

Impact of Technological Burden on Knowledge Management Functions in Jordanian Industrial Companies



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ABSTRACT

The goal of this study is to see how electronic information overload affects knowledge management functions in Jordanian businesses. All Jordanian industrial enterprises registered on the Amman Stock Exchange were included in the study's sample. Three hundred and seventy-three people were chosen at random from a simple random sample of 30% of the study population of 1242 senior and intermediate managers in the research community. Following the retrieval of the surveys, 206 questionnaires were found to be valid for analysis. It was used to do descriptive and heuristic statistical procedures, like simple and multiple regression analysis. The SPSS.16 application was used to do this. The study ends with the following findings: Electronic information overload (technological overload) has a statistically significant influence on knowledge management functions (acquisition, generation, transmission, exchange, and application) in Jordanian industrial companies. This work made a number of recommendations as a result of its findings, including: Adopting an organizational aspect that suits the nature of the tasks that industrial companies in Jordan perform, as well as providing technical capabilities to reduce the electronic information overload that these companies face while performing their tasks.

Index Terms: Knowledge Management, Organizational Overload, Statistical Analysis, Jordanian Industrial Companies

1. INTRODUCTION

These days, there has been a rapid acceleration of change toward the knowledge economy and the information economy. Knowledge is an essential ingredient for driving economic growth in countries [3]. Knowledge is already an intangible asset of the organization, leading organizations to reprioritize their efforts [49]. As a result, many technological applications that strengthened organizational capabilities and created a massive flow of information and their

use in organizations were developed [55]. This led to the development of new trends in the management of organizations based on these ideas.

As a result of the information and technical revolution in all sectors of knowledge, today's business organizations confront several obstacles [10]. Therefore, senior management must be able to strengthen its role in investing in contemporary technology and expertise to improve its capacity to respond to the unpredictable environment and its demands [11].

As a result, the foundations of thinking and theoretical frameworks capable of fulfilling the organization's aims must be identified [12].

The rapid shift in the business environment has an impact on business organizations, particularly industrial enterprises [13].

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The factors that led to the burden of electronic information were how easy it was to get and store information in electronic databases, how often it was used, and how long it was kept [15].

Knowledge management is one of the modern topics in the field of management and business and is of great interest to those involved in business organizations [54]. This interest has also grown in the adaptation of various types of organizations to knowledge application [16]. Knowledge management is also important for the growth of current businesses and their ability to handle future problems [16]. Knowledge management's importance in corporate organizations lies not in the knowledge itself, but in the value, it adds to these firms. It also helps firms transition to a knowledge economy that prioritizes knowledge capital investment [6].

Due to the rapid technological development, the business environment of organizations is characterized by rapid change and is dominated by the ICT revolution [34]. Knowledge is the strength of organizations to ensure their growth and sustainability [32]. Knowledge is shared with participation and increased by practice and use [38]. Knowledge is an important resource that contributes to the success of different organizations and is governed by three fundamental characteristics, according to which knowledge is an important economic resource [42]. It is a leading sector of the contemporary economy and it can be traded indefinitely across one organization and among others in general [42].

Modern corporate organizations strive to adapt at every step of the knowledge economy's evolution to meet the demands of the time [48]. Electronic information systems now serve as the foundation for management and productivity operations in all types of businesses [58]. These systems are important for things such as business, marketing, and productivity [58].

1.1. Statement of the Problem

The organization and its employees are burdened with information that needs attention, research, and treatment. Businesses, particularly Jordanian industrial companies, deal with a vast volume of electronic data and information, which weakens their position in making various judgments and leads to mistakes due to the excessive weight placed on understanding information elements. This necessitates businesses to develop new and inventive ways to collaborate constructively to tackle these challenges, with the need to determine control techniques for the implementation of this mechanism to establish its possibilities.

“Knowledge Management Functions Used in Jordanian Industrial Companies: A Study of Technological Burden” is the goal of the study.

1.2. Research Questions

This research is implemented through addressing the following questions:

- According to managers, what kind of technology and what kind of technical skills do Jordanian industrial businesses have?
- What do managers think about the effects of technology load on the functions of knowledge management?
- Managers in Jordanian factories think about the technological load in two ways: How much technology there is and how well they can use it.

1.3. Research Objectives

The research aims to accomplish the following goals:

- Assessing the influence of electronic information (technological load) factors on knowledge management functions in the firms studied.
- Knowledge management functions can be good and bad. Find out how to improve them.
- Measuring the level of use of knowledge management functions by Jordanian industrial firms to come up with ideas for how to handle electronic data (technological burden).

1.4. Research Hypothesis

In Jordanian industrial organizations, there is no statistically significant influence of technological load (technology type and technical potential) on knowledge management functions (acquisition, generation, transmission, sharing, and application of knowledge) at the level ($\alpha \leq 0.05$).

1.5. Research Model

The variables in the study model are chosen in accordance with the research's problem and hypothesis, as well as the study's purpose and particular goal (Fig. 1).

2. ELECTRONIC INFORMATION BURDEN

The electronic information burden in businesses companies is very important and needs a series of effective measures to overcome it.

