Recent trends in Management and Commerce
Vol: 1(3), 2020
REST Publisher; ISSN: 978-81-936097-6-7
Website: http://restpublisher.com/book-series/rmc/

Evaluation of Management Information System using WASPAS Method

Agrawal Deepa Manoj
SSt College of Arts and Commerce, Maharashtra, India.
*Corresponding Author Email: deepaagrawal@sstcollege.edu.in

Abstract

Mechanism for managing information. Management information systems (MIS) is the study of how people, technology, organizations, and their interactions interact (MIS). MIS experts help firms make the most of their investments in personnel, technology, and administrative processes.In MIS, the emphasis is on providing technology-enabled services to people. Organizations can organize, monitor, assess, spot, and fix performance breakdowns thanks to management information systems and the experts who utilize them. It supports firms' efforts to solve issues, make more strategic decisions, comprehend performance, and enhance processes.It ought to be founded on extensive planning. It needed to give a thorough overview of the system's dynamics and structure. It ought to work as a holistic system that incorporates all of the organization's interconnected subsystems. Data on people and corporate processes are recorded, stored, and processed by MIS information technology. In order to speed up the business's decision-making process, MIS is a concept that integrates human, mechanical, marketing, and methods for receiving data from internal and external sources and processing it. Resources for Data: A database contains processed and arranged data. Software Resources: They comprise all systems for processing information. Hardware resources: This category includes all tangible tools and supplies utilized in the data processing. Information is acknowledged in MIS as a valuable resource on par with money and effort. In order to effectively manage this resource, management must organize and regulate it in such a way that information becomes a crucial resource for the system. A management information system needs to be well-planned. Weighted Total Product Assessment (WASPAS) analysis used the results to provide a must-read decision-maker with this Individual, Workgroup, Department, Organization, Application, and evaluation of Exploration, Description, and Explanation. Individual, Workgroup, Department, Organization, Application. Exploration, Description, and Explanation. Application has the highest rank whereas Department has the lowest rank.

Keywords: MIS Organizational Position, The Properties of Management Information Systems, (MIS), WASPAS Method.

Introduction

Several scholars have looked into the issues faced by computer users as a result of the advancement and expanding use of computer-based management information systems (MIS) in enterprises. Management scientists and behavioral scientists were strongly motivated to investigate the causes of system failure by the early published case studies.The study of theoretical and conceptual analysis gave researchers a foundation for their investigation into the "implementation challenge." A thorough classified bibliography of implemented work is a significant contemporary issue with implementation in the field of management science.Real-time management information systems are a recent development in computer information systems. It is a usual practice to install a remote computer terminal connected to a sizable computer that houses all the necessary data at each former environmental office. The manager is always able to "interrogate" the data bank, which is regularly updated. In his workplace, a screen displayed answers to queries in an instant. The manager can obtain complete and timely information about everything occurring within the firm thanks to a real-time management information system.Management information systems are becoming increasingly important to both public and commercial sector organizations. More and more managers are becoming aware of how decisions can be impacted by timely and correct information, which in turn influences the overall organization all performance. Nowadays, computers are a commonplace tool for organizing information. This technologically advanced technology is undergoing rapid technological change. One outcome of these changes is the vast volume of advice material produced on how to improve computers as an information management tool. Some of this information is technical in nature, such as

database theory and local area networks, despite efforts to integrate technology into management issues like decision support systems (DSS) and management information systems (MIS).The capacity to distinguish which drugs are acceptable for their circumstances and which are not is a crucial challenge for any manager faced with analyzing using and applying these prescriptive arguments.

