerpt of Informant 20.

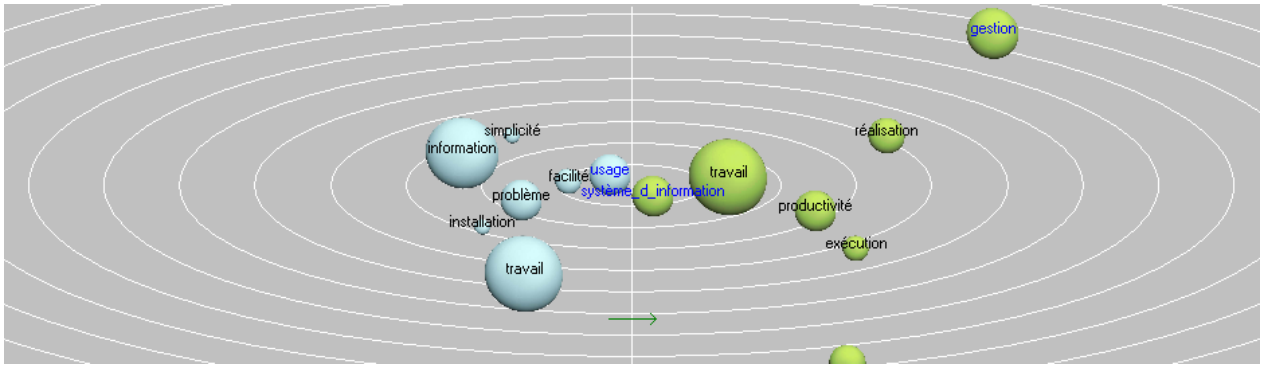

Fig. 7. Representation of the use of information systems

According to the graph above, the theme we analyze is the one located in the center "use of the information system", to the left of the main theme we have the actors "ease", "simplicity", "information", "problem" and "work" and on the right we have the acts "work", "productivity" and "realization". We deduce that the use of the information system facilitates the work, makes it easier to carry out and makes it possible to solve the problems encountered.

Thus, referring to our model, we find that the dimensions "nature of use", "attitude towards use", "rigor of use", "appropriate use" and "extent of use" verified as a measurement criterion for the variable "use of the information system" and that the other measurement dimensions "duration of use", "frequency of use" and "intention of reuse" are not present in our results. However, users 1, 2, 3, 4, 7, 8, 9, 10, 11, 13, and 19 cited that the brakes are due to difficulties in use, mishandling, problems with updating, the inability to use it during updates or in case of maintenance, bugs, slow flow of information, incomplete or erroneous information sharing, and lack of support in case of difficulties.

6.1.7 THE QUALITY OF THE INFORMATION SYSTEM

The quality of the information as a whole is fundamental to decision-making. The study of data acquisition, processing and dissemination of information make it possible to highlight the processes for this transformation.

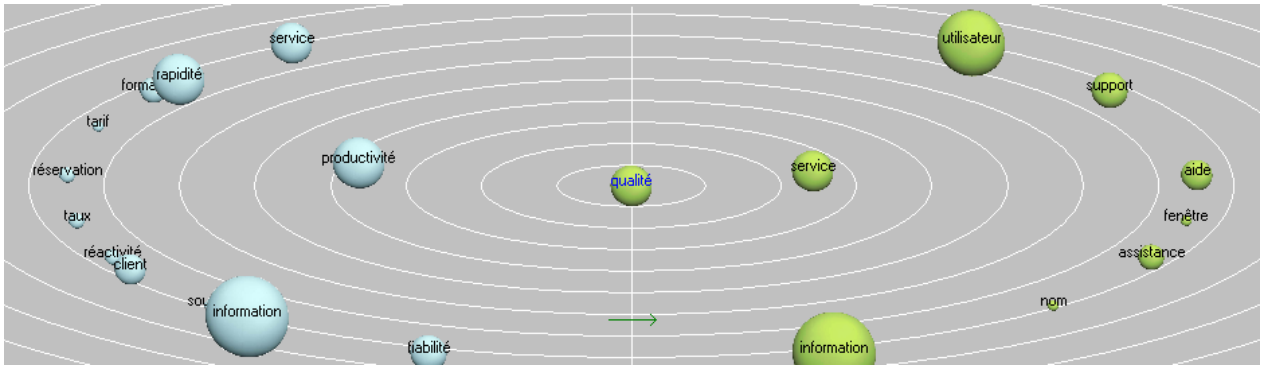

Fig. 8. Representation of the quality of the information system

The graph above illustrates the quality of the information system. The latter is related to the "productivity", the "speed", the "reliability", the "service" rendered and the satisfaction of the "user".

