A Qualitative Examination of Information Systems (ISs) and Management in Organizations: An Integrative Literature

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Abstract
Employers at all levels, in all settings, are continually in search of information to develop decisions that can be supportive when facing complex, and unpredictable scenarios in the global market. Hence, information and information systems have become strategic tools in the hands of decision makers in today’s businesses. This paper is a presentation of the contemporary reality of information systems, and their influence in enhancing organizational performance. Further, the author identifies the types and levels of information systems available, and their fundamental purposes and roles, alongside the challenges and risks involved. Ultimately, practical implications for business leaders, and recommendations for further studies are provided.

Keywords: information, system, use, business, data, decision

1. Information Systems Concepts
An information system (IS) can be described as a group of individuals, data, and technology that operate or function collectively to find, store, and distribute particular information that enhances decision-making processes. Hence, developing ISs should not be regarded as a separate function from business process management. Concisely, an IS is the use of information technology (IT) to gather, systematize, and allocate information for developing apposite decisions in today’s modern organizations. Oz (2009) clarified that, with an understanding of the two concepts “information” and “system”, the definition of IS is instinctive: It embraces all elements that function together to process data and generate information. The IS can also be defined as a planned, systematic mechanism for providing managers with information necessary for making wise decisions in organizations.

Additionally, ISs involve several subsystems with sub-goals, all linked to the organization’s central goals. Therefore, decision-makers should optimize each subsystem, in order to make the whole system function effectively. Another comprehensive definition involves ISs as systems for acquiring, organizing, storing, manipulating, and transmitting information, and they can be thought of as involving inputs, transformations, and outputs (Bartol & Martin, 1991; Jones & George, 2011; Schermerhorn, 2011). Nevertheless, Norton (2006) considered that ISs perform more than storing and retrieving data; they can also assist individuals in how they can use this information effectively. For example, “When a company desires a particular type of employee, job specifications and requirements are fed into the computer, where they are matched against the resume data stored there. The output is a set of resumes for individuals who meet the requirements” (Miner & Crane, 1995, p.333). Another conjecture is that an IS might be tailored to enhance business processes or to take advantage of a business opportunity, and if so, the design will comprise attributes that would include various IS types (Thompson & Cats-Baril, 2003).

Moreover, IS have become synonymous with a computer-based information system (CBIS), which collects and processes information according to an individual’s order to a computer. A (CBIS) is a distinct set of hardware, software, databases, individuals and processes that are put together to collect, store, control, and transform data into information (Stair & Reynolds, 2008). Developing CBISs can be complex and costly, predominantly when the applications are vast and multifarious. “Today, however, when business people think about information systems, they are most likely thinking about computer-based information systems. These systems rely on computer and related technologies to store information electronically in an organized, accessible manner” (Boone & Kurtz, 2010, p.499). Prominently, organizations should develop policies, and procedures regarding the ethical
use of computers and the Internet in the workplace. These policies involve: ethical computer use policy, information privacy policy, e-mail privacy policy, Internet use policy, anti-spam policy, and acceptable use policy (Baltzan & Phillips, 2009). More importantly, these policies must be communicated to each individual in the organization, and their signatures must be obtained on consent forms. Mathis and Jackson (2000) also recommended rigorously implementing every segment of each policy and monitoring usage for business uses. According to Stair and Reynolds:

Some IS professionals believe that their field offers many opportunities for unethical behavior. They also believe that unethical behavior can be reduced by top-level managers developing, discussing, and enforcing codes of ethics. Various IS-related organizations and associations promote ethically responsible use of information systems and have developed useful codes of ethics. (2008, p.415).

According to Odlyzko (1999), we will continue to live on the rim of intolerable frustration and always be exasperated with computers, as long as technology proposes alluring products and services. Therefore, the best path for an employer planning to be involved in employee monitoring, and enforcing codes of ethics, is open communication surrounding the issue. In a similar vein, Heeks (1998) declared that the efficiency of the technology is a regular frustration. Yet we endure in conceiving that productivity and success are effortlessly reachable if only: (a) we buy the most recent software; (b) we have better computers; (c) we have access to a new communication network; or (d) we apply a new management paradigm to develop and execute our ISs. Therefore, it is important to realize that businesses differ in the technologies used to deliver their outcome because: (a) some businesses are very labour-intensive, requiring a great deal of labour to produce goods and services; (b) other businesses are very capital-intensive, requiring large investments in tools and equipment to support their production processes; (c) some businesses have access to identical technologies and consequently have similar cost structures; and (d) other businesses can access a technology that is not accessible to others (Baye, 2009).

