

ANALYSIS OF THE INFLUENCE OF TECHNOLOGICAL DEVELOPMENT ON TRADITIONAL MARKET ACTIVITIES

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ABSTRACT

Purpose of the research This is to see how the influence of technological developments impacts conventional market activities. This research focuses on interactions between traders and consumers, operational efficiency, and competitiveness with contemporary markets. Research methods This is a qualitative descriptive, and case study conducted in several traditional markets that have used technology such as electronic payment systems and digital marketing applications. Apart from interviews and direct observations with traders and consumers, data was collected through research into related literature. Research result shows that technology impacts traditional markets in a dual way: it increases transaction efficiency and opens markets to traders who are able to adapt. However, some traders face difficulties understanding and implementing new technology. Apart from that, pressure from modern markets to adapt to faster technology also affects the sustainability of traditional markets. In order for traditional market traders to remain competitive in the face of change, this research recommends that they need technology training programs and policy support from the government to support technology integration in traditional markets so that they can compete fairly in the digital era.

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Introduction

General description of traditional markets

Traditional markets have long been an important part of communities around the world, serving as centers of social interaction and commerce (Nina, n.d.). Among the many products and services offered at these markets are fresh vegetables, handicrafts, clothing, and household items. Traditional markets are important for preserving local customs and improving the local economy in

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addition to being a good place to do business (Ardiyanto, Sasongko, Arief, & Maria, 2023). Despite the increase in online shopping and modern telecommunications, traditional markets are still quite popular due to their honest and wholesome characteristics, which appeal to both local and foreign customers.

Traditional markets offer a sense of community that is often absent in online shopping. Customers get the opportunity to interact with sellers, ask about products, and even sample local cuisine. Ultimately, traditional markets are not just places to shop; they are also places for social interactions and daily activities that enhance their lives and often interest them.

The importance of technology in modern society

Technology is an important aspect of modern society, changing communication, work, and daily life. Advances in smartphones, social media, artificial intelligence, and virtual reality have revolutionized access to information, ways of doing business, and communication. (Hadinata, 2024). This digital age is driving innovation and advancement in entertainment, education, and productivity, changing our interactions with the world. (Schindlwick, 2023) From online communities to virtual classrooms, technology has created new opportunities for collaboration and learning (Zubaidah, n.d.) . It has become an essential tool for staying connected, staying informed, and staying productive in today's fast-paced, interconnected world. Our reliance on technology highlights its importance in modern society, as it continues to influence and improve every aspect of our lives.

The impact of technology on traditional markets

The impact of technology on traditional markets cannot be denied (Khakim, n.d.). With the emergence of e-commerce platforms and digital marketing strategies, the way consumers shop and the way businesses operate has changed (Adha, 2022). Traditional brick-and-mortar stores are now facing competition from online retailers, forcing them to adapt and innovate in order to survive in this new digital landscape. Technology has also enabled greater access to global markets (Ardiansyah, 2023), allowing businesses to reach customers around the world with just one click. As technology advances, traditional markets need to accept these changes to remain relevant and competitive in the digital era.

Method

Research design and approach

The methodology for this study will involve a mixed approach, combining quantitative and qualitative research methods. ("Mixed Methods Research Guide With Examples," 2023) . Quantitative data will be collected through surveys and sales data analysis to measure the impact of online platforms on customer satisfaction and sales growth. Qualitative data will be collected through interviews with bookstore staff and customers to gain insight into their experiences and perceptions of new technology integration.

For example, surveys will be distributed to customers to measure their level of satisfaction with the online platform and track changes in their purchasing behavior. Additionally, interviews with bookstore staff will reveal their thoughts on how new technology has impacted their daily operations and interactions with customers.

Data collection methods

By utilizing a combination of qualitative and quantitative data collection methods (Waruwu, 2023), the aim is to provide a comprehensive understanding of the impact of technology integration on customer satisfaction and sales growth in the bookstore environment. This multifaceted approach will make it possible to gather rich insights that can inform future strategies and to improve customer experiences and drive business success. (Du & Marne, 2016).

