

“In truth, speaking of digital disruption in Indonesia is a tired tale, for our people breathe the digital life deeper than most of the world. Yet, this book is far from stale. It refuses to merely weep over the shifting tides, choosing instead to clearly paint the cases—the fallout—and above all, how we must rise to meet them. We are already living in the digital age. Face it, or fall!”

—Haryo Damardono, Editor in Chief, *Harian KOMPAS*

“Drawing on diverse and rich empirical cases, this timely and wide-ranging volume offers a valuable contribution to the study of contemporary Indonesia. It is an important resource for scholars, students, policymakers, and anyone seeking to understand Indonesia’s rapidly evolving digital landscape.”

—Merlyna Lim, Canada Research Professor, Professor of Communication and Media Studies, and Director of the ALiGN Media Lab, Carleton University

“This excellent volume, featuring scholars across disciplines, examines myriad digital developments that are rapidly transforming contemporary Indonesian society, politics, cultures, and economics. Spanning an impressive range of issues, from fintech to transport algorithms, social media influencers, online religious platforms, animation, cybercrime and esports, each chapter examines the specificities as well as broader connectivities of these topics as they converge to disrupt and reorganize everyday lives and modalities of social behaviour. Woven together, the editors and contributors offer a unique analytical perspective on this ever dynamic and globalizing archipelago that will also resonate well beyond it.”

—Ivan V. Small, Professor of Anthropology & Southeast Asian Studies, Northern Illinois University

DIGITAL **DISRUPTIONS**

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DIGITAL DISRUPTIONS

How Digital Technologies Change
Social and Cultural Life in Indonesia

Edited by Hui Yew-Foong, Ibnu Nadzir and Ahmad Najib Burhani

ISEAS YUSOF ISHAK
INSTITUTE

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Introduction

Digital Disruption in Contemporary Indonesia

Hui Yew-Foong, Ibnu Nadzir and
Ahmad Najib Burhani

On 16 November 2022, at the conclusion of the 17th summit of G20 in Bali, then-President Joko Widodo introduced Indonesia's future capital Nusantara to the world through Jagat, a virtual Nusantara embedded in metaverse and populated by avatars. Jagat was an attempt at mobilizing the latest digital technology (metaverse and Web 3.0) to engage young Indonesians in shaping the nation's future (Newsfile 2022). This modality is in line with much of public discourse in Indonesia, where digital technology and millennials have been valorized in the articulation of Indonesia's future (Nadzir 2020b). While digital technology has become celebrated as that which would pave the future of Indonesia, this volume will consider the impact of digital technology on the social and cultural life of the nation. In particular, we will consider the "disruptive" effect of digital technology, a theme that we will take up in the next section.

In the last two decades, the use of digital technology in Indonesia has become increasingly prominent. In 2025, internet users reached 229 million, which is around 80 per cent of the Indonesian population (APJII 2025). On the newer platform of TikTok, Indonesian users are in first place with 180 million accounts (Statista 2025).

To what extent do the figures translate into significant changes in social and cultural life? This is not an easy question to answer, since the

expanded use of digital technology is moving at an extremely fast rate. A decade ago, it would have been difficult to imagine that the *ojek* (an informal motor transport service) would now become the backbone of a unicorn corporation that is an integral part of the life of millions of urbanites. In the political arena, since the 2014 elections, we also see the influence of independent monitoring of votes through digital crowdsourcing platforms such as *Kawal Pemilu* (Guarding the Election) (Yusuf 2014).

The rapid adoption of digital technology in Indonesia has been dubbed a digital “revolution” that brings not just new opportunities but also challenges for the nation (Jurriens and Tapsell 2017a). One key recurring problem is the digital divide between rural and urban areas (Hadi 2018), which was exacerbated during the Covid-19 pandemic. The government was pushing for the use of digital platforms for almost any public service, including healthcare and education. Thus, while digital technology has become an essential part of everyday life for Indonesians, it is not without its ambivalences. This volume will examine the disruptive effects of digital technology on different sectors of Indonesia, including the economy, religious life, politics and governance, and leisure. But first, we will consider what digital disruption means.

