



China's growing digital reach: explaining citizens' high approval rates of fintech investments in Southeast Asia

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ABSTRACT

Recent years have witnessed a rise in global investments in the digital economy. The growing digital reach of Chinese tech companies is responsible for at least part of this transformation. Yet, little is known about how host country citizens view China's increasing stature in the digital sphere. Focusing on Chinese investments in mobile payment platforms (CIM), this article explains citizens' levels of approval of Chinese outward investments in the digital economy. Based on online surveys conducted in four selected Southeast Asian countries – Thailand, Malaysia, Indonesia, and the Philippines – this research shows that citizens of these four countries perceive the benefits of CIM to outweigh the risks, with approval rates to be higher for Thailand and Malaysia, and lower for Indonesia and the Philippines. We find these high levels of approval for CIM to be significantly associated with perceived personal benefit, such as price reductions and an increase in purchasing choices. By contrast, country-level factors, such as geopolitical concerns about China, do matter in some contexts, but overall show less explanatory influence. These results shed light on citizens' views of different types of foreign investments and of China, and support previous arguments on the separation between consumer behavior and politics.

KEYWORDS


Digitalization; FDI; fintech; technology acceptance; public perception; Southeast Asia; China

Introduction

Recent years have witnessed a structural shift in global foreign direct investment patterns, changing from asset-heavy to asset-light investments. Such a transformation is significantly driven by cross-border investments in the digital economy and global consumer needs for high-tech products (UNCTAD, 2017, 2018). This trend is accompanied by digital globalization and the rise of multinational enterprises (MNEs) which offer platforms through cloud- and internet-based services, digital

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solutions such as electronic and digital payments, digital media and information content, and IT hard- and software (Casella & Formenti, 2018).

Although the majority of the world's top 100 MNEs (75%) are still located in Europe and the United States (Casella & Formenti, 2018, S. 113), Chinese investors are bridging the gap at speed. Chinese investors have started to contribute to this global economic transformation under the framework of China's 'Digital Silk Road' - a conceptual part of China's Belt and Road Initiative (Huang, 2019; National Development & Reform Commission et al., 2015). While Chinese companies have historically engaged in global infrastructure provision, such as roads, railways, and bridges,¹ the announcement of the 'Digital Silk Road' suggests Chinese government support for global digital investments.

Investments by Chinese companies in the digital economy have heated the already ongoing debate whether Chinese investments come with an alternative development model, as well as whether China's rise is associated with a threat to the liberal economic order (Breslin, 2011; Zhao, 2014). Some governments, such as those in Australia, Japan, the United Kingdom, and the United States, have, for example, taken measures banning China's participation in their information and communication technologies' (ICT) infrastructure (e.g. Kelion, 2020; Sim, 2020). Furthermore, in 2018, the US government blocked an attempt by China's Alibaba's fintech arm, Ant Financial, to invest in MoneyGram, a US-headquartered mobile payment provider (Roumeliotis, 2018). Such decisions relate to Chinese tech companies' commitment problem, meaning that Chinese companies are often unable to convincingly guarantee they would not share foreign citizens' data with the Chinese government (Liu, 2021). In contrast, other countries display a more positive attitude. For example, Chinese telecommunication provider, Huawei, was allowed to engage in the Brazilian 5G auction, and also was allowed to provide technologies for the 5G network in South Africa (Huawei, 2020; Reuters, 2021). Overall, Chinese companies have built data centers and telecommunication transmission networks, laid submarine fiber optic cables around the world, and engaged in providing solutions for smart cities and cloud computing (Dekker et al., 2020).

While the attitudes of decision makers to China's global digital footprint are available in the form of public statements, interviews, and even real actions, comparatively little is known about the perceptions held by citizens. However, a nuanced understanding of citizens' perceptions is essential, because perceptions have the potential to shape behavior (Curtis & Curtis, 2011). In fact, citizens' negative perceptions of investments, such as infrastructure delivery, have the potential to turn into public protest and cause the delay or even end of such investment projects (Kostka & Anzinger, 2016). For instance, with regards to Ant Financial's acquisition of a stake in the Vietnamese e-wallet eMonkey, Potkin (2019) reports insiders saying that the deal was '[...] not being announced due to concerns that anti-China sentiment in Vietnam could result in possible pushback'. Our study thus investigates how citizens in host countries perceive Chinese investments in their countries' digital economy, and what factors determine their levels of approval or disapproval.

To tackle this knowledge gap, we focus on citizens' perceptions of Chinese investments in mobile payment platforms (CIM). Such investments are mainly carried out by Tencent and Alibaba's Ant Financial. These two own about 94% of China's domestic mobile payment market (OECD, 2020, 14), and in line with domestic market saturation in China (Iwamoto, 2020) have started to compete for

market share overseas. More specifically, we focus on investments in mobile payment platforms used in the Southeast Asian region. CIM in the Southeast Asian region is an appropriate case for investigation, because many mobile payment platforms used in Southeast Asia have received financial backing from either of these two investors. Among the first investments was Ant Financial's acquisition of a 20% stake in Thailand's Ascend Money in 2016. As part of the deal, Ant Financial planned to offer technical support to Ascend Money and its payment platform TrueMoney, aiming to expand its services and consumer pool (Sritma, 2016). Similarly, in 2017, Ant Financial and the Indonesian Emtek agreed to form a new digital payment joint venture, DANA, with Ant Financial providing financial investment and know-how and making its financial products accessible in Indonesia (Cadell, 2017).

