

Critical evaluation of disruptive transportation in Indonesia

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Abstract: This study analyzes the highly disruptive transportation business in Indonesia. The purpose of observation is to completely synthesize disruptive transportation that causes bad externalities in society. Data sources come from primary data of interviews and secondary data of related literature. The research method uses critical qualitative with a combination of in-depth interviews with several stakeholders. Key findings suggest that trust, consistency, capital ownership and proximity of new entrants to incumbents are important in disruptive innovation processes, empirical implications that transportation in Indonesia has undergone a definite economic shift. The results showed that although the government has publicly expressed its full support for any individual who will develop a business in the digital economy model, it is not effective enough to be consistent in the transportation business. Policy recommendations include adaptive training incentive programs for incumbent groups and accelerated funding assistance for new entrant groups, in addition to strengthening active collaboration between the government and the private sector is urgently needed.

Keywords: digital economy; disruption; evaluation; transportation; Indonesia

1. Introduction

The digital economy is a major research theme in maintaining the improvement of people's economic welfare and was agreed upon through the integration of 17 Sustainability Development Goals (SDGs) on sustainable development goals (UNDP, 2023). This research discusses the logical debate about the digital economy and the disruption that occurs in transportation in Indonesia. The context of the Indonesian phenomenon is important to observe because of the economic strength based on a high population of 273.8 million and a thirst for responsive regulation, thus causing the potential for a bad digital economy to occur more easily. The renewal of the transportation business in the digital era is contrary to the old concept and the old business model so it debates its existence. The transportation business combined with the digital economy seems to erode old players who are unable to transform, so they are forced to lag behind market mechanisms (Sköld et al., 2020). This theoretical fact is not in line with the research of Callander and Matouschek (2022) which explains that new entrants have less potential to interfere with the incumbent than the incumbent who acts. Of course, the empirical problem between the incumbent and the new entrant reaches not only the channels of market mechanisms at the middle level of the economy but also in all sectors of the economy. So the question of this research is how can the transportation business survive in the digital economy. Is it just a change in mindset enough to survive a change in business models in the digital economy?

The purpose of observation refers to identifying changes in the paradigm of transportation in Indonesia, in addition to exploring social changes that occur including efforts that must be made not to be trapped in negative externalities. The urgency of the problem lies in online transportation is very disruptive so that observations will be developed on predictions of future transformations and efforts to implement strategic policies to maximize existing potential. The contribution of this research is to complement the use of disruption theory which is proven to be vulnerable to the development of new phenomena. This contribution will result in the incumbent group being able to compete with the new entrant group fairly and massively. New entrants can also grow more massively with the help of investment and increased public trust. The disruption theory gap can be seen in the phenomenon of the sturdiness of the dollar currency that is not disrupted by the emergence of crypto currency and high funding at the beginning of the emergence of companies that are ready to fight in market mechanisms. The innovative value of this paper is the consideration of capital ownership, trust, and adaptive traits that must be possessed by the incumbent and new entrant groups respectively which will be reviewed in the next section.

Technological changes have been agreed upon by all economists in the world that make business models more efficient and effective (WEF, 2022). Cozzolino and Rothaermel (2018) analysed that the incumbent must ally with the new entrant following the discontinuity of the novelty of knowledge when the regime is very strong, when the regime is weak then the incumbent is more likely to get the new entrant. Empirical examples of the sinking of incumbent companies such as Nokia, Yellow Pages, and Kodak are unable to compete in market mechanisms (Kiyiklik, 2020). In addition, free trade allows each country to use the latest technology thereby reducing search costs, replication costs, transportation costs, tracking costs, and verification fees (Goldfarb and Tucker, 2019). The very high use of technology in the free market causes several adverse impacts on the welfare of society, namely the limitation of capital owners who have full facilities for the use of the latest technology, while people who do not have capital use simpler technology (Frensh and Mulyadi, 2019).

Indonesia is the fourth most populous country, the tenth largest economic sector by purchasing power parity, and is a member of the G20 international economic cooperation forum (Saputra and Ali, 2021). The Indonesian locus is interesting to analyze at least through the acceleration of the disruption of transportation technology against the incumbents. Indonesia's rise after the 1990 economic crisis has shown good results (World Bank, 2021), so can Indonesia's economic strength minimize the impact of disruption in transportation business technology? Mastery of increasingly high technology can lead to economic contradictions called digital dictatorships. In addition to digital dictatorship, as well as the problem of shifting the character of the human personality, every human being will have a very egocentric concept in himself. This is supported by the availability of all goods traded in the marketplace, so that information disclosure that was previously tightly closed is now wide open. To that end, this study investigates digital transformation measures even though they specifically cannot eliminate structural inequalities to ensure every citizen gets a decent job (Schor, 2021). Therefore, this study seeks to detect early

symptoms that can be anticipated so that transportation business actors do not degrade in market mechanisms.

A commonly discussed concept in digital transformation is the brilliant idea of disruption theory (Gomber et al., 2018). Based on literature disruption, theoretical analysis tools are provided based on two competing camps in the digital economy, namely new entrants and incumbents (Zhang et al., 2023). A new entrant is a new player that has high innovation and consistently takes on the market role originally owned by the incumbent. Furthermore, incumbents are long-time players who are incapable of digital transformation and are left out of market mechanisms definitively (Götz, 2021). Business actors who are victims of digital economic transformation are certainly not few and often put forward the same defense, as the Nokia CEO said “We did nothing wrong, but we were eliminated from the market mechanism” (Lamberg et al., 2021).

The relationship between the digital economy and disruption must be discussed considering that changes will always disrupt incumbents who have succeeded before (Margiansyah, 2020). Therefore, the digital transformation process requires a logical-linguistic and deductive approach that works effectively so that management methods are needed in making new decisions (Lepskiy et al., 2018). Another variable that should be taken into account is the macroeconomic state of a country that can consistently adapt to new business model patterns, of course, without a strong macroeconomic condition, a transformation will only be the beginning and then sink over time (Osterwalder et al., 2020).

Others analyzed that incumbents and new entrants turned disruptive areas of innovation into territorial scrambles (Lu et al., 2021). Every group that will implement a transformation strategy is faced with the dilemma of changing the game being played or adopting a new company focus where innovation is a major need (Akpan and Ibidunni, 2021; Hai et al., 2021; Priyono et al., 2020; Zaoui and Souissi, 2021). Another view assumes that disruption is not only taking the innovation sector but also the triumph of liberal democracy (Fukuyama, 2020). The thesis from Fukuyama seems to be a new alternative in the digital economy view, the triumph of liberal democracy is certainly not tearing down the incumbent company that tasted its previous market share. This study will further debate the thesis of Fukuyama on the triumph of liberal democracy. The whole disruption theory tool can be used as a sharp reference to analyze the business model expected in the digital economy era, as well as being a challenge in itself to be able to implement a better model (Cornelius, 2021; Ozalp et al., 2018; Scheibe and Blackhurst, 2018). Therefore, this study aims to fill the digital economy gap and disruption in the case of Indonesia and contribute to the existing literature. The innovative contribution of this study is to analyze in depth using in-depth interviews conducted with key stakeholders in Indonesia. To achieve this goal, critical analysis is needed and applied to test the extent of consistency of disruption theory and business models in Indonesia. The robustness of in-depth interviews combined with critical analysis makes it possible to get a new paradigm in interpreting disruption.

2. Literature review

In the available literature, industrial culture in China is implemented based on a five-year plan that is actively exposed in digital media (Bloom and Bloom, 2020; De Klerk and Hodge, 2021; Keane et al., 2018; Zhao, 2022). This study analyzes the chances of digital rulers being mentioned as digital dictatorships such as Tencent and Alibaba companies that produce tremendous digital disruption with the final output being the latest innovation. It seems that this research seems to be less careful and objective in analyzing the glorious events of a company, and it can be seen that the tendency of companies like Tencent and Alibaba to survive and disrupt is only caused by high innovation. Other researchers brought up serious topics about big data, the evolution of human behavior, and wisdom (Krasota et al., 2020; Meske and Junglas, 2021; Ordóñez and Labra, 2019; Stoianenko et al., 2022). Contradictions arise when behavioral evolutionary variables are raised previously, this is an important issue in interpreting disruption in addition to the single variable that is innovation (Abbas and Khan, 2022; Acharya et al., 2022; Harymawan et al., 2022; Shen and Ying, 2022). This study reviews ten themes related to disruption, thus concluding that the evolution of human behavior and wisdom interprets it to be very important to consider next.

