THE IMPACT OF E-COMMERCE IMPLEMENTATION ON THE INCOME OF SUKMAJAYA'S MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMEs) AFTER THE PANDEMIC PERIOD

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Abstract

This study aims to investigate the impact of e-commerce implementation on the income of micro, small, and medium enterprises (MSMEs) in Sukmajaya post the pandemic era, and to evaluate the magnitude of this impact. The research sample comprises 100 respondents. Primary data for this research were collected through questionnaires, and the correlation analysis employed is the Pearson Product Moment Correlation. Upon analyzing the results, it was found that at a significance level of 5%, the computed value of 0.380 exceeded the critical value of 0.361. Consequently, the null hypothesis (H0) is rejected, and the alternative hypothesis (Ha) is accepted. This outcome indicates a discernible influence of e-commerce implementation on the income of MSMEs in Sukmajaya following the pandemic period.

Keywords: E-Commerce, Earning, MSMEs, Pandemic

INTRODUCTION

The COVID-19 pandemic in early 2020 has dramatically changed the global business landscape. Among the sectors most notably impacted are the Micro, Small, and Medium Enterprises (MSMEs), recognized as vital components underpinning the economic frameworks of numerous nations, Indonesia prominently included. The pandemic epoch has imposed extraordinary tribulations upon MSMEs, manifesting as movement constraints, a marked reduction in market demand, and swiftly evolving consumer behavioral patterns (Smith et al., 2020). This unforeseen confluence of challenges has precipitated a reevaluation of conventional business paradigms, necessitating adaptive strategies and resilient responses from MSMEs to navigate these intricate circumstances and sustain their viability within the global economic landscape.

The MSME sector has been significantly impacted by the ongoing pandemic, rendering it a focal point of economic concern. Given its status as the primary contributor to Indonesia's Gross Domestic Product (GDP), the trajectory of MSMEs is intricately tied to consumer purchasing behavior. Sole reliance on direct transactional activities amplifies the magnitude of the challenge posed to their operational continuity (Awali, 2020). The surge in unemployment rates has stimulated a notable influx of individuals towards MSME enterprises, particularly within the culinary domain, reflecting a discernible proliferation of MSME entrants (Nurmala, 2022). This burgeoning trend underscores the shifting landscape of entrepreneurial engagements, underscoring the necessity for strategic support and adaptive measures to bolster the resilience and sustainability of this pivotal economic sector amidst the pandemic's adversities.

In the context of prevailing challenges, particularly exacerbated by the COVID-19 pandemic, MSMEs in Sukmajaya are confronted with the imperative to devise innovative
strategies to sustain their operations. An emerging and widely embraced remedial approach involves the integration of e-commerce within their business frameworks. E-commerce, denoting electronic commerce, epitomizes a commercial modality reliant on digital platforms to market and distribute goods and services to consumers. Remarkably, amidst the pandemic's exigencies, e-commerce has emerged as a pivotal and efficacious tool for circumventing physical mobility constraints and expanding market outreach (Ivanov & Dolgui, 2020). This digital avenue has provided MSMEs in Sukmajaya and analogous locales with an indispensable means to transcend geographical barriers and continue their business endeavors in a dynamic and evolving economic landscape.

The integration of information technology, particularly E-Commerce systems, represents a promising avenue for enhancing and advancing MSMEs. E-Commerce implementation holds significant value as it facilitates rapid and efficient customer feedback acquisition for MSMEs while concurrently curtailing marketing expenditures. The absence of E-Commerce systems within the operational framework of MSMEs could potentially engender challenges within their marketing endeavors. Recent studies underscore the positive correlation between the extent of information technology adoption, specifically in the form of E-Commerce systems, and the overall performance of MSMEs (Sondakh et al., 2022; Rayo & Rantung, 2020; Toding & Mandagi, 2022). Moreover, Sevtian (2011) found that E-Commerce exerts a substantial and concurrent influence on sales volume, accounting for a substantial 90.9% impact, alongside other pertinent contributing factors. Further corroborating this, Maryama's (2013) research discerned that the principal advantage derived from E-Commerce implementation resides in a notable surge of 31% in sales turnover. These empirical findings underscore the pivotal role of E-Commerce in fortifying the market position and operational efficiency of MSMEs, thus advocating for its widespread integration within the sector.

