DO INFORMATION TECHNOLOGY AND HUMAN RESOURCES CREATE BUSINESS PERFORMANCE: A REVIEW

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ABSTRACT

Purpose: Nowadays, information technology is used massively by business organisations in order to reap maximum profits. This condition is possible if the organisation has superior human resources in the IT field. The purpose of this research is to review and convince that information technology and human resources are important factors for the success of business organisations to achieve the ideal vision and mission that has been designed before. The two factors complement each other and cannot be separated.

Theoretical framework: Information technology will have a significant impact on business development if operated properly by competent and capable humans. Information technology and the human element, among others, fall into the category of tangible and intangible resources. So, this study will also slightly correlate the RBV theory that has been slightly discussed in the previous paragraph. In addition, it complements the discussion of the study to make it more interesting and comprehensive.

Design/Methodology/Approach: The research method took place in three stages. The first step was to collect and then review available literature and research. Next, the data was examined and the findings incorporated into the study framework. Third, instrument development. This stage involves detailing all the variables and describing the measurement items that have been developed.

Findings: The results of this study have provided evidence that human proficiency in IT will bring blessings to profit-oriented organisations. Moreover, the current business environment is increasingly dynamic and disruptive.

Research, practical & social implications: This research is expected to be a useful input for business people to be more courageous in making decisions when it comes to investing in IT and human resources in order to create superior and competitive business performance.

Originality/Value: The results of this study are expected to be useful input for business people to be more courageous in making decisions when investing in IT resources and human resources in order to create superior and competitive business performance. In addition, it is also expected to be a formal discussion material in universities, especially business administration and management study programmes.

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A TECNOLOGIA DA INFORMAÇÃO E OS RECURSOS HUMANOS CRIAM DESEMPENHO DE NEGÓCIOS: UMA REVISÃO

RESUMO
Propósito: Atualmente, a tecnologia da informação é amplamente utilizada por organizações empresariais para obter o máximo de lucros. Esta condição é possível se a organização tem recursos humanos superiores no campo de TI. O objetivo desta pesquisa é analisar e convencer que a tecnologia da informação e os recursos humanos são fatores importantes para o sucesso das organizações empresariais para alcançar a visão e a missão ideais que foram projetadas antes. Os dois fatores se complementam e não podem ser separados.

Estrutura teórica: A tecnologia da informação terá um impacto significativo no desenvolvimento de negócios se for operada adequadamente por pessoas competentes e capazes. A informática e o elemento humano, entre outros, enquadraram-se na categoria de recursos tangíveis e intangíveis. Assim, este estudo também irá correlacionar ligeiramente a teoria RBV que foi ligeiramente discutida no parágrafo anterior. Além disso, complementa a discussão do estudo para torná-lo mais interessante e abrangente.

Design/Metodologia/Abordagem: O método de pesquisa foi realizado em três fases. O primeiro passo foi coletar e, em seguida, revisar a literatura e a pesquisa disponíveis. Em seguida, os dados foram examinados e as conclusões incorporadas no quadro do estudo. Em terceiro lugar, o desenvolvimento de instrumentos. Esta fase envolve o detalhamento de todas as variáveis e a descrição dos itens de medição que foram desenvolvidos.

Constatações: Os resultados deste estudo forneceram evidências de que a proficiência humana em TI fará bônus para organizações orientadas ao lucro. Além disso, o atual ambiente de negócios é cada vez mais dinâmico e problemático.

Pesquisa, implicações práticas e sociais: espera-se que esta pesquisa seja uma contribuição útil para que os empresários sejam mais corajosos na tomada de decisões quando se trata de investir em TI e recursos humanos, a fim de criar um desempenho de negócios superior e competitivo.

Originalidade/Valor: espera-se que os resultados deste estudo sejam uma contribuição útil para que os empresários sejam mais corajosos na tomada de decisões ao investir em recursos de TI e recursos humanos a fim de criar desempenho de negócios superior e competitivo. Além disso, espera-se que seja também um material de discussão formal em universidades, especialmente administração de empresas e programas de estudo de gestão para que possam ser encontradas ideias novas e frescas que possam ser usadas como material de pesquisa adicional, de modo a enriquecer a literatura de conhecimento.