According to Hameed (2020) reinterism in the Middle East and North Africa where the model of development becomes a guarantee based on the distribution of leases carried out. The special note of this study is that vertical control and privileges will degrade the progress of technology. Complex vertical control and privileges do not occur in all countries, only centralistic-based countries implement them fully (Prokhanov, 2019; Steytler, 2019; Yang, 2022). Another contradiction if it occurs in a country that adheres to a democratic system that is intact, this will not make vertical control and rights in the acceleration of a technology that is accepted by society (Hedetoft, 2020; Kraus, 2021; Molek-Kozakowska and Wilk, 2021; Ruiz Casado, 2022). Support analysis (Margiansyah, 2020) suggests that the new economic outlook needs ample space to transform, this study is diplomacy as a family with economic diplomacy. Diplomacy is the contribution of this study that a transformation can occur when the path of diplomacy has been opened and technology at the most advanced point can be applied properly (Anton and Lăcătuș, 2022; Manor, 2021; Mazumdar, 2021). Although we cannot fend off that when transformation occurs, there will be a problem shifting from a conventional economy to a more modern economy (Soto-Acosta, 2020).

Meanwhile, the problem of shifting economy that has gained a place and has a high attraction is the concept of sharing economy (Adeyinka-Ojo and Abdullah, 2019; Gamage and Gnanapala, 2023; Geissinger et al., 2020; Pompella and Costantino, 2021). This logical implication arises to answer the victory of the Uber and Airbnb companies in running their business, these companies do not have everything singularly but they share ownership and share profits that are arranged in such a way that new businesses emerge through the use of the concept of sharing economy (Aznab and Akbaria, 2022; Truong et al., 2021; Tseng and Chan, 2019). Contradictions arise in a study by Nurlatifah and Mutmainnah (2021) about the development of the digital economy in journalism, that the digital ecosystem

produces an externality impact, namely the dilemma between social responsibility and the political economy of the media. This achievement is very important in delivering news to the public, this consideration requires high determination so that the selection of the dilemma case study can be objectively applied (Burr et al., 2020; Dutta, 2020).

Recent studies on disruption and the digital economy show active support for market liberalization taking shape in Korea (Shin, 2021). A review of the book suggests that changes in the market and the political economy environment and adaptation must start from the parent company which is the market leader in the market mechanism. Although the researchers' initial analysis of that assumption was too quickly concluded considering that other variables that affect disruption should be calculated, in terms of contribution, this study reminds us that the most important adaptation must be made by market leaders (Kalaiganam et al., 2021; Zemtsov et al., 2019).

Implementation of digital transportation as a result of research Tijan et al. (2021) obstacles in the digital transformation of the field of sea transportation are lack of awareness about transformation can affect business and lack of cooperation standards between stakeholders. On the other hand, monitoring of violations against transport can involve public-private partnership mechanisms that support the innovative development of transport infrastructure (Marusin et al., 2019). The combination of providing modern transportation Digital Twin (DT) is the main key in the application of Intelligent Transportation Systems (ITS) in smart cities in developed countries to maintain better health and reliability (Liao et al., 2021).

3. Theoretical framework

3.1. Digital economy theory

A new era in the perfect combination of market mechanisms and cutting-edge technology has resulted in new thinking about the digital economy (Dabija et al., 2022; Dede and Richards, 2020; Limna et al., 2022; Xu et al., 2022). Tapscott and Euchner (2019) introduces there are at least five levels that come with the use of special technologies and fundamental changes, namely: 1) Effective individuals, have estimated that individuals can increase their effectiveness and are efficient in learning things using interactive multimedia technology in computers; 2) High-performance teams, are the result of individuals in an organization who can work more effectively using technological tools to update the existing design of the work and the specifications that accompany the business restructuring process; 3) Integrated companies, which have the most crucial role of when an employee is united in the organization and a team is formed to complete a project using interactive multimedia technology, this will change the organization as a whole; 4) An expanded company, that is, a company that has strong and exclusive interactions using its customers and suppliers as a result of the establishment of a value chain. This creates a product and service that is adopted as short as possible; 5) Business on internet platforms, indicating that companies that connect suppliers and other corporate organizations through "virtual" connections create more specific value-added products for customers.

The Indonesian government launched a roadmap to be able to adapt to the ecosystem and structure in the digital economy, the aim is to encourage and motivate the growth of business models as a tool to monitor the use of technology properly (Ikhsan et al., 2020; Najib and Fahma, 2020). The Indonesian government responded to the digital economy through the establishment of Law Number 11 of 2008 concerning electronic information and transactions (ITE) (Irianto, 2019; Siregar et al., 2020). The last content of this discussion was the establishment of the National Cyber and Password Agency (BSSN) through the Presidential Decree of the Republic of Indonesia Number 53 of 2017, and efficiently to secure the use of cybersecurity, development, and integrity of all elements related to cybersecurity (Yanti and Yusnaini, 2018). The digital economy provides a promotional concept that combines advertising, face-to-face sales, sales promotion, and public relations aimed at increasing the sales of a company (Juska, 2021). This is supported by research findings, namely that digital economy consumers must get priority trust and honesty, especially about payments using online systems (Putra and Aristyanto, 2021; Rosalina et al., 2021). Continuously that sharp analysis is needed in more comprehensive and widespread input-output sectors such as e-commerce, financial technology, and trade (Barata, 2019). In addition to the benefits and planned economic growth in the digital economy, other externalities are vulnerabilities to consumer protection due to the very complex relationship between business and consumers, this is due to business procedures that are very different from conventional business (Dewi and Tahira, 2018; Tjipto et al., 2021).

3.2. Disruption theory

Disruption theory was initiated to explain the phenomenon of digital transformation changes that have occurred in developing countries and developed countries (Skog et al., 2018). New entrants in this case are young people who have high innovations that are possible to simplify business behavior, while incumbents are old players who have been comfortable with their position in the top market (Hopp et al., 2018; McGrath, 2020; Ozalp et al., 2018). The researchers analysis observed that the two lines are opposites of each other, once the newcomers manage to erode and simplify business processes then the incumbents will hinder them from developing (Islami et al., 2019; Tlaiss and Al Waqfi, 2020). These obstacles are often referred to as barriers to entry, and incumbents always want stable things and minimal change, this is done solely to maintain the condition of stability of power of the incumbents, but market mechanisms have different business demands, and the digital age initiates that all business processes must be simpler (Baker and Stratmann, 2021; Couto and Barbosa, 2020; Guthrie, 2020; Islami et al., 2019). This opposition that the incumbents take for sure, instead of them participating in the transformation, hinders changes in market mechanisms (Crittenden et al., 2019; Firdaus and Mori, 2023; Karttunen et al., 2021). Disruption theory provides alternative innovations to produce better opportunities that are: 1) Form an innovative idea based on theoretical recipes; 2) Disruption theory creates more balanced opportunities (Gomber et al., 2018; Palmie et al., 2020; Si and Chen, 2020). Some of them will be explained in **Figure 1** as follows:

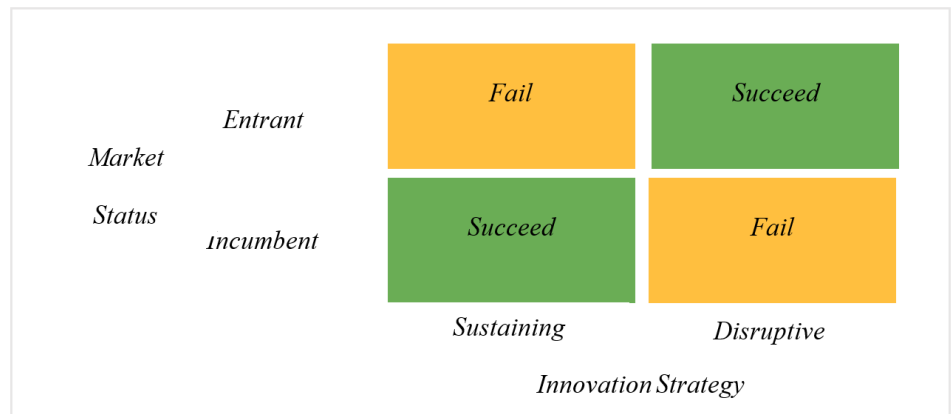


Figure 1. Implications of disruption theory.

