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Research Article

E-commerce Transformation in Indonesia: Innovation and Creative Destruction

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Abstract

This study investigates the interplay between entrepreneurial dynamism, innovation, and technological advancement in Indonesia's burgeoning e-commerce sector. Framed through the lenses of Creative Destruction and Disruptive Innovation, the research delves into the transformative impact of digital globalization on traditional business models. By tracing the historical development of e-commerce and scrutinizing the closure of offline stores in 2017, this study highlights the potential of digital globalization to disrupt established market players, paving the way for MSMEs to explore unconstrained market segments. The study introduces the Model of Disruption-Destruction Cycle, elucidating how entrepreneurs' innovations lead to technological advancements and business model transformations. These dynamics enrich our understanding of Indonesia's evolving digital economy. The contribution lies in its comprehensive analysis of the transformative forces redefining the e-commerce landscape. While the study presents valuable insights, it also acknowledges limitations, including the need for further empirical validation. Finally, this paper offers a platform for empirically validating and exploring the ever-evolving landscape of entrepreneurship, innovation, and technological advancement in Indonesia's e-commerce realm.

Keywords: Entrepreneurial Dynamism, Innovation, Technology, E-commerce, Creative Destruction

INTRODUCTION

The rapid digitalization of trade has yielded substantial profits due to technological advancements in online commerce, contributing to a staggering e-commerce revenue of 81.8 trillion within a year, primarily driven by fashion, accessories, electronics, furniture, and travel sectors. Clothing stood out as the primary revenue driver among online sectors, comprising a substantial 45.8% share of the significant 56.1 trillion value in fashion, accessories, and fast-moving consumer goods (FMCG), with travel at 19.8 trillion, and electronics and furniture at 5.6 trillion (MARS Indonesia, 2017). These developments signify a technological revolution impacting trading methodologies and consumer preferences, leading to the closure of physical stores and the ascent of e-commerce, thereby intensifying competition among stakeholders, including SMEs. Conversely, a 2017 scenario demonstrated offline shop closures, with prominent brands like Vans Store and 7-Eleven discontinuing operations in Indonesia, accompanied by the shuttering of divisions of local corporate supermarkets like Ramayana, Lotus Department Store, Hero, and Matahari. Iconic electronic wholesale centers like Glodok, WTC Mangga Dua, and Roxy Square Shopping Centre in Jakarta faced dwindling footfalls, with numerous stalls displaying "for rent" signs, indicative of a sharp decline in offline shops and buyers for specific products and markets. This situation underscores the pressing need to explore the ramifications of digitalization on traditional commerce, its implications for market dynamics, and the imperative to comprehend its broader impact on local and global economies within the framework of international political economy research.

Within the Digital Era Transformation, existing literature has extensively explored the transformative effects of digitalization on commerce and the economy (Borremans et al., 2018). This body of research has highlighted how traditional trade processes have transitioned into digital forms, encompassing activities from transactions and marketing to communication and information dissemination. Moreover, scholars have underscored the potential advantages of digitalization, including increased global market accessibility for businesses of all sizes and the operational efficiencies offered by real-time connectivity and customer feedback integration (Deloitte, 2017).

Furthermore, while existing studies have emphasized the potential benefits of Information and Communication Technology (ICT) integration into business operations, a gap persists concerning the nuanced interplay between ICT implementation and various aspects of the global political economy. Although previous research has shown that ICT can introduce new products, strengthen global relationships, efficiently run operations, gain a competitive edge, enable the creation of new business models, support entry into new markets, and drive operational efficiency and managerial effectiveness, ultimately fostering the development of new business opportunities and easing entry into various market segments (Berisha-Shaqiri, 2015; Nikoloski, 2014), there remains a limited examination of the potential regulatory and security challenges that come with the expanded use of ICT in global commerce. This gap necessitates further exploration into how governments and regulatory bodies adapt to these technological shifts, ensuring consumer data protection and intellectual property rights while facilitating the growth of cross-border digital transactions. As such, this research aims to contribute to closing these gaps by providing a comprehensive analysis of the strategies adopted by SMEs in adapting to digitalization and by offering insights into the complex interplay between ICT adoption, global political dynamics, and the evolving landscape of international commerce.

Within the domain of ICT, Foreign Direct Investment, Capital Flow, the literature has extensively acknowledged the transformative influence of Information and Communication Technologies (ICTs) on global systems, including social, political, and economic dimensions, ushering in unprecedented and multifaceted effects (Mcarthy, 2015). These effects have been traced through the intricate interactions of technological forces and international dynamics, which shape production processes, societal development, and power relations. However, a notable gap emerges in understanding the intricate linkages between ICTs, foreign direct investment (FDI), and capital flow within Indonesia's economic context. While previous studies have explored the impact of technological advancement on economic growth and market efficiencies (Iulia-Apavaloaie, 2014), there remains a dearth of research that delves into the nuanced interplay between

ICT adoption, FDI inflows, and their combined impact on Indonesia's capital flow landscape. This gap signifies a need for research that uncovers the mechanisms through which ICT-driven economic changes intersect with FDI trends, contributing to Indonesia's evolving economic structure and shaping its role in the global market.

Furthermore, despite recognizing the significance of technology in optimizing business processes and generating competitive advantages (Terzi, 2011), limited attention has been devoted to understanding the specific mechanisms through which ICT adoption influences the financial sector, particularly in Indonesia. While some studies have touched upon the general utilization of ICTs by businesses and financial institutions (Sijabat, 2016; Susanto, Kang, & Leu, 2016), the deeper linkages between ICT adoption, the facilitation of foreign investments, and the dynamics of capital flows remain underexplored. Addressing this gap requires a nuanced examination of how ICT infrastructure and digital platforms can enhance Indonesia's attractiveness as an investment destination, reshape the nation's financial landscape, and potentially mitigate obstacles related to information dissemination and transactional efficiency in the context of foreign capital inflow. Therefore, this research aims to bridge these gaps by comprehensively analyzing the intricate relationships between ICTs, FDI, and capital flows in Indonesia, ultimately contributing to a more nuanced understanding of the multifaceted impacts of technological advancements within international economics.