Palavras-chave: Tecnologia da informação, Recursos Humanos, Negócios, Desempenho.

¿LA TECNOLOGÍA DE LA INFORMACIÓN Y LOS RECURSOS HUMANOS CREEN EL DESEMPEÑO EMPRESARIAL: UNA REVISIÓN?

RESUMEN
Propósito: Hoy en día, la tecnología de la información es utilizada masivamente por las organizaciones empresariales con el fin de obtener los máximos beneficios. Esta condición es posible si la organización tiene recursos humanos superiores en el campo de TI. El propósito de esta investigación es revisar y convencer que la tecnología de la información y los recursos humanos son factores importantes para el éxito de las organizaciones empresariales para lograr la visión y misión ideal que se ha diseñado anteriormente. Los dos factores se complementan y no pueden separarse.

Marco teórico: La tecnología de la información tendrá un impacto significativo en el desarrollo de negocios si es operada adecuadamente por personas competentes y capaces. La tecnología de la información y el elemento humano, entre otros, pertenecen a la categoría de recursos tangibles y intangibles. Por lo tanto, este estudio también correlacionará ligeramente la teoría de RBV que se ha discutido ligeramente en el párrafo anterior. Además, complementa la discusión del estudio para hacerlo más interesante y completo.

Diseño/Metodología/Enfoque: El método de investigación se desarrolló en tres etapas. El primer paso fue recopilar y luego revisar la literatura y la investigación disponibles. A continuación, se examinaron los datos y se incorporaron las conclusiones en el marco del estudio. Tercero, el desarrollo de instrumentos. En esta etapa se detallan todas las variables y se describen los elementos de medición que se han desarrollado.
HALLAZGOS: Los resultados de este estudio han proporcionado evidencia de que la competencia humana en TI traerá bendiciones a las organizaciones con fines de lucro. Además, el entorno empresarial actual es cada vez más dinámico y perturbador.

INVESTIGACIÓN, IMPLICACIONES PRACTICAS Y SOCIALES: Se espera que esta investigación sea un insumo útil para que los empresarios sean más valientes a la hora de tomar decisiones cuando se trata de invertir en TI y recursos humanos con el fin de crear un rendimiento empresarial superior y competitivo.

ORIGINALIDAD/VALOR: Se espera que los resultados de este estudio sean un insumo útil para que los empresarios sean más valientes a la hora de tomar decisiones a la hora de invertir en recursos informáticos y recursos humanos con el fin de crear un rendimiento empresarial superior y competitivo. Además, también se espera que sea un material de debate oficial en las universidades, especialmente programas de estudios de administración y gestión de empresas, a fin de que se puedan encontrar ideas nuevas y frescas que puedan utilizarse como material de investigación adicional para enriquecer la literatura del conocimiento.

PALABRAS CLAVE: Tecnología de la Información, Recursos Humanos, Negocios, Rendimiento.

INTRODUCTION

Nowadays, information technology is used massively by business organisations in order to reap maximum profits (Ausat, 2023). Information technology has proven to provide important benefits to a number of organisations (Kraugusteeliana et al., 2022). This condition is possible if the organisation has superior human resources in the IT field (Ausat & Suherlan, 2021). This is very logic, how can a business organisation be successful and survive or be competitive without humans as the main driving element of technology? Human resources are crucial to the success of the vision and mission of any business organisation (Almeshref & Khwanda, 2022); (Nur’aeni et al., 2022) and (Ausat, Al Bana, et al., 2023). This fact emphasises that information technology and people are inseparable determining factors. Both complement each other to form a unified whole (Subagja et al., 2022). If one is not strong in sustaining the organisation's desire for success, then the business operated will also fail (Tarigan et al., 2023). This means that when business organisations have lofty ideals of increasing profits, profits, customer loyalty, and becoming market rulers, they must have superior human resources in the IT field (Chong et al., 2022) and (Muhamad et al., 2023). For example, being able to adapt to the marketplace and being able to improvise in it through consistent creativity and innovation (Hopia et al., 2023). These arguments clearly indicate that in order to compete and survive in the modern era, business organisations should not only rely on their past reputation for success (Teece, 2018); (Sutrisno et al., 2023); (Prastyaningtyas et al., 2023); (Harahap et al., 2023); (Sutrisno et al., 2022).