4. Results and discussion

The logical implication of disruption theory is that companies that have established and thrived because they cling to the legacy experiences and business models they use and are driven by barriers to entry that make it difficult to change and adapt to change (Agarwal et al., 2022). If there are business people who mess up, they will experience failure, meanwhile, new entrants who achieve victory in market mechanisms are the initiators of sustainable, large-scale, and renewable innovations (Besio et al., 2022; Hou and Li, 2020; Mourik et al., 2020). When newcomers follow the old way and compete with old players who still use the old way, these new entrants will have failures (Christensen et al., 2018). Disruptive innovation is an alternative needed by new entrants when dealing with established companies, in this case, it is a company that owns the incumbent (Petzold et al., 2019; Vergara and Pasola, 2021).

This study seeks to analyze whether consistent disruption theory can be applied on all fronts of the economy. Disruption theory is side by side with the transformation of the digital economy model in Indonesia, this implies that disruption faces serious challenges regarding the consistency of the integrity of the theory to be able to explain a phenomenon (Agarwal et al., 2022; Shi et al., 2020). The creators of the disruption theory openly explain that the consistency of this theory is still questionable because it is still classified as a new theory, and has the potential to be developed based on the anomaly-anomaly found in events after this theory was maintained (Terry, 2020). It is interesting to observe that the disruption theory exists in Indonesia so that the implementation of a policy can be applied better (Fadilurrahman et al., 2021; Margiansyah, 2020; Rahardja et al., 2019).

5. Data and method

5.1. Data

The theme of the digital economy and disruption cannot be interpreted broadly if it is based on secondary data and literature studies, so it is necessary to conduct in-depth interviews with several stakeholders in the study area (Deterding and Waters, 2021; Matyas, 2020; Rutakumwa et al., 2020). In-depth interviews conducted with several research informants were conducted in 2018–2022 by applying stakeholder

analysis of public officials in Indonesia. The author visits directly each place where the research informants are interviewed, this is done to get high data saturation so that the adequacy of research data becomes better. The identification of research informants is carried out through the snowball sampling technique of each interview conducted so that the number of informants may be increased periodically (Audemard, 2020; Bailey, 2019; Dosek, 2021; Parker et al., 2019). The total number of informants in this study were 112 people consisting of 50 civil society people in Indonesia, 50 university academics, and 12 public officials. It is important to know that this article interviewed several public officials in Indonesia, among which are the following (see **Table 1**):

Table 1. Research informant.

No	Informant	Public Office
1	Gus Fandi Akhmad Yani	Regent of Gresik Regency
2	Nyai Mundjidah Wahab	Regent of Jombang Regency
3	H. Armuji	Deputy Mayor of Surabaya
4	H. Charles Meikyansyah	Commission XI of the House of Representatives of the Republic of Indonesia
5	Faris Widiyatmoko	Experts of Commission XI of the House of Representatives of the Republic of Indonesia
6	Hj. Anik Maslachah	Deputy Speaker of the DPRD of East Java Province
7	Candra Hidayat	Expert Deputy Speaker of the East Java Provincial DPRD
8	Muhammad Yusuf Ibnu	Deputy General Secretary of HIPMI East Java Province
9	Fauzan	Experts of Commission D of the Surabaya City DPRD
10	Basa Alim Tualeka	Supervisory Board of the Indonesian Chamber of Commerce
11	Muhammad Lutfi	Chairman of HIPMI Surabaya City
12	Andrew Rafael	Indonesian Ministry of Home Affairs

5.2. Method

This article uses qualitative methods with in-depth interview data collection methods of several key informants of the study. The key informants of this study are several stakeholders who are authorized to produce public policies. The study used the technique of triangulation obtained from a comparison between the results of interviews, observations, and literature studies (Dzwigol, 2020; Jang and Kim, 2019; Kelle et al., 2019). This study paradigm is critical discourse analysis which is detailed to interpret data that has been obtained in the research process (Al Falaq and Puspita, 2021; Kennedy, 2022; Sahmeni and Afifah, 2019). Critical discourse analysis is increasingly used recently due to the lack of identifiable and accountable methods of qualitative analysis, e.g., corpus method analysis reveals linguistic patterns and frequency of information where the theoretical foundations of critical discourse analysis allow for in-depth analysis and thick explanations (Serafis, 2022; Wodak, 2020).

“Critical discourse analysis studies have made it clear that we cannot simply study media as a form of artifacts and multimodal text. We must also investigate the conditions of the products they produce, their institutional origin and

functioning, the circulation of their production in a modern economy, and to whom profits are derived either directly or indirectly in an economy and politics.” (Graham, 2018).

Critical discourse analysis can be applied to analyze phenomena that are multidisciplinary and not limited to economics (Anwar et al., 2020). Critical discourse analysis can also be applied to the analysis of writings in newspapers, magazines, and articles (Tabe and Fieze, 2018). Donald Trump’s representation of anti-Muslim-Islamic statements has been written using critical discourse analysis as well as being a method of reinforcing the sharpness of Donald Trump’s statements (Khan et al., 2019). Another paper explains that critical discourse analysis is used in the discussion of crucial issues such as gender and equality from the conclusion (Ahmad and Shah, 2019). Recent research on the use of critical discourse analysis in newspapers concluded that Airbnb can be viewed in a variety of ways to fit “platform capitalism” and “technochauvinism” as an externality impact on Airbnb’s residential community (Hassanli et al., 2022).

Critical Discourse Analysis in this article is combined with in-depth interviews, documentation, and observations made by researchers directly. Furthermore, the results of the interpretation of the theory and the data that have been obtained are analyzed to give rise to a new paradigm in changing the transformation of the digital economy. The use of this method is very important, considering that paradigmatic discussions cannot be completed through mathematical deterministic calculations, but rather through logical interpretations based on the theories and data that have been presented. Documentation was obtained through a literature study of official government documents obtained during an in-depth interview (DalGLISH et al., 2020; Deterding and Waters, 2021; Rutakumwa et al., 2020).

6. Empirical result analysis

6.1. Interpretation of digital economy

The availability of digital economy platforms allows users to complete all tasks faster. Acceleration is always correlated to the impact of externalities that occur, such impacts are those who are not able to keep up with the rhythm of technological developments. Of course, this will lead to lagging and disparities in the use of high technology. In addition, users of new technologies are generally those who have more savings reserves than those who earn wages from work just for daily life.

Based on the digital economy theory previously explained that there are five levels of technology use and fundamental changes, namely: 1) effective individuals, in this case, interactive multimedia technology is needed by each individual as well as being an attraction in a transformation. In Indonesia, this kind of business model has been widely and blatantly supported by public officials who are aware that technology is included in all calculations. In line with this, based on an in-depth interview conducted by researchers with Gus Yani as the Regent of Gresik Regency:

“Digital change will inevitably take place in Indonesia, we must try our best so as not to be left behind by technology. In this case, I as one of the public officials bridge between society and technological change, considering that the use of new technology requires costs and good human resources” (Interview

conducted at the pavilion of the Gresik regent's private house, 31 March 2021, at 14.00 WIB).