DIGITAL DISRUPTION IN INDONESIA

Admittedly, the concept of digital disruption takes its cue from business theory, notably what Clayton Christensen (Bower and Christensen 1995; Christensen 1997; Christensen et al. 2015) has called disruptive technology and subsequently, disruptive innovation. The theory suggests that the application of new technology to a new business model that attracts an underserved market or revenue stream could grow until it supplants incumbent competitors. From the sociocultural perspective, such technology / innovation not only disrupts specific business or market sectors but also contributes to the reorganization of everyday life. One common example is the widespread use of social media applications, which in the last decade or so have revolutionized the way we mediate social relations. Indeed, a more holistic approach would be to consider how techno-social disruption could have an impact on “social relations, institutions, epistemic paradigms, foundational concepts, values, and the very nature of human cognition and experience” (Hopster 2021, 1). This volume is an attempt

at unravelling the extent to which digital technology has disrupted social and cultural life in Indonesia, in the sense of reorganizing the modalities of social behaviour.

Social scientists have always been cognizant of how breakthroughs in technology could have an impact on social life. For example, Appadurai (1996) has observed that the capacity to transmit pictures all over the world could contribute to collective action, while Castells (2010) argues that networks enabled by digital technology would become the basis for modern sociality. As digital technology becomes a constitutive part of everyday life, social scientists have begun to recalibrate their research agenda and methodologies to take into account the impact of the digital era. Torpey (2020, 751) proposes a sociological agenda that considers both the “production” side of new technology, covering the power of big tech companies and their associated economic and governance ecosystem, and the “consumption” side, which includes “the transformation of everyday life as a result of the spread of new technologies”. While this systematic approach helps us to identify the key areas of research, we also have to recognize that both production and consumption are intricately intertwined in many of the most pertinent topics, from the proliferation of mobile phones (Horst 2021) to the use of social media (Miller 2021), the experience of infrastructures (Knox 2021), the introduction of the digital economy and labour (Bull and Gershon 2021), the operation of digital politics (Postill 2021) and how hyperconnectivity reconstitutes the self (Brubaker 2020). At the same time, new methodologies have emerged to meet the challenges of studying the digital world, including participatory mapping (Jeevendrampillai and Conquest 2021), social media network analysis (Hansen et al. 2011) and algorithmic ethnography (Christin 2020), among others. Many of the topics and methodologies listed are pertinent where Indonesia is concerned. This is a result of the degree that digital technologies have permeated society and transformed social relations.

To understand how the proliferation of digital technology has disrupted preexisting social and cultural practices, we need to contextualize this development in terms of the spread and use of such technology in Indonesia. The first generation of Indonesian internet users emerged in the last decade of the New Order regime under Soeharto, when a small number of Indonesian elite had access to the *Apakabar* mailing list set up by John Macdougall, a US citizen who lived in Indonesia during the 1980s (Hill and Sen 1997). The mailing list, which evaded censorship by the authoritarian

regime, became a popular platform among political activists, particularly for the distribution of forbidden news content (Lim 2003). The technology thus enabled Indonesian internet users to circumvent the constraints that conventional media was subject to.

In the context of Indonesia, digital technology has also provided a platform for the expression of identities, especially religious identities. One early example was the *Laskar Jihad*, a conservative Islamic group that derived its ideology from *Salafi* doctrine (Hasan 2005). The *Laskar Jihad* was one of the earliest religious organizations that used the internet to propagate its Islamic ideals, and eventually used it to mobilize both moral and financial support for its war in Maluku (Bräuchler 2003). Thus, the *Laskar Jihad* was an early pioneer in spreading conservative Islamic ideals through digital technology, even before the rise of ISIS or similar organizations and their presence on the internet (Bunt 2018).

The startup industry is also highly embedded in the Indonesian cultural context. One celebrated homegrown startup that has become a unicorn¹ is *Gojek*, a company offering a ride hailing application that started out by organizing *ojek*, an informal motorcycle transportation system that was very much part of urban everyday life in Indonesia. Later on, the company developed the platform to expand into a myriad of other services from food delivery to a digital payment gateway. The company has grown so large that it claims to provide opportunities for millions of partners and contributes 104 trillion rupiah (around 1 per cent of the GDP) to the Indonesian economy (Gojek 2020). Amid such glowing narratives, the company has also left many *ojek* partners feeling insecure (Nastiti 2017). Unlike formal employees, they lack access to health insurance, and their workload and income could fluctuate as determined by the company's payment application. These insecurities generated a form of resistance among some drivers, who used *tuyul*² accounts to trick the company application to favour them in terms of remuneration (Mustika and Savirani 2021). While the use of such accounts does not resolve the core issues, they do offer these drivers some form of cultural-technological agency vis-à-vis the power of a big tech company.