The present research delves into a compelling examination of the digital era's impact on e-commerce, viewed through the lens of Creative Destruction and Disruptive Innovation, particularly within the context of Indonesia. This topic holds intrinsic significance in the backdrop of the ever-evolving global economic landscape. The intricate interplay between technological advancements, market dynamics, and consumer behaviors has led to a novel economic paradigm driven by digital globalization and free market principles. This paradigm shift necessitates a profound adaptation by business entities and their stakeholders, prompting them to navigate the complexities of a digitally driven economic environment. Notably, the confluence of Information and Communication Technology (ICT) development and investment inflows has engendered a web of interdependence among various actors, underscoring the pivotal role they play in fostering the survival and advancement of both governmental and business institutions.

Consequently, this research is anchored in a rich foundation of previous and current studies that collectively shape our understanding of the intricate dynamics within this transformative landscape. By meticulously considering the insights garnered from prior research endeavors, this study seeks to unearth novel perspectives, bridge gaps, and contribute to the comprehensive comprehension of how Creative Destruction and Disruptive Innovation unfold within the e-commerce sphere in Indonesia. As such, a careful and deliberate consideration of the extant body of knowledge becomes paramount, not only to inform the development of this research but also to illuminate pathways for exploring uncharted territories within the realm of the digital economy.

This study delves into the influences of technology, investments, innovation, and market changes on Indonesia's economy, with a particular focus on the growing online shopping sector. The research question revolves around understanding how these factors collectively contribute to reshaping market structures, fostering stakeholder interdependence, and driving the evolution of Indonesia's economic system within its burgeoning e-commerce sector. By analyzing their combined impact on market structures, stakeholder interdependence, and the overall trajectory of the country's economy, the research seeks to provide a comprehensive understanding of the driving forces behind Indonesia's digital economic transformation. Through a thorough investigation into the interplay between technological advancements, shifts in market behavior, and investment patterns, this study aims to contribute to the existing knowledge by shedding light on the mechanisms underpinning change in a swiftly digitizing economy. Ultimately, the investigation strives to yield insights that can guide policy formulation, inform strategic decisions for businesses, and spark further discussions regarding the intricate dynamics shaping the contemporary global economic landscape.

METHOD AND THEORY

The research leans towards an empirical (positivist) methodology characterized by its objective and systematic approach to comprehending the complex dynamics of the digital era's impact on Indonesia's e-commerce landscape. In this research, a systematic approach refers to a methodical data collection process encompassing diverse sources like annual reports, surveys, scientific literature, and personal documents. This involves crafting a structured research plan, delineating precise data requirements, employing varied data collection methods, identifying sources, and conducting comprehensive analysis. Such a systematic approach guarantees data validity and completeness, it enables to perform a robust analysis and draw substantiated conclusions. By examining specific factors such as ICT adoption, innovation, and investment dynamics, the study aimed at quantitatively analyze their combined influence on reshaping market structures, fostering stakeholder interdependence, and propelling the evolution of Indonesia's economic system within the context of its burgeoning e-commerce sector. This method adheres to the positivist tradition, emphasizing data collection and correlation analysis techniques to unveil objective patterns and causal relationships between technology, investment, innovation, and the transformative aspects of the market in the digital era.

In this study, qualitative methods were employed to elucidate the phenomenon of traditional retail closures, unravel the underlying change process, and gain a comprehensive understanding thereof (Hancock, Ockleford, & Windridge, 2009), in conjunction with the Creative Destruction Theory framework. The selection of qualitative methods was deliberate, given their aptness for exploring intricate phenomena and generating in-depth insights. This choice diverges from standard practices in international relations research, which often lean towards quantitative approaches. Data sources encompassed a gamut of materials, including annual reports and surveys from APJII, Mckinsey & Company, Google Temasek, and Morgan Stanley, supplemented by inputs from entities like DailySocial, the Faculty of Economics at the University of Indonesia, Wearesocial, insight, the Department of Communication and Information Technology, and scholarly literature studies. Personal documents such as journals (Creswell, 1994) further enriched the data corpus, fostering a holistic data analysis and interpretation framework.

Creative destruction, an integral facet of capitalist economies, epitomizes the perpetual cycle wherein innovative products and methods continually supplant their predecessors. This phenomenon ensues when entrepreneurs successfully induce others to embrace innovations, explore uncharted domains, and dismantle established norms (Schneider, 2017). Entrepreneurs serve as pivotal agents driving invention, innovation, and technological advancement by amalgamating distinct products, ideas, and methodologies to forge novel production units that eclipse antiquated ones. Entrepreneurs bring fluidity to the competitive landscape as transformative agents, propelling competitors within the market system to adapt to novel dynamics (Crayannis, Stewart, Sipp, & Venieris, 2014).

Central to creative destruction is Disruptive Innovation, as championed by Clayton Christensen. Disruptive Innovation refers to the continuous progression of a product or service process from the lowest echelons of the market segment to the zenith, ultimately supplanting incumbent competitors. This form of innovation hinges on technological advancements that facilitate price reductions, galvanize investor interest and democratize public involvement in the market process. Concomitantly, innovators must navigate the market arena, often perturbing established actors. Successful innovators possess an astute awareness of when radical transformations are requisite for sustaining a thriving business. The diffusion, assimilation, and eventual upheaval of traditional markets necessitate time and perseverance on the part of innovators. Within Christensen's framework, innovation functions as the input, while creative destruction emerges as the resultant outcome (Schneider, 2017). Joseph Schumpeter's Creative Destruction has similarities with Marx's analysis of the development of capitalism, especially the dynamic and transformative nature of the economic system. However, there are fundamental differences between Schumpeter's and Marx's perspectives that limit a comprehensive explanation of Creative Destruction to the influence of Marx's ideas. Schumpeter's theory focuses on innovation, entrepreneurship, and technological progress as driving forces behind economic evolution, emphasizing the entrepreneurial spirit and creative disruption as essential elements in the capitalist system.

In contrast, Marx's analysis focused on the contradictions inherent in capitalism, emphasizing class struggle, exploitation, and systemic crisis. Although both theories recognize change and upheaval in capitalist structures, Schumpeter's approach centers on the positive role of innovation and entrepreneurial activity; Marx's framework highlights the contradictions and conflicts in capitalist modes of production. By leveraging the Creative Destruction Theory and Disruptive Innovation framework, this study seeks to elucidate the nuanced interplay between these constructs and the reshaping of Indonesia's e-commerce landscape. Through an analysis informed by these concepts, the study provides a granular comprehension of how entrepreneurial dynamism, innovation, and technological advancement collectively contribute to the transformative forces witnessed within Indonesia's digital economy.