The same opinion was explained by Armudji Deputy Mayor of Surabaya about the digital economy as follows:

“A digital economy transformation cannot be borne by the community alone but is more complex so that policy implementation and consistency can be maintained. I as a public official push for a more digitally literate society”. (Interview conducted at the residence of the Deputy Mayor of Surabaya, on 11 April 2022, at 14.00 WIB).

Based on this statement, the logical correlation between digital awareness and disruption is a whole that cannot be separated. The new approach from the discussion is that disruption can be faced through the digital awareness theory tool so that people are freer to interpret the digital economy in everyday life. Several studies have shown that promoting digital awareness in the workforce plays a major role in degrading the knowledge gap among workers (Aldawood and Skinner, 2020). Achieving a higher level of digital awareness requires multiple literacy delivery, as one session certainly does not allow for understanding the basics thoroughly, whereas multiple times literacy can open up new lessons for the workforce (Yasin et al., 2019). Serious incidents can occur requiring good awareness and training of the workforce since in general, some individuals have a habit of belittling the risks associated with the exchange of information. The level of digital awareness is critical when competing in the e-business more responsibly, both in relationships with individuals and relationships with digital communities (Grefen, 2021).

The literature on digital economy theory initiates five levels in the use of special technologies and fundamental changes, namely: 1) effective individuals, in this article shows that every individual must get a government touch in the field of digital awareness so that it can increase education definitely as a form of improving the skills of each society; 2) High-performance teams, this process indicates that the level of skills possessed by each individual can form a team that has high performance, this can be supported by efforts to increase digital literacy so that individuals can feel more confident while having the tools to adapt in the digital economy era; 3) Integrated companies, in this context that every company should support and encourage the renewal of network integration in the digital community. This point cannot be initiated by every individual in a company, but the awareness of the company to be able to perfectly interpret the change in business paradigm that is happening; 4) An expanded company, the next point is certainly a development of the previous point, which is about the integration of the company with the digital community. Market segmentation in digital communities can be an excellent opportunity for companies that will compete in digital communities. Furthermore, the expansion of the company is needed in line with the development of the company's assets; 5) Business on internet platforms, the next point in responding to the digital economy paradigm shift is the achievement of business on internet platforms that connect suppliers and other organizations on “virtual” connections to create more specific value. Changing the business model that has been fully supported by the government, causes a positive effect so this is an opportunity that can be utilized by the company.

The digital economy in Indonesia has been actively supported by the government and provided with extensive accommodation so that every community can adapt amid a paradigm shift in the digital economy business model. Sharp criticism has been written that changes in government organizations in the form of bureaucratic reform frameworks in Indonesia have not been able to optimize the capacity of human resources and the use of technology to optimize digital tax revenues (Tambunan and Rosdiana, 2020). This should be supported as if engagement in the digital economy should proactively join the currents of globalization and the development of renewable energy in every environment (Zhang et al., 2022). Every company is required to be affiliated with a digital platform to improve its business performance and meet stakeholder expectations including Corporate Social Responsibility (Irawan et al., 2022). Other researchers suggest that capital and talent are the necessary production factors in economic growth, so the digital economy is a tool to accelerate and improve the efficiency of resource allocation of these production factors (Xiang et al., 2022). The use of numerical methods has confirmed the possibility of the best solution, the sustainability of gross profit accumulation in the digital age is a consideration of external environmental characteristics such as component availability and limited resources (Makarov et al., 2021).

6.2. Interpretation of disruption

Disruption is a variable that coexists with the concept of the digital economy and is talked about in almost all academic debates. Recently, scholars have viewed the crunch of disruption as one of the biggest potentials in restructuring business models on digital platforms. The winner in the disruption of the digital economy business model is a country that adheres to liberal democracy (Fukuyama, 2020). This thesis seems hasty and seems to discredit other facts that show the opposite result. Disruption theory suggests that those who will win the competition are disruptive new entrants (Skog et al., 2018).

Disruption theory has two conflicting concepts, namely new entrant and incumbent. New entrants are new players involved in the business model, while incumbents are old players who are difficult to transform. In the digital era, a successful new entrant is when it succeeds in disrupting existing market mechanisms, while a failed new entrant is a new entrant that follows the old path of the incumbent. Furthermore, the incumbent only succeeds when he or she runs a sustainable business model and of course, they will deter the new entrants from entering into the old mechanism. While a failed incumbent disrupts strategic innovation, this is possible because in a disruption it is explained that the incumbent's victory is only in the sustainability of the old venture.

The incumbent will experience failure when following the disruptive rhythm produced by the new entrants, this will support the success of the new entrants in running a business (Deloitte, 2020). The implementation of the success of a transformation requires the involvement of the government and the private sector through academia to build responsibility both at the time of development and use (Radu, 2020). This is in line with the interview conducted by the Deputy Speaker of

the East Java DPRD, Namely Anik Maslachah as follows:

“Disruption is a recent and much-discussed issue, we as public officials certainly cannot over-limit the changes in business models that occur. We as stakeholders at the DPRD level actively support both in terms of financing, accommodation, facilities, and cooperation. We continue to encourage people to adapt more quickly and the output is to increase economic growth”. (Interview conducted by the East Java Provincial Parliament Building, 12 April 2022, at 14.00 WIB).

The interview results showed that the local government in this case represented by the Deputy Chairman of the DPRD of East Java Province provided positive support from both private financing and government cooperation. This has been stated in the government’s program, namely Business Entity Government Cooperation (PPP), this is a positive signal in Indonesia to respond to disruptions that are impossible to contain. Furthermore, an interview will be presented to the Expert of the House of Representatives of the Republic of Indonesia Commission XI, namely Faris Widiyatmoko as follows:

“More complexly, we must observe that disruption can be explosive because factors are not only based on the role of new entrants and incumbents, but we must understand that variable trust appears which is an important point in the occurrence of disruption”. (Interview conducted in Sidoarjo Regency, 17 April 2022, at 19.00 WIB).

In-depth interviews that have been conducted show a phenomenon that is more authentic and has not been widely discussed by other academics about the concept of disruption. Of course, disruption does not suddenly occur but shows the initial symptoms of disruption, it is important to observe that early detection of symptoms is a much-needed anticipatory step. Furthermore, the in-depth interview initiated that variable trust is very important, the analogy is as we know that cryptocurrencies are one of the excellent initiations for the development of the digital economy. Cryptocurrency is a technology for the use of blockchain, some of which are digital money, electronic money, or virtual money which are the same currency and this money does not have a physical form (Teichmann and Falker, 2020). The proof of variable trust in disruption is that theoretically, cryptocurrencies disrupt the role of currencies, but not the resilience of the dollar. The dollar still uses conventional methods in the process of transactions carried out. This is one of the contributions of this article, namely the use of trust in a concept that will disrupt other concepts so that its continuity can replace a concept continuously and consistently.

This research further suggests a model of disruption theory renewal by adding perspectives on capital ownership and adaptive strategies. The following will explain a new perspective in disruption theory in **Figure 2** as follows:

<i>Market Status</i>	<i>Entrant</i>	<i>With Capital</i>	Succeed	Succeed
		<i>Without Capital</i>	Fail	Fail
	<i>Incumbent</i>	<i>Adaptif</i>	Succeed	Succeed
		<i>Passif</i>	Fail	Fail
			<i>Sustaining</i>	<i>Disruptive</i>
		<i>Innovation Strategy</i>		

Figure 2. A new type of disruption theory implications.

This concept applies specifically in accordance with the empirical findings that have been made, the main purpose of adding this perspective is to explain that new entrants do not always monetize digital market mechanisms with their disruptive innovations. It takes established capital ownership as the new entrant struggles to defeat the incumbents. Furthermore, incumbents who can survive are expected to be adaptive in a technological development, this is very possible because the market mechanism works actually and periodically so that the incumbent is not allowed to stagnate in a certain position.

7. Conclusion and policy implication

This article analyzes the digital economy of business transportation as a form of disruption in Indonesia. The impact of the findings is the identification of new business models that can improve transportation efficiency, in addition to a complex understanding of the shift in transportation business models. This research plays an important role in policy-making mass transportation regulatory strategies involving the government and the private sector. Observational insights reveal disruptive transportation is changing travel patterns through ease of access and promoting an acceleration of the money supply in society. Empirical strategies show that disruption that occurs is not only based on behavior carried out by newcomers and incumbents, but must consider variable beliefs so that the disruption that occurs can be sustainable and consistent.

