Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems

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Abstract: The Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems is a scholarly paper within the domain of ESBB, which stands for the European Society for Biopreservation and Biobanking. The objective of this article is to formulate hypotheses that establish causal relationships among variables, which will be utilized in subsequent research. Conducting research across various subjects involves utilizing online libraries, Google Scholar, Mendeley, and other academic online platforms. The research methodology involves utilizing resources available in research libraries, such as e-books and open-access electronic journals. Qualitative descriptive analysis is employed. The outcomes of this article are as follows: 1) Information Technology Determinants of Executive Support System; 2) Digital Leadership Determinants of Executive Support System; and 3) Information Systems Determinants of Executive Support System.

Keywords: Information Technology, Digital Leadership, Information Systems, Executive Support System.

INTRODUCTION

Publication within the academic community is paramount for the advancement and revitalization of science, as indicated by the Circular Letter of the Ministry of Education, Culture, Research, and Technology (DIKTI) No. 152 ET of 2021 concerning Scientific Publications. Within this Circular Letter, DIKTI states that students enrolled in Bachelor's or undergraduate (S1), Master's or postgraduate (S2), and Doctoral or PhD (S3) programs are encouraged to publish their research findings as Final Projects, Theses, and Dissertations in accredited national journals, particularly those accredited by DIKTI, and international journals. It is the responsibility of all lecturers and researchers to provide recommendations for scientific publications to inspire and demonstrate their contributions to the advancement of knowledge. The aim of DIKTI is to enforce publication requirements for academics and researchers to foster a culture of productivity and enhance research outcomes in Indonesia.

To keep pace with the progress of science and contribute to the global scholarly corpus, Indonesian scholarly output must be as productive as possible. Completing scholarly works is

a mandatory requirement for graduation in most higher education institutions in Indonesia. Dissertations (S3), theses (S2), and undergraduate theses (S1) are all covered by this clause.

Based on practical experience, many authors and students encounter difficulties in finding relevant research or previous studies they can use to support their scientific claims. Relevant publications are crucial for forming hypotheses, establishing relationships or influences between variables, and supporting the hypotheses under investigation. The determination of Executive Support Systems is discussed in this article: a literature survey of ESBB subjects concerning information technology, digital leadership, and information systems.

Given the background and with a greater emphasis on literature review, as well as future results and discussions, the following reviews are formulated:

1. Does Information Technology influence the Executive Support System?
2. Does Digital Leadership influence the Information System of the Executive Support System?
3. Does the Information System influence the Executive Support System?

METHOD

Conducting a Literature Review article involves performing a Systematic Literature Review (SLR) and writing a literature review, both of which are qualitatively examined. Online resources such as Mendeley, Google Scholar, and other academic facilitation apps are utilized as sources of information.

According to Kitchenham et al. (2009), SLR is a process to discover, assess, and interpret all available research evidence with the aim of addressing specific research questions.

It is important to employ literature reviews consistently and methodologically, based on assumptions, in qualitative analysis. The exploratory nature of research becomes one of the justifications for using qualitative analysis (Ali, H., & Limakrisna, 2013).

RESULT AND DISCUSSION

Given the background, objectives, and methodology, here are the results of this article:

Executive Support System (ESS)

ESS is a type of management information system specifically designed to assist executives in decision-making at the highest level within an organization. ESS provides relevant and timely strategic information to executives to support the decision-making process (Power, D. J, 2002).

ESS is an executive support system that provides information to top executives to aid them in decision-making (McLeod Jr., R., & Schell, G, 2023).

Technology and performance are dimensions, indicators, syntheses, or variables that influence ESS.

Many previous researchers have studied ESS and information systems, including: (Power, D. J, 2002) and (McLeod Jr., R., & Schell, G, 2023).

Information Technology

The process of delivering data and messages without time and place constraints, which often limit an individual's mobility, is referred to as information technology. Workstations, networks, hardware, information theory, robotics, and artificial intelligence that originate from human cognition through robotic media are all included in information technology. The components of information technology enable practical and easy task completion (Aslizadeh & Ahmad, 2014).

