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[MALCOM] Editor Decision

1 pesan

Yumi Novita Dewi <novitadewi.ubsi@gmail.com>   29 Februari 2024 pukul 18.10
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Sutrisno, Kraugusteeliana Kraugusteeliana, Syamsuri:

We have reached a decision regarding your submission to MALCOM: Indonesian Journal of Machine Learning and Computer Science, "Analysis of the Interconnection between Digital Skills of Human Resources in SMEs and the Success of Digital Business Strategy Implementation".

Our decision is: Revisions Required

Reviewer A:
Recommendation: Revisions Required

Theoretical/ conceptual framework

    Good

Statement of the problem

    Good

Signicance of research

    Good

Literature review

    Good

Methodology

    Good

Results and conclusion

    Good

Contribution to the field

    Important

Originality

> Good

Keywords

> Good

References

> Good

Classification of the paper

> Original scientific paper

Overall reviewer comments and impressions

> - This research has clear objectives, with sufficient introduction accompanied by relevant previous research.
> - The methodology used is clear, but it is possible that readers who are not from the field of computer science will have difficulty understanding it. We hope that the authors can change the language style, wording and explanation of the research methodology with simple and easy-to-understand language.
> - The results of the research are clearly stated with a good explanation and as expected.
> - Conclusion Recheck the research objectives section, there is some language that needs to be corrected to adjust to the research objectives.
> - The references used are adequate and good

Reviewer Recommendations

> Revision Required

Reviewer B:
Recommendation: Revisions Required

Theoretical/ conceptual framework

> Good

Statement of the problem

> Good

Signicance of research

> Good

Literature review

> Good

Methodology

Good

Results and conclusion

Good

Contribution to the field

Trivial

Originality

Below Average

Keywords

Good

References

Good

Classification of the paper

Original scientific paper

Overall reviewer comments and impressions

- The abstract is good, describing the process, methods, results and conclusions of the research.
- References and relevant previous research in the introduction are sufficient so that this research falls into the category of good research.
- The methodology is clear, has a good flow and can be completed, in this section the researcher is very careful to describe the parts of the methodology

Reviewer Recommendations

Revision Required

Indonesian Journal of Machine Learning and Computer Science (MALCOM)

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Analysis of the Interconnection between Digital Skills of Human Resources in SMEs and the Success of Digital Business Strategy Implementation

Analisis Keterkaitan Keterampilan Digital SDM pada UMKM dengan Keberhasilan Implementasi Strategi Bisnis Digital

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Abstract

The advancement of information technology has transformed the way SMEs operate, from marketing aspects to inventory management. Digital business opens up new opportunities for SMEs but also demands new skills from human resources to keep up with these developments. The objective of this research is to analyze the interconnection between the digital skills of human resources in SMEs and the success of implementing digital business strategies. This research method focuses on qualitative literature review using Google Scholar as the data source, especially for articles published between 2021 and 2024. The study results indicate that the role of human resources in an increasingly digital business world is crucial. The digital skills possessed by human resources not only affect the effectiveness of implementing digital business strategies but also impact the competitiveness and sustainability of SMEs in the constantly changing market. A deep understanding of the market, creativity in innovation, and adaptability are important factors in ensuring business success in this digital era.

Keyword: Digital Skills, SME Human Resources, Digital Business Strategy

Abstrak

Perkembangan teknologi informasi telah mengubah cara UMKM beroperasi, mulai dari aspek pemasaran hingga manajemen inventaris. Bisnis digital membuka peluang baru bagi UMKM namun juga menuntut keterampilan baru dari SDM untuk dapat mengikuti perkembangan tersebut. Tujuan penelitian ini adalah untuk menganalisis keterkaitan antara keterampilan digital SDM pada UMKM dengan keberhasilan implementasi strategi bisnis digital. Metode penelitian ini berfokus pada tinjauan pustaka kualitatif yang menggunakan Google Scholar sebagai sumber data, terutama untuk artikel-artikel yang diterbitkan antara tahun 2021 hingga 2024. Hasil studi menunjukkan bahwa peran SDM dalam dunia bisnis yang semakin digital sangatlah krusial. Keterampilan digital yang dimiliki oleh SDM tidak hanya memengaruhi efektivitas implementasi strategi bisnis digital, tetapi juga berdampak pada daya saing dan keberlanjutan UMKM di pasar yang terus berubah. Pemahaman mendalam tentang pasar, kreativitas dalam inovasi, dan kemampuan adaptasi menjadi faktor penting dalam memastikan kesuksesan bisnis di era digital ini.