The results of the interpretation of the data show that the government has publicly expressed full support for any individual who will develop a business in the digital economy model. The Indonesian government in this case does not limit the possibilities of innovation and does not close the space for the application of more up-to-date technology. Although we will find that there will always be negative externalities of a change taking place, including the behavior of business models that are more individualistic, more egocentric, and profit-oriented. This finding explains that in interpreting disruptive business models, it must pay attention to the right momentum in its implementation, this encourages active open trust in these disruptive commodities. The limitations of the model proposed in this study are limited to empirical studies found by researchers, further the model proposed by

researchers has the potential to be developed along with the emergence of more complex phenomena in the future. Key findings suggest that trust, consistency, capital ownership and proximity of new entrants to incumbents are important in disruptive innovation processes, empirical implications that transportation in Indonesia has undergone a definite economic shift.

Future research requires observation of disruption that is not limited to the economic sector, considering that disruption almost occurs not only in business models but more complex, namely community behavior and stigma. Likewise, the community must play an active role in adapting the transformation of disruptive business models, as long as it does not violate the legality of the law, then the business model can be applied as a whole. Researchers realize that the discussion has limitations within the scope of narrow research locations, further researchers on disruption studies must be expanded through a series of comparative data from various countries. Policy recommendations include adaptive training incentive programs for incumbent groups and accelerated funding assistance for new entrant groups, in addition to strengthening active collaboration between the government and the private sector is urgently needed.

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References

- Abbas, J., & Khan, S. M. (2022). Green Knowledge Management and Organizational Green Culture: An Interaction for Organizational Green Innovation and Green Performance. *Journal of Knowledge Management*, ahead-of-print.
- Acharya, C., Ojha, D., Gokhale, R., & Patel, P. C. (2022). Managing Information For Innovation Using /Knowledge Integration Capability: The Role Of Boundary Spanning Objects. *International Journal of Information Management*, 62, 102438.
- Adeyinka-Ojo, S., & Abdullah, S. K. (2019). Disruptive Digital Innovation and Sharing Economy in Hospitality and Tourism Destination. *IOP Conference Series: Materials Science and Engineering*, 495(1), 12006.
- Agarwal, V., Mathiyazhagan, K., Malhotra, S., & Saikouk, T. (2022). Analysis of Challenges in Sustainable Human Resource Management Due to Disruptions by Industry 4.0: An Emerging Economy Perspective. *International Journal of Manpower*, 43(2), 513–541.
- Ahmad, M., & Shah, S. K. (2019). A Critical Discourse Analysis of Gender Representations in the Content of 5th Grade English Language Textbook. *International and Multidisciplinary Journal of Social Sciences*, 8(1), 1–24.
- Akpan, I. J., & Ibidunni, A. S. (2021). Digitization and Technological Transformation of Small Business for Sustainable Development in the Less Developed and Emerging Economies: A Research Note and Call for Papers. *Journal of Small Business & Entrepreneurship*, 1–7.
- Al Falaq, J. S., & Puspita, D. (2021). Critical Discourse Analysis: Revealing Masculinity Through L-Men Advertisement.

- Linguistics and Literature Journal, 2(1), 62–68.
- Aldawood, H., & Skinner, G. (2020). Evaluating Contemporary Digital Awareness Programs for Future Application within the Cyber Security Social Engineering Domain. *International Journal of Computer Applications*, 177(31), 57–61. <https://doi.org/10.5120/ijca2020919793>
- Anton, A., & Lăcătuș, M. (2022). Digital Diplomacy: The Case of the Embassy of Sweden in Bucharest. *Diplomacy, Organisations and Citizens: A European Communication Perspective*, 199–218.
- Anwar, A., Laraswati, A., & Ridhani, R. (2020). Critical Discourse Analysis in Media Studies: A Review Research on Its Application in Indonesian Context. *Elsya: Journal of English Language Studies*, 2(1), 32–36.
- Audemard, J. (2020). Objectifying Contextual Effects. The Use of Snowball Sampling in Political Sociology. *Bulletin of Sociological Methodology*, 145(1), 30–60.
- Aznab, E., & Akbaria, M. (2022). Persuasive Nature of UGC in Sharing Economy: Evidence for Entrepreneurship in POST COVID 19.
- Bailey, M. (2019). Snowball Sampling in Business Oral History: Accessing and Analyzing Professional Networks in the Australian Property Industry. *Enterprise & Society*, 20(1), 74–88.
- Baker, M. C., & Stratmann, T. (2021). Barriers to Entry in the Healthcare Markets: Winners and Losers from Certificate-Of-Need Laws. *Socio-Economic Planning Sciences*, 77, 101007.
- Barata, A. (2019). Strengthening National Economic Growth and Equitable Income Through Sharia Digital Economy in Indonesia. *Journal of Islamic Monetary Economics and Finance*, 5(1), 145–168. <https://doi.org/10.21098/jimf.v5i1.1053>
- Besio, C., Arnold, N., & Ametowobla, D. (2022). Participatory Organizations as Infrastructures of Sustainability? The Case of Energy Cooperatives and Their Ways for Increasing Influence. *Historical Social Research/Historische Sozialforschung*, 47(4), 91–113.
- Bloom, P., & Bloom, P. (2020). Creating Smart Economies: Administrating Empowering Futures. *Identity, Institutions and Governance in an AI World: Transhuman Relations*, 131–172.
- Burr, C., Taddeo, M., & Floridi, L. (2020). The Ethics of Digital Well-Being: A Thematic Review. *Science and Engineering Ethics*, 26(4), 2313–2343.
- Callander, S., & Matouschek, N. (2022). The Novelty of Innovation: Competition, Disruption, and Antitrust Policy. *Management Science*, 68(1), 37–51.
- Christensen, C. M., McDonald, R., Altman, E. J., & Palmer, J. E. (2018). Disruptive Innovation: An Intellectual History and Directions for Future Research. *Journal of Management Studies*, 55(7), 1043–1078.
- Cornelius, T. (2021). Dyadic Disruption Theory. *Social and Personality Psychology Compass*, 15(6), e12604.
- Couto, A., & Barbosa, N. (2020). Barriers to Entry: An Empirical Assessment of Portuguese Firms Perceptions. *European Research on Management and Business Economics*, 26(2), 55–62.
- Cozzolino, A., & Rothaermel, F. T. (2018). Discontinuities, Competition, and Cooperation: Coopetitive Dynamics Between Incumbents and Entrants. *Strategic Management Journal*, 39(12), 3053–3085.
- Crittenden, A. B., Crittenden, V. L., & Crittenden, W. F. (2019). The Digitalization Triumvirate: How Incumbents Survive. *Business Horizons*, 62(2), 259–266.
- Dabija, D. C., Csorba, L. M., Isac, F. L., & Rusu, S. (2022). Building Trust Toward Sharing Economy Platforms Beyond the COVID-19 Pandemic. *Electronics*, 11(18), 2916.
- DalGLISH, S. L., Khalid, H., & McMahon, S. A. (2020). Document analysis in health policy research: the READ approach. *Health Policy and Planning*, 35(10), 1424–1431.
- De Klerk, S., & Hodge, S. (2021). The Case Of The Creative Accelerator. *Creative Industries Journal*, 14(2), 169–189.
- Dede, C. J., & Richards, J. (2020). *The 60-year Curriculum: New Models for Lifelong Learning in the Digital Economy*. Routledge.
- Deloitte. (2020). Disruption 2020: What it will take to innovate and compete over the next decades. *MIT Sloan Management Review*, 61(3), 1–61.
- Deterding, N. M., & Waters, M. C. (2021). Flexible Coding of In-Depth Interviews: A Twenty-First-Century Approach. *Sociological Methods & Research*, 50(2), 708–739.
- Dewi, S., & Tahira, Z. (2018). Consumer Protection In Digital Economy Era: Law In Indonesia. *Yustisia*, 07(1). <http://dx.doi.org/10.1186/s13662-017-1121-6%0A>
- Dosek, T. (2021). Snowball Sampling and Facebook: How Social Media Can Help Access Hard-to-Reach Populations. PS:

- Political Science & Politics, 54(4), 651–655.
- Dutta, A. (2020). Impact of Digital Social Media on Indian Higher Education: Alternative Approaches of Online Learning During COVID-19 Pandemic Crisis. *International Journal of Scientific and Research Publications*, 10(5), 604–611.
- Dzwigol, H. (2020). Methodological and Empirical Platform of Triangulation in Strategic Management. *Academy of Strategic Management Journal*, 19(4), 1–8.
- Fadilurrahman, M., Ramadhani, R., Kurniawan, T., et al. (2021). Systematic Literature Review of Disruption Era in Indonesia: The Resistance of Industrial Revolution 4.0. *Journal of Robotics and Control (JRC)*, 2(1), 51–59.
- Firdaus, N., & Mori, A. (2023). Stranded Assets and Sustainable Energy Transition: A Systematic and Critical Review of Incumbents Response. *Energy for Sustainable Development*, 73, 76–86.
- Frensh, W., & Mulyadi, M. (2019). Criminal Policy in Preventing Cyberharassment as a Negative Impact of Technology. <https://doi.org/10.4108/eai.26-1-2019.2283260>
- Fukuyama, F. (2020). 30 Years Of World Politics: What Has Changed? *J. Democracy*, 31, 11.
- Gamage, T. C., & Gnanapala, A. (2023). Unleashing Business Model Innovation in the Era of Digital Disruption: A Multiple Case Study Analysis. In: *Transformation for Sustainable Business and Management Practices: Exploring the Spectrum of Industry 5.0*. Emerald Publishing Limited. pp. 155–173.
- Geissinger, A., Laurell, C., & Sandström, C. (2020). Digital Disruption Beyond Uber and Airbnb—Tracking the Long Tail of the Sharing Economy. *Technological Forecasting and Social Change*, 155, 0–1. <https://doi.org/10.1016/j.techfore.2018.06.012>
- Goldfarb, A., & Tucker, C. (2019). *Digital Economics*. 57, 3–43.
- Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On The Fintech Revolution: Interpreting The Forces Of Innovation, Disruption, And Transformation In Financial Services. *Journal of Management Information Systems*, 35(1), 220–265.
- Götz, M. (2021). *Clusters, Digital Transformation And Regional Development In Germany*. Routledge.
- Graham, P. (2018). Ethics in Critical Discourse Analysis. *Critical Discourse Studies*, 15(2), 186–203. <https://doi.org/10.1080/17405904.2017.1421243>
- Grefen, P. (2021). Digital Literacy and Electronic Business. *Encyclopedia*, 1(3), 934–941. <https://doi.org/10.3390/encyclopedia1030071>
- Guthrie, G. (2020). Investment Flexibility as a Barrier to Entry. *Journal of Economic Dynamics and Control*, 116, 103928.
- Hai, T. N., Van, Q. N., & Thi Tuyet, M. N. (2021). Digital Transformation: Opportunities and Challenges for Leaders in the Emerging Countries in Response to COVID-19 Pandemic. *Emerging Science Journal*, 5(1), 21–36.
- Hameed, S. (2020). Political Economy of Rentierism in the Middle East and Disruptions from the Digital Space. *Contemporary Review of the Middle East*. <https://doi.org/10.1177/2347798919889782>
- Harymawan, I., Nasih, M., Agustia, D., et al. (2022). Investment Efficiency and Environmental, Social, and Governance Reporting: Perspective from Corporate Integration Management. *Corporate Social Responsibility and Environmental Management*, 29(5), 1186–1202.
- Hassanli, N., Small, J., & Darcy, S. (2022). The Representation of Airbnb in Newspapers: a Critical Discourse Analysis. *Current Issues in Tourism*, 25(19), 3186–3198.
- Hedetoft, U. (2020). *Paradoxes of Populism: Troubles of the West and Nationalism’s Second coming*. Anthem Press.
- Hopp, C., Antons, D., Kaminski, J., & Oliver Salge, T. (2018). Disruptive innovation: Conceptual foundations, empirical evidence, and research opportunities in the digital age. *Journal of Product Innovation Management*, 35(3), 446–457.
- Hou, J., & Li, B. (2020). The Evolutionary Game for Collaborative Innovation of the IoT Industry Under Government Leadership in China: An IoT Infrastructure Perspective. *Sustainability*, 12(9), 3648.
- Ikhsan, O. F., Islam, R., Khamis, K. A., & Sunjay, A. (2020). Impact of Digital Economic Liberalization and Capitalization in the Era of Industrial Revolution 4.0: Case Study in Indonesia. *Problems and Perspectives in Management*, 18(2), 290.
- Irawan, E. P., Sumartias, S., Priyatna, S., & Rahmat, A. (2022). A Review on Digitalization of CSR during the COVID-19 Pandemic in Indonesia: Opportunities and Challenges. *Social Sciences*, 11(2). <https://doi.org/10.3390/socsci11020072>
- Irianto, Y. (2019). Enforcement Of Criminal Law In False News (Hoax) Management According To Law No. 11 In 2008 That Has Been Amended To Be Law No. 19 Of 2016 Concerning Electronic Information And Transactions In Islamic Law And Positive Laws. *Legal Reconstruction in Indonesia Based on Human Right*.
- Islami, X., Islami, V., Topuzovska Latkovikj, M., & Mulloli, E. (2019). Barriers Hindering the Entry of New Firms to the Competitive Market and Profitability of Incumbents. *Management: Journal of Contemporary Management Issues*, 24(2),

121–143.