Analysis techniques

Using regression analysis, cluster analysis, and factor analysis, we will identify patterns and relationships in the data, uncover hidden trends, and collect customer feedback through surveys and interviews. This comprehensive approach will provide insight into the impact of technology integration on customer satisfaction and sales growth.

Results

Technological Developments in Traditional Markets

Implementation of a digital payment system

Technological advances have changed traditional business interactions (Irawati, 2018), allowing businesses to streamline transactions and personalize offers. Mobile wallets and contactless payment options streamline transactions, while artificial intelligence and machine learning algorithms enable real-time anticipation of customer needs. This personalization increases customer satisfaction, loyalty, and repeat business. As technology develops, businesses must adapt and innovate to remain competitive.

Use of online platforms for marketing and sales

The digital era has revolutionized business marketing by utilizing social media (I. & Salsa, 2023), search engine optimization, and email marketing to reach a wider audience. Online platforms enable targeted advertising and data analysis, allowing businesses to tailor their strategies to specific customer segments. E-commerce platforms enable global sales, creating growth opportunities. As technology advances, businesses must remain competitive in the ever-growing online market by adopting digital marketing strategies and e-commerce platforms (Yohanes, Yulia, Nika, & Achmad, 2023). For example, a small clothing boutique can use Instagram and Facebook to target potential customers based on their interests and demographics, which will increase traffic to their online store. By analyzing data about customer behavior and preferences, they can adjust their product offerings and marketing tactics to increase sales and expand their reach globally.

Introduction of automated inventory management system

These systems can track inventory levels in real-time, automatically reorder products when stock is low, and provide insight into which items are selling well. This not only helps businesses avoid stockouts and overstocks, but also allows them to optimize their product mix to meet customer demand. Automated inventory management systems can help businesses predict future inventory needs more accurately, increasing overall efficiency and profitability (Indah & Muhammad, 2024). By adopting technology and implementing

automated solutions, businesses can position themselves for long-term success in today's digital economy.

Impact of Technology on Traditional Markets

Increased customer reach and sales

With the emergence of e-commerce platforms and social media marketing, businesses now have the ability to reach a global audience with just a click (Ovi et al., n.d.) . (Tuten, n.d.) How to open new opportunities for businesses to expand their customer base and increase their revenue streams. Technology has also enabled businesses to collect valuable data on consumer behavior and preferences, allowing them to tailor their products and services to better meet the needs of their target markets. The impact of technology on traditional markets has been transformative, leading to increased competitiveness and innovation in the industry (Arief, Supriyanto, Syamsulbahri, & Iskandar, 2023).

As businesses continue to adopt technology and adapt to the digital landscape, they are able to stay ahead and relevant in an ever-evolving marketplace. With the rise of e-commerce platforms and social media influencers, businesses have more channels than ever to connect with their customers and promote their products or services. The integration of technology into traditional marketing strategies has proven important for businesses looking to thrive in the modern economy (Dwi, Hani, & Mira, 2023).

Simplification of business operations

Technology integration is essential for businesses to remain efficient and agile in a rapidly changing business environment (Aan & Pupung, 2024). By leveraging automation and digital tools, companies can reduce costs, increase productivity, and provide a better customer experience. Technology has revolutionized inventory management, customer relationship management, and data analytics, enabling businesses to make informed decisions and adapt strategies to their target audience. By integrating technology into every aspect of business operations, companies can streamline processes, automate tasks, and analyze data in real-time, giving them an edge over competitors. For example, retail companies can use automation to track inventory levels in real-time, automatically reorder products when stock is low, and analyze customer data to personalize marketing campaigns. This allows companies to adapt quickly to changing market trends, reduce overhead costs, and provide a seamless shopping experience for customers.