Kata Kunci: Keterampilan Digital, SDM UMKM, Strategi Bisnis Digital

1. Introduction

The development of information technology has significantly transformed the operational landscape for Micro, Small, and Medium Enterprises (MSMEs), influencing not only marketing strategies but also inventory management. The presence of digital business has opened up new opportunities for MSMEs, providing broader access to the global market and enhancing operational efficiency [1]. However, the emerging challenges cannot be ignored. The adoption of digital technology requires MSMEs to acquire new skills in managing systems, analyzing data, and adapting to rapid changes in the business environment [2]. These new skills are crucial in ensuring the success and sustainability of businesses in this digital era.

In addition to the aforementioned phenomena, there has also been a significant shift in consumer behavior towards digital platforms as their primary means of meeting their needs. This shift, reflecting the evolving dynamics of consumers, poses its own challenges for Micro, Small, and Medium Enterprises (MSMEs). In facing the increasingly competitive digital market, MSMEs are required to not only adapt their business strategies but also enhance the quality of their services and products [3], [4], [5]. The adoption of digital technology is a necessity for MSMEs to expand their market reach, improve business processes, and enhance competitiveness. Therefore, digital transformation is no longer just an option but a necessity that cannot be overlooked for the sustainability of MSMEs in this era.

Nevertheless, there are still several challenges faced by Micro, Small, and Medium Enterprises (MSMEs), especially in terms of understanding and mastering digital technology. In fact, the lack of digital knowledge and skills can be a significant barrier for MSMEs in adopting and implementing effective digital business strategies [6]. This gap can slow down MSMEs' ability to adapt to dynamic business environments and limit their access to new opportunities offered by the digital era. Therefore, investing in digital capacity development, through training or collaboration with experts in this field, is essential to ensure that MSMEs can compete and thrive in this ever-changing market.

The importance of digital skills in Human Resources (HR) cannot be underestimated, as a key element that significantly influences the success of implementing digital business strategies in the context of Micro, Small, and Medium Enterprises (MSMEs). HR with reliable abilities in utilizing digital technology can have a tremendous impact, both in improving operational efficiency and in creating competitive advantages for MSMEs [7], [8], [9]. Those proficient in using digital tools can optimize business processes, reduce operational costs, increase productivity, and respond to market changes more quickly and effectively [10]. It is essential for MSMEs to not only focus on product development and marketing but also prioritize investment in developing digital skills in HR as an integral part of their efforts to survive and thrive in this digital era.

For these reasons, it becomes increasingly urgent for Micro, Small, and Medium Enterprises (MSMEs) to prioritize the development of digital skills among their Human Resources (HR). Properly organized training and education can equip MSMEs' HR with the necessary skills to face challenges and leverage opportunities arising in the dynamics of digital business [11]. Investing in HR development is not only an effort to keep up with trends but also a strategic necessity to ensure the sustainability and competitiveness of MSMEs in an increasingly digitalized market [12]. Therefore, MSMEs need to adopt a proactive approach to strengthen their HR's digital skills, optimizing business potential and facing challenges in this digital era with greater confidence and effectiveness.

The importance of thorough analysis of the relationship between HR's digital skills and the success of implementing digital business strategies cannot be underestimated. Understanding the correlation between these two factors is crucial in the context of performance evaluation and business development in the digital era. Careful analysis will provide stakeholders, both internal and external, valuable insights to identify areas where improvements are needed. Furthermore, a deep understanding of this relationship will also assist in designing appropriate and effective interventions to enhance HR's digital skills and improve digital business strategies. This means that business management based on robust analysis will enable MSMEs to optimize their potential in facing challenges and leveraging opportunities in this digital era.