Frank defined the burden of information as the point at which individuals' processing of information reaches its highest level, and therefore, the ability of individuals to process that information is reduced [52]. Bryant emphasizes

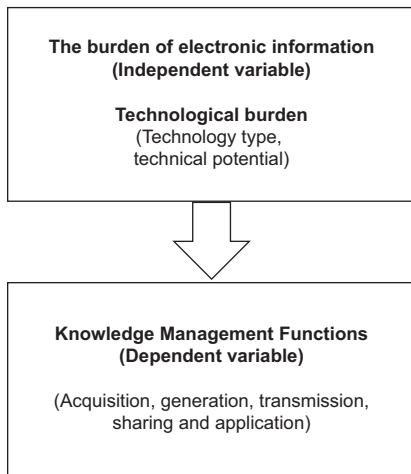


Fig. 1. Research model.

that the information burden occurs because there is more information than knowledge workers can absorb and determine what they need [28]. It has been shown that the information burden is attributed to the following elements: Multiple channels of information, time limiters, noise, and the volume of information coming in.

The burden of information is more pronounced in the fields of business in general and commercial business in particular. This confirms that the burden is a natural and inevitable condition and has several reasons for many of the developments and discoveries of the global era [21]. Several things show the burden of having too much information, like how people communicate, how they store and retrieve information, and how they make financial decisions.

Individuals are constantly exposed to a large amount of information that they obtain through their daily work, prompting them to refuse to receive this information and not allocate sufficient time to resolve the communication content. Choi *et al.* also showed that fear of dealing with information, and the inability to concentrate on memory-related problems may result in distracting thoughts and a lack of attention [22]. Such symptoms are reflected in the effectiveness of both the individual and the organization in their handling of information. According to Himma, the information burden arises from individuals' or the organization's management's frustration with not having access to the required information [37].

Filej *et al.* reported in his study that new information and communication technologies aim to facilitate rapid access to information [21]. Therefore, they cause a high overload

of information, especially with push systems, which provide information to the user without any request for such information [50], [59]. Choi *et al.* explained that information technology plays an important role in accomplishing tasks, especially in business, and is an integral part of the manager's work [22]. Friedrich *et al.*, 2020 [31] reported that ICTs have increased access to information, processed it and produced new information, resulting in a burdensome information burden for managers [31]. Consider, but do not overlook, the role of information technology is assisting in the reduction of the burden through large-scale information processing. Mengis and Eppler emphasize that the development of technology has helped to increase the amount of information flowing to the stakeholders until it has become the main reason for generating the overload of information, directly or indirectly [27].

Below are a number of concepts that illustrate the definition of knowledge and related matters:

Knowledge: Knowledge is the product of data, intuition, and experience [61]. As a result, knowledge is information that has been organized, digested, and structured in such a way that it may be applied [36]. Organizational routines, rules, processes, documents, and practices involve a mix of contextual information, values, expertise, new information, and new expertise that exist in knowing minds, organizational routines, rules, processes, documents, and practices [4]. Knowledge is also recognized as a crucial component and a source of intellectual capital in today's enterprises, and it grows as a result of learning and practice [5]. As knowledge is a product of both the organization and the individual's practice, experience, judgments, and values, it is expressed in the process of applying knowledge to specific goals [8].

Existing two types of knowledge: There are two types of knowledge: Explicit and tacit. Explicit knowledge is information that can be shared across organizations, groups, and individuals, and it may be kept electronically, documented, conveyed, and used in a variety of ways, including knowledge maps. Tacit knowledge is knowledge that is stored in human thoughts and behavior and is difficult to record and transmit to others [1]. Tacit knowledge is knowledge that comes from past experiences and is hard to write down and pass on to others.

Knowledge management: Knowledge management is defined as "doing what it takes to maximize the value of knowledge resources" [30]. Because knowledge management is the gateway to adding and producing value by synthesizing

knowledge pieces to generate top knowledge combinations, the purpose of data, information, and knowledge will change [2], [5]. Knowledge management encompasses learning and adaptation, improving the creative process, sharing, and making the best use of these assets [40]. Knowledge management is defined as “successful learning processes linked with the exploitation, investigation, and sharing of human knowledge,” according to the author (explicit and tacit). It improves performance and intellectual capital by utilizing proper technology, civilization, and culture.

Knowledge management contributes to the development of knowledge that attempts to enhance the success of companies through four dimensions, according to the organizational cooperation of knowledge management [30]. Processes, products, and people, as well as organizational performance, are all influenced by these characteristics.