Besides Southeast Asia's importance for CIM, the region has become a focal area of global politics and economics, which makes an investigation of citizens' perceptions of China particularly important. Amid the China-US trade tech dispute, some observers see emerging economic opportunities arising for countries in the Indo-Pacific (Choudhury, 2021). This comes as a result of Chinese manufacturers seeking to circumvent US tariffs by relocating their production sites (Schlacht, 2021), and some Southeast Asian countries being able to increase their global market share of tariffed goods (Goyer, 2021). Finally, Southeast Asian countries have historically been divided in their relations with China and, on the other hand, with the US (Aljazeera, 2021; Fitriani, 2018, p. 402–403; Hewison, 2018). Recurring political disputes and tensions between China and its neighboring Southeast Asian countries (Yahuda, 2020) not only impact the security situation of the region, but are increasingly of concern in world politics (Sim, 2021).

To investigate citizens' attitudes to CIM and ascertain whether and why citizens approve or disapprove of CIM, we conducted an online opinion survey in March 2021 in four selected Southeast Asian countries: Thailand, Malaysia, Indonesia, and the Philippines. We selected these four countries because they are among the major recipient countries of CIM. In addition, these countries show variations in their opinions of China, as well as in their economic and political relations with China, ranging from close economic ties (as is the case with Thailand, Malaysia and Indonesia) to countries experiencing political tensions with China, especially in the form of territorial disputes (such as Malaysia, Indonesia, and the Philippines). We expect to identify overarching explanatory factors which are applicable across cases, as well as context-specific dimensions, as a result of these variations.

Our analysis shows high levels of approval of CIM among the surveyed citizens across all selected countries. Levels of approval are highest for Thailand and Malaysia, and lower for Indonesia and the Philippines. These findings are surprising. This is because our results also show that a majority of all respondents mention domestic, Western, or other Asian companies, rather than Chinese companies, when asked who they prefer to build other physical infrastructure, such as roads, railway and energy-related projects, in their countries. Similarly, ISEAS finds in its State of Southeast Asia 2021 survey that citizens in ASEAN countries hold increasingly negative perceptions of China (Ha, 2021); and a study by the Pew Research Centre shows that the proportion of Southeast Asian citizens holding positive views of China is declining (Silver et al., 2019). We find the answer to these surprisingly high approval rates of CIM of citizens across all of the selected countries in individual-level factors of perceived personal gain. In fact, the respondents believe that

the perceived benefits of CIM outweigh the perceived risks. In contrast, China-specific factors, such as geopolitical concerns, have less explanatory influence and matter only in specific contexts.

Our findings make several contributions. We contribute to the broader literature on overseas investment by expanding research on perceptions of China and its global presence, which, so far, produced inconclusive results. While some find perceptions of China held in host countries to be rather neutral or positive (e.g., Chu et al., 2015; Hanusch, 2012; Nassanga & Makara, 2016), others identify them as rather negative (e.g. Wang & Elliot, 2014). Furthermore, by focusing on overseas investments in the digital economy, our research provides new insights into the ways in which different types of investments are perceived. Projects in the digital economy differ from other physical infrastructure and resource projects in their usage of huge amounts of personal data. Personal data can almost be considered a public good, which can be shared nearly infinitely (Liu, 2021, p. 47); as such, individuals using digital technologies in their daily lives have almost no control over who collects, stores, sells, and analyzes their online traces, and, eventually, steers their individual behavioral patterns. While some studies have investigated perceptions of Chinese natural resources projects, such as in the copper (Yan & Sautman, 2013) and coal industries (Sautman & Yan, 2014), more knowledge is crucial to understand citizens' perceptions against the backdrop of global digitalization and online behavioral data becoming a core interest for companies and governments.

Lastly, we expand findings on technology acceptance to countries in Southeast Asia. Previous research investigated citizens' perceptions of China's digital technologies domestically (Su et al., 2021) and in different socio-political contexts (Kostka et al., 2021; Kostka & Habich-Sobiegalla, 2021), and found that levels of acceptance of issues, such as facial recognition cameras or digital contract tracing, are lower in Western countries than in China (Kostka et al., 2021; Kostka & Habich-Sobiegalla, 2021). Our research expands upon these works by focusing on Southeast Asian countries.

Theoretical framework

To explain levels of approval and disapproval among citizens of selected Southeast Asian countries towards CIM, we test eleven hypotheses in three dimensions: 1) Chinese risk and benefit factors, 2) domestic factors, and 3) individual factors.

Chinese risk and benefit factors

In a first step, we investigate what kind of risks respondents believe that China brings to their countries, and we expect general, negative perceptions of China to also impact how citizens view CIM. In fact, negative perceptions of China by sections of the populations in Southeast Asian countries have repeatedly been manifested in protests, and have thereby put pressure on politicians - for instance during recurring public protests in the Philippines against President Rodrigo Duterte's perceived realignment with Beijing (Robles, 2019). Viewed more broadly, ISEAS (Ha, 2021) finds in a study that levels of distrust in China in all ASEAN

countries are higher than levels of trust, and that these levels of distrust have increased from 51% of the respondents in 2019 to 63% in 2021. At the same time, the respondents who perceive China as a revisionist power has increased from 38% in 2020 to 46% in 2021. In addition, 72% of the respondents mentioned that they are concerned about China's increasing economic influence, and 89% mentioned anxiety related to China's political clout in Southeast Asia (Ha, 2021). To explain citizens' perceptions of China, Yerima (2020, p. 21) uses interviews and focuses on perceptions of 'the rise of China' held by Indonesian diplomats and scholars. The author finds that views of China as an 'enemy' or 'imperialist' predominate, and not the 'ally' image.