Micro, Small, and Medium Enterprises (MSMEs) that successfully adopt digital business strategies effectively not only have the opportunity to improve their own business performance but also to make a substantial contribution to local economic growth [6]. In this context, enhancing digital skills among Human Resources (HR) in MSMEs becomes increasingly important as a key to stimulating innovation, competitiveness, and adaptability in a continuously evolving business environment. Investing in the development of these skills not only enables MSMEs to fully harness the potential of digital technology but also helps them expand market reach, increase operational efficiency, and open up new opportunities [13]. As a result, the improvement of HR's digital skills not only impacts the individual business performance of MSMEs but also contributes to overall economic growth, providing a significant boost to the local business ecosystem and driving broader economic progress.

Considering the explanation above, the objective of this research is to analyze the interconnection between HR's digital skills in MSMEs and the success of implementing digital business strategies. Thus, this research aims to provide a deeper understanding of how HR's digital skills influence the digital business performance of MSMEs. The research findings are expected to provide valuable insights for stakeholders, including government, academia, and business practitioners, in designing policies and programs that support MSME development in this digital era.

2. Materials and Method

Research methodology focuses on qualitative literature review using Google Scholar as the data source, primarily for articles published between 2021 and 2024. The initial step involves determining research topics related to the relationship between HR's digital skills in MSMEs and the success of implementing digital business strategies. Subsequently, literature search is conducted using relevant keywords in Google Scholar.

Articles found are then rigorously filtered based on inclusion and exclusion criteria to ensure that only truly relevant articles are considered. Selected articles are further evaluated to measure their quality and relevance to the research objectives, considering research methodology, accuracy, and depth of analysis. Selected articles are used as the basis for compiling literature reviews, where information and relevant findings from each article are critically analyzed and synthesized. Data analysis is conducted qualitatively, analyzing findings from selected articles to identify patterns, trends, and key findings related to the relationship between HR's digital skills in MSMEs and the success of implementing digital business strategies. However, this research has limitations in terms of the limited time range for literature search between 2021 and 2024, and limitations in data sources only from Google Scholar. The initial dataset comprised 55 articles, which underwent rigorous screening, resulting in 21 articles that met the stringent inclusion criteria.
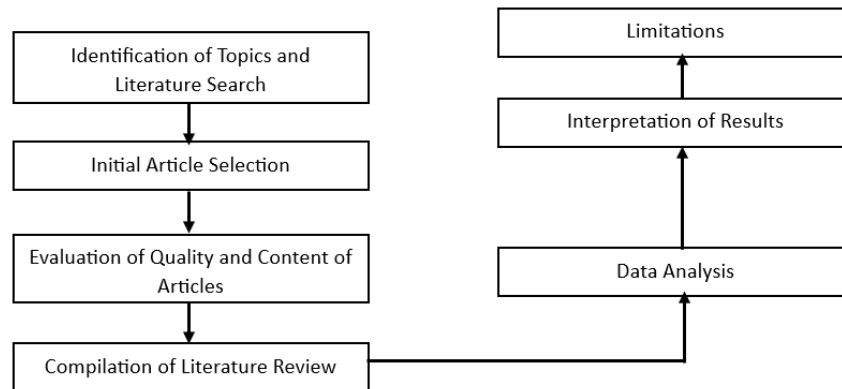

Figure 1. Flowchart Methodology

3. Results and Discussion

In the continuously evolving era of the digital world, the capabilities of information technology and digital skills play a crucial role in determining the success of various industrial sectors, including Micro, Small, and Medium Enterprises (MSMEs). A profound analysis of the relationship between digital skills possessed by human resources (HR) within MSMEs and the successful implementation of digital business strategies becomes essential in this context. In this dynamic context, a deep understanding of how HR's digital skills can influence the effectiveness of digital business strategy implementation is key to gaining sustainable competitive advantage.

First and foremost, it is important to understand the highly crucial role played by Micro, Small, and Medium Enterprises (MSMEs) in the current global economic landscape. Despite their relatively small size, MSMEs are consistently faced with a series of complex and often challenging challenges, such as fierce competition with larger business entities, limited access to vital resources, and the need to adapt to rapidly changing consumer behaviors. In the context of this increasingly competitive market dynamics, the adoption of digital business strategies has become an absolute necessity for MSMEs to enhance their competitiveness and ensure sustainable operational continuity in this ever-changing digital era [14].