Knowledge management functions can be divided into five functions as below:

- Knowledge acquisition: A function that attempts to collect and gain knowledge from a range of recorded sources as well as undocumented knowledge that is stored in people’s thoughts and issued through their actions. Knowledge can be acquired from stakeholders and experts, with information technology playing a key role in data capture, classification, processing, and harnessing to generate a competitive advantage for the organization [25], [29], [41], [51], [56], [60], [62], [64]. It takes a lot of work to get new knowledge [41].
- Knowledge generation: It implies that information is created from a variety of sources and channels to expand organizational memory vaults and enable the company to discover innovative solutions to its issues, resulting in innovation. Individuals are involved in the creation of knowledge within the company. Social involvement, embodied external knowledge, integrated internal knowledge, and synthetic knowledge are the four ways that knowledge will be passed on to new people [60], [61], [62], [63], [64].
- Knowledge transfer: Leadership, absorptive capability, organizational structure support, degree of complexity, degree of privacy, and reliability of knowledge vocabulary are all elements to consider while transferring knowledge [16], [19], [23], [40], [44], [53].
- Knowledge sharing: Knowledge sharing is critical in modern businesses for production, adapting to external factors, outperforming rivals, promoting opportunities, and sustaining their efficacy. Individuals are sharing their expertise and experience formally through frequent

formal meetings, which is expanding the organization’s knowledge base. As well as people’s involvement in knowledge with others, which avoids the loss of such information and its fading with time. Furthermore, sharing knowledge between organizations increases the amount of knowledge stored in organization warehouses [17], [20], [35], [39], [43], [45], [47], [56], [57], [63], [64].

- Knowledge application: The purpose of knowledge management is for modern enterprises to use knowledge retrieval techniques and web-based technology platforms to apply knowledge. Furthermore, these systems allow for the timely and appropriate access, use, and transfer of information, as well as communication with the appropriate individual [18], [33], [63], [64].

Tashkandi and Zakia examined the importance of knowledge management and the extent of its application in the management of education in the city of Mecca and concluded that the members of the study community recognize the importance of knowledge management and employment, but their management does not give priority to knowledge management [9]. The reason for this is that knowledge management is a modern area that organizations seek to adopt. Dubosson and Fragniere emphasized that the information burden affects the efficiency of organizations [26]. The burden is a curse and a real concern for the management of the organization, perhaps because the new IT trends are not fully absorbed, also showed that the information burden affects managers differently [22]. The role of the Director changed as he spent more time processing information and dealing with technology and less time managing staff, and he considered that the regulatory environment was the primary cause of the phenomenon of information burden, followed by technology and personal factors. Manovas concluded that the successful transfer of knowledge in an IT project must have a solid knowledge base and practical knowledge capabilities to ensure successful transfer of knowledge and that a culture of learning, sharing, collaboration technology, and incentive systems is important elements of the structure [46].

To measure the impact of organizational culture on knowledge management, the study of the convicted Rawluk *et al.* showed the impact of organizational culture factors individually and collectively in the management of knowledge as a whole, and its individual processes (knowledge generation, sharing, and application) [14]. Leadership was the most influential factor in organizational culture in implementing knowledge management. On the impact of knowledge management in achieving organizational creativity, Rawluk *et al.* [14]

showed that there is a clear awareness among employees of the need to adopt creative ideas in the technical fields to improve and develop. The organizational units in the research organizations want to adopt knowledge in all fields, through the adoption of expansion strategies in the scientific fields and the creation of new scientific departments.

3. METHODOLOGY

3.1. Research: Questionnaire Design

In the preceding sections, the electronic information overload in enterprises and their duties was discussed. This section will look at how to create the questionnaire that is necessary for this study. The questionnaire employs a five-field Likert scale, with strong agree, agree, neutral, disagree, and strongly disagree as the options. According to the study paradigm, the questionnaire is divided into two parts: An independent variable (technological burden) and a dependent variable (technological burden) (knowledge management functions).

- Independent variable (technological burden) (Fig. 2): This field is divided into two parts: Type of technology and technical potential and varied types of technology may not suit the type of task required, such as hardware, software, networks, and information systems, which are necessary to process data and information to accomplish various tasks. Human capabilities and infrastructure that support IT from databases and information processing systems, as well as specialists in data collection and analysis, maintenance workers, and equipment operators, are examples of technical potential.
- Dependent variable (knowledge management functions) (Fig. 3): Knowledge acquisition, knowledge generation,

knowledge transfer, knowledge sharing, and knowledge application are the five components of this discipline. Knowledge acquisition refers to obtaining information from both internal (such as learning, cooperation, and employee feedback), as well as external (such as training programs and workshops and knowledge databases) sources (such as customers, consultants, competitors, competent personnel, attract experienced, and establish relationships with allies and partners). Knowledge generation is concerned with equipping workers in the knowledge field with graphical analysis, and this is done through learning, teaching, research, and development. Knowledge generation is concerned with creating and deriving new creative knowledge from existing knowledge through the organization to secure knowledge types for the benefit of future decisions, which are concerned with equipping workers in the knowledge field

#	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The company uses the right hardware and tools to obtain the appropriate information.					
2	The company uses various programs to perform various electronic operations.					
3	The company provides systems to operate networks electronically.					
4	The company keeps updating the software used for its operations.					
5	Information technology enhances the company's ability to filter information.					
6	The company employs specialized software designers in proportion to the technological burden.					
7	The company employs specialized equipment operators.					
8	The company uses multiple databases supporting the role of IT operations.					
9	The company has an infrastructure to support information technology, such as information and communication networks, servers, peripherals and accessories.					
10	The company employs data collection specialists.					
11	The company provides feasible information processing systems.					
12	The company has a specialized IT maintenance unit.					
13	The company employs professionals who specialize in data processing and preparation for use.					

Fig. 2. Technological burden questioner.