It is worth noting that past successes can sometimes lead organisations to continue operating in outdated ways that are no longer relevant in modern times (Ausat, Siti Astuti, et al., 2022); (Rijal et al., 2023); (Sahtoni et al., 2023); (Ausat, Suherlan, et al., 2022); (Gadzali, 2023) and (Suherlan, 2023). In fact, the era has changed (Ausat & Peirisal, 2021). Therefore, it
is necessary to review the resources of the organisation, as formulated in the Resource Based View Theory (RBV). The Resource Based View is a business theory that explains how a company can sustainably gain a competitive edge by strategically allocating its resources (Barney, 1991). One of the central tenets of Resource-Based Theory is the idea that success depends on a company's ability to maintain a competitive advantage over time, thanks in large part to the methods by which it acquires and uses its resources and capabilities (Diawati et al., 2023; Ausat, Risdwiyanto, et al., 2023; Khouroh et al., 2021) and (Kasmawati, 2018). The resources in question can be tangible and intangible resources contained in information technology and human components. The success of a business organisation is determined by the resources and capabilities it has so that it can turn these resources into economic benefits (Ausat, Widayani, et al., 2022; Guesalaga et al., 2018) and (Taouab & Issor, 2019).

Referring to the explanation above, the purpose of this research is to review and convince that information technology and human resources are important factors for the success of business organisations to achieve the ideal vision and mission that have been designed before. The two factors complement each other and cannot be separated. Information technology will have a significant impact on business development if operated properly by competent and capable humans. Information technology and the human element, among others, fall into the category of tangible and intangible resources. So, this study will also slightly correlate the RBV theory that has been slightly discussed in the previous paragraph. In addition, it complements the discussion of the study to make it more interesting and comprehensive.

Resource Based View Theory is a theory that studies how organisational resources can be a source of competitive advantage. The contribution of Information Technology and Human Resources to Resource View Theory is allegedly significant. Information Technology has an important role in managing organisational resources. IT can help identify, collect, store and analyse information relating to organisational resources. This enables companies to better understand their resources and utilise them effectively to create competitive advantage. IT also facilitates integration and collaboration between various organisational functions and units, thereby strengthening efficient and effective resource management. An example of IT's contribution to the Resource Based View Theory is the adoption of database management systems that enable companies to collect and store resource data centrally. Thus, information about resources can be accessed quickly and accurately, helping companies identify potential resources that have not been fully utilised or that can be further developed. Human Resources also have a central role in the Resource Based View Theory. HR is responsible for managing
and developing human resources in the organisation. Improving HR competencies, knowledge, skills and experience can add value to the organisation’s resources. HR can ensure that organisational resources are managed effectively and efficiently. They can identify and develop human resources who have the expertise and capabilities that match the needs of the organisation. In addition, HR is also responsible for designing and implementing management policies and practices that support the optimal utilisation of human resources. In the context of Resource View Theory, HR’s contribution can be seen in efforts to recruit, develop and retain employees who have skills and knowledge that are rare and valuable to the organisation. This can create a competitive advantage for companies because they have access to human resources that are difficult for competitors to replicate. What needs to be underlined is that the contribution of Information Technology and Human Resources to the Resource Based View Theory is that it enables effective and efficient management of organisational resources, both in terms of collecting and analysing information about resources and in managing and developing human resources.

Conditions that can be reaffirmed if we refer to a brief description of the contribution of Information Technology and HR in RBV Theory, which boils down to a current research objective, namely regarding the study of IT and HR that can have a significant impact on improving business performance. This means that this research will make every effort to combine credible and relevant reference sources to be studied more deeply in order to ensure that business performance is an important component that cannot be separated from the contribution of IT and HR factors.