In light of the prevailing global pandemic, the strategic adoption of e-commerce has emerged as a prospective avenue for the sustenance and growth of businesses, including MSMEs (Fahrezi & Rizaldi, 2023). However, a comprehensive comprehension of the nuanced implications of e-commerce implementation on the income of MSMEs within the Sukmajaya region remains conspicuously elusive. Extensive and systematic research is imperative to illuminate the precise extent to which e-commerce integration influences the financial outcomes of MSMEs within this particular locality. This research encompass rigorous inquiry, employing multifaceted methodologies, to discern the potential positive or negative ramifications that the adoption of e-commerce may engender within the MSME sector of Sukmajaya.

This research aims to examine the impact of E-commerce Implementation on the financial performance of MSMEs in the Sukmajaya region in the aftermath of the pandemic. Specifically, the study seeks to elucidate whether the integration of e-commerce solutions correlates with a notable upsurge in revenue for these enterprises throughout and in the post-pandemic landscape. The anticipated findings from this research endeavor to furnish valuable insights, offering practical guidance for MSMEs in Sukmajaya and its contiguous locales, aiding them in devising and refining their business strategies to align with the imperatives of the contemporary digital milieu. The insights garnered from this study aim to empower these enterprises, promoting informed decision-making in leveraging digital platforms for economic growth and sustainability.

To achieve the research objective, this study incorporates a rigorous analysis of revenue patterns among MSMEs prior to and subsequent to the implementation of e-commerce strategies. Additionally, comprehensive interviews with MSME proprietors who have made the strategic choice to adopt e-commerce methodologies are conducted. The
anticipated outcome of this research endeavor is to furnish significant insights and empirically-driven findings that hold the potential to profoundly inform and guide various stakeholders. These stakeholders encompass MSME proprietors themselves, local governmental bodies, and financial institutions. The intent is to equip these entities with an informed perspective, thereby assisting them in fostering the growth and prosperity of MSMEs within the region of Sukmajaya. Moreover, these insights are intended to aid in the optimal leveraging of e-commerce benefits, particularly in the context of the post-pandemic landscape.

LITERATURE REVIEW

E-Commerce

E-commerce, or electronic commerce, is a form of trade that involves buying, selling, or exchanging products and services through an online platform or the internet (Laudon & Traver, 2020). This phenomenon has changed the global business landscape and how consumers interact with the products and services they need. E-commerce includes various types, such as B2B (Business-to-Business), B2C (Business-to-Consumer), and C2C (Consumer-to-Consumer). Examples of well-known online stores include Amazon, eBay, and Alibaba. Security is also a crucial aspect of e-commerce, with the use of encryption and SSL (Secure Socket Layer) security certificates as common practice (Chaffey & Ellis-Chadwick, 2019).

The influence of technologies such as artificial intelligence, data analytics, and the Internet of Things (IoT) has brought constant innovation in e-commerce, enabling personalization of the consumer experience and increased operational efficiency. E-commerce also allows businesses to reach global markets without geographical restrictions. However, challenges in delivery and logistics remain, with businesses having to organize product delivery efficiently (Kalakota & Whinston, 1997). E-commerce is constantly changing and evolving, with innovations continuing to emerge in terms of digital payments, delivery technology, and consumer experience.