As noted earlier, an IS, is a formal system for supplying management with required and helpful information for making critical decisions, and enhancing the different business functions and activities. However, successful ISs in organizations necessitate managerial control because of the rapid expansion of the field of ISs, and the unlimited information that can be generated from such systems. Following this line of thought, managers need appropriate and timely information to perform tasks as planned or desired. Certo and Certo (2009) reported that information appropriateness, information quality, information timeliness, and information quantity are crucial factors that portray the significance of such information. Moreover, to optimize the whole system, several practices must be taken into account (e.g., systems investigation, systems analysis, systems design, systems implementation, and systems maintenance and security). Accordingly, awareness of the present state of the system and its mechanisms is the initial phase to develop influential policies, and effective ways of management to optimize the whole system. Another important issue for an effective IS is to distinguish between data and information, as well as to examine the ontology of information processing. Computer professionals interpreted data, as the unexamined facts, reports or charts; whereas, information implies data that has been scrutinized and ready for decision makers, and information processing encompasses the different types of data manipulation and inquiries, such as sorting, summarizing or classifying that convert data into information. The efficiency of information processing and flat organizational structures are consequences of strategically implemented IT, which facilitate access to information (Gong & Greenwood, 2012). Information is the result of the process of transforming data into a valuable and practical form for a particular objective (Bartol & Martin, 1991; Goodman, et al, 2007). However, enabling data and applying systems analysis effectively calls for an environment where employees realize that knowledge is power and behave accordingly to assist the organization generating the required knowledge promptly to produce the right decisions at the right time (Johnson, 2012). Generally, system analysis involves a spotlight on the goals and actions that users undertake; what users identify about their duties and responsibilities; and the psychological factors such as perceptions, objects, entities, and attributes and how they are interconnected (Smith-Atakan, 2006).
Comprehensively, O’Brien and Marakas (2006) noted that the IS function embodies the following:

- A fundamental business area the same as other business functions (e.g., HR, marketing, finance, and accounting);
- A significant tool that enhances employee productivity, operational efficiency, and customer satisfaction;
- A large amount of information required to assist decision makers and business leaders; an important component to reserve a competitive advantage or first-mover advantage in the global marketplace;
- A challenging occupation for many individuals around the globe; and
- An important part of the assets of today’s networked business corporations.

Consequently, it is vital for business leaders to become fully aware of the different ingredients of information systems that they encounter, and be able to recognize all hardware, software, data, and networks they use in everyday operations. Thus, “in thinking about the relationship between redesigning business processes and developing information systems, it is always helpful to remember the saying: before paving the cow path, straighten it” (Thompson & Cats-Baril, 2003, p.354). For example, operating an influential IS requires prior consideration of the following: (a) specify what information is required within the organizational system; (b) determine a prompt time to obtain this information; (c) decide in what structure the information must be delivered; (d) draw decision areas in which management makes decisions; and (e) develop alternative decisions that must be well scrutinized to make critical decisions. In addition, the fast development of information technologies has modified many business structures and hierarchies, and enabled ISs to contribute positively. Developing high-quality ISs requires a process called ‘systems analysis and design’. This process entails systems investigation, analysis, design, implementation, security, and maintenance (Goodman, et al, 2007). In addition, they stated that if all stages in the design of an IS have been successful, the ensuing system will have two critical aspects: (a) feasibility: an evaluation of the IS feasibility emphasizes the assessment of alternative systems that are likely to comply with the business needs and workers. In addition, feasibility has many features (e.g., organizational feasibility, economic feasibility, technical feasibility, and operational feasibility); and (b) ability to meet needs of diverse users: the system should eventually fulfill the users’ needs and expectations to accomplish their goals. ISs create learner organizations, operations that are more flexible, enhanced collaboration among different quarters, greater diversification of operations, management processes that are more developed, and they change employee manners or behavior (Griffin, 2008).