METHODOLOGY OF STUDY

The research method took place in three stages (figure 1). The first step was to collect and then review available literature and research. All reference articles were retrieved from Google Scholar sources. We obtained 70 potential article data. Next, the data was carefully examined. Finally, we only used a total of 51 articles for reference as they were considered most relevant to the study topic, and the valid findings were incorporated into the research framework. Third, instrument development. This stage involves detailing all the variables and describing the measurement items that have been developed. Given that this research uses a literature review approach, this research activity analyses a previous study and then presents the results into a concept and specifics that are part of the scientific field. In the current research, this is information technology and human resources. In addition, the content in this literature
review is an explanation or discussion of one of several theoretical dimensions of a research finding or topic. From the explanation of these theoretical dimensions, we make it the basis of the framework in making the current research activities. In addition, this research is also an interpolation of the results of previous research or research that has been conducted for the first time on the topic of information technology and human resources published recently. Thus, this research is argumentatively strong in re-presenting similar previous research results to analyse their credibility, in addition to their validity and reliability.

The authors used search terms such as "technology information and business performance" and "human resources and business performance" when collecting relevant literature and research. In this study, we used a hybrid search strategy consisting of the use of keywords and snowball technique. To ensure that all eligible publications were included, the authors critically read each publication and provided a brief summary of the hypotheses and main findings of the paper. Thereafter, a conceptual research model was developed as shown in figure 2.

**FINDINGS AND DISCUSSION**

The concept of Resource Based View (RBV) was first developed by Wernerfelt in 1984 where initially the concept that developed in business strategy was the concept of industrial
organisation which emphasised that organisational performance was influenced by the company's external environment. Because they form the foundation of the company's competitiveness and performance, RBV values the company's resources and capabilities highly (Wernerfelt, 1984). Additionally, the concept of resource-based view (RBV) was developed by (Barney, 1991), which plays a crucial role in strategic management. According to the theory, businesses can maintain an edge in a competitive market by making use of resources that are exceptionally valuable, rare, and difficult for rivals to replicate. It is the belief of RBV theory that a company's resources and capabilities are crucial to its success, as they serve as the foundation upon which the company's competitiveness and performance are built (Lubis, 2022).

According to RBV theory, a company's performance is the result of both its material assets and its immaterial competencies. Both of these will help the company gain and keep an edge in the market (Widagdo et al., 2020); (Kamasak, 2017) and (Tehseen et al., 2019). When a company's resources and capabilities allow it to perform its functional activities more efficiently and effectively than rivals, the company gains competitive advantage. According to (Dale Stoel & Muhanna, 2009), in order to remain competitive in an ever-evolving business environment rife with competitive pressures in a wide range of innovative and imitative activities, businesses must constantly develop and maintain all capabilities, including those related to information technology and human resources.

Businesses today rely increasingly on information, making it crucial for them to develop skills in areas like information management tools and processes. That is to say, after spending money on specific forms of IT, businesses need to modify their daily operations to make full use of those tools. Ultimately, businesses need to always be learning more about and getting better at using technology. A trifecta of IT infrastructure, IT operations, and IT knowledge make up what is referred to as IT capabilities. The majority of papers that analyse IT capabilities (Chakravarty et al., 2013) centre on these three factors. Therefore, the ability to select, accept, configure, and deploy IT is what constitutes an organization's IT competence. The level of IT competence is conceptualised as a three-part construct. These three facets of IT capability all work together to affect an organization's ability to derive strategic value from its IT spending (Crawford et al., 2011). In a nutshell, companies can't grow their IT prowess without spending money on IT, encouraging employees to use it in their daily work, and providing training to help them acquire better IT skills and a broader understanding of the ways in which IT can help. The results of several previous studies also mentioned that if organisations use technology to run their business activities, they will be more competitive (Apulu & Latham, 2011).
Meanwhile, another study found that companies that use IT perform much better than those that do not (Sidiq & Astutik, 2017). Information technology capability has a beneficial and significant influence on firm performance (Turulja & Bajgorić, 2016). A recent study also found that information technology plays an important role in the success of running a business (Kamar et al., 2022).