Digital transformation such as the utilization of e-commerce social media play a crucial role in empowering MSMEs to compete effectively in today’s dynamic business landscape (Rantung et al., 2023; Sondakh et al., 2022). By embracing digital technologies, MSMEs can optimize operations, improve efficiency, and gain a competitive edge (Fahrezi, & Rizaldi, 2023). Social media, a significant component of this transformation, offers a powerful platform for engaging with target audiences, enhancing brand visibility, and garnering real-time feedback (Waworuntu et al., 2023; Warbung et al., 2023; Kainde & Mandagi, 2023) This integrated approach allows MSMEs to innovate, expand their market reach, diversify offerings, and ultimately thrive in an increasingly competitive and digital-driven business environment (Sondakh et al., 2023; Mandagi & Aseng, 2021).

Income

Income is an economic concept which constitutes a fundamental concept denoting the quantifiable accumulation of monetary or economic value acquired by individuals, corporations, or other entities during a designated temporal interval (Mankiw & Taylor, 2014). This financial accrual derives from multifarious origins, encompassing remunerations disbursed to individuals in exchange for their labor, dividend payouts yielded from equity ownership in enterprises, interest yields arising from investments in financial instruments,
operational profits garnered by firms through their core business undertakings, as well as proceeds arising from the exchange of products or services with consumers (Perloff, 2018; Polii et al., 2023).

Income holds a fundamental and pivotal position within the economic landscape, serving as a barometer of the purchasing power and economic engagement of both individuals and enterprises. Its significance extends beyond mere consumption capabilities, permeating tax computation, financial strategizing, and comprehensive economic assessments. At its core, income signifies not only a financial resource but also a metric for evaluating the economic well-being and equitable dispersion of wealth within a given society. The magnitude of personal or national income embodies a substantial indicator of economic welfare, reflecting the socioeconomic fabric and fiscal health of a nation. In sum, income, whether at the individual or national level, embodies multifaceted implications that reverberate throughout the economic and societal spectrum, rendering it an indispensable facet for insightful economic analysis and policy formulation.

RESEARCH METHOD

The research methodology serves as a systematic framework employed by scholars to gather data within a study. Sugiyono (2017) elucidates that the research methodology constitutes a scientific approach meticulously designed to procure valid data in alignment with the research objectives, subsequently serving to address extant issues and forecast forthcoming challenges. In the present study, the methodological approach of choice is the quantitative descriptive research method, aimed at providing a comprehensive statistical analysis and elucidation of observed phenomena for a thorough understanding of the subject matter.

Arikunto (2010) expounds upon the utility of descriptive quantitative research methods employing correlation techniques in elucidating situations and events, offering a nuanced comprehension and discernible implications. This methodological approach facilitates the discernment of interrelationships among pertinent variables, thereby enabling an evaluation of the substantive impact wielded by correlation techniques. The aptitude to ascertain the magnitude and direction of associations enhances the researcher's capacity to gauge the substantial influence exerted by these correlation techniques, substantiating the empirical foundation of the study.

Data Collection

The data for this research was gathered through a survey design employing a structured questionnaire. As elucidated by Sugiyono (2017), a questionnaire constitutes a method for data acquisition involving a series of carefully formulated written inquiries presented to participants for their responses. Within the context of this study, the questionnaire employed adhered to a closed format, wherein each query was paired with predetermined response options to enable respondents to mark their selections (√). Functioning as the principal tool for data aggregation, the questionnaire encompassed a deliberate assortment of inquiries, systematically tailored with specific response alternatives to facilitate a streamlined and efficient response process from the respondents.

Data Analysis

The procedure of data analysis encompasses a systematic evaluation involving scrutiny,
filtration, transformation, and modeling of data, with the primary objective of revealing substantial insights, formulating informed conclusions, and establishing a robust foundation for prudent decision-making. Through the application of data analysis, practitioners possess the means to transmute raw data into a refined and dependable fount of actionable information. Within the domain of data analysis methodologies, correlation analysis stands as a prominent approach, directed towards discerning interrelationships amid variables and empirically assessing hypotheses. Notably, when the dataset under examination manifests discernible associations among variables bearing interval scales, derived from multiple data points, the deployment of correlation analysis emerges as a judicious and consistent choice in analytical procedures.