MIS Organizational Position

While considering the role of the MIS director, it is vital to understand that the comparison here focuses on functional-level managers. Depending on the nature of the sample frames, the top computer administrator in a private corporation may be a senior vice president or a department manager. Notably, the data processing line system is a part of every position, even the Senior Vice Presidents. Like publicly traded firms, data processing businesses come in a wide range of sizes and functions. Some of the respondents handled data processing for a single small business, while others handled it for a number of big businesses. In some circumstances, office automation and communications are handled by the data processing system.Nonetheless, running data processing businesses resulted in tax obligations for each respondent. The findings imply that managers of data processing in the public sector are positioned somewhat lower in the hierarchy than their counterparts in the private sector. According to empirical findings, government data processing companies are positioned lower in the hierarchy than comparable private data processing companies after accounting for business size and computer technology. There are numerous reasons why this outcome could have occurred. Based on the broad environmental distinctions created above, the first one. High-tech subsystem managers are shielded from political upheaval and politics, which lowers their organizational status.

The Properties of Management Information Systems, (Mis)

Utilizing MIS can fundamentally alter how top leaders make important decisions (not manipulate trivial data that can be easily plotted). These MISs aid managers in structuring and comprehending the complexity of the present. These are systems that enable the administrator to look at different future states of his environment and discover potential repercussions for each condition. Systems that a senior executive might use to simulate the future to increase the likelihood that the decisions he makes will result in actions that in some way come true to the predictions.It is understood that such systems can be unrealistic. To pinpoint some of the issues with their introduction and use, it is helpful to look at these systems as they were. As a result, much like many other similar models, the MIS investigated for this project is far from establishing a complete system of this kind. For such assertions, the state of the art is too rudimentary. Nonetheless, it is appropriate to concentrate on the effectiveness of MIS and its level of sensitivity in such use, as managers act as much (if not more) to our existing delivery capabilities, while examining the human issues connected to the introduction and acceptance of MIS to management.MIS is predicated on the idea that systems are purposefully rational and continuous, just like formal pyramid systems. The designer of MIS is more interested in how humans model the organization than the classic scientific management designer of an organization, who attempts to establish organizational structures while (at least temporarily) ignoring personality and team elements. Be sensible. He concentrates on the features of both healthy and unhealthy functioning that were previously mentioned. He acknowledges the pertinent official and informal functions by doing this.

WASPAS Method

WASPAS (Weighted Aggregate Product Assessment) technique. In this way, two essential contributions are made, specifically a new technique for evaluating the work of experts and a brand new LNN WASPAS version, which enriches the field of multi-criteria choice-making. Consultants are rated using seven experts primarily based on 9 standards. The version is validated following the appearance of the sensitivity evaluation on the outcomes. The evaluation of the outcomes received when utilizing LNN extensions serves as a demonstration of the outcomes produced by the LNN WASPAS model. WASPAS method and criteria and a new system calculating the weights of selection-making experts. In the process of calculating weights, new tactics are proposed to calculate expert Weights and Scale Weights Language-valued intuition is ambiguous Facts are metrics (entropy, divergence, etc.) similarity measures) are extra sensitive to obtaining the weights. Innovative primary information activities of high-speed operation are created by IVIFS. WASPAS can also be used Weights and Measures Good to use and evaluate Select providers. Current Literature Mathematical Modelling or Testifies to use incorporated tactics based on Ratio analysis and ash related Analytical or gray principle and qualitative characteristic Deployment. Most of these tactics are complex and now determine the first-class provider When implicit in the expert's Not using information, some Practices are now overlooked on sustainability and some methods. There is a family of MCTM methods exclusive to WASPAS. It is of two distinct fashions when joined. The estimated blended prime criterion value basically produced a unique combination of results. from the outcomes of those trends.Scale weights can be determined by specialists or by applying a particular method. For the best estimation accuracy, WASPAS employs a recommended method to optimize the weighted combination characteristic. utilizing

forethought while selecting the best strategy for building or modernizing residences or choosing the ideal site for a retail mall employing expanding assessment and workable outsourcing strategies for TUMS healthcare supplementary healthcare services. The WASPAS multi-criteria decision-making tool and the team (QSPM) Recommended are used in conventional strategic planning.

TABLE 1. Management Information System

	Exploration	**Description**	**Explanation**
Individual	31.08	139.53	29.15
Workgroup	29.12	142.97	33.69
Department	24.08	122.58	29.18
Organization	23.17	128.28	24.6
Application	33.33	186.41	27.96

Table 1 shows the data set Analysis using the WASPAS Method. Individual, Workgroup, Department, Organization, and Application are the Alternative and Evaluation Parameters in Exploration, Description, and Explanation.