RESULT AND ANALYSIS

The digital era has indeed opened up opportunities for retailers to provide operational efficiencies and higher customer concentration in their business models. Digital connects vendors, employees, and customers in real-time and incorporates network feedback into day-to-day business operations (Deloitte, 2017). On the other hand, retail businesses, including SMEs, must suffer losses first and force themselves to be adaptive and resistant to change. Lower overhead costs and tax advantages that allow online merchants to offer lower prices have challenged retail stores. As global consumers become increasingly sophisticated, unfortunately, retailers cannot adapt their operating models at the same speed (Wiefel, 2016). In the political view, it indicated the weakness of the State and sovereignty. The absence of laws regulating online business increasingly weakens the role of the State and the position of countries that hierarchically have a central role.

After all, SMEs must be involved in the digital economy. Conceptually, the digital economy is the active implementation and application of digital technologies, including the collection, storage, processing, transformation, and transmission of data in all areas of human activity, resulting in online services, electronic payments, e-commerce, crowdfunding, internet banking, advertising (Borremans, Zaychenko & Iliashenko, 2018). The ease of business activities in communication and transactions includes ordering, billing, payment, marketing, advertising, communication, or buying and selling products, services, and information through telecommunications networks is a signal of digital globalization. Digital globalization allows small businesses and entrepreneurs to participate, resulting in the rapid emergence of new competitors and increasing pressure on incumbent industry players (Manyika et.al, 2016). This general condition occurs in digital globalization. The exciting thing from the description of the facts above is the closure of offline stores, at almost the same time accompanied by the rise of online stores. Technology has proven influential, reaching a broader digital economy and bringing consumer behavior and trading models changes.

Entering Digital Era: The role of ICT and Impact to the E-Commerce

The digital era has ushered in transformative changes in commerce, particularly evident in the dynamic interplay between Information and Communication Technology (ICT) and its profound impact on e-commerce. In 2013, the amalgamation of Business-to-Business (B2B) and Business-to-Consumer (B2C) transactions yielded an impressive $161.1 trillion, with over 40% of individuals participating in the burgeoning e-commerce landscape (ADB Institute, 2016). Eight years later in the second year of the pandemic, 2021, the global retail e-commerce market recorded $5.2 trillion in sales, driven by the increasing use of smartphones, the convenience and safety of home-based shopping for daily essentials and luxury items, the abundance of products and sellers, and rapid technological advancements, including features like voice recognition, augmented reality, and artificial intelligence (ADB, 2023).

Comparatively, the trajectory of online retail companies in the United States showcased a profound shift. In 2000, online retail constituted a mere 1%, accounting for $27.4 billion in transactions. This digital transformation was accompanied by the closure of over 1,400 brick-and-mortar stores, a trend perpetuated over the years. Notably, online retail sales in the United States witnessed a staggering 9.5% rise, nearly $400 billion by early 2016 (Perry, 2017). China's trajectory is a compelling example of the digital economy's ascent, as its retail transaction value marked a $1,915 billion in 2016. The penetration of mobile payments among Chinese internet users surged from 25 percent in 2013 to 68 percent in 2016, with China's mobile payment value relative to individual consumption reaching $790 billion in 2016, which was 11 times greater than that of the United States (Woetzel, Seong, Wang, 2017).

In contrast, the six ASEAN countries, including Singapore, Malaysia, Thailand, Philippines, Indonesia, and Vietnam, despite representing 3 to 4 percent of global GDP and approximately 8 percent of the population, constitutes less than 1 percent of global online retail. Indonesia emerges as a promising contender within this context despite its online retail sales hovering below 1%. The country showcases remarkable potential for cultivating a more expansive e-commerce market than its ASEAN counterparts (A.T. Kearney, 2015), substantiated by an internet penetration rate of 51.8% (Directorate General of Domestic Trade, Ministry of Trade of the Republic of Indonesia, 2017).

This juxtaposition of statistics underscores the correlation between embracing creative destruction and facile ICT integration. Countries that welcome and implement creative destruction within their business environments are better positioned to harness the potential of ICT (Nikoloski, 2014). Indeed, the nexus between accepting and applying creative destruction and the exponential growth of a nation's digital economy is a testament to the transformative power inherent in this paradigm shift. The surge in e-commerce and the development of the digital economy in Indonesia is closely related to the dynamics of the international financial sector, especially under the influence of Neoliberalism in its financial form. Foreign Direct Investment (FDI) driven by the principles of liberalization, deregulation, and efforts to achieve a free-market economy plays a vital role in this correlation. Investors and global financial players in Indonesia's digital economy, such as venture capitalists, institutional investors, large technology companies, multinational entities, and private equity firms, see Indonesia's digital landscape as a profitable investment arena due to its rapid growth potential. The aggressive financialization of capitalism in venture capital, where investors actively inject capital into startups and innovative digital companies to exploit the potential for high profits associated with technological progress, is particularly prominent in the digitalization movement of the Indonesian economy. This process is a strategic response to identifying and exploiting opportunities in the dynamic digital space, in line with broader trends in the financial sector, prioritizing sectors that promise strong returns on investment.

Power of ICT, Foreign Direct Investment, and Capital Flow in Indonesia

The influence of Information and Communication Technology (ICT), Foreign Direct Investment (FDI), and the dynamic flow of capital has left an indelible mark on Indonesia's economic landscape. The inception of the Internet in Indonesia was pioneered by university campuses, notably the Bandung Institute of Technology (ITB) and the University of Indonesia (UI), initiating the application of the internet in the country (APJII, 2004). The first internet service introduced, the Unix-to-Unix Copy Protocol (UUCP), facilitated global email exchanges; however, the lack of support from government and military sectors rendered the transmission expensive (APNIC, 2007). Notably, Indonet introduced Internet Service Provider (ISP) services in 1994. By early 1996, the government licensed 27 ISPs, culminating in forming the Indonesian Internet Service Provider Association (APJJI) in collaboration with regulators. Furthermore, the inception of the Indonesia Internet Exchange (IIX) in partnership with CISCO marked a strategic move to reduce international costs and amplify local access (APJII, 2004).