Challenges faced by traditional market traders in adopting technology

Limited resources, lack of technical expertise, and resistance to change. Many traditional market traders may find it difficult to invest in new technology due to budget constraints or fear of disrupting their established business practices. Additionally, some vendors may not have the knowledge or skills to effectively implement and maintain technology solutions. Resistance to change can also be a significant barrier, as vendors may be hesitant to adopt new tools and processes that require them to learn new skills or change the way they operate. Overall, these challenges may hinder traditional market traders from utilizing technology to improve their operations and remain competitive in the market. However, with rapid technological advances and increasing demand for online shopping, it is

increasingly urgent for traditional market traders to adapt and adopt technological solutions. By investing in new technologies and overcoming their resistance to change, vendors can streamline their operations, reach a broader customer base, and increase their competitiveness in the marketplace. It is critical for vendors to recognize the benefits that technology can bring to their business and to seek help from experts in implementing and maintaining these solutions effectively. Ultimately, by adopting technology, traditional market traders can not only survive but also thrive in an increasingly digital market.

Discussion

Examples of traditional markets that have successfully integrated technology

On transforming local farmers markets by leveraging online ordering systems to reach customers beyond their physical locations. Another example is traditional clothing markets that are implementing mobile payment systems to meet the needs of a younger, tech-savvy demographic. This case study shows the positive impact that technology can have on traditional markets, paving the way for their continued relevance and success in a rapidly evolving business landscape.

Case studies on the transformation of traditional markets through technology

The importance of adapting to changing consumer preferences and adopting digital solutions. By leveraging technology, these markets are able to expand their reach, increase customer convenience, and remain competitive in an increasingly digital world. As more industries adopt innovation and digitalization, traditional markets must also evolve to meet the demands of modern consumers. By doing so, they can not only survive but thrive in today's ever-changing marketplace. By staying ahead of the curve and incorporating digital solutions into their business models, traditional marketplaces can position themselves as leaders in their industries. This not only allows them to attract new customers but also retain existing customers by providing a seamless and efficient experience. As technology advances, it is vital for businesses to continue to adapt and innovate to remain relevant and successful in the fast-paced digital era. Embracing digital transformation is no longer an option but a necessity for businesses that want to remain competitive and thrive in an ever-evolving market. (Nina, Didier, & Michael, 2014).

Lessons learned from technological advances in traditional markets

The emerging industry continues to evolve, with innovative solutions and cutting-edge technology. To survive and thrive, businesses must stay ahead of the curve, investing in research and development, collaborating with industry experts, and seeking growth opportunities. This positioning allows them to differentiate themselves from competitors and attract a loyal customer base. Welcoming change and being open to new ideas allows companies to stay relevant and innovate. With a focus on continuous improvement and agility, businesses can navigate market challenges and emerge as industry leaders. Those who are willing to embrace change will shape the future of their industry.

Conclusion

Summary of main findings

Overall to thrive in today's rapidly changing market landscape, businesses must be proactive in their approach to innovation and growth. By prioritizing research and development, collaboration, and a willingness to embrace change, companies can position themselves as industry leaders and attract a loyal customer base. It's clear that those willing to adapt and evolve will ultimately shape the future of their industry. In conclusion, staying ahead of the curve and open to new ideas is an important strategy for success in the modern business world.

Implications for the future of traditional markets

Companies must continually monitor market trends, consumer preferences, and technological advances to remain competitive and relevant in the digital era. Embracing innovation, anticipating future challenges, and exploring new ways of doing business is important. This may involve investing in new technology, adjusting marketing strategies, and expanding product offerings. Remaining proactive and adaptive is critical to long-term success and growth.

Recommendations for further research and practical application of technology in traditional markets

Research on new technologies such as artificial intelligence, blockchain, and virtual reality is critical to understanding their impact on traditional markets. These technologies can improve customer experience, streamline operations, and drive sales. Practical applications include chatbots, personalized marketing campaigns, and mobile payment solutions. Companies must adopt technology and continue to innovate to position themselves for success in the digital landscape. Augmented and virtual reality can create immersive shopping experiences, while cybersecurity measures protect customer data. By utilizing technology strategically, companies can survive and thrive in a competitive market.