These attitudes are also found in other socioeconomic and cultural contexts, such as Latin American and African countries. Armony and Velásquez (2015) focus on Latin American countries and find that negative perceptions of China tend to be more prevalent among individuals who believe that China holds a great deal of influence over their country. Relatedly, Wang and Elliot (2014) focus on African countries and identify negative views due to the perceived insufficient quality of Chinese products and infrastructure provision, as well as to unlawful business practices and the perceived negative environmental impacts of Chinese infrastructure projects (Wang & Elliot, 2014, p. 1030). Based on this literature, we hypothesize that *citizens' approval of CIM is higher among citizens who perceive fewer risks that China might bring to their countries (H.1)*. Specifically, we ask respondents what kind of risks they perceive China to bring to their countries, and offer the following six choices: risks to democracy; environmental risks; military risks; workers' safety risks; economic risks; and cultural risks. In addition to asking citizens what general risks they believe China brings to their countries, we also asked citizens what kind of specific risks they see associated with CIM. We hypothesize that *citizens' approval of CIM is higher among citizens who perceive CIM not to bring risks (H.2)*. As for survey questions, we offered the following three answer choices: crowding out of domestic companies; dependency on China; and external control over one's own country's economy.

In addition to Chinese risk factors, we also test several possible perceived benefits that China might bring to the respondents' countries in general. In fact, research has also identified positive views of China, especially in emerging economies (Chu et al., 2015; Hanusch, 2012; Nassanga & Makara, 2016; Wang & Elliot, 2014). Hanusch (2012, p. 494) finds that opinions of China in some African countries are neither better nor worse compared to opinions held vis-à-vis Western countries (Hanusch, 2012, p. 494). The occasionally negative images about China's presence in African countries, as is portrayed in the Western press (Yan & Sautman, 2013; Zhao, 2014), do not necessarily correspond to public perceptions in the host countries themselves (Sautman & Yan, 2009, 2014). For instance, Sautman and Yan (2009, p. 738) find in their surveys, carried out in nine African countries, that respondents were in favor of Chinese business activities in their countries when these activities helped local economies. Similarly, studies also confirm levels of appreciation of Chinese investment among the public when it goes hand-in-hand with poverty alleviation, humanitarian assistance, the provision of goods, investment, tourism, and Chinese knowledge of agriculture (Hanusch, 2012; Wang & Elliot, 2014; Nassanga & Makara, 2016). Based on this literature, we assume that *citizens' approval of CIM is higher among citizens who are more receptive towards*

the perceived benefits China might bring to their countries (H.3). We therefore offered six benefit choices to the survey respondents: economic growth; good quality products; education opportunities; service provision; employment opportunities; and infrastructure provision.

Domestic factors

In addition to the kinds of risks and benefits respondents associate with China, we also explore whether citizens' perceptions of the domestic economic and political situation of the country they live in are associated with how they view CIM. In essence, Armony and Velásquez (2015) find that 82% of the respondents who rate their own country's economic situation worse compared to the previous years also hold negative perceptions of China's influence. On a similar note, Wang and Elliot (2014, p. 1030) find that individuals are more likely to hold negative views of China when they are less satisfied with their personal employment and economic situations – a situation that is likely due to the perceived competition coming from the influx of Chinese workers. Similarly, Hearn (2012) investigates perceptions of China in Mexico and Cuba and finds that negative perceptions of China increase in line with fears regarding the domestic economies' competitiveness. We therefore hypothesize that *citizens' approval of CIM is higher among citizens who view their countries' economies as better than they were five years ago (H.4).* On the other hand, Chinese investment might also bring opportunities to weak economic sectors, contribute to the development of local economies, and provide goods (Sautman & Yan, 2009, p. 738; Wang & Elliot, 2014, p. 1030). We thus assume that *citizens' approval of CIM is higher among citizens who tend to be less satisfied with the mobile payment services in the country they live in (H.5).*

From a political angle, we also expect citizens' levels of trust in their domestic institutions, including government and the police, to play a role in how they view CIM. Armony and Velásquez (2015) find that citizens who are more skeptical about their countries' state institutions' ability to protect its citizens also hold more negative views of China. This is because countries with weak state institutions might be unable to protect their own national interests vis-à-vis the interests of other countries. Regarding acceptance of technologies that collect and use personal data, especially surveillance technologies, Pavone and Degli Esposti (2012) find that trust in political institutions enhances citizens' positive perceptions of these technologies, due to most public attention being paid to their benefits rather than their risks. We hypothesize that *citizens' approval of CIM is higher among citizens who have higher levels of trust in their domestic institutions, such as government and police (H.6).*

Additionally, following theories of elites framing an issue to gain support (e.g. Fearon & Laitin, 2000), we also assume that a country's perceived official government rhetoric towards China influences how citizens view Chinese investments in general and, hence, how they also view CIM. We thereby follow Sautman and Yan (2009, p. 730) who find that the '[m]ain determinants of African perspectives are not 'social factors' but how national political discourses (...) play out (...), where ruling elites and oppositions (...) interpret links with China.' We therefore ask how citizens perceive their government's attitude towards China. We hold that

citizens' approval of CIM is higher among citizens who also perceive the attitude of their government towards China to be more positive (H.7).

Individual factors

Finally, we consider what individual personal benefits and risks respondents associate with CIM, and how these CIM-related factors relate to citizens' approval rates of CIM. A large body of research provides evidence that attitudes to technology are a key factor influencing the acceptance of new digital technologies and innovations. In a first step, we expect citizens' views of CIM to depend on individuals' behavior towards the intensity of mobile payment usage. A study by Buckley and Nurse (2019) on the acceptance of biometric data shows that familiarity with technology increases technology acceptance. Technology optimists are also more likely to accept new innovations (Modahl, 1999; Edison & Geissler, 2003), and are more likely to have a technological affinity (Edison & Geissler, 2003). As a crude measure of technology affinity, we use frequency of mobile payment usage. We expect frequency of mobile payment usage to be important for citizens' approval rates of CIM, since citizens who use mobile payment services more intensively are possibly more likely to do so because they usually enjoy the technological advantages (Chen et al., 2021). We hypothesize that *citizens' approval of CIM is higher among citizens who use mobile payments more frequently (H.8).*

Relatedly, we expect that perceived personal gains increase citizens' levels of approval of CIM. Research found that the degree to which individuals accept or oppose the collection, storage, and usage of their data depends on the perceived benefits they receive in exchange for providing their personal data (Kostka, 2019). We assume that *citizens' approval of CIM is higher among citizens who perceive personal benefits from CIM (H.9).* In the survey, we asked specifically about four kinds of perceived benefits of CIM: more merchants linked to e-commerce; better mobile payment app usability; more vouchers, promotions and price reductions; and more mobile payment providers linked to e-commerce.