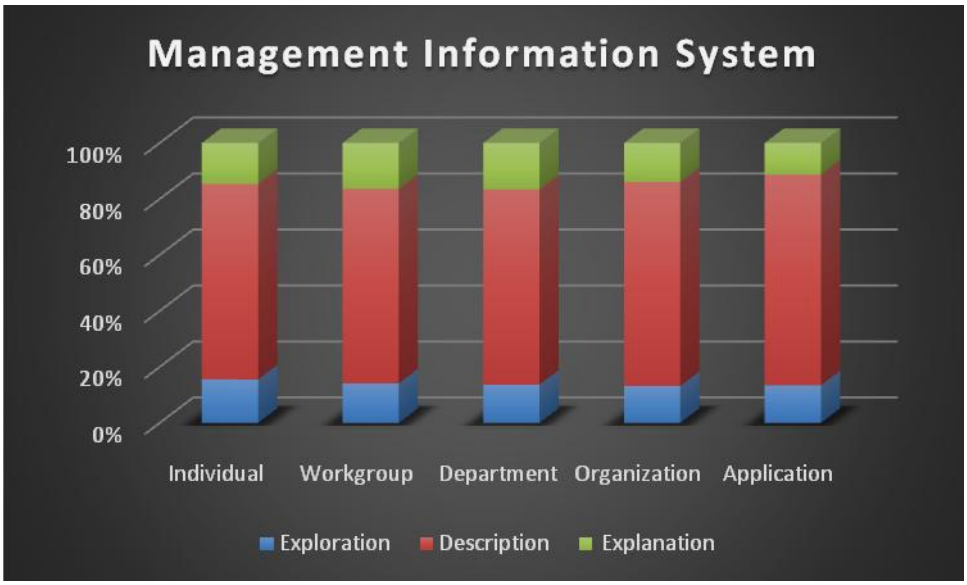

FIGURE 1. Management Information System

Figure 1 shows the data set Analysis using the WASPAS Method. Individual, Workgroup, Department, Organization, and Application are the Alternative and Evaluation Parameters in Exploration, Description, and Explanation.

TABLE 2. Performance Value

	Performance value		
Individual	0.932493	0.748511	0.843911
Workgroup	0.873687	0.766965	0.730187
Department	0.722472	0.657583	0.843043
Organization	0.69517	0.688161	1
Application	1	1	0.879828

Table 2 shows the performance value of the data set using the WASPAS method. It is calculated by the value in the dataset divided by the maximum of the given value of the data set.

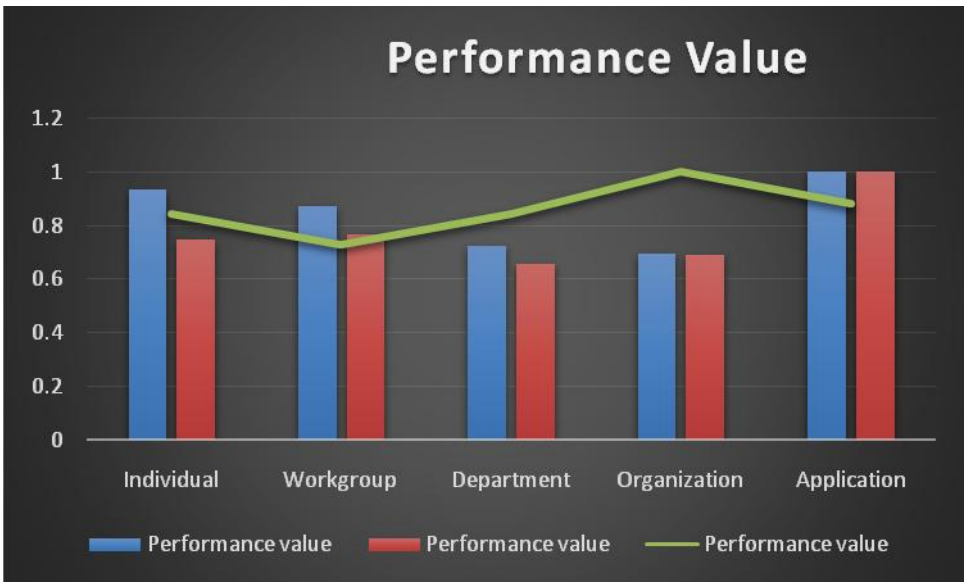

FIGURE 2. Performance Value

Figure 3. Shows the performance Value Data Set in Individual, Workgroup, Department, Organization, Application, and Exploration, Description, and Explanation.