#	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The company receives feedback from employees on a permanent basis.					
2	The company uses training programs and workshops as a way to equip employees with the necessary knowledge.					
3	The company acquires knowledge from its partners or allies by establishing relationships with them.					
4	The company is keen to provide employees with information consistent with its products					
5	The company recruits experienced and competent staff to work for it to enhance its knowledge.					
6	The company always synthesizes information collected from multiple sources, in order to generate new knowledge.					
7	The company adopts advanced R&D policies to generate new knowledge.					
8	The company provides incentives for new innovations and knowledge.					
9	The company encourages brainstorming among employees to generate new ideas.					
10	The company seeks to meet its knowledge needs by bridging the knowledge gap.					
11	Company information flows smoothly across functional boundaries.					
12	The company contributes in sending scholarships for specializations in order to transfer knowledge.					
13	IT helps bring people in need of knowledge closer to those who have it.					
14	The company encourages dialogue between employees to impart knowledge.					
15	The company makes periodic transfers between departments and departments as a means of knowledge sharing.					
16	The company employs informal meetings and dialogues for the purposes of expanding sharing of knowledge.					
17	The company has an atmosphere of mutual cooperation to support knowledge sharing.					
18	The company fosters a culture of knowledge sharing among employees.					
19	The company provides multiple channels for knowledge sharing (Internet, Extranet and Intranet).					
20	The company holds meetings to discuss its annual reports to get feedback.					
21	The organization holds training courses on how to use and apply the knowledge gained to achieve specific objectives.					
22	Directors recognize that the Organization has a non-invested knowledge balance.					
23	The company uses modern technologies to apply knowledge and invest its returns.					
24	The management of the company is keen to use the new knowledge generated by the company.					
25	The company is keen to ensure that employees are aware of the methods of applying the acquired knowledge.					

Fig. 3. Knowledge management functions questioner.

with graphical analysis, and this is done through learning, teaching, research, and development. Knowledge transfer refers to the proper conveyance of specific knowledge to a specific individual (communications, reports, bulletins, staff movements, and use of technical tools to enhance knowledge transfer) in a formal and informal way (individual informal meetings) at the correct cost and at the right time.

Individuals share and circulate numerous sorts of knowledge in the context of knowledge sharing. Securing collective collaboration among them, interacting with others' conversations both within and outside the company, reaching out and working on the same document concurrently from many locations to develop fresh creative ideas everywhere in an organization, knowledge application refers to how people and resources are developed, how businesses are made better, how technology is used to get information, and how people can share information about what they know.

3.2. Research: Population and Sample

Industrial enterprises registered on the Amman Stock Exchange make up the study's population. All managers in senior management (general managers, their assistants, or their representatives) as well as managers in middle management were included in the sample and analysis unit (directors of the main departments and heads of departments). The sampling and analysis unit has a population of 1242 people. A random selection of 30% of them was chosen to form the sample (373 people). The questionnaires were then sent out to that group. There were 206 questionnaires that could be used for statistical analysis, accounting for 55% of the total distributed questionnaires.

Secondary sources, which contain data and material published in various library sources, have been permitted for assessment of the literature and prior works to meet the study's goal. In this case, the questionnaire was the main source of data. It was used to manage the questions and test the hypotheses in the applied part of a study.

4. RESULTS AND ANALYSIS

The relative importance was determined in the respondents' perceptions of the study questions based on the Likert five-point scale. A low (<2.33), middle (2.33–3.66), and high (3.77 and above) are used as shown in Fig. 4.

Question 1: How do managers working in Jordanian industrial enterprises perceive the technological load (kind of Fig. 1 shows that the sample's perceptions

of the technological burden were high in both dimensions of the type of technology and technical possibilities, with the general arithmetic mean of the type of technology (4.20) and the standard deviation of the standard deviation of the standard deviation of (0.55).

This is because businesses recognize the significance of the technology they employ as the foundation for data and information filtering. It is very important for businesses to have electronic network operating systems because they have to deal with a lot more information.

Question 2: What are the perspectives of managers in Jordanian industrial businesses that operate in knowledge management functions (acquisition, generation, transfer, sharing, and application of information)?

Fig. 1 shows that the respondents' level of response was high, with an arithmetic mean of (3.71) and a standard deviation of (0.57). While the high degree of knowledge sharing revealed a significant influence of the electronic burden on knowledge sharing, the results also revealed a significant impact of the electronic burden on knowledge sharing. The researchers argue that the availability of technological devices and equipment hinders the establishment of a favorable regulatory environment, beginning with the speed with which information is delivered across numerous communication networks both internally and externally. Finally, respondents gave a positive response to the application of knowledge.

According to the researchers, this is due to the capacity of the investigated firms to apply current techniques in the application of information and to strive to communicate it to all people, as well as the use of fresh knowledge that is relevant and produces excellent results.