However, the essence of success in implementing digital business strategies does not solely depend on the extent to which technology has been adopted, but also on the level of digital skills possessed by Human Resources (HR) within the structure of MSMEs [15]. These digital skills include the ability to deeply understand information technology, proficiency in using various software and specialized applications, as well as the courage and creativity in leveraging various digital platforms to enhance overall business effectiveness and performance [16]. Thus, the development of digital skills becomes an integral aspect in bridging the gap between technology potential and its application in the dynamic and evolving context of MSME businesses.

In this context, the analysis of the interconnection between HR's digital skills in MSMEs and the success of digital business strategy implementation involves several key aspects:

1. *Alignment of Skills with Utilized Technology*

Firstly, it is crucial to highlight the alignment between the skills possessed by Human Resources (HR) within Micro, Small, and Medium Enterprises (MSMEs) and the technology used in digital business strategy. In this context, consistency between HR's digital skills and the applied technology becomes paramount. For example, when MSMEs decide to utilize social media as one of their primary pillars in marketing strategy, it requires SDM's capability to effectively manage social media accounts, analyze user data for valuable insights, and design/implement engaging content that resonates with market needs. By ensuring that SDM's skills and utilized technology work synergistically, MSMEs can enhance their potential in utilizing social media as an

effective tool to boost visibility, interaction, and ultimately, overall business success in the continuously evolving digital era [17].

2. Deep Understanding of Markets and Consumers

In addition to having adequate digital skills, it is also important for Human Resources (HR) within Micro, Small, and Medium Enterprises (MSMEs) to possess a deep understanding of market dynamics and desired consumer behaviors. In this context, the ability to carefully analyze market data and interpret consumer trends becomes crucial in designing efficient digital business strategies that are responsive to the ever-changing market needs. HR equipped with comprehensive understanding of markets and consumer behaviors will be able to identify potential business opportunities, formulate targeted marketing strategies, and adapt their products or services to consumer needs and preferences more accurately (DWIVEDI 2021). Thus, the synergy between digital skills and deep market understanding will serve as a solid foundation for the successful implementation of digital business strategies in the context of MSMEs in the continuously evolving digital era.

3. Creativity in Product and Service Innovation

The importance of digital skills lies not only in technical abilities but also in the capacity of Human Resources (HR) within Micro, Small, and Medium Enterprises (MSMEs) to harness creativity in the process of product and service innovation. In this context, digital skills provide a strong foundation for HR to explore new ideas and deliver innovative solutions [18]. With a deep understanding of technology, HR can design and develop unique digital products and services, adapt to changing market needs, and creatively address challenges faced by MSMEs. This creates potential to drive product differentiation, enhance consumer experiences, and unearth new untapped opportunities. Therefore, digital skills are not just tools for operating technology but also catalysts for fostering innovation and growth within MSMEs in the rapidly changing and fast-moving digital era.

4. Adaptation to Change

Amidst the rapidly changing business environment in the digital era, the ability to adapt is crucial to maintaining the success of digital business strategy implementation. Human Resources (HR) equipped with good adaptation skills will have an advantage in responding to changes, both in technology and the market [19]. The ability to flexibly adapt to new technological developments and changes in consumer behavior is a valuable asset in maintaining competitiveness and overall business success [20]. Additionally, adaptive HR can identify emerging opportunities with technological advancements and adjust business strategies to leverage them optimally [21]. Thus, adaptation skills become a determining factor supporting the sustainability and progress of MSMEs in facing challenges and opportunities in the dynamic and competitive digital business era.

Therefore, it is important to emphasize that the analysis of the interconnection between digital skills possessed by Human Resources (HR) within Micro, Small, and Medium Enterprises (MSMEs) and the success of digital business strategy implementation highlights the urgency of investing in digital skills development as an integral part of HR development strategy. By deeply understanding this relationship, MSMEs can better prepare themselves to face emerging challenges and leverage opportunities presented by the digital revolution to achieve sustainable business growth. In this increasingly digitally connected context, digital skills are not just an add-on but a necessary foundation for creating sustainable competitive advantages for MSMEs. Thus, awareness of the urgency of investing in digital skills development becomes increasingly important in responding to the evolving dynamics of business in this digital era.