Amid Indonesia's economic crisis in 1998, an exciting phenomenon unfolded, with corporate domains (co. id) exhibiting an over 100% increase, signaling the proliferation of the internet and social networking's pivotal role in the business sector's evolution (APJII, 2004). Businesses in Indonesia commenced leveraging the internet to create database systems accounting calculations and enhance overall productivity. A 2013 survey by APJII indicated that sectors like manufacturing, hotels, and restaurants harnessed ICT to bolster value chains and promotional activities (APJII, 2013). Indonesia's online trading market boasts a formal e-tailing business valued at approximately $5 billion, coupled with over $3 billion in informal trading, with at least 30 percent of online commerce spending attributed to new consumption, addressing previously unmet needs. At the same time, Indonesia has many active users on social media platforms such as Facebook, Instagram, Line, Twitter, and YouTube (Das et al., 2018), manifesting a widespread acceptance and embracement of the digital age.

The rapid ascent of e-commerce in Indonesia has magnetized foreign investors, with start-up investments skyrocketing from IDR 1.02 trillion to IDR 2.09 trillion in the second quarter of 2016 (Manuwu, 2016). This surge correlates with the exponential growth of smartphone internet users, underscored by Indonesia's 2016 internet user count of 90.5 million, translating to 35.4% of the population. Within this cohort, 26.3 million users, primarily aged 26-35, engaged in e-commerce activities (Agency of Research and Human Resource Development, 2017). The dominance of mobile phone usage for online activities stands at 89.9%, reflecting a transformation in transaction behavior toward ATMs (77.5%) compared to cash (22.5%) (Agency of Research and Human Resource Development, 2017).

As defined by the OECD and WTO, E-commerce orchestrates the intricate chain of production, distribution, marketing, sales, and delivery through electronic means, creating an ecosystem that encapsulates businesses, households, individuals, governments, and organizations (OECD, 2002) (WTO, 2013). In Indonesia, 2018 witnessed the emergence of 142 companies, including ten marketplaces, with notable investments such as $1 billion into Bukalapak and over $7 billion into Tokopedia, cementing their status as leading market players and unicorn start-ups (DailySocial, 2018). The Indonesian government's ratification of Presidential Regulation No. 44 of 2016 concerning the Negative Investment List (DNI) further underscores efforts to enhance the economy through e-commerce, facilitating foreign investor-local entrepreneur collaborations (BKPM, 2016). This regulatory framework allows foreign investors to hold 100% ownership with a total investment exceeding IDR 100 billion ($7.4 million US) while emphasizing partnerships with SMEs (Indonesia Investments, 2016).

The confluence of ICT and investment has yielded profound outcomes, amplifying economic growth, spurring competition, and nurturing a thriving e-commerce ecosystem. Indonesia's digital economy market burgeoned from $18 billion in 2015 to $27 billion in 2018, contributing 2.9% to the GDP, with projections foreseeing its expansion to a remarkable $100 billion by 2025 (Google, Temasek, 2018). This dynamic synthesis underscores the implications of ICT and investment, shaping Indonesia's economic trajectory and engendering a future deeply intertwined with the digital realm.

Entrepreneurial Dynamism, Innovation, and Technological Advancement in Indonesia's E-commerce Landscape

The Entrepreneurial Dynamism, Innovation, and Technological Advancement subtopic in Indonesia's E-commerce Landscape delves into the intricate interplay between Information and Communication Technology (ICT) adoption, innovation, and investment dynamics. This analysis, viewed through the lens of Creative Destruction and Disruptive Innovation, highlights how the convergence of these factors shapes the transformative impact of digital globalization on the country's business ecosystem. The closure of numerous offline stores in 2017 is a poignant example of the disruptive force of digital globalization, as it demonstrated the capability of technology-driven changes to challenge well-established corporations. This unfolding scenario also offers a compelling context wherein the digital economy's development and the concurrent closure of traditional brick-and-mortar stores create fertile ground for Micro, Small, and Medium Enterprises (MSMEs) to explore and capitalize on untapped market segments, unbound by geographical constraints.

In 2017, several prominent retail outlets in Jakarta, Indonesia, experienced closure, signifying the shift in consumer preferences and behavior towards digital platforms. These included closing 7-Eleven outlets, Matahari department stores, and GAP retail stores. Even established commercial centers like Glodok, WTC Mangga Dua, and Roxy Square Shopping Centre encountered dwindling visitor numbers. These closures are a stark manifestation of Creative Destruction in action, where traditional business models succumb to the transformative effects of digital globalization. The transformation that emerged from these closures not only underscores the disruptive potential of technology but also opens doors for enterprising MSMEs to tap into and navigate the dynamic landscape of the digital economy.

Tracing the historical evolution of e-commerce provides a compelling illustration of the intricate relationship between Creative Destruction and Disruptive Innovation. The origins of e-commerce can be traced back to the early 1970s, marked by the electronic funds transfer (EFT) innovation. During this time, the application of EFT was confined to financial institutions and a select few companies. This initial step in digitalizing transactions set the stage for the emergence of Electronic Data Interchange (EDI), which gradually expanded beyond financial processes to encompass various sectors such as manufacturing, retail, and services. The early 1990s ushered in a significant shift with the commercialization of the internet and the burgeoning growth of potential online customers. This period marked the coining of the term "e-commerce," reflecting its increasing prevalence and influence within the global landscape (Widagdo, 2016).

The pivotal year of 2005 marked a significant turning point in the trajectory of e-commerce, with the advent of the World Wide Web (www) transforming the internet into a powerful business medium. This pivotal innovation triggered the widespread proliferation and multiplication of e-commerce, extending its influence across America, Europe, and East Asia (Nanehkaran, 2013). This technological watershed facilitated the emergence of an entirely new economic paradigm, reshaping traditional business models and catalyzing a profound shift in how commercial transactions were conducted. The transformative trends set in motion by e-commerce reverberated beyond the business domain, leaving an indelible mark on global finance and macroeconomics (UNCTAD, 2001).