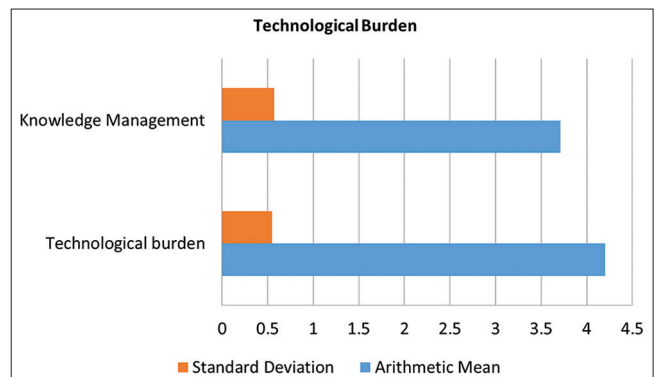


Fig. 4. Arithmetic mean and standard deviation (Technological Burden).

In this section, the hypotheses of the study are tested, where simple regression, multiple regression, and other tests are used to validate the hypotheses. These tests are the F-test for the significance of the regression model, the *t*-test for the effect of significance, and the value of R² (coefficient of determination), to find out the percentage interpreted by the independent variables in the dependent variable, depending on the statistical significance values extracted using the statistical software as below:

The hypothesis of the study: In Jordanian industrial organizations, there is no statistically significant influence of technological load (type of technology and technical skills) on knowledge management functions (acquisition, generation, transmission, sharing, and application of knowledge) at the level of (0.05).

Table 1 findings show that technical load is the most important variable that determines knowledge management

TABLE 1: The influence of technological strain on the dimensions of knowledge management functions

Dependent variable	Standard deviation	Coefficient of determination	F-value	Degree of freedom	Significance level	Regression coefficients				
						Independent variable	β	Standard error	t-test	Significance level
Acquisition of Knowledge	0.515	0.266	73.790	1.204	0.000	Technological Burden	0.510	0.059	8.590	0.000
Generation of Knowledge	0.535	0.286	81.709	1.204	0.000	Technological Burden	0.572	0.063	9.039	0.000
Transmission of Knowledge	0.601	0.361	115.331	1.204	0.000	Technological Burden	0.678	0.063	10.739	0.000
Sharing of Knowledge	0.535	0.286	81.733	1.204	0.000	Technological Burden	0.577	0.064	9.041	0.000
Application of Knowledge	0.498	0.248	67.182	1.204	0.000	Technological Burden	0.569	0.069	8.196	0.000
Functions of Knowledge Management	0.618	0.382	126.324	1.204	0.000	Technological Burden	0.581	0.052	11.239	0.000

TABLE 2: The influence of technological load characteristics on knowledge management function dimensions

Dependent variable	Coefficient of determination	Standard deviation	F-test	Degree of freedom	Significance level	Regression coefficients				
						Independent variable	β	Standard error	T-Test	Significance level
Acquisition of knowledge	0.540	0.292	41.850	2.203	0.000	Type of technology	0.091	0.079	0.901	0.368
						Technical capabilities	0.445	0.480	5.495	0.000
Generation of knowledge	0.610	0.372	60.137	2.203	0.000	Type of technology	0.077	0.101	0.769	0.443
						Technical capabilities	0.549	0.080	6.835	0.000
Transmission of knowledge	0.536	0.287	40.825	2.203	0.000	Type of technology	0.269	0.103	2.625	0.009
						Technical capabilities	0.321	0.082	3.916	0.000
Sharing of knowledge	0.498	0.248	33.464	2.203	0.000	Type of technology	0.193	0.112	1.729	0.085
						Technical capabilities	0.369	0.089	4.136	0.000
Application of knowledge	0.518	0.268	37.137	2.203	0.000	Type of technology	0.269	0.095	2.821	0.005
						Technical capabilities	0.261	0.076	3.431	0.001
Functions of knowledge management	0.619	0.383	63.088	2.203	0.000	Type of technology	0.180	0.083	2.166	0.031
						Technical capabilities	0.389	0.066	5.861	0.000

functions. All models of progressive multiple regression are consistent with statistical tests, including F values and the *t*-test, implying that the initial zero hypothesis is rejected and the alternative hypothesis is accepted.

The influence of technological strain on the dimensions of knowledge management functions is shown in Table 1.

Table 2 shows that the multiple regression model used to assess the impact of the dimensions of the independent variable technological burden (type of technology and technical capabilities) on the variable of knowledge management functions is significant, and that the two variables together ($R^2 = 38.3\%$) account for the majority of the differences in knowledge management function values.

Table 1 shows the significance of the multiple regression model when it comes to the impact of type of technology and technical abilities on the dimensions of knowledge management functions. Technical capabilities and type of technology have a big impact on the two dimensions of knowledge transfer and application, but not so much on the technical sub-dimensions of knowledge acquisition.

5. CONCLUSIONS

In light of the prior talks, the study came to the following conclusions:

- The high importance of the technological burden in terms of the type of technology in Jordanian industrial companies, particularly in terms of the companies' use of appropriate devices and tools to obtain the required and appropriate information in their use through their reliance on activating local and spider networks.
- The findings of this study agreed with those of the Ching-Chiao *et al.* [24] study, which found that technology produces an information burden and that the sort of technology used is critical in decreasing that burden. The present study's findings also agreed with those of Dubosson and Fragniere [26] in that information technology is an information burden that reduces company efficiency.
- The study found that the technological burden is becoming more important in terms of technical skills in Jordanian industrial enterprises, particularly in terms of their capacity to have a supporting infrastructure for information technology, networks, servers, and other peripherals. This study supported the conclusions of the Choi *et al.* [22] study, especially in terms of the human

component, where the larger the information load, the more time managers spend on analysis and audits, and the less time they spend on staff management. In the technological section of the study, the previous study Choi *et al.* [22] varied from the current one since technology was the second source of the information load phenomena.