In a last step, we inspect individual data privacy concerns. Digital technologies produce data, which can be used almost infinitely and can travel across borders (Liu, 2021). Citizens of other countries often fear that Chinese tech companies, even private ones, share data they collected overseas with the Chinese government (Liu, 2021, p. 47). Concerns over privacy violations and the misuse of data may cause citizens' resistance to digital technologies (Degli Esposti and Santiago Gómez, 2015). Mobile payment services might also spark privacy concerns because of their use of personal financial transaction data (Johnson et al., 2018; Kim et al., 2016). Data privacy concerns might therefore be a hindrance to citizens' acceptance levels of digital technologies (Kostka et al., 2021). We test whether *citizens' approval of CIM is higher among citizens who believe CIM to cause worsening data privacy (H.10).* However, research has also found that data privacy concerns are not necessarily a hindrance to the usage of digital technologies. In fact, data privacy concerns can be a by-product of increased usage of digital technologies. This seemingly counterintuitive data privacy paradox occurs because citizens who use digital technologies more intensively are also more likely to benefit from their advantages (Chen et al., 2021). Thus, citizens may trade-off data privacy for perceived individual advantages, such as increased convenience and security (Acquisti,

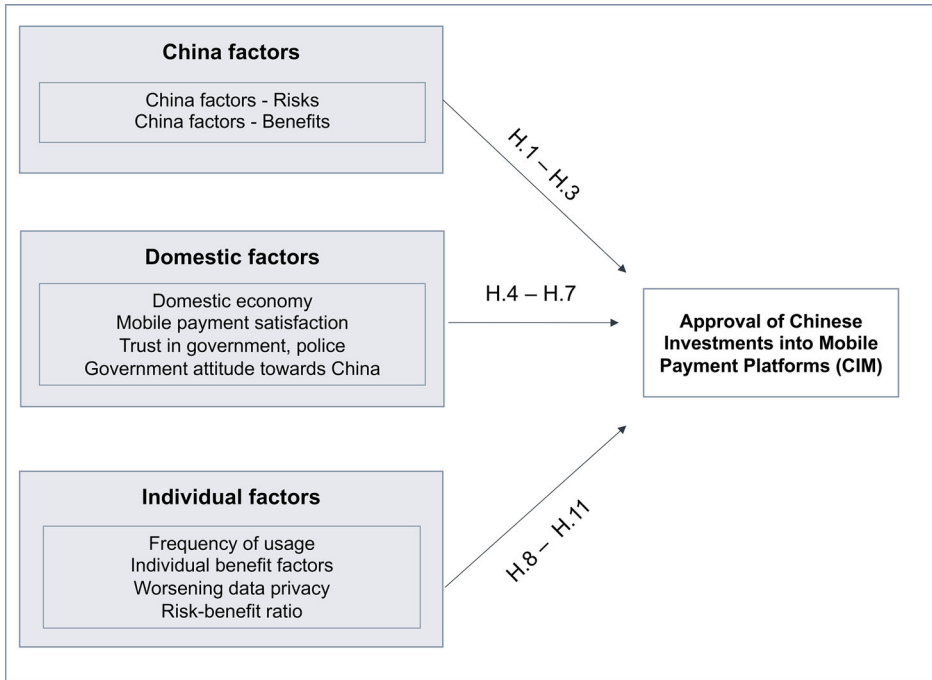


Figure 1. Explanatory framework.

2004; Davis & Silver, 2004; Kostka et al., 2021). We thus hypothesize that *citizens' approval of CIM is higher among citizens who believe that the benefits of CIM outweigh the risks (H.11)*.

Besides these three dimensions of Chinese risk and benefit factors, domestic factors, and individual factors, we also included socio-demographic control variables, namely gender, age, education, and income, in our framework (Figure 1).

Method and data

Case selection

We selected Chinese investments in Southeast Asian mobile payment services over other kinds of global investments in the digital economy. Focusing on CIM allows for inspecting the same dependent variable in different countries, because CIM is widely spread across the Southeast Asian region. This differs from other digital investments, such as smart city projects or submarine fiber optic cables, which are concentrated in some countries but are absent in others. Furthermore, we expect CIM to be a case more likely to spark negative perceptions due to possible privacy concerns in line with personal financial transaction data being used (Johnson et al., 2018; Kim et al., 2016).

The Southeast Asian region by itself is essential for investigation, as it is seen to be one of the most important markets for mobile payment platforms. Southeast Asian fintech companies have developed numerous mobile payment applications, such as GCash, LinkAja, and Coins.ph, which advertise themselves to consumers

with attractive rebate incentives and allow for sending money to family and friends, as well as paying bills and ordering products (Coins.ph, n.d.). Southeast Asia also has a high internet penetration rate, amounting to almost 90% of the population in Malaysia and more than 70% in Indonesia (Statista, 2021a). Furthermore, while China and India together account for 70% of worldwide mobile e-payment users (de Sartiges et al., 2020), Southeast Asia has seen a drastic growth in the number of mobile payment users, with more than 50% of citizens now using their smartphones to make payment transactions (Felicitas, 2019). Relatedly, Southeast Asian countries witness a lack of or minimal usage of bank accounts and credit cards, while there is an increasing number of start-ups in the related field (de Sartiges et al., 2020). Governments of some Southeast Asian countries have developed programs furthering the use of mobile payments. For instance, in Thailand, government agencies cooperate with stakeholders from industries, financial institutions, and fintech companies (Fintechnews Singapore, 2019), and in Malaysia the government is working with mobile payment firms, providing a financial support program worth 151 million dollars (Hazlin, 2020). Similar developments are taking place in Indonesia, with the government having launched a non-cash movement in 2014 (Phua, 2020), and in the Philippines, where the government is promoting the use of digital currencies while also expanding e-payment options for government services (Endo, 2020). The Southeast Asian mobile e-payment market currently appears to be one of overheated competition between a large number of players with, for example, 40 licenses for mobile payment services having been issued in Malaysia and the Philippines (de Sartiges et al., 2020). Many of the new start-ups in the mobile payment services industry urgently require financial investments, and Chinese companies are eager to provide some of the financial backing (de Sartiges et al., 2020).