In this sense, organizations or every business must have modern ISs, and continually up-dated communication systems (Moss, 2006). Another school of thought revealed that an IS does not call for the use of a computer, and various organizations manage their information without being computerized (Goodman, et al, 2007). Perhaps the hypothesis behind this trend is that systems of managing information were present many years before the existence of computers. However, the partnership between people and computers is now everlasting and rooted in our business and domestic culture (Maddix, 1990). Aside from this, computers can be used to manage a significant amount of information in a short period, diminish the per-unit cost of information processing, deliver information that is advanced and promptly available, and monitor activities as they arise by classifying real-time information (Miner & Crane, 1995).

### 2. Types and Levels of Information Systems

Information systems comprise two expansive categories: (1) operational support systems are tailored to generate a variety of information on the organization’s processes, and activities for internal and external stakeholders; and (2) management support systems are ISs that are structured to offer support for strategic decision-making needs of the upper-level of management (Boone & Kurtz, 2010; Daft & Marcic, 2007). Further, businesses often set up ISs from the bottom up, level by organizational level, and many different levels of management support systems are practical in today’s businesses.
(e.g., a transactional-processing system (TPS), a management information system (MIS), a decision support system (DSS), an executive support system (ESS), enterprise resource planning (ERP) systems, customer relationship management (CRM) system, business intelligence (BI) systems, geographic information systems (GISs), information management systems (IMs), and an expert system (ES)). Dessler (2011) noted that TPS provides an organization’s management, particularly accountants’ comprehensive information about everyday activities. The following are the most widely used information systems. Robbins and Coulter (1999) noted that MIS assist managers and professionals in making effective decisions by regularly developing uniform, consistent, and precise reports. Boone and Kurtz (2010) articulated that DSS provide direct support to business managers, while making decisions: one more level up is ESS, which supplies the upper-level of management with vital information necessary for making decisions, such as for developing a multi-year strategic plan (Gitman & McDaniel, 2006). Thompson and Cats-Baril (2003) mentioned that ERP systems are also known as supply chain management (SCM) systems, which provide information that enhances the planning process of shipping resources (e.g., raw materials or funds); however, they support managers in tracking and altering processes as they arise, and are not only for planning. They are a set of integrated software packages, which support core business activities. CRM systems, administer an organization’s connections with customers and refer to a variety of ISs from simple ones to sophisticated systems that examine important aspects and predict future prospects. As Oz (2009) noted, BI systems are ISs that can help businesses find competitive advantages over others in the marketplace. GISs can be helpful when managers link information to physical settings. According to Orilia (1986), IMS are designed for the distribution of data through a system, access to a database, and data communications’ activities, and their major function is to manage the flow of information to individuals. Finally, according to Bartol and Martin (1991), ESs sometimes called ‘knowledge-intensive systems’, are computer-based systems that apply considerable expert information to assist in solving critical dilemmas. Aside from this, ESs can be used for a plethora of purposes (e.g., monitoring, tracking, and anticipate prospective dilemmas in the workplace).

Hence, there are numerous types of computerized ISs, which serve the different managerial levels in organizations, and the common element to all ISs is that they support decision-making within the organization. Dichter (1987) described three managerial styles of rational decision-making. Speculative managers are managers who must be risk takers, since a great deal of information required for evaluation will not be accessible to them and speculative behavior is desired when facing uncertainties. This approach is known as ‘belief in growth or positive thinking’ rather than taking chances. Timid managers are those who take actions when all risks involved have been removed, and there is very little of a backfire because of their fear of making inappropriate decisions. Straddler managers are managers who venture a decision, when positive and negative results are equal. They consider themselves astute and they will be accountable for any damages or losses. There are several successful examples of decision-making patterns; however, perplexity and intricacy occur when managers superimpose their own managerial philosophies that might not be compatible with others.