- The study revealed that information generation piques people's attention. This is due to managers' capacity to diversify information sources, their focus on research and development, and an effort to bridge knowledge gaps as a result of changes in the workplace, as well as attention to the organizational and technical dimensions of knowledge creation. This result matched that of research on knowledge sources, acquisition, and transmission [9]. The findings are also in line with research Suhaimi [7] that looked at the characteristics and processes of knowledge management (acquisition, generation, transmission, distribution, and application).

6. RECOMMENDATIONS

As a result of their research, the researchers make a number of recommendations for Jordanian industrial companies to follow. These recommendations are: Adopting the type of technology appropriate to the environment in which Jordanian industrial companies operate in such a way as to reduce the burden of information in terms of the technological burden that may be exposed to them in carrying out their decision-making tasks.

- Jordanian industrial businesses should undertake a strategic study of the company's strengths and weaknesses as reflected in the performance of their departments and departments and decide their influence on raising or lowering the technical load in those departments and departments.
- Building organizations in their regulatory environments to make communication systems that work well, based on the idea of cutting down on technology so that they can reorganize their systems to be more effective.
- Organizations are anxious to guarantee that employees are aware of how to use previously acquired information and how to apply new knowledge developed by these companies based on their unique characteristics. Recognize that managers have a knowledge asset that has yet to be invested in and support this trend by offering training courses on how to use and apply that expertise to achieve certain goals.