Yet, investments by Chinese companies in mobile payment providers active in Southeast Asia are spread unequally across the region. Based on this unequal distribution we selected four Southeast Asian countries, which we found empirically and theoretically important, because they are among the major countries where mobile payment providers have received Chinese investments: Thailand, Malaysia, Indonesia, and the Philippines (see Figure 2). Other countries, such as Vietnam, have also received mobile payment investments, namely into eMonkey. However, investments in other Southeast Asian countries remained comparatively limited in terms of both number and size.

What also makes these four selected countries interesting is the variation in their economic and political relations with China. In 2020, China's investment stock in Indonesia amounted to 18 billion USD compared to 10 billion USD in Malaysia, 9 billion USD in Thailand, and 1 billion USD in the Philippines (Ministry of Commerce et al., 2021, p. 152–153). Furthermore, changes in government in recent years have contributed to changes in the countries' multidimensional relations with China. While Thailand has turned towards China since the military junta's rule in 2014 (Hewison, 2018), public anti-government protests in 2020 and 2021 on the other hand expressed solidarity with protestors in Hong Kong (Yang, 2021). Malaysia, despite cancelling several key projects of the Belt and Road Initiative during Mahathir Mohammad's second term, used to follow a hedging strategy towards China by balancing it with a friendly relationship with other Asian countries and the US (Gerstl, 2020). Indonesia was also found to have

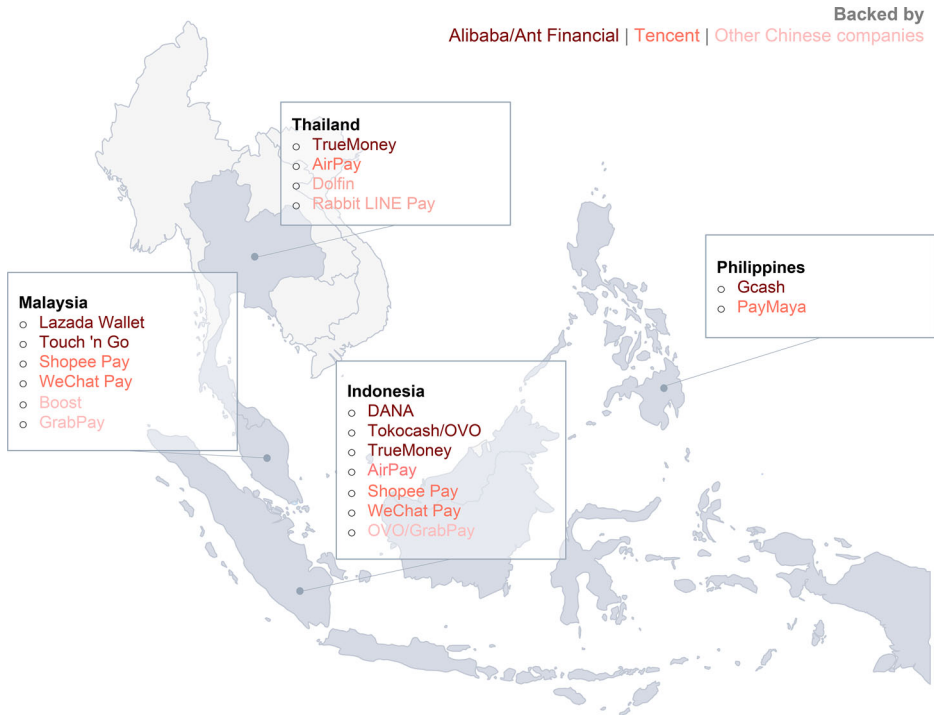


Figure 2. Chinese-backed e-wallets used in Southeast Asia.
Source: DealStreetAsia (2020) and authors' digital investments database

maintained a balanced relationship between China and the US (Fitriani, 2018, p. 402–403), whereas in 2021, the Philippines sought to secure increased US military commitments while showing disappointment with the US's weak support of the country vis-à-vis China's military presence along the Scarborough Shoal (Aljazeera, 2021). Moreover, previous studies have found variations in these countries' citizens' general perceptions of China. Citizens' views on China were historically more favorable in Thailand and Malaysia, amounting to 72% and 74% respectively of the respondents, according to a 2014-research by the Pew Research Center – compared to 66% in Indonesia and 38% in the Philippines (Pew Research, 2014).

Survey data

We conducted a large cross-national online survey in the four selected Southeast Asian countries during March 2021, using an international survey company. The survey company recruits respondents via panels and river sampling, and runs 'open enrolments,' while also recruiting 'by invitation' by sending email invitations and phone alert messages on panel community sites. It also works with online affiliated partners and targeted websites. The company's panels for the four countries encompass around 100,000 individuals in total. Participants received commercial rewards such as shopping and dining vouchers and gift cards.

In our survey, participants were sampled based on age (18–64), gender, and country. Our total sample size comprises 7,275 respondents. We excluded responses from the final sample if they provided invalid or inconsistent answers. This was the case when a survey was completed within a very short period of time, if the same login ID had been used more than once, or if built-in consistency checks were not met. In total, 275 respondents were cleared from the dataset as a result of these criteria. 796 respondents abandoned the survey ahead of completion, and the completion rate was thus 85%. Our final sample consists of a total of $N=6,204$ respondents, which includes 1,554 for Thailand, 1,543 for Malaysia, 1,544 for Indonesia, and 1,563 for the Philippines. 50.27% of our respondents identified with ‘male,’ 49.53% with ‘female,’ and 0.19% with ‘other.’