One proposition to discern the different types of ISs is to examine the functions they execute, and the individuals they serve in an organization (Daft & Marcic, 2007). Recently, the trend has been shifted toward the unification, and the amalgamation of the capabilities of more than one system, and it is less likely to find a separate system in one particular organization. One IS cannot contain an array of information requirements; therefore, the IS is a complex of many ISs that allocate information while supporting different organizational levels, departments, and operations (Griffin, 2008). However, linking or integrating systems is difficult to develop and implement, as well as being costly. Loraa and Diaz (2011) discovered that when technology is easy to use, potential users count on their situational learning temperament, and when it is difficult, a larger risk of malfunction is expected, situational goal orientations are less powerful, and users count on dispositional goal orientations more. Either way, an organization’s technology is an important variable in shaping its structure; however, clarifying the rapport between technology and structure is convoluted, because different businesses may apply different technologies (Nelson & Quick, 2006). It is commonly considered best to create an impermanent structure, and promote resilience and employee freedom for creating and innovating constructive ideas (Daft & Marcic, 2007).
In all cases, technology in organizations must be managed (e.g., planning for the expansion of technological capacities, recognizing key technology, specifying what technology to purchase, and developing some tools to lead and harmonize the development of bureaucratic standards and policies to control it). With that said, technology is not the sole source of achieving a competitive advantage; however, it is becoming a fundamental stipulation for many businesses. A competitive advantage arises from positioning IT effectively in redesigning processes, maintaining smart connections with diverse quarters, and drawing the organization’s design.

Dessler (1998) argued that there is a hierarchy of ISs, because of information prerequisites at every organizational level. A hierarchical MIS structure elongates its resources through an organization according to management needs. For example, MISs and DSSs offer information for middle-level managers regarding issues related to present versus past equipment and facilities required for the production process or operations. Moreover, ESSs provide information for strategic planners and decision-makers concerning issues related to the operating plans in the future. Further, different types of ISs support different business functions and serve different managerial levels. For example, ISs in organizations can be designed and started at the basic TPS, which records a variety of events, to a more advanced system, such as an ES that enhances individuals’ efforts, and minimizes costs required. This leads us to question what types of information are available in today’s businesses, in order to select and scrutinize the most applicable and effective system that can assist or enhance policy makers, and decision makers. Nickels, McHugh, and McHugh (2008) expounded upon the types of information that are accessible in today’s businesses, as follows:

1. **Business process information** involves all data and information accumulated during an organization’s operations.
2. **Physical-world observations** are caused by the use of radio frequency identification (RFID) devices, tiny cameras, wireless access, and global positioning systems (GPS). All of these devices can identify people’s locations and what they do within an organization.
3. **Biological data** are types of recognition including fingerprinting, and biometric devices that can scan and recognize faces and voices, which may be used to modify products or services in organizations.
4. **Public data** involve electronic devices that individuals use, such as sending e-mails or using instant messages, and public data being shared, stored, or purchased.
5. **Data that indicate personal preferences or intentions**: on the Internet can divulge individuals’ priorities, what they like and dislike, and this valuable information can be sold to different quarters.

In short, critical information comes in and goes out of an organization through countless sources or directions. Thus, it can be dangerous to allow this sea of information to flow without having the ability to manage it and control it to obtain the utmost benefits for an organization. Managers and business professionals encounter the following factors that primarily emphasize the quality of support services business users may require: (a) performance; (b) system improvement; (c) maintenance; (d) training; (e) backing; (f) ease of access; (g) business reputation; (h) hardware; and (i) software. Other types of IS services required by an organization can be outsourced (e.g., ‘system integrators’) (O’Brien & Marakas, 2006). They also added that IS maintenance is essential in all business operations because the system maintenance involves monitoring, assessing, and adapting operational business systems to accomplish desired improvements.