TABLE 3. Weight

Weight		
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25

Table 3 shows the Weightages used for the analysis. We took some weights for all the parameters for the analysis.

TABLE 4. Weighted Normalized Decision Matrix

	Weighted normalized decision matrix		
Individual	0.233123	0.187127836	0.210978
Workgroup	0.218422	0.191741323	0.182547
Department	0.180618	0.164395687	0.210761
Organization	0.173792	0.172040127	0.25
Application	0.25	0.25	0.219957

Table 4 shows the weighted normalization decision matrix it is calculated by multiplying the weight and performance value in table 2 and table 3 Individual, Workgroup, Department, Organization, Application in this Exploration, Description, and Explanation.

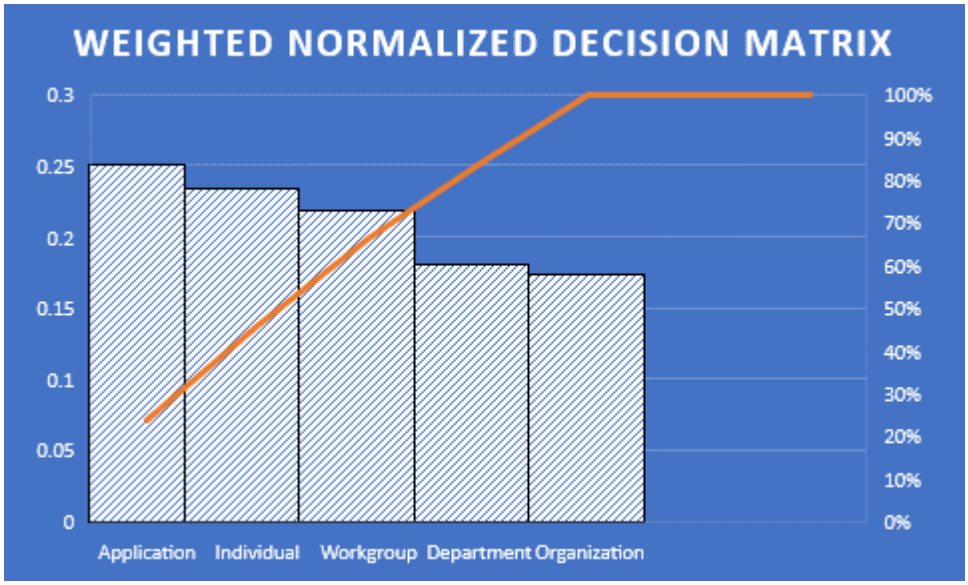

FIGURE 3. Weighted Normalized Decision Matrix

Figure 4 shows the weighted normalization decision matrix it is calculated by multiplying the weight and performance value in table 2 and table 3 Individual, Workgroup, Department, Organization, Application in this Exploration, Description, and Explanation.

TABLE 5. Weighted Normalized Decision Matrix

	Weighted normalized decision matrix		
Individual	0.982678	0.930143	0.95846
Workgroup	0.966805	0.935823	0.924397
Department	0.921946	0.900508	0.958214
Organization	0.913109	0.910799	1
Application	1	1	0.9685

Table 5 shows the weighted normalization decision matrix it is calculated by multiplying the weight and performance value in table 2 and table 3 Individual, Workgroup, Department, Organization, Application in this Exploration, Description, and Explanation.