**Validity and Reliability**

The validation process, a critical procedure within research methodology, serves as a meticulous evaluation mechanism aimed at determining the extent to which the measurement instruments employed in a study faithfully and authentically capture the underlying conceptual constructs under investigation (Sugiyono, 2017; Arikunto, 2010). Integral to this assessment is the determination of whether the measurement tool in question can effectively and with precision gauge the variables aligned with the research objectives. Through the validation process, researchers strive to ascertain that the measurement instrument, by design, accurately appraises the designated phenomena it intends to measure. This meticulous scrutiny of measurement tool validity not only bolsters the precision and dependability of research outcomes but also serves as a safeguard against measurement biases and inaccuracies. In this study, the analytical model employed for validation purposes is the Product Moment Correlation, which is computed using the following formula.

\[
\begin{align*}
    r_{xy} &= \frac{N \sum XY (\sum X)(\sum Y)}{\sqrt{\left[N \sum X^2 - (\sum X)^2\right] \left[N \sum Y^2 - (\sum Y)^2\right]}} \\
    \text{Where:} \quad & \quad r_{xy} = \text{Coefficient correlation} \\
    N &= \text{Sample size} \\
    \Sigma x &= \text{Total score X (question/questionnaire)} \\
    \Sigma y &= \text{Sum of Y scores (total score)} \\
    \Sigma X^2 &= \text{Sum of Squares of X scores} \\
    \Sigma Y^2 &= \text{Sum of Square of Y scores} \\
    \Sigma XY &= \text{Sum of multiplication of X and Y scores}
\end{align*}
\]

Arikunto (2013)

The evaluation of measurement instrument reliability, an integral facet in empirical research, is conducted through a reliability test. This method scrutinizes the extent of consistency and dependability exhibited by the measurement tools across diverse situations or time periods (Sugiyono, 2017; Arikunto, 2010). The objective of a reliability test is to ascertain the stability and coherence of the measurements derived from the instrument. Statistical techniques, such as Cronbach's Alpha, are commonly employed in the realm of
research to conduct these reliability tests, providing a reliable coefficient that gauges the instrument's uniformity in measuring a specific variable (Nunnally & Bernstein, 1994). Accurate reporting of these reliability test results in research is imperative, offering readers valuable insights into the instrument's trustworthiness in data collection. The utilization of the Spearman formula is a method for measuring reliability in this context:

\[ r_i = \frac{2r_b}{1+r_b} \]

(Sugiyono, 2017)

Where:

\( r_i \) = Internal reliability of the whole instrument

\( r_b \) = Product moment correlation between the first and second hemispheres

The inferential process entails a critical assessment to determine the veracity of the proposed hypothesis, necessitating either its acceptance or rejection based on empirical test outcomes. In this study, the application of rigorous data analysis techniques constitutes a fundamental method employed in processing the data, ultimately leading to the formulation of substantiated conclusions. To elucidate the relationship between the Effect of E-Commerce Implementation on the Income of Sukmajaya Micro, Small, and Medium Enterprises (MSMEs) subsequent to the pandemic period and in response to the research objectives, a specific analytical framework is implemented. The acceptance or rejection of the alternative hypothesis (Ha), positing the presence of an Effect of E-Commerce Implementation on the Income of Sukmajaya MSMEs after the pandemic period, is contingent upon the comparison of the computed correlation coefficient (r count) with the critical correlation value (r table) at a predetermined significance level of 5%. If r count surpasses r table at the 5% significance level, the alternative hypothesis (Ha) is affirmed, signifying the existence of a substantial effect. Conversely, the null hypothesis (Ho) positing no Effect of E-Commerce Implementation on the Income of Sukmajaya MSMEs post-pandemic period is rejected under the same conditions.