It is clear that the disruption introduced by digital technology could be both empowering and disempowering. From a critical perspective, we need to understand the new forms of ambivalences that have emerged. Towards this end, the chapters in this volume draw on a number of disciplinary approaches, including economics, political science, anthropology, communication and others. The chapters are classified

under four broad themes, namely, economy, religious life, politics and governance, and leisure.

ECONOMY

In Chapter 2, Manggi Taruna Habir draws attention to the development of the financial technology (fintech) industry in the midst of the Covid-19 pandemic. The majority of fintech firms could be categorized into two main groups: online lending platforms and online payment services. While the slowing economy led banks to be more conservative in lending money, fintech startups that had access to international funds were able to expand their businesses. In terms of online payment services, these are tied to the rise of e-commerce, and they are likely to overtake conventional payment systems in the future.

Habir posits that fintech development has yet to reach its full potential due to several challenges. One fundamental challenge is the lack of accessible and reliable data that would allow fintech ventures to assess the quality of their loans and develop their business. Another challenge is the gaps in regulation for both companies and customers, in terms of protecting legal fintech entities from the competition of illegal fintech platforms, and protecting the data and privacy of customers.

Amalinda Savirani and Warih Aji Pamungkas examine the precarity of female *Gojek* drivers under the regime of the algorithm in Chapter 3. Engineers of *Gojek* built the algorithm to learn about the behaviour and preferences of their customers and determine the allocation of orders and payments for the drivers. Those that fail to comply with the preferred behaviour determined by the company's algorithm will receive negative evaluation and a smaller number of orders, which then leads to a vicious cycle of worsening evaluations. In turn, platform drivers find various ways to compromise the draconian control of the algorithm and exercise some degree of agency (Mustika and Savirani 2021).

Savirani and Pamungkas suggest that these problems are rooted in a techno-solution framework where the algorithm is perceived to be the solution to social problems. The algorithm, designed to operationalize standard business management values and practices, is not value-free but reinforces existing biases in society. In the case of female drivers, the gender-blind algorithm imposes demands that do not take into account the multiple roles that women have to play in Indonesian society, and thus punishes them when they do not perform as well as their male counterparts.

RELIGIOUS LIFE

One of the integral aspects of Indonesian society is its religious life. The introduction of digital technology, particularly social media, has inflected the way people relate to religious practices, authorities and beliefs. This section focuses on the changes in religious sociality related to the use of digital technology.

In Chapter 4, James B. Hoesterey discusses the emergence of social media and how it contributes to the changing landscape of Islamic proselytization. In particular, he presents and compares the cases of two prominent religious preachers: Abdullah Gymnastiar, also known as Aa Gym, who became popular through Islamic television programmes after the 1998 Reform Movement; and Gus Baha, a popular preacher affiliated with Nahdlatul Ulama (NU, the largest Islamic organization in Indonesia), whose sermons were circulated widely through social media.

After losing his popularity due to his second marriage, Aa Gym made a comeback by abandoning his political neutrality and articulating his political stance vis-à-vis specific political figures via social media platforms such as Twitter and Instagram. The use of social media in addition to television expands the preacher's reach to larger audiences, but these audiences are not passive and could express their disagreement with the preacher. Indeed, social media has facilitated the emergence of fragmented religious publics, and the rise of a traditional preacher like Gus Baha in a field dominated by image-savvy celebrity preachers demonstrates this fragmentation. While preachers could gain significant influence through their social media followers, they could also easily face challenges from other social media users who support different preachers.

It is inevitable that discussions of religious life in Indonesia tend to focus on the Islamic community, due to its salience as the majority and its corresponding impact on religious sociality in Indonesia (Bruinessen 2013; Hefner 2000; Menchik 2016). However, given Indonesia's religious diversity, it is also important to address developments in other religious communities due to the intervention of digital technology. In this regard, Harmakaputra's chapter on the Christian community and Evi Sutrisno's chapter on the Confucian community provide perspectives from minority religious communities.

In Chapter 5, Hans Harmakaputra observes that during the Covid-19 pandemic, digital media had not only facilitated "religion online" for the Christian community, but also "online religion". Following Campbell

and Altenhofen (2016), “religion online” refers to the transfer of existing religious practices to digital media platforms, while “online religion” refers to the emergence of new religious practices as a result of engaging with digital media technology.