- Jang, B. W., & Kim, C. G. (2019). Impact Localization of Composite Stiffened Panel with Triangulation Method using Normalized Magnitudes of Fiber Optic Sensor Signals. *Composite Structures*, 211, 522–529.
- Juska, J. M. (2021). *Integrated Marketing Communication: Advertising And Promotion In A Digital World*. Routledge.
- Kalaiganam, K., Tuli, K. R., Kushwaha, T., et al. (2021). Marketing Agility: The Concept, Antecedents, and A Research Agenda. *Journal of Marketing*, 85(1), 35–58.
- Karttunen, E., Tsytsyna, E., Lintukangas, K., et al. (2021). Toward Environmental Innovation in the Cement Industry: A Multiple-Case Study of Incumbents and New Entrants. *Journal of Cleaner Production*, 314, 127981.
- Keane, M., Chen, Y., & Wen, W. (2018). *The Creative Economy, Digital Disruption And Collaborative Innovation In China*. In: *Creative Industries and Entrepreneurship*. Edward Elgar Publishing.
- Kelle, U., Kühberger, C., & Bernhard, R. (2019). How to use Mixed-Methods and Triangulation Designs: An Introduction to History Education Research. *History Education Research Journal*.
- Kennedy, C. R. (2022). Worthiness, Unity, Numbers and Commitment: Strengthening Qualitative Corpus Methods in the Critical Discourse Analysis of Protest Press Coverage. *Discourse & Society*, 33(5), 611–630.
- Khan, M. H., Adnan, H. M., Kaur, S., et al. (2019). Muslims' Representation in Donald Trump's Anti-Muslim-Islam Statement: A Critical Discourse Analysis. *Religions*, 10(2), 115.
- Kiyiklik, A. (2020). Digital Transformation Maturity of Airline Firms: a Tool for Self-Assesment.
- Krasota, T., Bazhenov, R., Abdyldeaeva, U., et al. (2020). Development Of The Digital Economy In The Context Of Sustainable Competitive Advantage. *E3S Web of Conferences*, 208, 3042.
- Kraus, P. A. (2021). Popular Republicanism Versus Populism: Articulating the People. *Social Sciences*, 10(10), 366.
- Lamberg, J. A., Lubinaitė, S., Ojala, J., & Tikkanen, H. (2021). The Curse of Agility: The Nokia Corporation and the Loss of Market Dominance in Mobile Phones, 2003–2013. *Business History*, 63(4), 574–605.
<https://doi.org/10.1080/00076791.2019.1593964>
- Lepskiy, V. E., Avdeeva, Z. K., & Raikov, A. N. (2018). Disruptive Situation Management in Digital Economy. *Proceedings of 2018 11th International Conference & Management of Large-Scale System Development MLSD, 2018*, 1–4.
<https://doi.org/10.1109/MLSD.2018.8551949>
- Liao, S., Wu, J., Bashir, A. K., et al. (2021). Digital Twin Consensus for Blockchain-Enabled Intelligent Transportation Systems in Smart Cities. *IEEE Transactions on Intelligent Transportation Systems*, 23(11), 22619–22629.
- Limna, P., Kraiwani, T., & Siripipathanakul, S. (2022). The Growing Trend of Digital Economy: A Review Article. *International Journal of Computing Sciences Research*, 6, 1–11.
- Lu, L., Zhou, Y., Wang, C., & Zhang, Q. (2021). The Dominant Design of Disruptive Innovations in the 3rd-Party Online Payment in China. *Wireless Communications and Mobile Computing*, 2021, 1–13.
- Makarov, V. L., Bakhtizin, A. R., Beklaryan, G. L., & Akopov, A. S. (2021). Digital plant: Methods of discrete-event modeling and optimization of production characteristics. *Business Informatics*, 15(2), 7–20. <https://doi.org/10.17323/2587-814X.2021.2.7.20>
- Manor, I. (2021). How Russian diplomats employ humour in online public diplomacy. *Global Society*, 35(1), 61–83.
- Margiansyah, D. (2020). Revisiting Indonesia's Economic Diplomacy in the Age of Disruption: Towards Digital Economy and Innovation Diplomacy. *Journal of ASEAN Studies*, 8(1), 15–39. <https://doi.org/10.21512/jas.v8i1.6433>
- Marusin, A., Marusin, A., & Ablyazov, T. (2019). Transport Infrastructure Safety Improvement Based on Digital Technology Implementation. *International Conference on Digital Technologies in Logistics and Infrastructure (ICDTLI 2019)*, 348–352.
- Matyas, M. (2020). Opportunities and Barriers to Multimodal Cities: Lessons Learned from In-Depth Interviews about Attitudes Towards Mobility as a Service. *European Transport Research Review*, 12(1), 1–11.
- Mazumdar, B. T. (2021). Digital Diplomacy: Internet-Based Public Diplomacy Activities or Novel Forms of Public Engagement? *Place Branding and Public Diplomacy*, 1–20.
- McGrath, R. (2020). The new disrupters. *MIT Sloan Management Review*.
- Meske, C., & Junglas, I. (2021). Investigating The Elicitation Of Employees' Support Towards Digital Workplace Transformation. *Behaviour & Information Technology*, 40(11), 1120–1136.
- Molek-Kozakowska, K., & Wilk, P. (2021). Casual, Colloquial, Commonsensical: A News Values Stylistic Analysis of a Populist Newsfeed. *Journalism Studies*, 22(6), 760–779.
- Mourik, R. M., Breukers, S., van Summeren, L. F. M., & Wieczorek, A. J. (2020). The Impact of the Institutional Context on the

- Potential Contribution of New Business Models to Democratising the Energy System. In: *Energy and Behaviour*. Elsevier. pp. 209–235.
- Najib, M., & Fahma, F. (2020). Investigating the Adoption of Digital Payment System Through an Extended Technology Acceptance Model: An Insight from the Indonesian Small and Medium Enterprises. *International Journal on Advanced Science, Engineering and Information Technology*, 10(4), 1702–1708.
- Nurlatifah, M., & Mutmainnah, N. (2021). Disruption and Collaboration in Digital Journalism: Ambivalence of Social Responsibility and Political Economy Practices of Media Companies. *Jurnal Komunikasi: Malaysian Journal of Communication*, 37(1), 181–195. <https://doi.org/10.17576/JKMJC-2021-3701-10>
- Ordóñez, P., & Labra, J. E. (2019). Rethinking Key Issues For Understanding The New Challenges Of Disruption And Digital Transformation In Companies And Economies. *Behaviour and Information Technology*, 38(9), 873–875. <https://doi.org/10.1080/0144929X.2019.1641663>
- Osterwalder, A., Pigneur, Y., Smith, A., & Etienne, F. (2020). *The Invincible Company: How To Constantly Reinvent Your Organization With Inspiration From The World's Best Business Models*. John Wiley & Sons.
- Ozalp, H., Cennamo, C., & Gawer, A. (2018). Disruption in Platform-Based Ecosystems. *Journal of Management Studies*, 55(7), 1203–1241.
- Palmie, M., Wincent, J., Parida, V., & Caglar, U. (2020). The Evolution of the Financial Technology Ecosystem: An Introduction and Agenda for Future Research on Disruptive Innovations in Ecosystems. *Technological Forecasting and Social Change*, 151, 119779.
- Parker, C., Scott, S., & Geddes, A. (2019). *Snowball Sampling*. SAGE Research Methods Foundations.
- Petzold, N., Landinez, L., & Baaken, T. (2019). Disruptive Innovation From a Process View: A Systematic Literature Review. *Creativity and Innovation Management*, 28(2), 157–174.
- Pompella, M., & Costantino, L. (2021). Fintech and Blockchain Based Innovation: Technology Driven Business Models and Disruption. *The Palgrave Handbook of FinTech and Blockchain*, 403–430.
- Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying Digital Transformation Paths in the Business Model of SMEs During the COVID-19 Pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 104.
- Prokhanov, A. (2019). The Tragedy of Centralism. In *The Soviet System in Crisis*. Routledge. pp. 347–351.
- Putra, A. P., & Aristyanto, E. (2021). Analysis of Existential Feminism Struggle of Women Online Drivers During the Covid-19 Pandemic. *HUMANISMA: Journal of Gender Studies*, 5(2), 143–158.
- Radu, L. D. (2020). Disruptive Technologies in Smart Cities: A Survey on Current Trends and Challenges. *Smart Cities*, 3(3), 1022–1038. <https://doi.org/10.3390/smartcities3030051>
- Rahardja, U., Lutfiani, N., & Juniar, H. L. (2019). Scientific Publication Management Transformation In Disruption Era. *Aptisi Transactions on Management (ATM)*, 3(2), 109–118.
- Rosalina, S., Nurhadi, N., & Yuhastina, Y. (2021). Stereotypes Against Female Online Ojek Drivers in Surakarta. *Humanisma: Journal of Gender Studies*, 5(1), 54–65.
- Ruiz Casado, J. A. (2022). Who Owns “Democracy”? The Role of Populism in the Discursive Struggle Over the Signifier “Democracy” in Catalonia and Spain. *Critical Discourse Studies*, 1–17.
- Rutakumwa, R., Mugisha, J. O., Bernays, S., et al. (2020). Conducting In-Depth Interviews with and without Voice Recorders: A Comparative Analysis. *Qualitative Research*, 20(5), 565–581.
- Sahmeni, E., & Afifah, N. (2019). Using Critical Discourse Analysis (CDA) in Media Discourse Studies: Unmask the Mass Media. *REiLA: Journal of Research and Innovation in Language*, 1(2), 39–45.
- Saputra, F., & Ali, H. (2021). The Impact of Indonesia's Economic and Political Policy Regarding Participation in Various International Forums: G20 Forum (Literature Review of Financial Management). *Journal of Accounting and Finance Management*, 2(1), 40–51.
- Scheibe, K. P., & Blackhurst, J. (2018). Supply Chain Disruption Propagation: A Systemic Risk and Normal Accident Theory Perspective. *International Journal of Production Research*, 56(1–2), 43–59.
- Schor, J. (2021). *After The GIG: How The Sharing Economy Got Hijacked And How To Win It Back*. Univ of California Press.
- Serafis, D. (2022). Revisiting the Toolbox of Discourse Studies: New Trajectories in Methodology, Open Data and Visualization. Taylor & Francis.
- Shen, W., & Ying, W. (2022). Large-Scale Construction Programme Resilience Against Creeping Disruptions: Towards Inter-Project Coordination. *International Journal of Project Management*, 40(6), 671–684.

