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Information Technology Resource Framework

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ABSTRACT

This study is a literature review aimed at investigating and analyzing concepts and frameworks related to Information Technology Resource. Through a literature review approach, this research gathers, organizes, and analyzes previous studies conducted in this field. The main focus of this study is to gain an understanding of the roles, components, and characteristics of the Information Technology Resource framework, as well as its impact on company performance. The method used in this research involves searching and selecting relevant scientific articles, journals, and publications related to the topic. After a careful selection process, the literature studies that meet the inclusion criteria are analyzed in detail, and relevant essential information is extracted for further analysis. The results of this literature review present various frameworks within the domain of Information Technology Resource. These frameworks encompass crucial aspects such as managing information technology resources, integrating information technology into business strategies, measuring information technology performance, and developing information technology competencies within organizations. In this context, the research identifies key concepts, theoretical perspectives, and recent trends in the development of Information Technology Resource frameworks.

Keywords:
Information Technology Resource, framework, literature review

INTRODUCTION

The Informatica Technology Resource Framework (ITR Framework) is a framework or structure used to manage and optimize information technology (IT) resources in an organization. This framework is specifically designed to facilitate the efficient and effective use of information technology to achieve business goals and improve organizational performance. The ITR Framework includes various components and processes related to the management of information technology resources. This includes IT policy and strategy development, IT risk management, asset and inventory management, application development, system integration, IT project management, IT service management, security[1].

The main objective of the ITR Framework is to provide a structured and comprehensive framework for organizations to manage critical aspects of technology their information. By adopting this framework, organizations can ensure that their use of IT resources is optimized, risks related to information technology are properly identified and managed, and strategic decisions related to information technology are based on a deep understanding of their IT environment.[2]. The ITR framework usually includes guidelines, procedures and best practices that are developed based on industry standards and practical experience. Organizations can adapt and apply this framework according to their

own needs and characteristics, with the aim of achieving better IT governance, efficiency of information operations, and monitoring of information technology performance.[3].

METHODS

The research method used in reviewing literature is to collect Literature Studies consisting of journal articles, textbooks, handbooks, archives and regulations. This is a way to solve problems by tracing written sources that have been made before. In this study, researchers used literature review data collection in thematic structural order. Thematic structure groups and discusses sources according to the theme or topic. By grouping themes or research topics, it can show the types of topics that are important and strengthen research acumen. The collection of literature reviews is used in several stages including searching for articles based on the topic outline,

RESULTS AND DISCUSSION

1. ITR Framework Topic Deployment

The deployment of Information Technology Resource Framework topics involves important steps such as needs analysis, identification of IT resources, assessment and allocation of resources, development of policies and procedures, training and development, and monitoring and evaluation. By implementing this framework, organizations can manage IT resources more effectively, improve operational efficiency, ensure data security, and improve the quality of services provided. Topics related to the ITR Framework are presented with the help of the following applications:

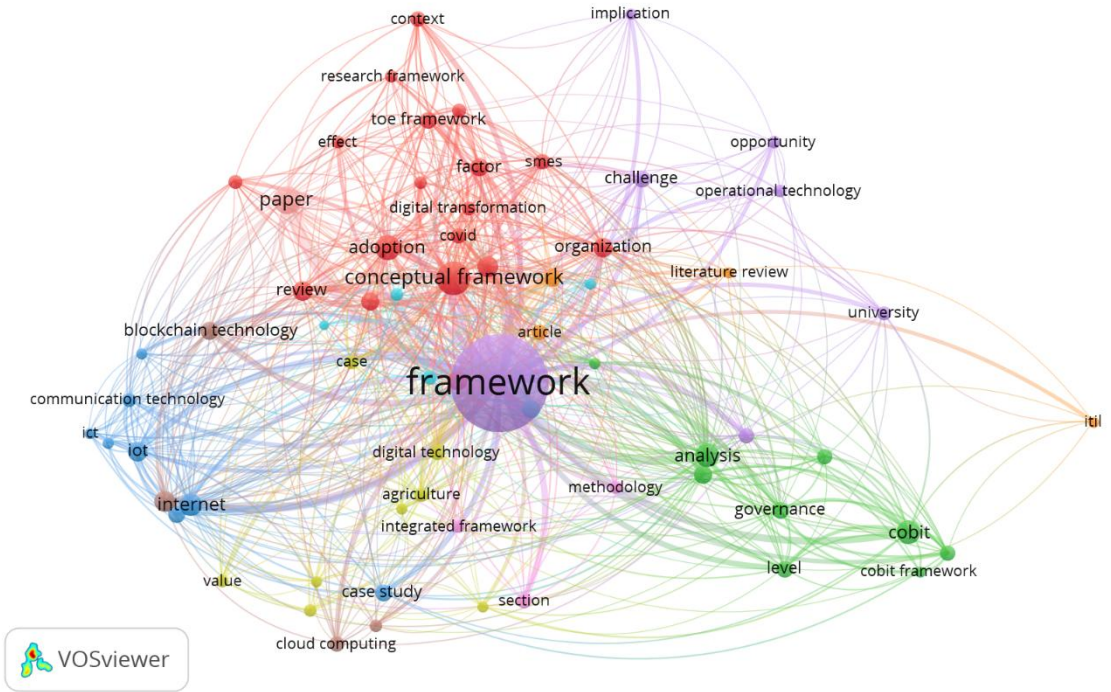

Figure 1. The distribution of research directions towards the framework

Based on a study on the visualization results of 2022 data as many as 1000 data sets providing important information for research updates, keywords from visualization such as frameworks, conceptual frameworks and others have been used as topics by researchers. Meanwhile, research gaps that are still limited based on these visualizations direct or

provide recommendations that are suitable as part of research such as ITIL, Smart City, Implitaction and others. Information on research studies is carried out with information visualization in 2022, in the following figure:

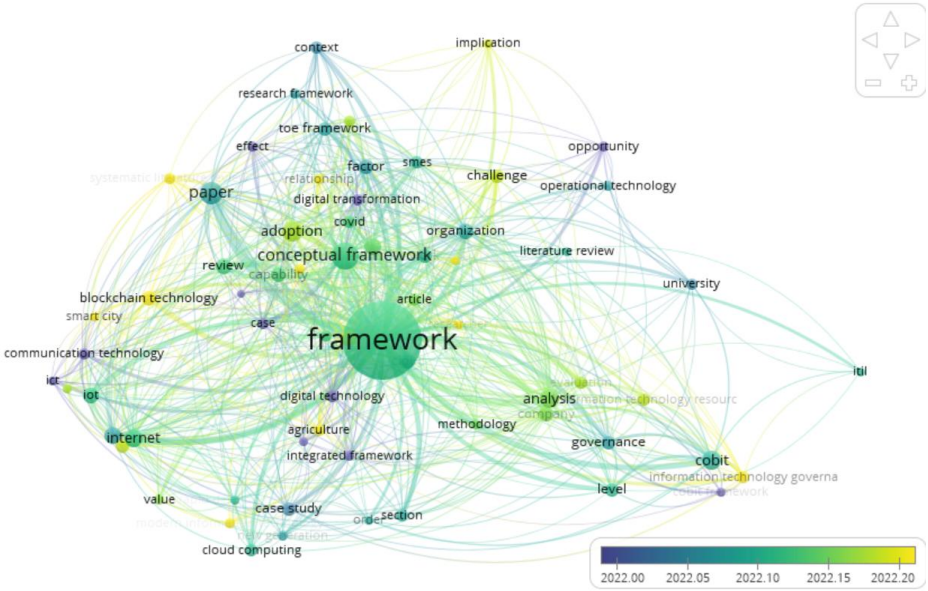

Figure 2. Vizualitazion Overlay

The extent of the latest research by selecting Density Viluaization is represented by certain colors with a range of suitable research topics, the topic of the framework is not a recommendation represented by the yellow color, and even if you make changes to the data it will potentially shift the color to red.

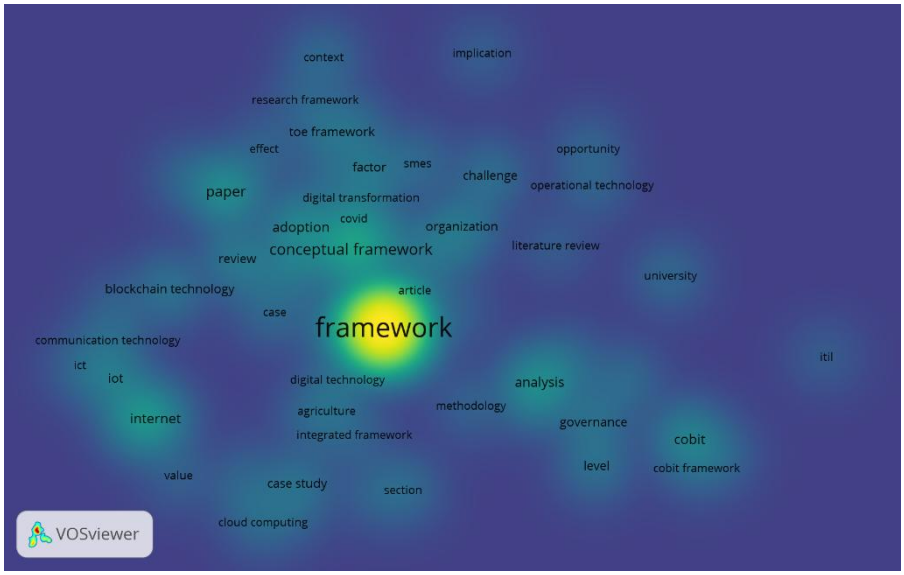

Figure 3. Density Vizualitation

2. Evaluation of the Information Technology Resource Framework

Research by Alycia Leonard, 2022 with a focus on developing a framework for risk assessment states that context-specific risk evaluation is necessary to implement prevention and mitigation strategies. The proposed resource risk evaluation framework can be applied to individual contexts to help countries, companies, sectors or projects optimize the positive outcomes of renewable energy development and avoid the mistakes of

renewable energy resources. risks can be mitigated through appropriate policy interventions that maximize the positive social, environmental and economic outcomes of renewable energy development[4]. Future research can be developed at the prediction stage to provide information by utilizing past data so that risks can be mitigated properly.