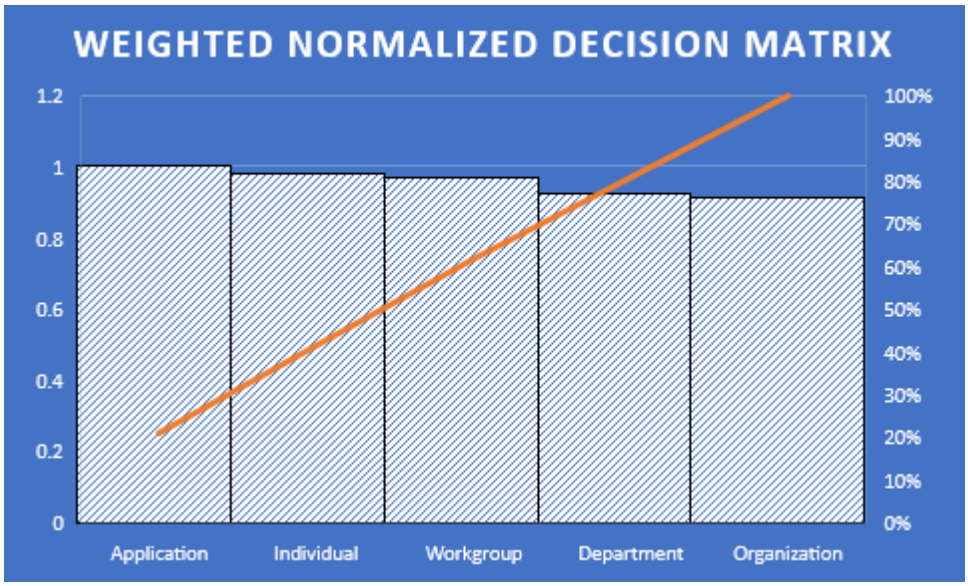

FIGURE 4. Weighted Normalized Decision Matrix

Figure 4 shows the weighted normalization decision matrix it is calculated by multiplying the weight and performance value in table 2 and table 3 Individual, Workgroup, Department, Organization, Application in this Exploration, Description, and Explanation.

TABLE 6. Preference Score (WSM) AND (WPM)

Preference Score		Preference Score		lambda	WASPAS Coefficient
	WSM Weighted Sum Model		WPM Weighted Product Model	0.5	
0.63122885		0.876062636			0.753646
0.592709915		0.836356557			0.714533
0.555774544		0.79552778			0.675651
0.595832506		0.831658664			0.713746
0.719957082		0.968499688			0.844228

Table 6 shows the preference score of the WSM Weighted Sum Model; it is calculated by the sum of the values on the row of the weighted normalized decision matrix. The preference score of the WPM Weighted Product Model is calculated by the product of the value on the row on a weighted normalized decision matrix.

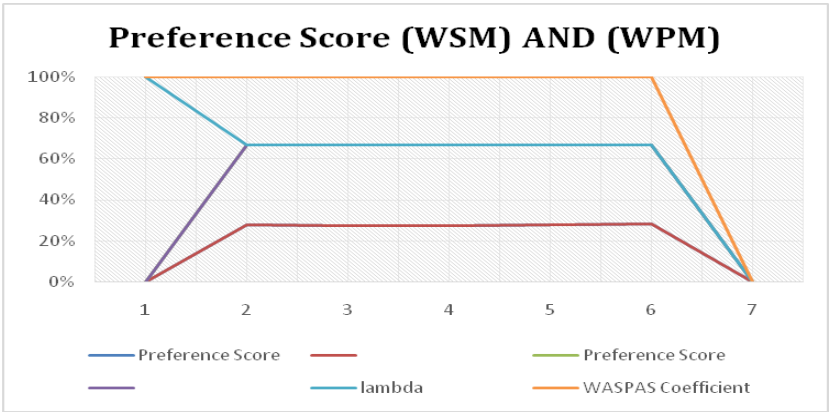

FIGURE 5. Preference Score (WSM) AND (WPM)

Figure 6 shows the preference score of the WSM Weighted Sum Model; it is calculated by the sum of the values on the row of the weighted normalized decision matrix. The preference score of the WPM Weighted Product Model is calculated by the product of the value on the row on a weighted normalized decision matrix.