REFERENCES

- [1] A. Jazar and A. Talaat. "Proposed Project for Knowledge Management in Jordanian Public Universities". Unpublished Doctoral Thesis, Faculty of Higher Education Studies, Amman Jordan, Amman Arab University for Graduate Studies, 2005.
- [2] M. Bataineh and Z. Mashaqbeh. "Knowledge Management between Theory and Practice". Jalis Al-Zaman Publishing House, Amman, 2010.
- [3] S. N. Jawad, M. S. Al-Ani, H. A. Hijazi and H. Irshaid. "Small Business Management, A Technology Entrepreneurial Perspective". Safa Publishing House, Amman, Jordan, 2010.
- [4] H. Hijazi. "Measuring the Impact of Knowledge Management Perception on Employment in Jordanian Organizations: A Comparative Analytical Study between the Public and Private Sectors towards Building a Model for Knowledge Management Employment". Unpublished Doctoral Thesis, Faculty of Administrative and Financial Studies, Amman Arab University for Graduate Studies, Amman, Jordan, 2005.
- [5] N. Hamidi. "Management Information Systems: Contemporary Entrance". Wael Publishing House, Amman, Jordan, 2005.
- [6] M. Ziadat. "Contemporary Trends in Knowledge Management". Safaa Publishing and Distribution House, Amman, Jordan, 2008.
- [7] Z. Suhaimi. "The Readiness of Public Organizations for Knowledge Management: A Case Study of King Abdul Aziz University in Jeddah". An Introduction to the International Conference on Administrative Development: Towards Distinguished Performance of the Government Sector, Riyadh, 2009.
- [8] S. Al. Sharfa. "The Role of Knowledge Management and Information Technology in Achieving Competitive Advantages in Banks Operating in Gaza Strip". Master of Business Administration, Islamic University, Gaza, 2008.
- [9] Z. Tashkandi. "Knowledge Management: The Importance and Extent of Application of its Operations from the Point of View of the Supervisors and Administrator's Departments of the Department of Education in Makkah and Jeddah". Master Thesis, Umm Al-Qura University, 2009.
- [10] A. Taher and I. Al-Mansour. "Requirements for Sharing Knowledge and Obstacles Facing its Application in Jordanian Telecommunication Companies". Presented to the Scientific Conference, Applied Science University, Amman, Jordan, 2007.
- [11] M. S. Al-Ani and S. N. Jawad. "Management Process and Information Technology". Al-Ethaa Publishing House, Amman, Jordan, 2008.
- [12] M. S. Al-Ani and S. N. Jawad. "Business Intelligence and Information Technology". Safa Publishing House, Amman, Jordan, 2012.
- [13] A. A. Eniola, G. K. Olorunleke, O. O. Akintimehin, J. D. Ojeka and B. Oyetunji. "The impact of organizational culture on total quality management in SMEs in Nigeria". *Heliyon*, vol. 5, no. 8, p. e02293, 2019.
- [14] A. Rawluk, R. M. Ford, L. Little, S. Draper and K. J. H. Williams. "Applying social research: How research knowledge is shaped and changed for use in a bushfire management organization". *Environmental Science and Policy*, vol. 106, pp. 201-209, 2020.
- [15] A. R. Said, H. Abdullah, J. Uli and Z. A. Mohamed. "Relationship between organizational characteristics and information security knowledge management implementation". *Procedia Social and Behavioral Sciences*, vol. 12320, pp. 433-443, 2014.
- [16] A. M. Abubakar, H. Elrehail, M. A. Alatailat and A. Elçi. "Knowledge management, decision-making style and organizational performance". *Journal of Innovation and Knowledge*, vol. 4, no. 2, pp. 104-114, 2019.
- [17] S. Almahamid, A. Awwad and M. McAdams. "Effects of organizational agility and knowledge sharing on competitive advantage: An empirical study in Jordan". *International Journal of Management*, vol. 27, no. 3, pp. 387-404, 2010.
- [18] M. Ariffin, N. Arshad, A. R. S. Shaarani and S. U. Shah. "Implementing knowledge transfer solution through web-based help desk system". *World Academy of Science Engineering and Technology*, vol. 21, pp. 78-82, 2007.
- [19] E. Awad and H. Ghaziri. "Knowledge Management". Pearson Education Inc., Prentice Hall, United States, 2004.
- [20] K. Bartol and A. Srivastava. "Encouraging knowledge sharing: The role of organizational reward systems". *Journal of Leadership and Organizational Studies*, vol. 9, no. 1, pp. 64-76, 2002.
- [21] B. Choi, S. K. Poon and J. G. Davis. "Effects of knowledge management strategy on organizational performance: A complementarity theory-based approach". *Omega*, vol. 36, no. 2, pp. 235-251, 2008.
- [22] B. Filej, B. Skela-Savič, V. H. Vicić and N. Hudorovic. "Necessary organizational changes according to Burke-Litwin model in the head nurses system of management in healthcare and social welfare institutions-The Slovenia experience". *Health Policy*, vol. 90, no. 2-3, pp. 166-174, 2009.
- [23] J. Bou-Liusar and M. Segarra-Cipres. "Strategic knowledge transfer and its implications for competitive advantage: An integrative conceptual framework". *Journal of Knowledge Management*, vol. 10, no. 4, pp. 100-112, 2006.
- [24] Y. Ching-Chiao, P. B. Marlow and C. S. Lu. "Knowledge management enablers in liner shipping". *Transportation Research Part E: Logistics and Transportation Review*, vol. 45, no. 6, pp. 893-903, 2009.
- [25] W. Cohen and D. Levinthal. "Absorptive capacity: A new perspective on learning and innovation". *Administrative Science Quarterly*, vol. 35, no. 1, pp. 128-152, 1990.
- [26] M. Dubosson and E. Fragniere. "The consequences of information overload in knowledge based service economies: An empirical research conducted in Geneva". *Service Science*, vol. 1, no. 1, pp. 56-62, 2009.
- [27] M. Eppler and J. Mengis. "A Framework for Information Overload Research in Organizations: Insights from Organization Science, Accounting, Marketing, MIS, and Related Disciplines". ICA Working Paper, University of Lugano, Lugano, 2003.
- [28] B. Furlow. "Information overload and unsustainable workloads in the era of electronic health records". *The Lancet Respiratory Medicine*, vol. 8, no. 3, pp. 243-244, 2020.
- [29] J. Feliciano. "The Success Criteria for Implementing Knowledge Management Systems in an Organization". Doctoral Dissertation, Pace University, USA, 2006.
- [30] A. Ferraris, C. Giachino, F. Ciampi and J. Couturier. "R&D internationalization in medium-sized firms: The moderating role of knowledge management in enhancing innovation performances". *Journal of Business Research*, vol. 128, pp. 711-718, 2019.
- [31] J. Friedrich, M. Becker, F. Kramer, M. Wirth and M. Schneider. "Incentive design and gamification for knowledge management". *Journal of Business Research*, vol. 106, pp. 341-352, 2020.
- [32] S. Goh. "Managing effective knowledge transfer: An integrative framework and some practice implications". *Journal of Knowledge*