Harmakaputra posits that the more egalitarian communication and open organization facilitated by digital media provided platforms for “public theology”, which appealed not only to Christians but also those outside the Christian community. In his chapter, Harmakaputra discusses three examples of such platforms. First is a YouTube channel known as *Theology* that discusses controversial topics such as LGBTIQ, atheism and even religious concepts outside of Christian tradition, and engages in dialogue with people from various religious and sexual orientation backgrounds. Second are creative public ministries that spread Christian values beyond the Christian community, such as the initiative by Reverend Eklin that uses puppet shows to teach the idea of peace and harmony for children via YouTube and Instagram. Third are interreligious ritual engagements, such as digital multireligious prayer events during the Covid-19 pandemic, which became more acceptable because virtual meeting spaces such as Zoom are considered neutral. It is undeniable that the pandemic accelerated the adoption of digital media within the Christian community in Indonesia, which led to the development of corresponding new religious paradigms, methods and content.

Similarly, the adoption of digital media technology by the Confucian community in Indonesia was accelerated by the Covid-19 pandemic, as observed by Evi Sutrisno in Chapter 6. In comparison with other religious communities, the Confucian community has less resistance toward virtual ritual gatherings, as its practices are less bound to materiality, unlike the followers of *Tridharma*, whose religious practices are strongly tied to temples. Moreover, digital technology facilitated new practices that were not possible in physical space, such as collaboration by members from different regions in organizing meetings and assuming ritual tasks. This allowed members not to feel as isolated during the pandemic, but instead participate in online meetings that involved the larger Confucian community across cities and regions in Indonesia.

POLITICS AND GOVERNANCE

The field of politics and governance is one major area that has been revolutionized on a global scale by digital technology. Studies have been

concerned with how social media could harm democracy (González 2017; Hal Berghel 2018), as well as how digital technology could be used to mobilize supporters for social movements, whether in Hong Kong (Lee and Chan 2018), Spain (Postill 2014) or the United States (Gerbaudo 2012). The chapters in this section focus on how different political and government actors have utilized digital technology.

Chapter 7 by Detta Rahmawan, Justito Adiprasetyo and Kunto Adi Wibowo traces the use of social media by Joko Widodo (Jokowi) to navigate his political career from mayor of Solo to president of Indonesia. Jokowi's political ascendancy was negotiated through a political campaign landscape that has undergone significant changes, such as the emergence of micro-celebrities who are adept at mobilizing support through social media. In his second term as president, Jokowi's use of digital media became more structured and coordinated, involving the participation of paid influencers to support the government, as he considered the propagation of hoaxes and negative narratives a threat to the government. Scholars have suggested that this signals an authoritarian turn in the Jokowi administration (Power 2018), as those who actively criticize the government also experience various threats, such as legal indictment, arrest and hacking (Nadzir 2020a). The authors then propose the development of a sustainable critique ecosystem for the future of Indonesian democracy, which involves a network of civil society organizations that are concerned with the use of digital technology, a journalism sector that is concerned not only with political criticism but also familiar with developments in the technology industry, and a public movement that prioritizes the accountability of the state budget with respect to the use of digital media.

In Chapter 8, Yanuar Nugroho and Sujarwoto examine the formal implementation of digital governance under the Jokowi administration to improve public services. Some of these digitalization programmes, such as the One Data Policy, One Map Policy and Palapa Ring Project, were initiated under the Susilo Bambang Yudhoyono administration, but were implemented under Jokowi.

The key concern raised by Nugroho and Sujarwoto is that although digital technology can improve the quality of public services, the implementation is very much hindered by uneven development of digital infrastructures (Sujarwoto and Tampubolon 2016). The authors demonstrate that although internet penetration has been rising, access to the internet has predominantly been more available to people with better education, wealth and those living on the islands of Java and Bali. Limitations in

internet access for those outside of this group make it difficult for the optimization of digital governance across the archipelago. Apart from infrastructure, political will, leadership and institutional qualities are also crucial in determining the successful implementation of digital governance, especially with decentralization, which has left implementation in the hands of sub-national regions.

Chapter 9 by Galuh Syahbana Indraprahasta, Henny Warsilah, Yoka Pramadi and Rusydan Fathy follow up on the theme of digital governance by focusing on the development of smart cities, in particular, Semarang, a city in Central Java, and Banyuwangi, a largely rural regency in East Java. Semarang has garnered various awards for its success as a smart city, delivering government services such as internet access in public areas, an online reporting mechanism that responds to citizen's complaints on public services and information access through government websites and applications. In addition, there are also multiple grassroot initiatives, but they may not always be connected to the government's smart city programme due to lack of communication.