Thus, the dimensions shown by our results are compatible with those of our model for this variable, including the dimensions "Relevance", "reliability", "flexibility and flexibility", "Speed", "system interactivity", "response time" and

"security". However, we did not observe the following dimensions at the level of this variable: "ease", "learning", "personalization" and "availability". Accordingly, users 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 18 and 20 cited the reliability and accuracy of the information provided, speed of execution and export of data and ergonomics.

6.1.8 SATISFACTION WITH THE INFORMATION SYSTEM

User satisfaction is considered in the literature to be one of the most important constructs for the evaluation of an information system. In information systems, satisfaction is assimilated to an attitude towards several aspects of information systems management, i.e. the quality of the results obtained, the human-machine interface, the staff... and various aspects related to the user such as the feeling of participation. In fact, two factors related to the information system were suggested by users 18, 19 and 20 to improve satisfaction:

"Make it available to all staff (E18)", "professional training is a necessity to carry out our activities. I can therefore say that it plays a major role in improving our knowledge and for the proper functioning of the company. However, too much training can have a negative effect on our work." Interview excerpt of Informant 20

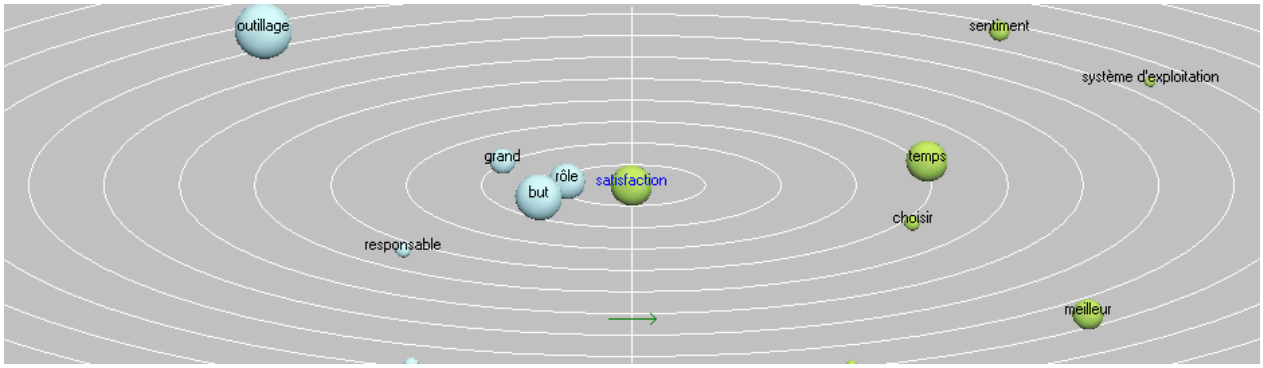

Fig. 9. Representation of satisfaction with information systems

The graph above illustrates satisfaction as a result of the use of information systems. To the left of the theme, we have the actors "role" and "goal". This means that the purpose of an information system is to satisfy the needs of its user. The dimensions of our model are all verified, which supports the relevance of our results at the level of the variable "quality of the system", demonstrating that user satisfaction depends on the quality of the IS.

On the other hand, the user 7 raises the fact that the training makes it possible to master the use of the information system, which creates fluidity and harmony in its operation. Also, users 7, 9 and 10 raise the fact that the training makes it possible to master the use of the information system, which creates fluidity and harmony in its operation. Additionally, users 14 and 15 also stressed the importance of training in mastering work tools, including the information system, and the proper functioning of the company. Finally, user 6 finds that:

"Training is important, it allows to give the hand to other employees so as not to have a need to keep people in the same position ". Interview excerpt of Informant 6.

6.1.9 THE PERFORMANCE OF THE INFORMATION SYSTEM

The evaluation of the performance of information systems becomes an integral part of corporate governance. The performance of the information system is defined as the alignment between the result of the efforts made by the organization and the objectives it had set itself. Its role is to evaluate an information system according to certain criteria using measurement tools. All users stipulate that the use of the information system makes the work more efficient. User 1 expresses that the information system therefore facilitates daily tasks in order to achieve our objectives. User 3 also stipulates that the use of the information system makes the work more efficient.

User 6 indicates that the information system:

"Facilitates the work and the realization of tasks especially in accounting". Interview excerpt of Informant 6.