Computerization and interaction technology are combined to create information technology, which will result in hardware and software systems. Processing, creation, compilation, storage, and manipulation of data in various ways will be facilitated by these software and hardware arrangements. The highest quality and precise, accurate, and relevant information is produced using this procedure. A company can leverage this knowledge as a tool to reduce human needs, uncertainty, government, and company operations. Information technology can generate highly important data to support business decision-making (Samuel, 2019).

Application development, system integration, and technology infrastructure are interrelated dimensions, indicators, and variables that impact information technology. Information technology indicators may include the level of compliance with data security guidelines, the effectiveness of IT initiative implementation, and the level of user satisfaction with existing systems.

Some researchers who have studied information technology include: Hotman Panjaitan (2007), Budiman, M. A. (2012), Abrianto, D., & Sitompul, H. (2014), Aslizadeh, and Ahmad (2014), A. A. Hidayat & Achjari (2017), Prasetyaningrum et al. (2019), Pratiwi, N. Dewi, A. (2022), and Giovani Huiser Mangalindung (2023).

Digital Leadership

The strategic use of digital business resources to fulfill organizational goals is known as "digital leadership." The following qualities are important for a leader in the digital era:

1. Characteristics - In the realm of digital business, a digital leader must possess qualities as an inventive visionary who not only has a future vision but also has the ability to generate innovation. A leader should have network intelligence and mastery of complexity. Network intelligence refers to the capacity to coordinate and utilize information, skills, and team resources effectively. On the other hand, mastering complexity refers to the ability to understand complex conditions and scenarios, and successfully solve problems in challenging situations.

2. The discussed characteristic is the social attitude of a digital leader, namely how they can serve as role models for other team members. Democratic delegation strategies involve creating organizations with minimal hierarchy and bureaucracy. This enables a digital leader to prioritize the growth and advancement of organizational members.

3. General Mindset Characteristic - In addition to the above characteristics, individuals also possess general traits, such as the ability to quickly adapt to changes in the organizational context by developing transformation methods. Additional attributes include the ability to acquire information through mistakes and a focus on acquiring knowledge, i.e., motivation to continue learning. (According to Muljono, 2021).

Digital leadership refers to the capacity to effectively guide and supervise a rapidly evolving company or organization in the digital era. Effective digital leaders have a comprehensive understanding of technology, agility in adapting to change, and the ability to encourage and inspire personnel to drive innovation and achieve corporate goals using digital technology (Tjahjo Kumolo, 2023).

Dimensions, indicators, syntheses, and aspects that drive digital leadership include technology understanding, transformational leadership, collaboration and networking, as well as digital risk management.

Digital leadership has been extensively researched by previous researchers including (Kazim, 2019), (According to Muljono, 2021), and (Tjahjo Kumolo, 2023).

Information Systems

Information systems refer to the management and operation of information technology and communication systems managed by commercial enterprises. In the 21st century, the importance of support from information systems is crucial due to the emergence of several significant trends. This transformation has propelled the global economy into the fourth era known as the creative economy (Khristianto et al., 2015). Within organizations, the creation of sophisticated management information systems requires individuals with excellent managerial abilities. Many organizations have experienced failures due to inadequate management selection. The lack of personnel and human resources understanding management information systems may be the root cause of these failures. Additionally, manager's lack of initiative in the system design process and their refusal to incentivize employees participating in the management information system process are other contributing factors to these failures (Rusdiana & Irfan, 2019).

Information systems are the skilled integration result of various information technology components working together to produce information and facilitate groups or organizations in building integrated communication channels (Jonny Seah, 2020).

Elements influencing Information Systems include Organization, Technology, and Human. These elements encompass dimensions, indicators, syntheses, and factors.

Information systems have undergone in-depth research by previous researchers, such as (Abdul, Kadir 2014), and (Huda, N. 2017).

CONCLUSION

The conclusion of this article provides hypotheses that will serve as the basis for further study, based on the objectives, findings, and discussions presented:
  1) Information Technology Determinants of Executive Support System;
  2) Digital Leadership Determinants of Executive Support System;
  3) Information Systems Determinants of Executive Support System.