TABLE 7. Final Result of Rank

	Rank
Individual	2
Workgroup	3
Department	5
Organization	4
Application	1

Table 7 shows the Final Result of the data set using the analysis Method in WASPAS. The application got the first rank whereas Department has the Lowest rank.

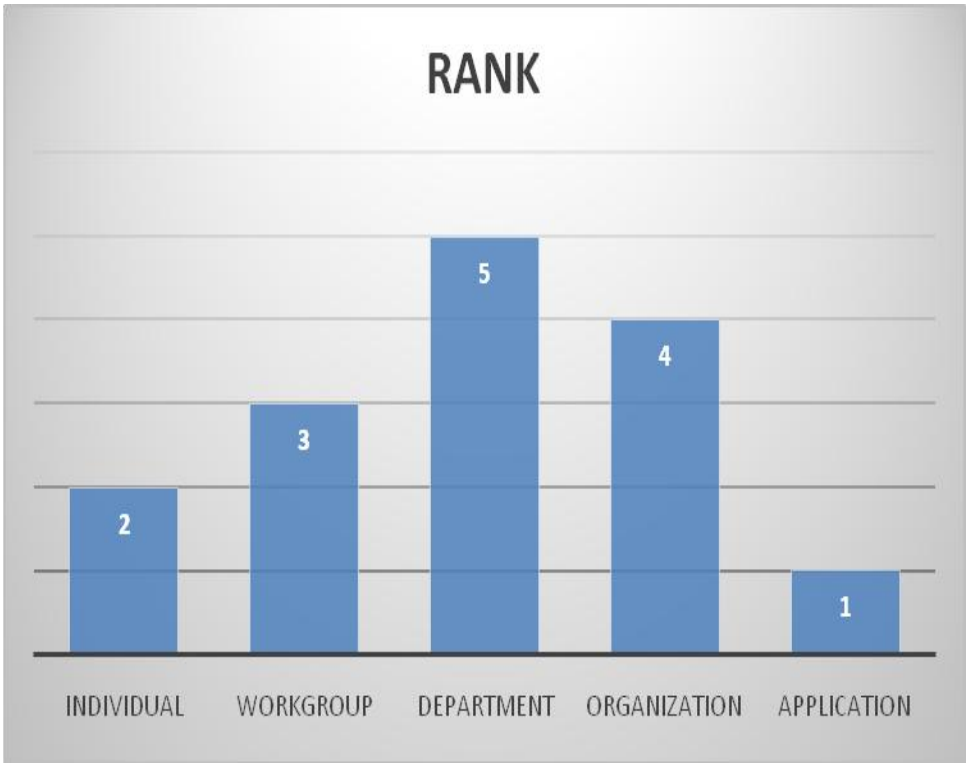

FIGURE 6. Final Result of Rank

Figure 6 shows the Final Result of the data set using the analysis Method in WASPAS. The application got the first rank whereas Department has the Lowest rank.

CONCLUSION

Two insightful findings are presented in this study. First off, the PMIS context is distinct from the private sector context. More dependency, which at the very least leads to increased accountability, drawn-out administrative procedures, and red tape, is the fundamental difference. Second, in these extremely regulated environments, standard MIS prescriptions are not usually accepted.This shows that the adoption of sustainable management approaches has been influenced by the environment of public organizations. To put it another way, the environment of the organization affects or modifies the character of managerial operations.They state in the opening of their study that environmental protection and computing are two distinct fields. A few scientists who work in the field of environmental information systems believe they have a

minor impact on the IS community based on the existing circumstances.According to publications in the information systems field, the integration of environmental management and information systems has not yet been fully implemented.The "organizational strategy set," which is a compilation of data defining the organization's mission, objectives, strategies, and other strategic features, is identified and evaluated as part of the MIS strategic planning process. This set of data can be used to generate the "MIS strategy set," which describes the system objectives, controls, and design strategies.