The far-reaching impact of e-commerce on economic growth becomes evident when examining the trajectory of world online retail sales. The figures paint a compelling picture of its ascendancy: from USD 1.316 trillion, comprising 5.9% of total retail sales, in 2014 to USD 1.592 trillion or 6.7% in 2015, and a further surge to USD 1.888 trillion or 7.4% in 2015. This trend continued its upward trajectory in subsequent years, with online retail sales reaching USD 2.197 trillion, accounting for 8.2% of total retail sales in 2017 and ultimately surging to 8.80% in 2018 (Saleh, 2017). This staggering growth underscores the seismic shift in consumer behavior and preferences, with increasing numbers of individuals choosing the convenience and accessibility of online shopping.

The escalating figures of online retail sales signify more than just a change in consumer behavior; they symbolize a profound transformation in the dynamics of global commerce. E-commerce's ability to bridge geographical boundaries, offer a seamless shopping experience, and harness the power of technological advancements has revolutionized how businesses engage with customers and how products and services are delivered. As the statistics demonstrate, the growth of e-commerce is not merely a trend but a fundamental restructuring of economic interactions that has the potential to reshape industries, redefine business strategies, and drive economic growth in an increasingly digitized world.

The advent of websites has not only facilitated but fundamentally underpinned the resounding success of e-commerce, elevating it to the status of the preferred method of shopping for consumers across the globe. This shift has not only resulted in an exponential increase in online retail sales volume but has also eroded the conventional business model. This transformation has been coupled with a simultaneous intensification of competition within the e-commerce arena, fostering an environment conducive to emerging even more significant future trends in this domain. The allure of e-commerce stems from its inherent profitability; consumers are empowered with easy access to comprehensive price information, enabling them to compare prices, make informed decisions, and optimize their expenditure on products (Gupta, 2014).

This spectacular growth of e-commerce is intrinsically linked to the ease of access to internet services and the widespread literacy in communication technology. The inexorable march of technological progress ensures that novelty, development, and replication remain constants within this arena. The current phase of exponential growth exemplifies digitization, wherein the transition of products and services into digital formats allows for the convenience of image-based displays and sales with near-zero costs (Ramirez, 2016). This technologically driven evolution has ignited intense competition among players within the e-commerce landscape, fueling a race to innovate and offer distinctive value propositions to customers.

The growth of e-commerce is vividly illustrated by Indonesia's journey in this digital realm. In the late 1990s, the electronic trading forum landscape was characterized by just three players: sanur.com, Bhinneka.com, and Kaskus. However, the subsequent years witnessed a remarkable proliferation of e-commerce startups, with notable players such as Tokopedia, Bukalapak, Lazada, and Shoppe emerging in the early 2000s. This surge in entrepreneurial activity heralded a new era of buying and selling products online, reshaping the retail landscape and propelling Indonesia into the vanguard of the global e-commerce market.

The exponential ascent of Indonesia's online business ecosystem is evident when considering the number of active internet users: a staggering 143.26 million people, constituting over 50% of the nation's total population. Moreover, the ubiquity of mobile phones is a hallmark of this digital revolution, with 91% of the population utilizing these devices and 60% accessing the internet via smartphones (Wearesocial, 2018). This trend underlines the remarkable democratization of access to digital platforms, opening up unprecedented opportunities for businesses, entrepreneurs, and consumers alike.

The convergence of factors, including the closure of numerous offline outlets, the relentless march of technological advancements, and the shift in consumer shopping behaviors, has catalyzed a transformative response from businesses. Companies operating within the traditional retail landscape have been compelled to recalibrate their strategies and embrace the emerging paradigm of online commerce. Prominent examples of this adaptive shift are evident in the initiatives undertaken by established players like the Matahari Group, which launched www.mataharimall.com, and Mitra Adi Perkasa (MAP), which introduced www.mapemall.com. Leading retailers like Alfamart and Indomaret have also harnessed this momentum through platforms like www.alfaonline.com and www.klikindomaret.com (Eatspring Investments, 2016).

This transformation aligns with the theory of creative destruction, positing that industrial development, innovation, and revolution inherently forge a new economic landscape while concurrently dismantling or eroding the structures of existing industrial businesses rooted in the old paradigm. The phenomenon of creative destruction becomes particularly evident when observing the closure of traditional retail outlets in tandem with the meteoric growth of e-commerce technology in the United States and the dynamic trajectory of online business development in China. The resonance of these global trends is unmistakably mirrored in the shifting contours of the Indonesian retail sector, underscoring a transformation that extends beyond local boundaries (Prayogo, 2017).

The interplay between technological advancements, economic fluctuations, the closure of offline stores, and the continuous evolution of e-commerce has profoundly contributed to the long-term economic growth trajectory triggered by the advent of Information and Communication Technology (ICT). This amalgamation of dynamics can be likened to the conceptualization of creative destruction by Schumpeter. This process, constituting a form of restructuring, unfolds across multiple macroeconomic dimensions, encompassing long-term growth, responses to economic fluctuations, structural adaptations, and the intricate functioning of markets. The confluence of these multifaceted elements culminates in a landscape where the digital transformation of commerce has reshaped business strategies and the foundations of economic interaction and progression.

The impetus behind the processes of destruction and disruption stems from the intricate interrelationships among entrepreneurs, innovation, the working class, society, and technology. The amalgamation of Entrepreneurship and Innovation epitomizes this nexus, concepts closely aligned with Foster & Kaplan's (2001) perspective, echoing Schumpeter's amalgamation of these elements. The surge in internet users and the untapped economic potential of the lower middle class, coupled with the recognition of an imperfectly optimized business model in meeting stakeholder needs, serve as the driving forces propelling programmers and entrepreneurs to embark on creating e-commerce platforms. For the betterment of consumers, the Indonesian marketplace operates under the Customer-to-Customer (C2C) business model, engendering transactions between consumers via online platforms functioning as intermediaries. Technologically, these platforms seamlessly facilitate a spectrum of online transactions, encompassing goods promotion to monetary exchanges, safeguarded through third-party accounts to assure transactional security.