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DESCRIPTION OF TABLES AND FIGURES

Table

To formulate research hypotheses, it is important to review relevant articles and explain previous research findings. This involves depicting similarities and differences with the planned research design. Table 1 can be used to systematically summarize this information.

Table 1: Relevant Research Findings

No	Author (Year)	Previous Research Findings	Similarities with This Article	Differences from This Article	H
1	Putri Primawanti, Eka, & Ali, Hapzi (2022).	Influence of Information Technology, Web-based Information Systems, and Knowledge Management on Employee Performance (Literature Review of Executive Support Systems (ESS) for Business)	Information Technology Influences Executive Support Systems..	Determinants of Executive Support Systems: Information Technology, Digital Leadership, and Information Systems.	H1

2	Wahono, S.., & Ali, H.. (2023).	Communication, Technology Acceptance, and Decision Making in Employee Performance Evaluation (Literature Review of Executive Support Systems for Business)	Information Technology Impact on Executive Support Systems.	Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems	H1
3	Nopriadi Saputra, Annisa Putri, Safina Danaswati, Safira Putri (2022)	Job Satisfaction and Engagement: The Impact of Digital Leadership and Organizational Support.	*Digital Leadership Influences Executive Support Systems.*	Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems	H2
4	Dewa Elmario, R. (2024).	Employee Performance and the Impact of Digital Leadership, Management Information Systems, and Emotional Intelligence.	*Digital Leadership Influences Executive Support Systems.*	Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems.	H2
5	Sari, D. R. J., Nursolih, E., & Suhendi, R. M. (2023).	The Impact of Decision Support Systems and Management Information Systems Usage on Employee Productivity at PT Bank BJB Ciamis Branch.	Information Systems Influence Executive Support Systems.	Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems.	H3

| 6 | Kharisma Syahputri, MIP Nasution. (2023) | The Role of Databases in Information Management Systems | Information Systems Influence Executive Support Systems. | Determinants of Executive Support System: Information Technology, Digital Leadership, and Information Systems | H3 |

Figure

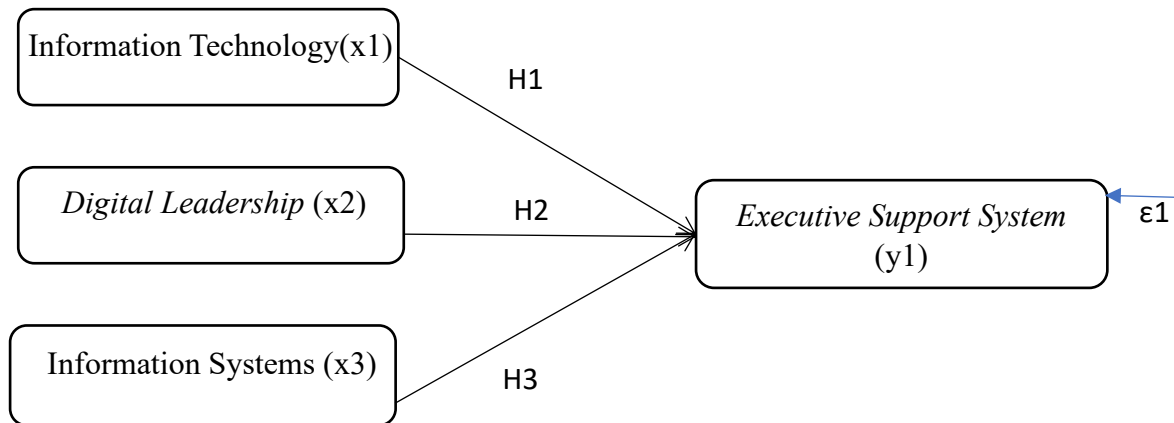Based on the problem formulation, discussion, and relevant research, the conceptual framework of this article is formulated as shown in Figure 1 below.

Figure 1: Conceptual Framework