RESULTS AND DISCUSSIONS

The section pertaining to research results serves as a critical platform for presenting the outcomes derived from the research endeavor. Conversely, the discussion section assumes the role of elucidating the intricate interplay between the research findings and established theoretical frameworks. Furthermore, it undertakes a meticulous comparison of these findings with extant literature, aiming to discern congruencies and divergences. Within this discourse, due attention is accorded to the potential implications of the research findings in advancing the domain of knowledge and its practical applications.

The processed and analyzed research data yield a series of succinct statements intended to fortify the research findings concerning the impact of e-commerce integration on the post-pandemic income of Sukmajaya MSMEs. The deduction drawn from the meticulous data calculation and analysis substantiates a discernible influence of e-commerce integration on the income of Sukmajaya MSMEs post the pandemic. This influence is elucidated based on precise calculations utilizing the product moment correlation formula, revealing a calculated correlation coefficient value (r_count) of 0.380. This value is then juxtaposed against the critical correlation coefficient value (r_table) for a research sample comprising
100 respondents at a 5% significance level. The comparative analysis unequivocally establishes that, at the 5% significance level, the calculated correlation coefficient (0.380) surpasses the critical threshold of 0.361. Consequently, the alternative hypothesis (Hₐ) is affirmed, warranting the rejection of the null hypothesis (H₀).

CONCLUSIONS

Based on the findings derived from a comprehensive analysis of e-commerce integration and its impact on the revenue of MSMEs in Sukmajaya post the COVID-19 pandemic, notable conclusions can be drawn. Employing the product moment correlation formula and referencing the calculated value of r-count (0.380) against the critical rtable value for a research sample comprising 100 respondents at a 5% significance level, it is evident that the correlation (rcount = 0.380) surpasses the critical threshold (r-table = 0.361). Consequently, it is affirmed that the utilization of e-commerce demonstrates several affirmative dimensions concerning MSMEs. Primarily, the implementation of e-commerce unequivocally leads to a substantial increase in revenue for MSMEs in Sukmajaya. This observation accentuates that MSMEs that have seamlessly embraced e-commerce exhibit superior revenue generation in comparison to their non-e-commerce engaged counterparts. This is in line with previous research by Karagozoglu and Lindell (2004), affirming that E-Commerce significantly amplifies the expansion of the customer base (pertaining to the marketing function) while insignificantly impacting purchasing management. The capacity to vend products or services online empowers MSMEs to access a broader customer base, extending beyond their geographical confines.

Furthermore, this study underscores the imperative of adapting to the evolving business landscape, particularly catalyzed by the COVID-19 pandemic. MSMEs that proactively adopted e-commerce technologies positioned themselves advantageously to respond to shifts in consumer purchasing behaviors and preferences. Additionally, e-commerce utilization augments the competitive edge of MSMEs in Sukmajaya within an increasingly digitalized market. By leveraging e-commerce platforms, these enterprises can effectively compete with other businesses, both locally and nationally, enhancing the efficiency of their product sales.

Moreover, the integration of e-commerce creates novel avenues for business collaborations with major e-commerce platforms, facilitating heightened innovation in product offerings and diversification of services. This presents an auspicious and potentially lucrative alternative for MSMEs in Sukmajaya. However, it is imperative to acknowledge that this conclusion underscores the necessity for continued education and support to empower MSMEs in the adept and effective utilization of e-commerce. Comprehensive training, enhanced technological access, and an acute comprehension of the digital marketplace constitute pivotal elements in enabling MSMEs to realize the full potential offered by e-commerce.

In essence, this study provides profound insights into how the strategic implementation of e-commerce can enable MSMEs in Sukmajaya to escalate their revenue, navigate through transformative shifts in business dynamics, and fortify their competitiveness in the contemporary digital environment. The findings underscore the sustained requirement for a supportive ecosystem to ensure that MSMEs can capitalize on the transformative opportunities presented by e-commerce technology.
REFERENCES