- Shi, Y., Jang, H. S., Keyes, L., & Dicke, L. (2020). Nonprofit Service Continuity and Responses in the Pandemic: Disruptions, Ambiguity, Innovation, and Challenges. *Public Administration Review*, 80(5), 874–879.
- Shin, S. (2021). Implementing Agility In A Big Firm-Driven Economy: Digital Disruption And Korea’s Retail Chaebol. In: *The Routledge Companion to Asian Family Business*. Routledge. pp. 298–312.
- Si, S., & Chen, H. (2020). A Literature Review of Disruptive Innovation: What it is, How it Works and Where it Goes. *Journal of Engineering and Technology Management*, 56, 101568.
- Siregar, G., Siregar, S. A., & Silaban, R. (2020). Legal Implementation of Electronic Information and Transaction Law in Preventing the Spread of Content Containing SARA Issues through Social Media. *International Journal of Innovation Creativity and Change*, 13(10), 1418–1431.
- Skog, D. A., Wimelius, H., & Sandberg, J. (2018). Digital Disruption. *Business & Information Systems Engineering*, 60, 431–437.
- Sköld, M., Freij, Å., & Frishammar, J. (2020). New Entrant or Incumbent Advantage in Light of Regulatory Change: A Multiple Case Study of The Swedish Life Insurance Industry. *European Management Review*, 17(1), 209–227.
- Soto-Acosta, P. (2020). COVID-19 Pandemic: Shifting Digital Transformation to a High-Speed Gear. *Information Systems Management*, 37(4), 260–266. <https://doi.org/10.1080/10580530.2020.1814461>
- Steytler, N. (2019). Non-Centralism in Africa: in Search of the Federal Idea. In: *A Research Agenda for Federalism Studies*. Edward Elgar Publishing. pp. 175–186.
- Stoianenko, I., Kondratiuk, O., Mostova, A., et al. (2022). Digitization of the Economy Under the Influence of the COVID-19 Pandemic. *Postmodern Openings*, 13(4), 127–141.
- Tabé, C. A., & Fieze, N. I. (2018). A Critical Discourse Analysis Of Newspaper Headlines On The Anglophone Crisis In Cameroon. *British Journal of English Linguistics*, 6(3), 64–83.
- Tambunan, M. R. U. D., & Rosdiana, H. (2020). Indonesia Tax Authority Measure on Facing the Challenge in Taxing Digital Economy. *The International Technology Management Review*, 9(1), 1. <https://doi.org/10.2991/itmr.k.200203.001>
- Tapscott, D., & Euchner, J. (2019). Blockchain And The Internet Of Value: An Interview With Don Tapscott Don Tapscott Talks With Jim Euchner About Blockchain, The Internet Of Value, And The Next Internet Revolution. *Research-Technology Management*, 62(1), 12–19.
- Teichmann, F. M. J., & Falker, M. C. (2020). Money Laundering Via Cryptocurrencies – Potential Solutions from Liechtenstein. *Journal of Money Laundering Control*, 24(1), 91–101. <https://doi.org/10.1108/JMLC-04-2020-0041>
- Terry, O. (2020). Disruption Innovation And Theory. *Journal of Service Science and Management*, 13(03), 449.
- Tijan, E., Jović, M., Aksentijević, S., & Pucihar, A. (2021). Digital Transformation in the Maritime Transport Sector. *Technological Forecasting and Social Change*, 170, 120879.
- Tjipto, F. P., Ong, J. P., Sulistio, M. R., & Harnowo, T. (2021). Consumer Protection Law: The Case Study Of Grabtoko Company In Indonesian E-Commerce Transactions. *Journal of Private and Commercial Law*, 5(2).
- Tlaiss, H. A., & Al Waqfi, M. (2020). Human resource managers advancing the careers of women in Saudi Arabia: caught between a rock and a hard place. *International Journal of Human Resource Management*, 1–36. <https://doi.org/10.1080/09585192.2020.1783342>
- Truong, Y., Ackermann, C. L., & Klink, R. R. (2021). The Role of Legitimacy and Reputation Judgments in Users’ Selection of Service Providers on Sharing Economy Platforms. *Information & Management*, 58(8), 103529.
- Tseng, Y. C., & Chan, C. L. (2019). When the Sharing Economy Meets Established Institutions: Uber and Airbnb in Taiwan. *IEEE Transactions on Engineering Management*, 68(6), 1895–1906.
- UNDP. (2023). Sustainable Development Goals | United Nations Development Programme. Available online: https://www.undp.org/sustainable-development-goals?gclid=CjwKCAiA0JKfBhBIEiwAPhZXD3qC7v6GCgtdblBsXjoqkLE_x8t_AhMwu51_jyIP1QIjaB-V_o7w4hoC06MQAvD_BwE (accessed on 8 June 2023).
- Vergara, M. S. J., & Pasola, V. J. (2021). Clarifying the Disruptive Innovation Puzzle: A Critical Review. *European Journal of Innovation Management*, 24(3), 893–918.
- WEF. (2022). Annual Report 2021|2022. *The Veterinary Record*, 191(4), 174–181. <https://doi.org/10.1002/vetr.2169>
- Wodak, R. (2020). Analysing the Politics of Denial: Critical Discourse Studies and the Discourse-Historical Approach. In: *Discourses in Action*. Routledge. pp. 19–36.
- World Bank. (2021). Indonesia Overview: Development News, Research, Data | World Bank. Available online: <https://www.worldbank.org/en/country/indonesia/overview> (accessed on 17 July 2023).

- Xiang, X., Yang, G., & Sun, H. (2022). The Impact of the Digital Economy on Low-Carbon, Inclusive Growth: Promoting or Restraining. *Sustainability (Switzerland)*, 14(12), 1–27. <https://doi.org/10.3390/su14127187>
- Xu, S., Yang, C., Huang, Z., & Failler, P. (2022). Interaction Between Digital Economy and Environmental Pollution: New Evidence From a Spatial Perspective. *International Journal of Environmental Research and Public Health*, 19(9), 5074.
- Yang, G. (2022). A New Approach to the Realization of “People’s Sovereignty”: Party Centralism. In: *The Historical Dynamics of Chinese Politics*. Springer. pp. 125–143.
- Yanti, M., & Yusnaini, Y. (2018). the Narration of Digital Literacy Movement in Indonesia. *Informasi*, 48(2), 243–255. <https://doi.org/10.21831/informasi.v48i2.21148>
- Yasin, A., Liu, L., Li, T., et al. (2019). Improving Software Security Awareness Using a Serious Game. *IET Software*, 13(2), 159–169. <https://doi.org/10.1049/iet-sen.2018.5095>
- Zaoui, F., & Souissi, N. (2021). A Framework For A Strategic Digital Transformation. 2020 6th IEEE Congress on Information Science and Technology (CiSt), 502–508.
- Zemtsov, S., Barinova, V., & Semenova, R. (2019). The Risks of Digitalization and the Adaptation of Regional Labor Markets in Russia. *Форсайт*, 13, 84–96.
- Zhang, Y., Su, L., Jin, W., & Yang, Y. (2022). The Impact of Globalization on Renewable Energy Development in the Countries along the Belt and Road Based on the Moderating Effect of the Digital Economy. *Sustainability (Switzerland)*, 14(10). <https://doi.org/10.3390/su14106031>
- Zhang, Z., Jin, J., Li, S., & Zhang, Y. (2023). Digital Transformation of Incumbent Firms From the Perspective of Portfolios of Innovation. *Technology in Society*, 72, 102149.
- Zhao, X. (2022). Re-presenting China in Digital Immersive Art: Virtual Reality, Imaginaries, and Cultural Presence. Curtin University.