Many authors, however, argue that a company's greatest valuable asset is actually its people because of the expertise they bring to the table (Lin & Hsu, 2010). As a result, the capacity of an organization's human resources is crucial. One assumption of the so-called "VRIN" framework (valuable, rare, inimitable, and non-substitutable) for resources to have the ability to support the achievement of sustainability and competitive advantage is that the skills and knowledge of human resources are very difficult to replicate by competitors (Barney, 1991). To put it simply, an organization's HRM capacity is its prowess in enforcing best-in-class procedures for managing its employees, including performance evaluation, employee development, and pay and benefits (Mäkelä et al., 2013). In the current study, we will suggest a conceptualisation of HRM capabilities that organisations need to consider, where HRM capabilities are seen as a construct or concept consisting of four dimensions, including:

A. Employment selection procedures have a lot to do with staffing and recruitment practises. The organisation should give more weight to candidates who display skills connected to information generation and dissemination, as well as those who share the company's core values and work style. (Perez Lopez et al., 2005) stresses the importance of a candidate's social network and character references over a candidate's technical abilities when making hiring decisions.

B. Workers are said to have received "training" if they showed signs of improvement in their performance after acquiring new knowledge and abilities on the job.

C. The term "employee involvement" is used to describe a rise in workers' input into organisational decisions.

D. The phrase "reward practises" refers to both the organization's remuneration structure as well as the many activities that are used to reward personnel.

The four dimensions above are supporting HR capabilities in information technology. If employees are competent, they will easily adapt to changes or modern technology regulations. They will be able to improvise when faced with IT constraints for business processes. The human element must also be supported by company management, especially
leaders. This is a trigger for employees to be more competent in a career in information technology, so as to create superior company performance. Previous research results also state that HR management can affect business performance (Kamar et al., 2022). Many experts suggest HRM capabilities to be the most important enabler of superior business performance (Chen et al., 2010). HRM capabilities are important predictors of a firm's competitive advantage (Lengnick-Hall & Lengnick-Hall, 2012) and serve as a significant determinant of a firm's business performance (Khandekar & Sharma, 2005). HRM capabilities have a positive and significant effect on business performance (Turulja & Bajgorić, 2016).

In essence, today's businesses can't function without IT, and the majority of them need to leverage electronic markets to get a foothold in their respective industries. With IT, businesses may streamline their operations and become more productive. Previous studies have acknowledged the significance of human resources and information technology in the context of obtaining superior corporate performance (Song et al., 2008); (Chae et al., 2014) and (Turulja & Bajgorić, 2016).

CONCLUSION

The results of this study have provided evidence that IT resources and human resources play an important role in improving the company's business performance. This means that the two factors are inseparable in business operationalisation. Human proficiency in IT will bring blessings to profit-oriented organisations. Moreover, the current business environment is increasingly dynamic and disruptive. Business organisations need to be more aware that IT and human resource capabilities can provide great benefits for their long-term performance. Several studies have also shown that a company's long-term performance is closely related to the technology it uses. In addition, human resource management capability is an important factor in an organisation. This condition should not be out of the grasp of the company's operations because both are unique. In line with the Resource Based View theory which states that a unique capability will create a competitive advantage. Unique capabilities that can create this competitive advantage are capabilities that have four basic properties, namely value, rarity, difficult to imitate and difficult to substitute. IT enables effective collection, management and analysis of resource information. With proper IT adoption, companies can identify and develop resources that provide a competitive advantage. System integration and business process automation supported by IT also improve efficiency and resource utilisation. HR is responsible for managing and developing human resources. By recruiting, developing and retaining quality
employees, the company can optimally utilise human resources. HR also designs policies that support effective human resource management. Overall, IT and HR play an important role in optimising organisational resources and creating competitive advantage through RBV Theory.

Research on the topics covered in this study has several limitations. Firstly, it is difficult to directly measure the impact of IT and HR on business performance because there are many other variables that influence it. Secondly, external factors such as economic conditions and market competition also play an important role. In addition, business performance measurements can be subjective and vary between individuals and organisations. Therefore, future research can go deeper in analysing the impact of IT and HR by using more sophisticated methods, conducting longitudinal and comparative studies, and considering different contexts and industries. Further, the results of this study are expected to be useful input for business people to be more courageous in making decisions when investing in IT resources and human resources in order to create superior and competitive business performance. In addition, it is also expected to be a formal discussion material in universities, especially business administration and management study programmes so that new and fresh ideas can be found that can be used as further research material so as to enrich the knowledge literature.

REFERENCES