Our survey consisted of six parts and a total of 33 questions: overall satisfaction with the domestic situation (3 questions), perceptions of China related to one’s own country (6 questions), tech affinity (3 questions), tech awareness (3 questions), benefits and risks (9 questions), and socio-demographic factors (9 questions). Our dependent variable is ‘approval of Chinese investments in mobile payment platforms (CIM)’. The related question reads as follows: ‘To what degree do you approve or disapprove that Chinese companies invest in mobile payment platforms used in the country you currently live in?’. Answer options included five categories (1 = strongly disapprove, 2 = somewhat disapprove, 3 = neutral, 4 = somewhat approve, 5 = strongly approve). [Table 1](#) presents an overview of the variables, questions, and hypotheses.

Before beginning to answer a survey, participants received only very basic, non-leading information about the survey, in order to avoid biases existing in the sample population due to the survey’s content. In this case, we included a short statement which briefly described the fact that Chinese companies were investing in Southeast Asian mobile payment platforms. We used ordered logistic regression for the analysis and also checked for multicollinearity by calculating variance inflation factors (VIF) for all of the variables. VIFs between 1.09 and 1.47 allow us to rule out multicollinearity (see [Table S3](#) in the [supplementary material](#)).

Limitations

Our findings are based on a non-probability sampling method which is subject to a number of limitations. First, the sample is biased due to a ‘coverage bias’ (Van Dijk, 2005), as our population resembles the internet-connected population in these four countries, but subpopulations without access to the Internet are excluded. Yet, it is noteworthy that the Internet-connected population is a relevant sample group for our survey, because using mobile payment services requires access to online services. Similarly, our surveyed population might be more prone to using mobile payment services than overall populations. On average, only 0.9% of all our respondents reported never using mobile payment services. In contrast, Felicitas (2019) finds this share to be higher, with approximately only 50% of the population in Southeast Asia making financial transactions using their mobile phones. Furthermore, our findings are biased towards the younger sections of a population. Our sampling on age was based on the countries’ censuses, but included larger groups of younger people. Most notably, respondents above 55 years old are under-represented compared to younger groups. This might again create a bias towards

Table 1. Measurements and hypotheses.

Category	Measurement	Hypothesis
China factors		
<i>China factors - Risks</i> What kind of risks do you believe China brings to the country you live in? What would be the risks of Chinese investments into mobile payment platforms used in the country you live in?	Risks to democracy Environmental risks Military risks Workers' safety risks Economic risks Cultural risks For all listed above: 0 = No, 1 = Yes Crowding out Dependency on China External Control For all listed above: 0 = No, 1 = Yes	Citizens' approval of CIM is higher among citizens who perceive fewer risks that China might bring to their countries (H.1) Citizens' approval of CIM is higher among citizens who perceive CIM not to bring risks (H.2)
<i>China factors - Benefits</i> What kind of benefits do you believe China brings to the country you live in?	Economic growth Good quality products Education opportunities Service provision Employment opportunities Infrastructure provision For all listed above: 0 = No, 1 = Yes	Citizens' approval of CIM is higher among citizens who are more receptive towards the perceived benefits China might bring to their countries (H.3)
Domestic factors		
<i>Domestic economy</i> Compared to five years ago, do you think the economy of the country you live in is doing ...? <i>Mobile payment satisfaction</i> How satisfied are you with the mobile payment services in the country you live in? <i>Trust in government, police</i> How much do you trust institutions in the country you live in, such as government and police? <i>Government attitude towards China</i> How do you perceive the government's attitude of the country you live in towards China?	1 = Much worse, 2 = Somewhat worse, 3 = Remain at the same level, 4 = Somewhat better, 5 = Much better 1 = Very unsatisfied, 2 = Somewhat unsatisfied, 3 = Neither unsatisfied nor satisfied, 4 = Somewhat satisfied, 5 = Very satisfied 1 = Not at all, 2 = Very little, 3 = Neutral, 4 = Somewhat, 5 = A lot 1 = Very negative, 2 = Somewhat negative, 3 = Neutral, 4 = Somewhat positive, 5 = Very positive	Citizens' approval of CIM is higher among citizens who view their countries' economies as better than they were five years ago (H.4) Citizens' approval of CIM is higher among citizens who tend to be less satisfied with the mobile payment services in the country they live in (H.5) Citizens' approval of CIM is higher among citizens who have higher levels of trust in their domestic institutions, such as government and police (H.6) Citizens' approval of CIM is higher among citizens who also perceive the attitude of their government towards China to be more positive (H.7)
Individual factors		
<i>Frequency of usage</i> How often do you use mobile payments? <i>Individual benefit factors</i> What would be the benefits of Chinese investments into mobile payment platforms used in the country you live in? <i>Worsening data privacy</i> What would be the risks of Chinese investments into mobile payment platforms used in the country you live in?	0 = Never, 1 = Yearly, 2 = Monthly, 3 = Weekly, 4 = Daily More merchants Better mobile payment app usability More vouchers, promotions More mobile payment providers For all listed above: 0 = No, 1 = Yes 0 = No, 1 = Yes	Citizens' approval of CIM is higher among citizens who use mobile payments more frequently (H.8) Citizens' approval of CIM is higher among citizens who perceive personal benefits from CIM (H.9) Citizens' approval of CIM is higher among citizens who believe CIM to cause worsening data privacy (H.10)

(continued)



Table 1. Continued.