4. Conclusion

The findings of this research reveal that the role of Human Resources (HR) in the context of an increasingly digitized business environment is vital. The digital competencies possessed by HR not only influence the efficiency of digital business strategy implementation but also have significant implications for the competitiveness and sustainability of Micro, Small, and Medium Enterprises (MSMEs) amidst the constantly evolving market dynamics. A profound understanding of market dynamics, the ability to innovate creatively, and high adaptability are crucial elements in ensuring the success of a business in the current digital era. Recommendations that can be provided based on these study results include:

1. Digital Skills Development: MSMEs need to pay serious attention to the development of HR's digital skills. Internal training and education programs can help enhance their understanding of technology and its applications in a business context.
2. Integration of Skills with Business Strategy: Enhanced digital skills should be integrated into the overall business strategy. HR needs to see how their skills can support business objectives, including using data for better and more effective decision-making.
3. Digital Innovation: Encourage HR to be more creative in designing digital-based innovations. Collaboration among teams and a strong understanding of market needs will help MSMEs produce more relevant and sought-after products and services.

4. Deep Understanding of Markets and Consumers: Deepen understanding of markets and consumer behavior. MSMEs can leverage data analysis to quickly respond to changing market trends and needs, ensuring the relevance of their digital business strategies.
5. Flexibility and Adaptability: Build a culture of flexibility and adaptability within the organization. HR who can quickly adapt to technological changes and market conditions will provide a competitive advantage for MSMEs.
6. Collaboration and Networking: Encourage collaboration and networking within the industry. MSMEs can learn from the experiences and best practices of similar businesses. Knowledge and experience exchange can enrich their digital skills.

By implementing these recommendations, it is hoped that MSMEs can optimize the potential of their HR's digital skills, enhance business competitiveness, and sustainably achieve success in an increasingly digital business environment

References

[1] A. P. Aslam, "Do Economic Literacy and Digital Literacy among Business Actors registered in the Grab Application Contribute to Entrepreneurial Behavior?," *PINISI*, vol. 1, no. 2, pp. 99–108, 2023.

[2] L. Anatan and Nur, "Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia," *Economies*, vol. 11, no. 6, p. 156, May 2023, doi: 10.3390/economies11060156.

[3] A. Yani, D. O. Suparwata, and Hamka, "Product and Service Innovation Strategies to Expand MSME Markets," *Journal of Contemporary Administration and Management (ADMAN)*, vol. 1, no. 3, pp. 163–169, Nov. 2023, doi: 10.61100/adman.v1i3.67.

[4] S. Sutrisno, R. M. Permana, and A. Junaidi, "Education and Training as a Means of Developing MSME Expertise," *Journal of Contemporary Administration and Management (ADMAN)*, vol. 1, no. 3, pp. 137–143, Nov. 2023, doi: 10.61100/adman.v1i3.62.

[5] Sutrisno, P. A. Cakranegara, F. Asri, M. Yusuf, and J. Sahala, "Strategi for MSME Development Using Financial Technology to Increase Capital and Consumers," *Jurnal Darma Agung*, vol. 30, no. 2, pp. 677–686, 2022.

[6] I. Athia, B. E. Soetjipto, and E. Efendi, "The improvement of Micro, Small, and Medium Enterprises' (MSMEs) business performance during the COVID-19 pandemic through financial and digital literacy," *Jurnal Ekonomi Bisnis dan Kewirausahaan*, vol. 12, no. 1, pp. 92–109, Apr. 2023, doi: 10.26418/jebik.v12i1.58984.

[7] A. M. A. Ausat, E. Siti Astuti, and Wilopo, "Analisis Faktor Yang Berpengaruh Pada Adopsi E-commerce Dan Dampaknya Bagi Kinerja UKM Di Kabupaten Subang," *Jurnal Teknologi Informasi dan Ilmu Komputer (JTIIK)*, vol. 9, no. 2, pp. 333–346, 2022, doi: 10.25126/jtiik.202295422.

[8] S. Sutrisno, A. M. A. Ausat, R. M. Permana, and S. Santosa, "Effective Marketing Strategies for MSMEs during Ramadan in Indonesia," *Community Development Journal: Jurnal Pengabdian Masyarakat*, vol. 4, no. 2, pp. 1901–1906, 2023, doi: 10.31004/cdj.v4i2.13792.