Entrepreneurs orchestrate a harmonization of prices and information utilizing this innovative model, enhancing the transactional framework's structural integrity, organizational efficiency, streamlined inventory logistics, and expeditious delivery mechanisms to reduce costs. Beyond this, the presence of these enterprising individuals yields parity among traders, fortified by the backing of investors, fostering a more efficient and comprehensive trading system inclusive of all stakeholders. Such inclusion, efficiency, and innovation principles epitomize the diverse types of startups and business actors within the digital realm. Within this paradigm, marketplaces endeavor to nurture consumer comfort, encapsulating a "novelty" distinct from the traditional business models. The phenomenon of offline store closures could be perceived as an iterative facet of the more extensive digital transformation process, collectively initiated by clusters of entrepreneurs and innovators driven by concepts, knowledge, capital prowess, and an unwavering ambition to persistently refine and advance facilities, effectively catalyzing transformational agents capable of subverting pre-existing patterns, models, and habits.

The trajectory of technological innovation in the context of buying and selling in Indonesia traces back to 1999 with the inception of the KASKUS forum. Regrettably, this platform lacked the capability for financial transactions and technology-based business models. It was in the early 2000s that transformative players like Tokobagus (now OLX), DOKU, and Tokopedia entered the scene, introducing vital features such as product categorization, payment functionalities, marketplaces, and robust community engagement tools. Their emergence precipitated a transformative shift within the Indonesian e-commerce ecosystem, fostering a climate of heightened openness to competition and customer-centric innovations.

Competitive dynamics within a specific sector stimulate a pricing equilibrium that aligns with production costs. Concurrently, competition across sectors generates a consistent cost structure marked by uniform profit margins. Within this competitive landscape, entrepreneurs and innovators adopt a strategic approach to identify service amalgamations that confer a competitive edge, thereby overshadowing their rivals. Innovation serves as the engine propelling this competition. This evolution encompasses the conception of novel ideas, the strength of resolve, and the synchronization of efforts to create something novel by dismantling outdated behavioral norms and replacing them with innovative alternatives. Each business entity is characterized by distinct technological, organizational, and routine design attributes intricately linked to output characteristics and production methodologies. Successful entrepreneurs and innovators must possess a remarkable ability to adapt throughout the iterative journey, pivoting their strategies and refining their approaches with evolving outcomes. This amalgamation of business unit behaviors is an intricate dance encompassing both the replication of proven models and the dynamic interaction of ideas to forge new paths.

The digital market is characterized by its dynamic and ever-evolving nature. Apart from traditional or offline market paradigms, the digital market operates on a foundation of innovation, hybridity, and customer-centricity. E-commerce has dramatically disrupted established business norms, manifesting through shifts in consumer spending habits. This transformation reflects a preference for the sharing economy, heightened product and pricing information transparency, diverse product offerings, and services that integrate trade, payment, and distribution within a unified platform.

Innovation drives the creation of new products, leveraging novel technologies, inventive management strategies, and innovative business models that were previously nonexistent within the operational landscape. A prime example is the substantial investment of over USD 7 billion in Bukalapak and Tokopedia. Such investments propel these markets forward, granting them a degree of market platform monopoly, openness, and the freedom to navigate the market. Numerous platforms are currently undergoing a phase of significant transformative innovation. The adoption of Innovative Payment Methods, particularly electronic wallets (e-wallets) like GoPay, OVO, DANA, LinkAja, ShopeePay, Jenius, iSaku, Sakuku, Qris, has reshaped online transactions, empowering users to securely and effortlessly handle even minor payments. Addressing the complexity of supply chains and logistics, major Indonesian e-commerce players have harnessed technology, employing drones, sophisticated routing algorithms, and expanding delivery options, significantly enhancing efficiency and convenience for consumers.

The paradigm shift towards multifaceted e-commerce platforms has elevated these spaces beyond mere transactional hubs. They've evolved into holistic ecosystems offering educational content, community engagement forums, financial tools, and even health or beauty services, fostering a richer and more engaging environment for consumers. Leveraging artificial intelligence and data analytics, e-commerce platforms dive deep into understanding consumer behavior, enabling precise recommendations and tailored experiences for customers, ultimately enhancing satisfaction and loyalty. Moreover, the integration of AR and VR technologies within several e-commerce platforms has amplified the shopping journey, granting consumers the ability to physically inspect products virtually, providing an immersive and realistic preview before purchase—a transformative innovation heightening the interactive shopping experience.

When comparing e-commerce development across various countries, each nation adopts a distinct approach tailored to its consumers' unique needs. The utilization of e-commerce technology reflects localized market traits, consumer behaviors, and technological advancements. In addition to Indonesia, other countries like China boast mature e-commerce landscapes, exemplified by platforms such as Alibaba and JD.com. These platforms have embraced cutting-edge technology, integrating digital payments into daily applications and implementing highly personalized marketing strategies leveraging extensive consumer data. Meanwhile, in the United States, Amazon has emerged as a global e-commerce giant, leveraging global delivery services and membership programs like Amazon Prime. Innovations like AI-driven product recommendations and streamlined purchasing processes contribute to the platform's ongoing evolution. India's e-commerce, led by platforms such as Flipkart and Myntra, demonstrates adaptability to diverse market conditions. They offer cost-effective payment solutions while prioritizing a user-centric experience. The e-commerce strategies in these countries underscore diverse market approaches, technological innovations, and consumer-centric initiatives tailored to their respective landscapes.

While financial resources remain a significant factor in the success of innovators, they are not the sole determinant. Even capitalist entities may crumble if they fail to embrace innovation at the juncture of innovative disruption. Capitalism can be sustained through investments in innovators and fostering innovation within their purview to safeguard against such collapse. Simultaneously, emerging innovators can emerge as a novel group of capitalists who can influence regulations, shape market dynamics, and steer changes in a nation's socio-political and economic fabric.

There's an observable trend of investment shifting from the e-commerce sector to FinTech, potentially owing to management, leadership, innovation, and financial autonomy gaps. These deficiencies could jeopardize platform stability and even lead to self-inflicted downfall. Another noteworthy observation is the volatility of even well-established platforms. For instance, in 2017, the massive closure of offline stores was paralleled by the decline of online forums like KASKUS, once thriving but now replaced by fresh platforms. Even the most dominant platforms are not immune to potential upheaval, highlighting the necessity for continual adaptation and innovation in the rapidly changing digital landscape.