References

- Aan, & Pung. (2024). *Digital Transformation of Strategy Management in Facing Modern Business Dynamics*. Retrieved from <http://j-innovative.org/index.php/Innovative/article/view/12112>
- Adha. (2022). *Factors of the digital era consumer behavior revolution: a literature review*. Retrieved from <https://www.ejournal.unis.ac.id/index.php/JIPIS/article/view/3286>
- Ardiansyah. (2023). *The Role of Technology in Economic and Business Transformation in the Digital Era*. Retrieved from <https://pdfs.semanticscholar.org/6dd0/879293fdd48556e88b2c0623a7ead95ea420.pdf>
- Ardiyanto, Sasongko, Arief, & Maria. (2023). *SUSTAINABLE TOURISM PLANNING IN REGIONAL AND CITY DEVELOPMENT*. Retrieved from <http://eprints.itn.ac.id/14435/>
- Arief, Supriyanto, Syamsulbahri, & Iskandar. (2023). *Business revolution in the digital era: Strategy and impact of technological process transformation on competitive advantage and organizational growth*. Retrieved from <https://wnj.westscience-press.com/index.php/jbmws/article/view/563>

- Aurelia, Sayudin, & Azka. (2023). *Business development in the digital era*. Retrieved from <https://jmi.rivierapublishing.id/index.php/rp/article/view/554>
- Ayu, Adi, Arief, & Romi. (2023). *Collaborative strategies in encouraging business innovation in creative industries: a qualitative study of graphic design companies*. Retrieved from <https://sj.eastasouth-institute.com/index.php/smb/article/view/221>
- You, & Marne. (2016). *Towards a holistic customer experience management framework for enterprises*. Retrieved from <https://journals.co.za/doi/abs/10.7166/27-3-1624>
- Dwi, Hani, & Mira. (2023). *Developing Business Strategy in the Era of Digital Transformation*. Retrieved from <http://journal.ikopin.ac.id/index.php/coopetition/article/view/3076>
- Dwi, & Muhammad. (2023). *ANALYSIS OF TRADITIONAL MARKET MANAGEMENT IN IMPROVING THE COMMUNITY ECONOMY*. Retrieved from <https://ejurnal.kampusakademik.co.id/index.php/jiem/article/view/319>
- Hadinata, F. (2024, September 26). The Impact of Information Technology on Modern Societys . . . Retrieved October 19, 2024, from <https://bit.telkomuniversity.ac.id/the-impact-of-information-technology-on-modern-societys-lifestyle/>
- I., & Salsa. (2023). *Analysis of the Use of Social Media as a Marketing Tool in Small and Medium Enterprises*. Retrieved from <https://journals.unisba.ac.id/index.php/JRMK/article/view/1716>
- Indah, & Muhammad. (2024). *Integration of Business Information Systems with Machine Learning Technology*. Retrieved from <https://jurnal.itbsemarang.ac.id/index.php/JPSI/article/view/1916>
- Irawati. (2018). *Fintech and Changes in the Structure of the Financial Industry in Indonesia*. Retrieved from <http://download.garuda.kemdikbud.go.id/article.php?article=1317452&val=617&title=FINTECH%20DAN%20PERUBAHAN%20STRUKTUR%20INDUSTRI%20KEUANGAN%20DI%20INDONESIA>
- Khakim. (n.d.). *Revitalization of Traditional Markets with the Concept of VRIO, Heritage Tourism and Science and Technology to Strengthen Existence in the Era of Society 5.0*. Retrieved from <https://repository-penerbitlitnus.co.id/id/eprint/259/>
- Mixed Methods Research Guide With Examples. (2023, February 20). Retrieved October 19, 2024, from <https://dovetail.com/research/mixed-methods-research/>
- Muh, Jacobus, Ida, Bahtiar, & Rosa. (2023). *Mobile Applications in Digital Marketing: A Literature Analysis of Their Impact on Business Finances and Marketing Strategy*. Retrieved from <https://jptam.org/index.php/jptam/article/view/10002>
- Nina, Didier, & Michael. (2014). *Embracing digital technology: A new strategic imperative*. Retrieved from <https://emergenceweb.com/blog/wp-content/uploads/2013/10/embracing-digital-technology.pdf>
- Nina. (n.d.). *The existence of traditional markets in seizing digital opportunities: Descriptive study of Palasari traditional market traders, Lengkong District, Bandung City*. Retrieved from <https://digilib.uinsgd.ac.id/91865/>