[9] S. Sutrisno, "Exploring the Potential of ChatGPT to Improve Customer Service in MSMEs," *Innovative: Journal Of Social Science Research*, vol. 3, no. 2, pp. 653–664, 2023, doi: https://doi.org/10.31004/innovative.v3i2.330.

[10] S. S. Gadzali, J. Gazalin, S. Sutrisno, Y. B. Prasetya, and A. M. A. Ausat, "Human Resource Management Strategy in Organisational Digital Transformation," *Jurnal Minfo Polgan*, vol. 12, no. 2, pp. 760–770, 2023, doi: https://doi.org/10.33395/jmp.v12i2.12508.

[11] A. M. A. Ausat and S. Suherlan, "Obstacles and Solutions of MSMEs in Electronic Commerce during Covid-19 Pandemic: Evidence from Indonesia," *BASKARA: Journal of Business and Entrepreneurship*, vol. 4, no. 1, pp. 11–19, Oct. 2021, doi: 10.54268/BASKARA.4.1.11-19.

[12] R. Kusumastuti, I. R. Maruf, E. Fatmawati, L. Kartika, and S. N. Alam, "Increasing digital-based human resources competencies for profitable and sustainable MSME managers," *Int J Health Sci (Qassim)*, vol. 6, no. S4, pp. 2892–2908, Jun. 2022, doi: 10.53730/ijhs.v6nS4.8483.

[13] A. Sopanah, Z. Rusyad, and Zulkarnain, "Optimizing Small Business Management through Collaborative Training and Education in Business Applications," *TGO Journal of Community Development*, vol. 1, no. 2, pp. 45–50, 2023.

[14] A. Risdwiyanto, Moh. M. Sulaeman, and A. Rachman, "Sustainable Digital Marketing Strategy for Long-Term Growth of MSMEs," *Journal of Contemporary Administration and Management (ADMAN)*, vol. 1, no. 3, pp. 180–186, Nov. 2023, doi: 10.61100/adman.v1i3.70.

[15] D. R. Rahadi, J. Iskak, Wijonarko, and M. Muslih, "Developing the Human Resources Talent of Small Medium Enterprises (SME) in Bandung City of Indonesia," *International Journal of Science and Society*, vol. 4, no. 2, pp. 197–208, Jun. 2022, doi: 10.54783/ijsoc.v4i2.462.

[16]   S. Hakim, L. N. Laelawati, and R. Mardiana, "The Role of Digital Skills and Technological Innovation in Improving the Performance of Small and Medium Industries: Systematic Literature Review," in *ICOBIS*, 2023, pp. 74–102. doi: 10.2991/978-94-6463-068-8_7.

[17]   M. R. Ohara, D. O. Suparwata, and S. Rijal, "Revolutionary Marketing Strategy: Optimising Social Media Utilisation as an Effective Tool for MSMEs in the Digital Age," *Journal of Contemporary Administration and Management (ADMAN)*, vol. 2, no. 1, pp. 313–318, 2024, doi: https://doi.org/10.61100/adman.v2i1.125.

[18]   J. Stofkova *et al.*, "Digital Skills as a Significant Factor of Human Resources Development," *Sustainability*, vol. 14, no. 20, p. 13117, Oct. 2022, doi: 10.3390/su142013117.

[19]   O. Ali, V. Osmanaj, M. Alryalat, R. Chimhundu, and Y. K. Dwivedi, "The impact of technological innovation on marketing: individuals, organizations and environment: a systematic review," *Economic Research-Ekonomska Istraživanja*, vol. 36, no. 3, pp. 1–37, Dec. 2023, doi: 10.1080/1331677X.2023.2210661.

[20]   S. Suherlan and M. O. Okombo, "Technological Innovation in Marketing and its Effect on Consumer Behaviour," *Technology and Society Perspectives (TACIT)*, vol. 1, no. 2, pp. 94–103, Oct. 2023, doi: 10.61100/tacit.v1i2.57.

[21]   Sutrisno, A. M. A. Ausat, B. Permana, and M. A. K. Harahap, "Do Information Technology and Human Resources Create Business Performance: A Review," *International Journal of Professional Business Review*, vol. 8, no. 8, p. e02206, Aug. 2023, doi: 10.26668/businessreview/2023.v8i8.2206.