Numerous global investors and financial entities play a pivotal role in shaping Indonesia's digital economy. Their engagement mirrors the principles of Neoliberalism, advocating for free-market policies, minimized governmental intervention, and prioritizing private sector-driven economic growth. An article from TechAsia in 2015 (Cosseboom, 2015) highlighted investors such as Rebright Partners, Corfina Group, Aucfan, IREP, 500 Startups, Gree Ventures, IMJ Investment Partners have backed Bukalapak. AdsKom secured investments from Rebright Partners, Digital Garage, East Ventures, Beenos Plaza, Skystar Capital. Traveloka received funding from East Ventures and Global Founders Capital. Touchten gained support from Ideosource, CyberAgent Ventures, TMS Entertainment, UOB Venture Management. CekAja attracted investments from Compare 88 and Mountain SEA Ventures. Tokopedia garnered support from PT Indonusa Dwitama, CyberAgent Ventures, Beenos, Softbank Ventures Korea, East Ventures, SoftBank Internet and Media, Sequoia Capital. MalesBanget saw investments from Nusantara Capital Incubator and Rebright Partners. Berrybenka received support from Gree Ventures, East Ventures, and Transcosmos. Qraved was backed by Rebright Partners, 500 Startups, Toivo Annus, Convergence Accel, M&Y Growth Partners. VIP Plaza attracted investments from CyberAgent Ventures. These global investors' interest in Indonesian tech startups significantly contributes to the rapid expansion of the digital ecosystem. Additionally, international tech giants like Alibaba, Tencent, Google, and various private equity funds have also shown interest and involvement in this flourishing landscape.

E-commerce's influence extends to the labor market and societal well-being, with notable examples like Gojek making a significant impact. Gojek's platform has revolutionized services by engaging partners in sectors like GO-RIDE, GO-CAR, GO-FOOD, and GO-LIFE, thereby involving the wider Indonesian populace. This comprehensive suite of services has translated into a positive macroeconomic influence on the nation. An enlightening survey conducted by the Demographic Institute of FEB UI showcased the substantial contribution of GOJEK to Indonesia's economy, amounting to Rp. 44.2 trillion.

A remarkable facet of GOJEK's contribution lies in its positive impact on partner incomes, surpassing the local minimum wage in many regions. The survey outcomes revealed that partners enjoyed average monthly earnings ranging from 3.8 million to 6 million Indonesian Rupiah in the Jabodetabek region. This upswing in partner earnings demonstrates how the platform has effectively bolstered the income of individuals associated with the service, subsequently elevating the overall economic welfare of this working class. This transformative effect on income generation underscores the broader societal ramifications of innovative e-commerce platforms, redefining livelihoods, and socioeconomic dynamics for a significant portion of the population.

GOJEK's services extend their positive influence across various dimensions, amplifying transaction volumes, economic dynamism, mobility, partner empowerment, and even fostering gender inclusion, technological advancement, and marketing reach—the multifaceted benefits of GOJEK's presence ripple through the economy, catalyzing diverse positive changes. In addition, GOJEK has made substantial contributions to Micro, Small, and Medium Enterprises (MSMEs) by harnessing and optimizing the potential of GO-FOOD technology features. This endeavor has advanced the platform's capabilities and empowered MSMEs to thrive digitally.

A notable aspect to consider is the socioeconomic background of GOJEK partners. Before affiliating with GOJEK, many partners were engaged in various roles, such as company employees, traders, laborers, and students. A demographic analysis conducted by the Demography Institute FEB-UI revealed that approximately 71% to 91.5% of partners possessed a high school education or below. This insight provides a glimpse into the diversified range of individuals who have found meaningful participation within the GOJEK ecosystem. The inclusive nature of the platform in embracing partners from diverse educational and vocational backgrounds is symbolic of how innovative e-commerce models can democratize opportunities, enabling a broader cross-section of the population to engage actively in the digital economy.

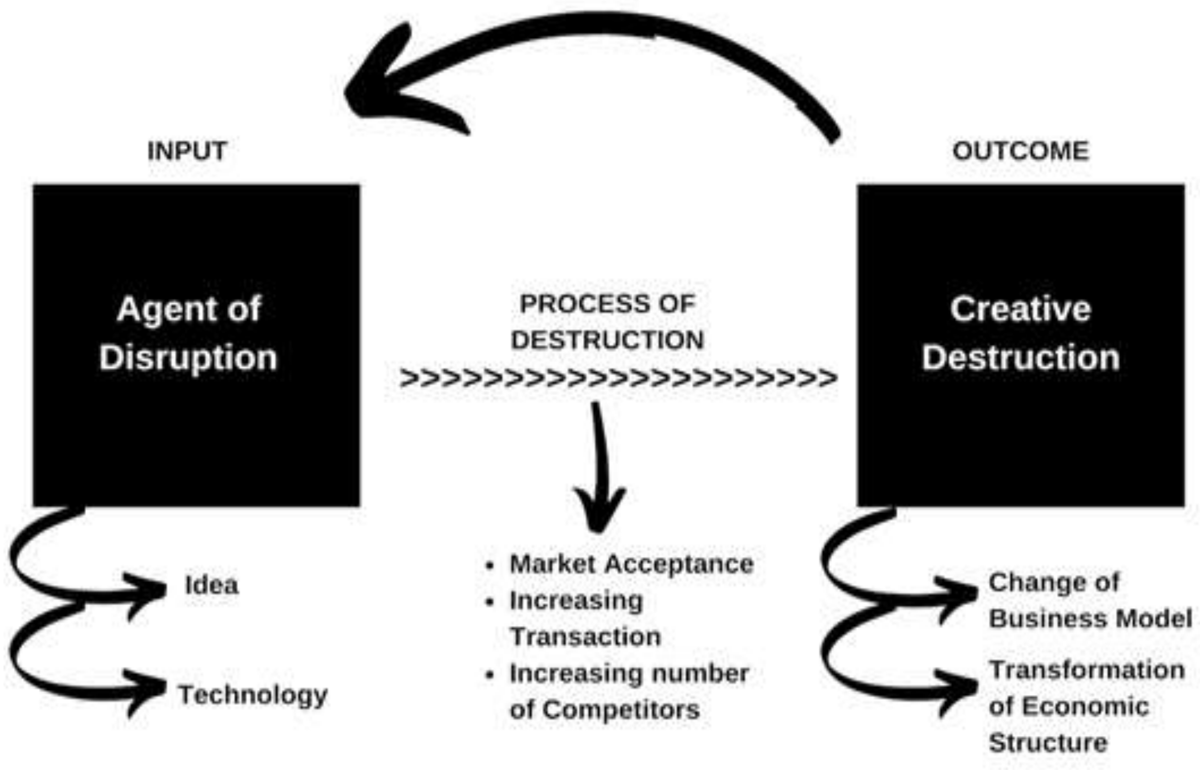
Technology has served as a transformative force in the evolution of e-commerce, reshaping the landscape of payment systems, service delivery, product diversity, community engagement, transaction security, transparency, and speed. In the past, these features were often associated with offline stores and pioneering online forums like KASKUS, which gained prominence in the 1990s. However, the relentless pace of innovation has led to the emergence of novel technologies that surpass these previous benchmarks. The dynamism of the digital realm ensures that once-accepted innovations may be outpaced by newer, more versatile, and efficient alternatives. This innovation dynamic underscores the inherent nature of technological progress—replacing stagnant offerings with advancements that cater to evolving consumer needs.