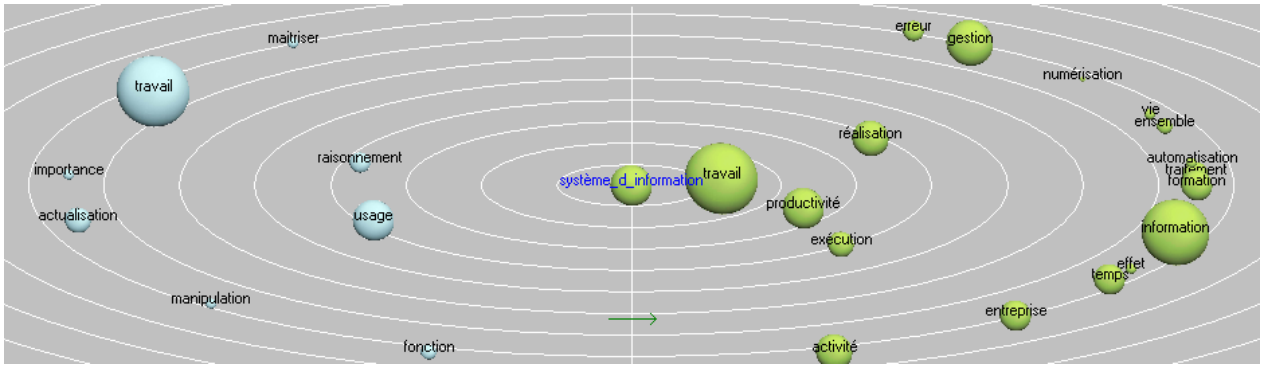

Fig. 10. Representation of the performance of information systems

The theme analyzed is the "performance of information systems". We notice that the references "work", "productivity", "achievement" and "execution" are close and therefore they have many relationships in common. We note that the measurement dimensions of this variable are verified, namely "overall productivity", "input and output results" and "increased capacity", while the dimensions "organizational costs", "staffing requirements", "cost reduction", "e-government" and "business process change" were not advanced in our results.

7 CONCLUSION

The Delone and McLean Information System Success Evaluation Model (D&M) has been regarded as a benchmark in its field since 1992. It is a taxonomy of measures for IS success, which includes six dimensions: system quality, information quality, service quality, use and intention to use, user satisfaction, and net impact. Over the years, the D&M model has undergone scrutiny from numerous researchers who have provided critiques, enhancements, and validations, leading to the release of a second version in 2003 and a third version in 2016.

Despite criticisms and limitations, the D&M model remains a potent and widely used model for evaluating information system success because of its robust theoretical foundation and ability to explain success from various technical, human, and organizational perspectives. The constant effort by researchers, including Delone and McLean (2016) , to refine the model implies that it will remain pertinent and valuable for a long time to come as they strive to adapt it to new challenges and changes in the internal and external environments of organizations driven by advances in information technology.

Based on our results, we can say that at the managerial level (decision-makers), a quality information system guarantees quality and satisfaction of use while having positive impacts on the organization and its environment. However, it should be noted that our results at this level highlighted a new variable which is the "IS Evaluation" arguing that any information system must be constantly evaluated through a monitoring system and precise evaluation methods in order to effectively contribute to the company's gains on the levels of decisions on information, of operation and involvement, and especially the impact of these gains on the image and reputation of the company, as well as its consistency with the general environment. Brand image and company awareness are therefore two new dimensions that have emerged in relation to the net impact variable.

In addition, a quality information system must be able to work with different tools and must imperatively be "easy to use, efficient, able to store and output information as needed, and help decision-making". In terms of knowledge, he must be able to carry out the various missions.

At the level of users, it is also noted that for users, good use of the information system depends on the simplicity and ease of the latter and the need for learning and information in order to avoid obstacles of use and adopt a positive attitude allowing the proper execution of tasks and more productivity. We can also say that impacts "user satisfaction", especially in relation to efficiency (reliability, speed, relevance and quality of service). This satisfaction is subsequently translated into improved user productivity.

In terms of net impacts, it is important to note that the implementation of an information system and a quality service improves the performance of the company as well as its relationship with its global environment thanks to better productivity of users who in turn demonstrate an intention to use these systems and subsequently show satisfaction with the use of these solutions.

The variables of our model are thus all verified at this level with the appearance of a new variable which is that of the "evaluation of the IS" at the level of decision-making managers.

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