Category	Measurement	Hypothesis
<p><i>Risk-benefit ratio</i> Do you think that the benefits or the risks of Chinese companies investing into mobile payment platforms used in the country you live in are stronger?</p>	<p>Likert scale risks to benefits 1–10</p>	<p>Citizens' approval of CIM is higher among citizens who believe that the benefits of CIM outweigh the risks (H. 11)</p>
<p>Socio-demographics Age Gender Education Income</p>	<p>In years (open) 1 = Male, 2 = Female 1 = I don't have a formal education, 2 = High school diploma, 3 = Vocational training, 4 = Bachelor's degree, 5 = Master's degree or higher 1 = Low income, 2 = Low-middle income, 3 = Middle income, 4 = Middle-upper income, 5 = Upper income</p>	

the more tech-aligned parts of the population (18–24, 20%; 25–34, 27%; 35–44, 23%; 45–54, 19%; 55–64, 11%), who, at the same time, might hold generally more positive views of China (Silver et al., 2019). Table S1 in the appendix presents summary statistics on the countries' populations based on census data and our sample population to illustrate the bias.

The rewards-based recruitment might also have resulted in participants associating the positivity of incentives with positivity to CIM. As a result, participants in our survey may already have a particular affinity for technology which could positively affect their stance regarding technology adoption, which by extension would include a more positive attitude to CIM.

Furthermore, an inherent limitation of surveys lies in their structured nature, which does not allow for requests for clarification from the respondents. While we sent our survey for pilot tests to several individuals ahead of the field time to check whether questions were understood in the right way, it is possible that respondents answered questions differently than we had intended due to possible misunderstandings. Finally, some questions might also have been perceived as sensitive or uncomfortable. While we included a 'prefer not to answer' option for questions we deemed to fall into this category, this does not rule out the possibility that respondents might not have provided their real opinions.

Results: Explaining approval of Chinese investments in mobile payment platforms

Based on our analysis, we find very high levels of approval of CIM from citizens across the four countries. 57% of the respondents reported to somewhat approve or strongly approve of CIM, compared to 9% of the respondents reporting to somewhat disapprove or strongly disapprove of CIM, and 34% being neutral. Figure 3 shows that approval rates are highest in Thailand, with 69% of the respondents somewhat or strongly approving of CIM. This is followed by Malaysia, with levels of approval amounting to 58%. Levels of approval in Indonesia and the Philippines are lower, amounting to 52% and 50% respectively. The approval rates are much higher than rates for disapproval of CIM, which are lowest in Thailand

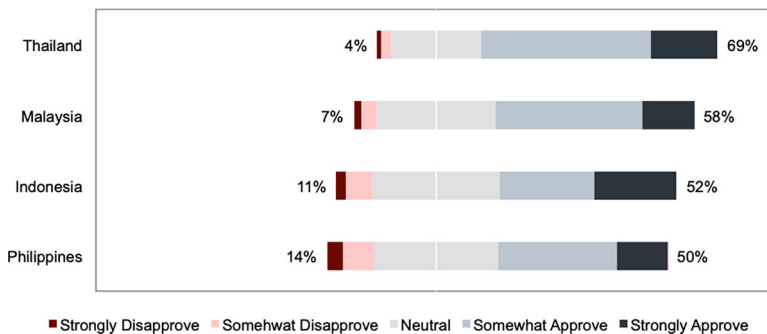


Figure 3. Citizens' approval rates of CIM in four Southeast Asian countries (in % of respondents). Note: Citizens were asked 'To what degree do you disapprove or approve that Chinese companies invest in mobile payment platforms used in the country you currently live in?'

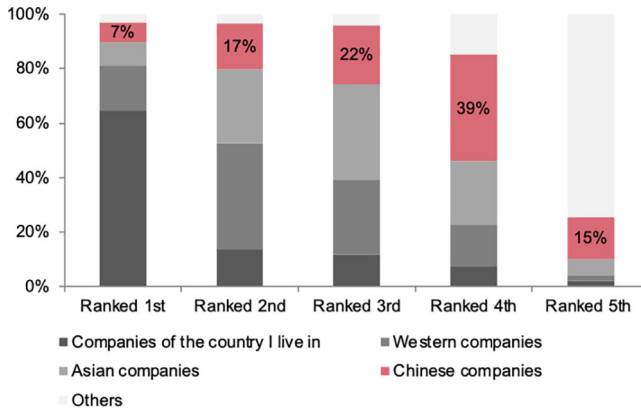


Figure 4. Citizens' preferences in infrastructure provision (in % of respondents).

Note: Citizens were asked 'Who do you prefer to build infrastructure (such as roads, railways, energy) in the country you live in?'

and Malaysia, at only 4% and 7%, while amounting to 11% in Indonesia and 14% in the Philippines.

These high approval rates of CIM among surveyed citizens seem surprising. Essentially, we also asked respondents who they would prefer to build other, physical infrastructure, such as roads and railways, in their countries, and gave five choices (companies of the country I live in; Western companies; Asian companies (except China); Chinese companies; and others). Respondents were asked to rank these options according to their preference. As shown in Figure 4, an interesting finding is that only a minority (7% of the respondents) said they would prefer Chinese companies to build infrastructure in their countries. On the other hand, 39% of the respondents ranked China fourth. In contrast, respondents prefer domestic companies, followed by other Asian companies, and then Western companies, as investors. To explain these comparatively high levels of approval of CIM by the respondents in the four selected Southeast Asian countries, the subsequent sections test our eleven hypotheses.

Chinese risk and benefit factors

In a first step, we assessed whether respondents' views of China in general are associated with the way in which they view CIM, and tested six possible risk factors. We expected that *citizens' approval of CIM is higher among citizens who perceive fewer risks that China might bring to their countries (H.1)*. Of these six potential risk factors, our analysis shows that in Thailand and Indonesia, perceived risks to democracy and environmental risks are significantly and negatively associated with CIM. In Malaysia, citizens who believe China to bring risks to democracy are also more likely to be in the group of citizens with higher approval rates of CIM. Finally, in the Philippines, environmental risks, military risks, and workers' safety risks are significantly and negatively associated with approval rates of CIM. Economic risks and cultural risks are not associated with approval rates of CIM in any of the countries. As a result, we accept H.1 only partially, namely for selected risk factors and selected countries.