Gojek and the Customer-to-Customer (C2C) Marketplace serve as prime examples of platforms that embody the integration of groundbreaking technologies. These technologies optimize operational costs and attract investor interest and public engagement. For instance, Gojek's innovative app-based services have revolutionized the ride-hailing and food delivery sectors and fostered an entire ecosystem that benefits users and partners alike. Similarly, the C2C Marketplace model addresses a fundamental consumer need—the ability to compare real-time prices for the same product, which was once a feature predominantly associated with offline shopping. The advent of online marketplaces offers a solution, allowing consumers to make informed choices and compare prices easily, thereby enhancing the value proposition of e-commerce.

Marketplace technology has revolutionized marketing methods, presenting a stark contrast to the strategies employed by traditional offline stores. Special events like Harbolnas or online shopping days, such as 11-11 or 12-12, have become catalysts for public engagement as both sellers and buyers. The influence of Harbolnas was evident in a Nielsen Company survey, which found that in 2017, it prompted 5% of new online shoppers to make their first-ever online purchases. The figures also speak volumes: total sales exceeded Rp during December 11-13, 2017. 4.7 trillion, reflecting an increase of over Rp. 1.4 trillion from the previous year. The allure of e-commerce for online buyers lies in the appealing features platforms offer, including discounts, free shipping, cashback, and vouchers.

With the cost of the internet decreasing, thanks to factors like increased availability and competition among providers, technology-driven shopping experiences are becoming ingrained in the habits of consumers. In Indonesia, obtaining 1GB of internet data now accounts for only 0.7% of an individual's monthly income (Google Temasek, 2018). Technological innovation's pivotal role in the disruption landscape cannot be overstated. This evolution takes time to be fully embraced by the community. An illustrative example can be seen in Bukalapak's trajectory, which began in 2010 and took significant strides, accumulating 1.3 million users by the end of 2016. This journey underscores the gradual technological transformation and adoption process shaped by changing consumer behaviors and preferences. I introduce a comprehensive understanding of the interplay between creative destruction and innovative disruption through the Model of the Disruption-Destruction Cycle lens, as illustrated in Figure 1. This cycle serves as a conceptual framework that illuminates the dynamics in the transformative process within the business landscape.

Figure 1. Model of Disruption-Destruction Cycle



Source: Author illustration

Disruption agents, often represented by entrepreneurs and innovators, act as catalysts by introducing novel ideas and technologies into the market. These ideas undergo a phase of destruction and reconfiguration, and upon acceptance by the market, they give rise to what is termed creative destruction. This phenomenon involves a transformation in business models and even economic structures. The increased competition stemming from these changes generates a continuous cycle of adaptation and innovation as companies strive to navigate and thrive within the tumultuous environment.

Maintaining this cycle requires sustained innovation to prevent the relentless forces of creative destruction from potentially disrupting the status quo. The Model of Disruption-Destruction Cycle is inherently adaptable, evolving according to the needs and responses of the market, as the transition from the old to the new model is subject to ongoing debate and varying degrees of acceptance. It's crucial to recognize that not all stakeholders will readily embrace these changes, leading to efforts to resist the disruption, allowing incumbents to remain resilient and safeguard their foothold in the ever-evolving landscape.

CONCLUSION

This paper has thoroughly explored the intricate relationship between entrepreneurial dynamism, innovation, and technological advancement in Indonesia's e-commerce landscape, using the frameworks of Creative Destruction and Disruptive Innovation as lenses. The historical evolution of e-commerce, coupled with the closure of traditional stores in 2017, has showcased the potential of digital globalization to disrupt established market players and provide fresh avenues for Micro, Small, and Medium Enterprises (MSMEs) to flourish in unconstrained market segments.

The major contribution of this study lies in its nuanced analysis of the transformative forces shaping Indonesia's e-commerce environment. The introduced Model of Disruption-Destruction Cycle provides a comprehensive framework to understand the interplay between creative destruction and innovative disruption within the business ecosystem. By uncovering the pivotal role of entrepreneurs and innovators in driving technological advancements and reshaping business models, this research enriches our comprehension of Indonesia's digital economy evolution.

While the paper holds notable strengths, including comprehensive historical analysis and theoretical application, it also bears inherent limitations. Empirical data are needed to validate the theoretical constructs introduced, and a more thorough exploration of counterarguments could provide a more balanced perspective. Future research prospects lie in empirical validation of the presented findings and frameworks. Investigating how different industries within Indonesia's digital economy respond to these dynamics could provide granular insights. Additionally, delving into the long-term repercussions of digital disruption on the overall economy, job markets, and societal well-being could offer a broader view of technology's transformative power.

In conclusion, this study aspires to offer reproducible results by meticulously tracing historical developments, presenting theoretical frameworks, and paving the way for further empirical validation and exploration of the ever-evolving landscape of entrepreneurial dynamism, innovation, and technological advancement in Indonesia's e-commerce realm. The research raises more questions than it answers, encouraging scholars to dive deeper into this dynamic arena to uncover new dimensions and implications for economies and societies worldwide.

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