- Management*, vol. 6, no. 1, pp. 23-30, 2002.
- [33] R. Grant and C. Baden-Fuller. "A knowledge accessing theory of strategic alliances". *Journal of Management Studies*, vol. 41, no. 1, pp. 61-84, 2004.
- [34] M. L. Grise and B. Gallupe. "Information overload: Addressing the productivity paradox in face-to-face electronic meetings". *Journal of Management Information Systems*, vol. 16, no. 3, pp. 157-186, 2000.
- [35] D. Gurteen. "Creating a Knowledge Sharing Culture". Vol. 2. Knowledge Management Magazine, 1999.
- [36] H. Biemans and C. Siderius. "Advances in global hydrology-crop modelling to support the UN's sustainable development goals in South Asia". *Current Opinion in Environmental Sustainability*, vol. 40, pp. 108-116, 2019.
- [37] K. Himma. "A preliminary step in understanding the nature of a harmful information-related condition: An analysis of the concept of information overload". *Ethics and Information Technology*, vol. 9, no. 4, pp. 4, 2007.
- [38] J. Hodge. "Examining Knowledge Management Capability: Verifying Knowledge Process Factors and Areas in an Educational Organization", Doctoral Dissertation, Northcentral University, 2010.
- [39] M. Ismail and Z. Yusof. "The impact of individual factors on knowledge sharing quality". *Journal of Organizational Knowledge Management*, vol. 2010, pp. 13, 2010.
- [40] A. Jashapara. "Knowledge Management an Integrated Approach". Pearson Education, Prentice-Hall, Hoboken, 2004.
- [41] K. Mellahi and D. G. Collings. "The barriers to effective global talent management: The example of corporate élites in MNEs". *Journal of World Business*, vol. 45, no. 2, pp. 143-149, 2010.
- [42] Y. L. Kim and W. Van Biesen. "Fluid overload in peritoneal dialysis patients". *Seminars in Nephrology*, vol. 37, no. 1, pp. 43-53, 2017.
- [43] N. Leung and S. Kang. "Ontology-based collaborative Inter-organizational knowledge management network". *Interdisciplinary Journal of Information Knowledge and Management*, vol. 4, p. 699, 2009.
- [44] L. Lin, X. Geng and A. Whinston. "A sender-receiver framework for knowledge transfer". *MIS Quarterly*, vol. 29, no. 2, pp. 197-219, 2005.
- [45] K. Mahesh and J. Suresh. "Knowledge criteria for organization design". *Journal of Knowledge Management*, vol. 13, no. 4, pp. 41-51, 2009.
- [46] M. Manovas, "Investigating the Relationship between Knowledge Management Capability and Knowledge Transfer Success". Mastery Degree, Concordia University, Canada, 2004.
- [47] M. Mohayidin, N. Azirawani, M. Kamaruddin and M. Idawati. "The Application of knowledge management in enhancing the performance of Malaysian Universities". *Journal of Knowledge Management*, vol. 5, no. 3, pp. 301-312, 2007.
- [48] G. B. Mulder. Management, husbandry, and colony health. In: *The Laboratory Rabbit, Guinea Pig, Hamster, and Other Rodents*. Ch. 28. Academic Press, Cambridge, pp. 765-777, 2012.
- [49] G. B. Mulder. "Perception as information processing". *Urban Ecology*, vol. 4, no. 2, pp. 103-118, 1979.
- [50] M. Raoufi. "Avoiding Information Overload-A study on Individual's Use of Communication Tools". Proceeding of the 36th Hawaii International Conference on System Sciences, 2003.
- [51] E. Reiter, A. Cawsey, L. Osman and Y. Roff. "Knowledge Acquisition for Content Selection". In: Proceedings of the Sixth European Workshop on Natural Language Generation, 1997, pp. 117-126.
- [52] F. Ruff. "The advanced role of corporate foresight in innovation and strategic management-reflections on practical experiences from the automotive industry". *Technological Forecasting and Social Change*, vol. 101, pp. 37-48, 2015.
- [53] W. Seidman and M. McCauley. "Optimizing Knowledge Transfer and Use". Cerebyte, Inc., Lake Oswego, Oregon, 2005.
- [54] N. K. Sekaran and G. B. Seymann. "Hospital-based quality improvement initiatives". *Hospital Medicine Clinics*, vol. 3, no. 3, pp. e441-e456, 2014.
- [55] J. Song, H. Zhan, J. Yu, Q. Zhang and Y. Wu. "Enterprise knowledge recommendation approach based on context-aware of time-sequence relationship". *Procedia Computer Science*, vol. 107, pp. 285-290, 2017.
- [56] A. Tiwana. "The Knowledge Management Toolkit: Orchestrating IT, Strategy and Knowledge Platform". 2nd ed. Prentice Hall, Upper Saddle River, 2002.
- [57] S. Wang. "To Share or not to Share: An Examination of the Determinants of Sharing Knowledge via Knowledge Management Systems". Doctoral Dissertation, Ohio State University, United States, 2005.
- [58] E. Whelan and R. Teigland. "Transactive memory systems as a collective filter for mitigating information overload in digitally enabled organizational groups". *Information and Organization*, vol. 23, no. 3, pp. 177-197, 2013.
- [59] T. Wilson. "Information overload: Implications for healthcare services". *Health Informatics Journal*, vol. 7, no. 2, pp. 112-117, 2001.
- [60] R. Wong and T. Tiainen. "Are you ready for right knowledge management strategy: Identifying the potential restrains using the action space approach". *Frontiers of E-Business Research*, pp. 480-490, 2004.
- [61] X. Xie, H. Zou and G. Qi. "Knowledge absorptive capacity and innovation performance in high-tech companies: A multi-mediating analysis". *Journal of Business Research*, vol. 88, pp. 289-297, 2018.
- [62] S. Zahra and G. George. "Absorptive capacity: A review, reconceptualization, and extension". *Academy of Management Review*, vol. 27, no. 2, Pp. 185-203, 2002.
- [63] X. Zhang. "Understanding Conceptual Framework of Knowledge Management in Government (Condensed Version)". Presentation on UN Capacity-Building Workshop on Back Office Management for e/m-Government in Asia and the Pacific Region, Shanghai, China, 2008.
- [64] M. S. Al-Ani, S. N. Jawad and S. Abdelal. "Knowledge management functions applied in Jordanian industrial companies: Study the impact of regulatory overload". *UHD Journal of Science and Technology*, vol. 5, no. 2, pp. 47-56, 2021.