In Banyuwangi, smart city initiatives are aligned with the regent Abdullah Azwar Anas's plan to develop tourism as the source of Banyuwangi's economy. The village is considered the main source of data that could feed evidence-based policies. Since the village is the main hub for information, Banyuwangi could make its public services closer to its target audience. Such decentralized initiatives differentiate Banyuwangi from many other regions where public services are still centralized.

In Chapter 10, Lilis Mulyani, Ary Wahyono and Masyhuri Imron discuss the development of virtual policing in Indonesia. The Cybercrime Unit was established to tackle crimes that emerged with the proliferation of digital technology, such as hacking, and the use of digital platforms to carry out conventional crimes such as terrorism and money laundering. Since its establishment, the Unit claims that it has solved thousands of cases corresponding to the loss of USD 9.1 million. However, the effectiveness of virtual policing remains limited as resources are centralized, such that regional police are not equipped to deal with cybercrimes. In addition, there are also criticisms that the handling of hate speech and fake news involving public officials is a form of repression privileging the interests of public officials. Thus, there are still many aspects of virtual policing that require fine tuning, so that it protects rather than compromises the rights of citizens.

LEISURE

The proliferation of digital technology has also led to significant changes in consumption and leisure. In turn, this has led to the increasing vibrancy of creative industries such as film, music and games. In particular, growing access to the internet, although uneven between rural and urban areas (Fuady 2018; Hadi 2018), has had significant impact on the development, production and distribution of leisure products.

Sentiela Ocktaviana and Andrian Wikayanto discuss Indonesian animation in Chapter 11, in particular, the animated series on YouTube known as *Nussa* and the debates surrounding it amid the social and political polarization during the 2019 presidential election. *Nussa* is a da'wa (Islamic proselytization) oriented animation designed to educate children on Islamic practices and values. Plots of the series revolve around the daily lives of Nussa, a Muslim boy, and his sister Rara, as they navigate difficulties and problems that need to be resolved by making choices that adhere to Islamic values. Criticisms of the series were raised by prominent *Twitter* users concerned with whether the perceived conservatism of the animation would contribute to rising religious intolerance in Indonesia.

These debates could not be separated from the social and political cleavages apparent in social media then. Such cleavages are fuelled by rising conservatism (Bruinessen 2013), hatred towards minority groups (Lim 2017) and the aspiration among certain Islamic sectors for a caliphate political system (Burhani and Nadzir 2021). The authors argue, based on content analysis of *Nussa* episodes, that such divisive elements are not evident. While the series may promote certain ideas of Islamic normativity, these ideas remain in sync with Indonesia's master narrative of nationalism, diversity and tolerance. As a result, *Nussa's* version of tolerance is also subject to the limits observed by Menchik (2019), and reflects the continuing entanglement between religion and politics in Southeast Asia (Hui 2013).

In Chapter 12, Bima Prawira Utama and Pradipa P. Rasidi examine the transformation of online gaming from merely a leisure activity to a form of professional sports or eSports in Indonesia. Since Prawira has spent time as an active gamer, he also incorporates his personal reflections on the massive changes to the industry in the chapter. The early development of eSports can be traced back to the booming *warnet*³ (*warung Internet*) shops of the 1990s. *Warnet* offered very affordable access to internet and personal computers, which not only allowed teens to play games, but also

to engage in social networks outside of family and school. While *warnet* and gaming in the early days bore negative impressions, young people continued to flock to *warnet* and even formed guilds to compete against each other.

This social structure became the backbone of the eSports community as the gaming landscape evolved into a professionalized industry following the injection of billions of dollars by South Korean companies in 2011. The professionalization of players changed the public perception of gaming, and it became a career that youths could aspire to under the banner of eSports.

The eleven content chapters demonstrate the different ways in which digital technology has disrupted Indonesian society. Admittedly, the impact in certain sectors, such as finance, business and politics, is deeper and more extensive than in others. Moreover, it is undeniable that the Covid-19 pandemic facilitated or accelerated the use of digital technology in ways that would have been unimaginable otherwise. In some cases, changes adopted during the pandemic might have been reversed, especially in more conservative sectors such as religion. Nevertheless, we believe it is still fair to say that digital technology has transformed social and cultural life in Indonesia, and when the impact is aggregated across the many sectors under its influence, this constitutes digital disruption.

Notes

1. The term is often used to refer to a startup company valued at over US\$1 billion.
2. This is a reference to spirits in Javanese folklore that have the ability to steal money to enrich their masters.
3. Internet stall, a business establishment that rents internet access to individual users.

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