- Ovi, Arief, Musran, Nurillah, Muhammad, Raden, . . . Ratih. (n.d.). *DIGITAL MARKETING: Optimizing Digital Marketing Strategy*. Sonpedia Publishing Indonesia. Retrieved from https://books.google.com/books?hl=en&lr=&id=yBjEAAAQBAJ&oi=fnd&pg=PA64&dq=Munculnya+platform+e-commerce+dan+pemasaran+media+sosial,+bisnis+sekarang+memiliki+ke+mampuan+untuk+menjangkau+audiens+global+hanya+dengan+sekali+klik+&ots=x3zAMLw7hw&sig=CMVhwdZjcJvPwRk8g_go5cXPGQE
- The Role of the Technology Sector in Driving Innovation and Economic Growth in 2023*. (2023). Retrieved from <http://circle-archive.com/index.php/carc/article/view/44>
- Rubiyanto, Ceprudin, & Siti. (2023). *Legal Protection of Traditional Business Actors from Modern Retail Expansion from a Pancasila Law State Perspective*. Retrieved from <https://publikasiilmiah.unwahas.ac.id/IQTISAD/article/view/9583>
- Schindlwick, H. (2023, April 13). The Future of Work in the Digital Age: AI And . . . Retrieved October 19, 2024, from <https://www.linkedin.com/pulse/future-work-digital-age-ai-transformation-helmut-schindlwick>
- Tuten. (n.d.). *Social media marketing*. Sage publications limited. Retrieved from https://books.google.com/books?hl=en&lr=&id=1D_JEAAAQBAJ&oi=fnd&pg=PT13&dq=With+the+rise+of+e-commerce+platforms+and+social+media+marketing,+businesses+now+have+the+ability+to+reach+a+global+audience+with+just+the+click+of+a+button&ots=z3_zQFg510&sig=JtQ72n4hgiDRjNUR56ik6NngvXw
- Vip, Carlof, Rabiah, & Muh. (2023). *Organizational Capability Development Strategy in the Digital Era Focuses on Adaptation and Innovation*. Retrieved from <https://jurnaluniv45sby.ac.id/index.php/jmcbus/article/view/1161>
- Virda, Muhammad, Andi, & Megawati. (2023). *Digital Marketing Strategy: Innovation to Maximize Consumer Product Sales in the Digital Era*. Retrieved from <http://journal.stieamsir.ac.id/index.php/abrij/article/view/405>
- Waruwu. (2023). *Educational research approaches: qualitative research methods, quantitative research methods and mixed research methods (Mixed Method)*. Retrieved from <https://jptam.org/index.php/jptam/article/view/6187>
- Yohanes, Yulia, Nika, & Achmad. (2023). *Business innovation strategy to increase competitiveness and organizational growth in the digital era*. Retrieved from <https://wnj.westscience-press.com/index.php/jbmws/article/view/564>
- Zubaidah. (n.d.). *21st century skills: Skills taught through learning*. Retrieved from <https://sitizubaidahbioum.wordpress.com/wp-content/uploads/2018/01/siti-zubaidah-stkip-sintang-10-des-2016.pdf>