Uky Yudatama Dwi Ekasari Harmadji, 2022 produced a formula to calculate the Information Technology Governance Awareness assessment system (IT Governance Awareness). The process of assessing and grouping requires high accuracy in processing the data obtained. Data collection was carried out through surveys and observations of the organizations that were the object of research. The assessment is carried out openly and creates a conducive atmosphere and interactive communication to maintain trust between the two parties. [5]. This research has limitations, namely it only provides calculation and grouping results, does not yet provide information about deficiencies that must be corrected by organizations in implementing Information Technology Governance practices. To overcome these limitations, further research can be developed in the future.

Aldisa, Rima Tamara, 2022 in his research conducted an evaluation of human resources and information technology with the main problem being the lack of an in-depth explanation of the problems encountered in the implementation of Information Technology Governance (IT Governance) using the COBIT 5 framework[3], Research does not provide sufficiently detailed information or empirical data to describe in detail the impact or results that have been achieved in managing human resources with appropriate information technology.

Liang T, You J, Liu C 2010 with a discussion of the relationship between information technology resources and company performance using a resource-based view approach. conducted a review of a number of previous studies regarding the relationship between information technology resources and company performance. This research analyzes various concepts and theories related to the resource-based view, which emphasize the importance of resources and organizational capabilities in achieving competitive advantage[6].

McSweeney, Alan, 2022 in his research explains the various frameworks used to describe information technology resources and information technology capabilities (IT capability).[7].Neama A. Dahan, 2022 provides an overview ofmetaverse and seeks to formulate a clear metaverse framework. In addition, this study proposes the development of a metaverse-based virtual learning environment (ELEM) to make the learning process more interactive and fun. However, this description does not provide details about the implementation of ELEM and the concrete benefits expected from its use[8].

Kitsios et.al 2022, in research succeeded in developing a risk analysis framework for an information security management system. This study also analyzes the benefits and conditions of information security investment, explores a multinational IT consulting firm, and identifies difficulties and challenges in implementing ISO 27001 and the risk analysis process. However, further research is still needed to evaluate the level of impact and likelihood of each asset against threats, gather more information based on ISO 27005, and incorporate case studies from various industries. Overall, this research provides progress in the development of a risk analysis framework for information security management systems, but requires further work on enhancements and refinements.[9].

Prabowo et.al 2023, conducted a Risk Management Analysis on the SWCU FTI KKM LKF Website using the ISO 31000 framework, has identified 16 risks related to the website,

which are divided into low, medium, and high risks. The results of this study provide valuable insight into the risks involved and their severity. This information can be used as a guide for organizations involved in risk management to optimize the use of the website in accordance with organizational goals. Nonetheless, the current approach still relies on experience rather than a systematic and structured framework. For further improvement, steps are needed such as developing detailed risk management plans, monitoring and controlling risks on an ongoing basis, as well as documentation and standardization of risk management processes. This will help improve risk management that is more effective and standardized on the use of the SWCU FTI KKM LKF website[10].

Discussion

The study was conducted with the main focus of investigating and analyzing concepts and frameworks related to Information Technology Resources (information technology resources). The main focus of this review is to understand the roles, components, and characteristics of the Information Technology Resource Framework. Through a literature review, this study collects, organizes, and analyzes previous studies that have been conducted in this field. The purpose of this overview is to provide a comprehensive understanding of the concepts and theory underlying the Information Technology Resource Framework. in the research that has been submitted about the Information Technology Resource Framework research can involve evaluating the performance of information technology resources owned by the organization. This evaluation can be carried out using relevant metrics and indicators to measure the effectiveness, efficiency, and impact of the use of information technology resources on organizational performance. Research can also consider factors that affect information technology performance, such as information technology management policies, HR competencies, information technology investments, and adaptation of information technology innovations. In addition, performance evaluation can also involve comparisons between different Information Technology Resource frameworks and identifying the strengths, weaknesses, and practical implications of each of these frameworks for organizational performance. This performance evaluation aims to provide a better understanding of the benefits, contributions,

CONCLUSION

This literature review provides deeper insight into the importance of the Information Technology Resource Framework in achieving competitive advantage and improving organizational performance. This research has made an important contribution in identifying relevant frameworks, highlighting existing research gaps, and providing guidance for future research in this area.

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