### 3. Fundamental Purposes and Roles of Information Systems

Individuals in organizations need information for a plethora of reasons (e.g., to develop solutions to problems, promote particular strategies or policies, and make appropriate decisions) and the dynamics of the system govern what information should be disseminated to whom and in what standard. In addition to solving problems and making decisions, organizations need ISs to support daily operations and activities. In other words, ISs serve diverse purposes intended to improve organizational performance, such as maintaining records, creating reports, promoting products and services, organizing budgets and finance issues, analyzing documents, and evaluating performance of individuals. According to Oz (2009), the use of ISs has become significant in organizations for a
plethora of reasons, some of which include: the rapid development of computers and their low prices, the fast-growing capacity of electronic devices with cheap prices, the array and creativity of computer programs are greater than before, the ease of access with which the Internet and Web pages become worldwide, the overwhelming majority of the global workforce can manage computers, and perhaps more importantly, organizations may be uncompetitive if they do not use ISs to accomplish their goals. Furthermore, ISs provide support to, control, and enhance all business functional areas (e.g., marketing, finance, HR, and accounting). However, technological factors, legal issues, languages, cultural factors, and economic and political paradigms remain critical challenges to all businesses that use ISs to support processes, strategies, and decision makers. In other words, effective management of ISs delivers fundamental challenges to business leaders.

The main purposes of any IS, regardless of the type of information that is applied, involve the ease to deliver relevant information to users, which enable them to recognize critical issues and allow them to add or create value to the information that already exists in the organization’s system. Moreover, Thompson and Cats-Baril (2003) noted that a long-term IS plan typically answers vital matters, such as: Where does the organization stand? What does the organization want to achieve? What facilities are needed to obtain the desired output? What resources are needed to implement such systems? How long does it take to obtain results? Does the organization have the human capital required for executing an effective system? Thus, the concept of IS planning implies converting strategic and organizational efforts into systems development initiatives (Stair & Reynolds, 2008). Above and beyond, individuals in organizations should undertake particular roles with regard to ISs, such as trainers, facilitators, system developers, and records specialists. However, verifying whether organizational and IS goals are aligned is an enormous gap in IS literature that remains unidentified.

In business, the most valuable asset is not technology but, rather, an individual’s mind (Haag & Cummings, 2010). Managers and business professionals may rely heavily on ISs, but they can rarely replace them because difficult problems call for human interference or judgment. With that said, the fast development of the Internet, intranets, extranets, and other global networks, limits our abilities to predict IS capabilities in organizations, and to what extent ISs could enhance business processes, and activities. Nonetheless, the fundamental roles of ISs were generally interpreted as follows: they support the organization’s processes and operations; support decision-makers; and support an organization’s strategies for sustainable growth, and development (O’Brien & Marakas, 2006). Most importantly, an IS should provide the right information to the right person in the right format at the right time. DuBrin (2006, 2009) thoroughly reported and synthesized the most indispensable factors and capacities of ISs in organizations as follows:

- Provide detailed accounts concerning the organization’s sales.
- Enhance inventory management.
- Deliver a comprehensive report on employee turnover rates, absenteeism, and employee stress levels.
- Provide precise information about each departmental budget, manager, or region.
- Accumulate financial proportions periodically, and compare them to organizational standards.
- Synthesize production and operation control indices, and compare them from setting to another.
- Print out a synopsis of delayed or unpaid accounts related to goods or services obtained.
- Measure the return-on-investment (ROI) of cash excess by subsidiary.
- Make price comparisons for goods and services purchased in organizations.

Likewise, ISs are structured to fulfill one or more goals: (a) infrastructure systems offer services that are shared across the organization and its stakeholders. Some businesses are very modest in their infrastructures, while others make significant investments in infrastructure systems; (b) transactional ISs are developed to enhance operational efficiency and are often considered for containing costs and downsizing; (c) informational ISs are dedicated to informational and decision support and their purpose is to improve managerial effectiveness by allowing them to create better decisions; (d) strategic ISs are described as systems that are aligned to the organization’s competitive strategy and for managing the structural changes of improvement systems (Thompson & Cats-Baril, 2003). To sum up briefly, an IS covers the following serviceable aspects that relate to a business and its environment:
Perception is data entry whether captured or produced into the organization.

Recording is physical capture of data.

Processing is transformation depending on particular objectives of the organization.

Transmission is the flow of information that takes place in an information system.

Storage assumes anticipated future use.

Retrieval is the search for stored data.

Presentation is reporting, documenting, and communicating.

Decision making is when the information system is connected to making decisions (Adeoti-Adekeye, 1997).