REFERENCES

1. Gallagher, Charles A. "Perceptions of the value of a management information system." *Academy of Management Journal* 17, no. 1 (1974): 46-55.
2. Mason, Richard O., and Ian I. Mitroff. "A program for research on management information systems." *Management science* 19, no. 5 (1973): 475-487.
3. Dickson, Gary W., James A. Senn, and Norman L. Chervany. "Research in management information systems: The Minnesota experiments." *Management science* 23, no. 9 (1977): 913-934.
4. Robey, Daniel. "User attitudes and management information system use." *Academy of management Journal* 22, no. 3 (1979): 527-538.
5. Abernethy, Margaret A., and Cameron H. Guthrie. "An empirical assessment of the “fit” between strategy and management information system design." *Accounting & Finance* 34, no. 2 (1994): 49-66.
6. Swanson, E. Burton. "Management information systems: appreciation and involvement." *Management science* 21, no. 2 (1974): 178-188.
7. Bretschneider, Stuart. "Management information systems in public and private organizations: An empirical test." *Public Administration Review* (1990): 536-545.
8. El-Gayar, Omar, and Brian D. Fritz. "Environmental management information systems (EMIS) for sustainable development: a conceptual overview." *Communications of the Association for Information Systems* 17, no. 1 (2006): 34.
9. King, William R. "Strategic planning for management information systems." *MIS quarterly* (1978): 27-37.
10. Pinsonneault, Alain, and Kenneth Kraemer. "Survey research methodology in management information systems: an assessment." *Journal of management information systems* 10, no. 2 (1993): 75-105.
11. Ives, Blake, Scott Hamilton, and Gordon B. Davis. "A framework for research in computer-based management information systems." *Management science* 26, no. 9 (1980): 910-934.
12. Bozeman, Barry, and Stuart Bretschneider. "Public management information systems: Theory and prescription." *Public administration review* (1986): 475-487.
13. Culnan, Mary J., and E. Burton Swanson. "Research in management information systems, 1980-1984: Points of work and reference." *Mis Quarterly* (1986): 289-302.
14. Argyris, Chris. "Organizational learning and management information systems." *Accounting, Organizations and Society* 2, no. 2 (1977): 113-123.
15. Ein-Dor, Phillip, and Eli Segev. "Organizational context and the success of management information systems." *Management science* 24, no. 10 (1978): 1064-1077.
16. Weill, Peter, and Margrethe H. Olson. "An assessment of the contingency theory of management information systems." *Journal of management information systems* 6, no. 1 (1989): 59-86.
17. Argyris, Chris. "Management information systems: The challenge to rationality and emotionality." *Management science* 17, no. 6 (1971): B-275.
18. Raymond, Louis, and François Bergeron. "Project management information systems: An empirical study of their impact on project managers and project success." *International Journal of project management* 26, no. 2 (2008): 213-220.
19. Culnan, Mary J. "The intellectual development of management information systems, 1972–1982: A co-citation analysis." *Management science* 32, no. 2 (1986): 156-172.
20. Hamilton, Scott, and Norman L. Chervany. "Evaluating information system effectiveness-Part I: Comparing evaluation approaches." *MIS quarterly* (1981): 55-69.
21. Naranjo-Gil, David, and Frank Hartmann. "How CEOs use management information systems for strategy implementation in hospitals." *Health Policy* 81, no. 1 (2007): 29-41.
22. Faber, Nynke, and Steef L. Van de Velde. "Linking warehouse complexity to warehouse planning and control structure: an exploratory study of the use of warehouse management information systems." *International Journal of Physical Distribution & Logistics Management* 32, no. 5 (2002): 381-395.
23. Brancheau, James C., and James C. Wetherbe. "Key issues in information systems management." *MIS quarterly* (1987): 23-45.

24. Lee, JinKyu, Nitesh Bharosa, Jing Yang, Marijn Janssen, and H. Raghav Rao. "Group value and intention to use—A study of multi-agency disaster management information systems for public safety." *Decision Support Systems* 50, no. 2 (2011): 404-414.
25. Badri, Masood A. "Critical issues in information systems management: an international perspective." *International Journal of Information Management* 12, no. 3 (1992): 179-191.