In a general view, ISs are considered necessary to make decisions and this can be made through the description or explanation of particular phenomena or events, recommend solutions, and ultimately assess current activities performed.

4. Challenges and Risks to Information Systems

Organizations encounter several serious challenges to information systems (e.g., technological aspects, economic and political trends, language differences when dealing with other nations, and employees’ competencies in IT). Additionally, it is necessary to realize that ISs may not be easy to develop and be executed effectively because they are not all relevant for all processes or quandaries. Another major challenge is that managers may not be competent enough to identify what ISs can and cannot do, alongside with the difficulty to predict new technologies that may occur in the future. However, strategic information should be provided for all concerned managerial levels, which presents another challenge for most organizations in the current global economy. Perhaps the largest challenge is that ISs are susceptible to sabotage and viruses. Likewise, risks to hardware, data, and applications are considered large threats to organizations that do not plan for worst-case scenarios or create contingency plans. Employers should operate efficiently to thwart violations and threats to information systems, and repeatedly assess perils to information, and ISs. Finally, a lack of control over data security and integrity can lead to the invasion of individual rights to privacy. Therefore, Cunningham (2012) urged five ‘generally accepted recordkeeping principles (GARPs) of integrity as follows: the employers’ policies and procedures need to be accurate and complied with; inclusive training must be offered to those who interact with the system; the reliability of the data within the system must be taken into account; an audit trail for the system is required to test different documents effectively, and the algorithms, processes, and the computing milieu that act upon the data must be reliable.

5. Practical Implications for Leaders

Managers or business leaders should devote considerable time in particular issues associated with behavioral and managerial aspects and roles of ISs. Aside from this, it is crucial to develop some tactics that can align the IS and departmental goals to organizational strategies, goals, and vision. Business leaders should regularly manage, monitor, and control the development efforts of IS specialists to ensure that they can offer or develop novel applications of IT for the organization. Several questions need to be answered to ensure the positive contribution of ISs that achieve the objectives of an organization. These are: (1) What are the results of general control of IS auditing in enhancing the quality of information delivered by the system? (2) What is the role of general control of IS auditing in facilitating the adaptation of systems with the latest changes? (3) What are the effects of general control of IS auditing in containing the economic cost of such systems? By reviewing, and auditing all phases of the system, and validating appropriate control, the economic cost of the system can be reduced, and the quality of information provided by the system can be improved, thus, enhancing the system’s capability to adapt to the latest changes, which lead to achieving the organization’s objectives. As a word of caution, it is important to determine the present grade of the different parts of the technology applied and its level, and perhaps more importantly, the recognition of the entire business network because any hidden aspect might negatively affect the quality of such decisions. Another significant issue is that vendors and suppliers of hardware and software products provide various IS services to organizations. Therefore, business managers are required to fully
recognize their staff capabilities, network resources they use, and the types of information products they produce to make the best choice when purchasing such services.

Significantly, it is essential never to underrate or fail to recognize the significance of change management strategies and interventions necessary to accomplish particular goals. Above all, any scientific investigation concerning what adds to successful information technology execution and any endeavors at explanatory theory building need to begin with a rigorous analysis of the environmental aspects, as portrayed in the four actions:

1. **Analysis of the business environment:** What are the most dominant environmental factors?
2. **Analysis of the IT plan:** How can these environmental factors influence the particular IT plans?
3. **Theory building:** Why do the recognized factors affect the particular IT plans in this form?
4. **Promising generalization of the theory:** Who may benefit from these conclusions and where and when? (Roztocki & Weistroffer, 2011).

It was also recommended that a system could be effective in an organization if there is continuity between the legacy environments and proposed future activities (Wagner, Galliers & Scott, 2004). Another practical issue is that IS professionals should critically analyze the organizing vision and evolving configurations, to maximize their benefits from such a system (Aanestad, Henriksen & Pors, 2004). In conclusion, practitioners should realize that the IS field is affected by multiple disciplines (e.g., management and organizational studies, social sciences, computer sciences, and behavioral sciences). Korpela et al. (2004) noted that information, technology, system, communication, organization, and the individual are all important elements, but remain only elements without interpreting sufficiently which IS should take place. Consequently, several human factors should be taken into account, and efforts should be made to assess the fit between an individual and the used technology in the workplace.

### 6. Recommendations for Future Research

Organizations vary considerably in their level of IT focus; therefore, this offers great opportunities for researchers to investigate a plethora of critical issues related to the field. Another area of study could be related to drawbacks and new risks of IT programmes for best practices in organizations. Little research has been done in the area of IT investment behavior of corporations and the constituents that influence such behavior. Shark and Brady (2012) noted that almost no Chief Information Officer (CIO) or manager would argue that the most challenging issue of adopting new technologies is employee consent. Thus, employee acceptance of the use of new technologies and employee interaction with a new system can be investigated. The term IS in North America implies a system offering technology-based information and communication services in organizations; whereas in Europe, IS scholars rely more heavily on interpretive, and descriptive studies, and social and organizational topics regarding IS, to obtain in-depth understanding of the IS discipline (Mursu, 2002). Hence, comparative case studies regarding the field of IS, what it means, and how it can be applied in different socio-economic and cultural contexts would be another interesting research area. We also need to expand our level of understanding of the IS subject by including legal and economic factors involved in a system. Another intriguing area of research could be related to the level and the capacity of ISs in facing crises.

### 7. Contributions of the Paper

The contributions of this study are related to the IS field portrayed and interpreted here. Pozzebon (2004) mentioned that critical interpretive research is an emerging and valuable perspective on IS research. The main contribution of this paper is focused on knowledge sharing about ISs in organizations because of the misperception of the connotation and significance of ISs. Some users mistakenly conceive that ISs are only converting documents and paperwork in-to a digital dossier. The paradigm or the school of thought that was empowered in this paper is, thus, constructivism because of the fact that critical interpretive research is fundamentally constructivist. Academics can use the knowledge in this paper to compare or reflect their own research to other research. For practitioners, the author hopes that this paper can inspire them to improve their work tasks and provide practical notions that can be used to reflect on the output of their own work activities. However, Bell and Adam
(2004) acknowledged that IS is often described as a young field concerned with reflexivity between theory and practice.

Moreover, Lee (2004) argued: (a) ISs research is a product of ISs researchers; (b) ISs research itself is an objective reality; and (c) an IS researcher is a product of IS research. Following these arguments, this paper can serve individuals who attempt to comprehend, and analyze critical issues in IS. The author also believes that an extensive review of literature and discussions of the existing trends in IS can lead to better practices in organizations that employ such systems and stipulate those in doubt about IT investments. As a caveat, IS studies are indefinitely of great importance, whether exploring novel and creative trends or revising, integrating, and replicating other studies. Novel and creative ideas may add value to organizations that place great emphasis on technological matters and have the human capital required to interact with new systems, particularly in Western societies. Alternatively, integrative or revised literature might be useful to individuals who are skeptical about the use of technology in their work activities because it provides a large body of evidence about the value of implementing or investing in technology. Evidently, integrative theory development is a feasible strategy to construct truly exportable IS theory, despite being difficult and time-consuming (Rose, Lindgren, & Henfridsson, 2004). Briefly, the author argues that all types of IS research are needed, as they serve different purposes and individuals in different settings around the globe.

8. Conclusion

Every business needs a system perspective that reflects all ingredients of input and output and conversion process through control apparatus and feedback tools, an integration of decision-making processes, and consideration of the effects of every decision concerning discrete or unconnected areas. Apparently, the use of proper IS methods reflects the effectiveness and the efficiency of an organization’s functions and affects its strategic direction. As discussed earlier, effective ISs contribute to organizational financial performance, increase the efficiency of operations, integrate related technologies across all organizational units, and enhance the overall performance of an organization. Nevertheless, development that arises continually in the IT field has led to the investigation of the controlling function and the value of the auditing system to ensure valuable and supportive information is delivered. Thus, auditors should excel in knowledge of computer informational systems for planning, consulting, controlling, and examining organizational performance. To this end, systems exist in private, public, small, large, economic, social, administrative, military, and commercial institutions; therefore, the author of this paper decided to explore the present reality of ISs and their effects on management performance.

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9. References


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