In addition to the general risk factors, we investigated more specific CIM-related risk factors. We find that neither risks of decreased dependency on China nor risks of increased external control over one's country's economy are significantly associated with CIM approval rates. The unique exceptions are perceived risks of increasing domestic economic competition with domestic companies being crowded out. This risk factor is significantly and negatively associated with approval rates of CIM in all four countries. These findings confirm H.2 only partially, that is only for risks of domestic competition: *citizens' approval of CIM is higher among citizens who perceive CIM not to bring risks (H.2)*.

Besides, we inspected several general benefit factors China is perceived to bring to the respondents' countries. Findings showed varying results. In Thailand, only economic growth and good quality products, of a total of six benefit choices, are significantly and positively associated with citizens' approval rates of CIM. In Malaysia, economic growth and education opportunities show significant and positive results. In Indonesia and the Philippines, more services are significantly and positively associated with approval rates of CIM, while economic growth also shows significance in the Philippines. As a result, we confirm H.3 partially, and again in a country- and factor-specific manner, namely that *citizens' approval of CIM is higher among citizens who are more receptive to the perceived benefits China might bring to their countries (H.3)*

Domestic factors

As our second dimension, we inspected whether respondents' perceptions of their own countries play a role in how respondents view CIM, both from economic and political perspectives. First, we investigated how citizens view their countries' current economies compared to how they viewed it five years ago. In Thailand and the Philippines, we found a significant and positive association between the positivity of the outlook on economic growth in the last five years and approval rates of CIM, but found no such significant relationship in Malaysia and Indonesia. Overall, only 20% of the respondents in Thailand and 39% in Malaysia perceive their economies to be better off compared to five years ago, whereas the same is true of 54% of the respondents from Indonesia and of 49% of the respondents in the Philippines (see [Figure S1](#) in the [supplementary material](#)). We therefore confirm H.4 only for Thailand and the Philippines. This means that, in these two countries, *citizens' approval of CIM is higher among citizens who view their countries' economies as better than they were five years ago (H.4)*.

Furthermore, we looked at how satisfied respondents were with the mobile payment services in their countries. The results show a very strong significant positive relationship between this opinion and CIM approval in Thailand and Indonesia, but no significant association in the other two countries. We therefore reject H.5, which expected that *citizens' approval of CIM is higher among citizens who tend to be less satisfied with the mobile payment services in the country they live in (H.5)*. Overall, respondents in all four countries claim to be very satisfied or somewhat satisfied with the mobile payment services in their countries. 78% of the respondents from Thailand claim to be very or somewhat satisfied with the mobile payment services in their country (compared to 4% reporting to be only somewhat or very unsatisfied); 65% reported the same in Malaysia (13% reported being

somewhat or very unsatisfied in each of these countries); 71% in Indonesia (compared to 8% reporting somewhat or very unsatisfied); and 67% in the Philippines (compared to 13%) (see [Figure S2](#) in the [supplementary material](#)).

Testing political aspects, we assessed whether respondents' political trust in their home countries' institutions, such as government and the police, are associated with how citizens view CIM. We found a significant positive relationship between trust in domestic institutions and CIM approval only for Indonesia, and therefore confirm H.6 only for this country: *citizens' approval of CIM is higher among citizens who have higher levels of trust in their domestic institutions, such as government and police (H.6)*. In fact, only 27% of the citizens in Thailand report some or high levels of trust in the domestic institutions. These levels amount to 35% in Malaysia, 55% in Indonesia, and 39% in the Philippines (see [Figure S3](#) in the [supplementary material](#)). In a last step, we looked at whether the perceived attitudes towards China among political elites might be associated with how citizens view CIM. Our findings show that a perceived positive government attitude towards China has a strong and significant positive relationship with CIM approval rates for all four examined countries, which thus supports H.7, namely that *citizens' approval of CIM is higher among citizens who also perceive the attitude of their government towards China to be more positive (H.7)*.

Individual factors

In a last step, we investigated individual benefit factors directly related to CIM. Our variable for technology affinity shows varying results. With regards to the frequency of using mobile payments and its relation to CIM approval, we found a significant and very strong positive association for Thailand, Malaysia, and the Philippines, but no significant association for Indonesia. We thus accept H.8 only for these three countries, where we indeed find that *citizens' approval of CIM is higher among citizens who use mobile payments more frequently (H.8)*. Based on our data, respondents in Thailand used mobile payments most frequently. That is, 68% of the respondents said they would use mobile payment services on a daily or weekly basis. This was followed by Malaysia, with 66% of the respondents. In Indonesia, 60% chose either of the two categories, whereas in the Philippines 54% chose those options. In contrast, 2% in both Thailand and Malaysia reported to use mobile payment services only on a yearly basis or not at all. In Indonesia, the figures were 3% and in the Philippines 4%.

Subsequently, we investigated whether the perceived benefits of CIM are more strongly associated with CIM approval or disapproval across all four countries. We measured four individual categories: more merchants; better mobile payment app usability; more vouchers, promotions and price reductions; and more payment providers linked to e-commerce. Our findings suggest that individual perceived benefit factors are significantly, positively, and very strongly associated with citizens' approval rates of CIM. This applies to almost all four categories across all countries. In Thailand, all of the categories show a significant and positive relationship with CIM approval rates, except for more mobile payment providers. In Malaysia, Indonesia and the Philippines all of the categories are positively significantly associated with citizens' approval rates of CIM. Hence, our findings suggest that citizens who believe in personal benefits from CIM are more likely to also have higher

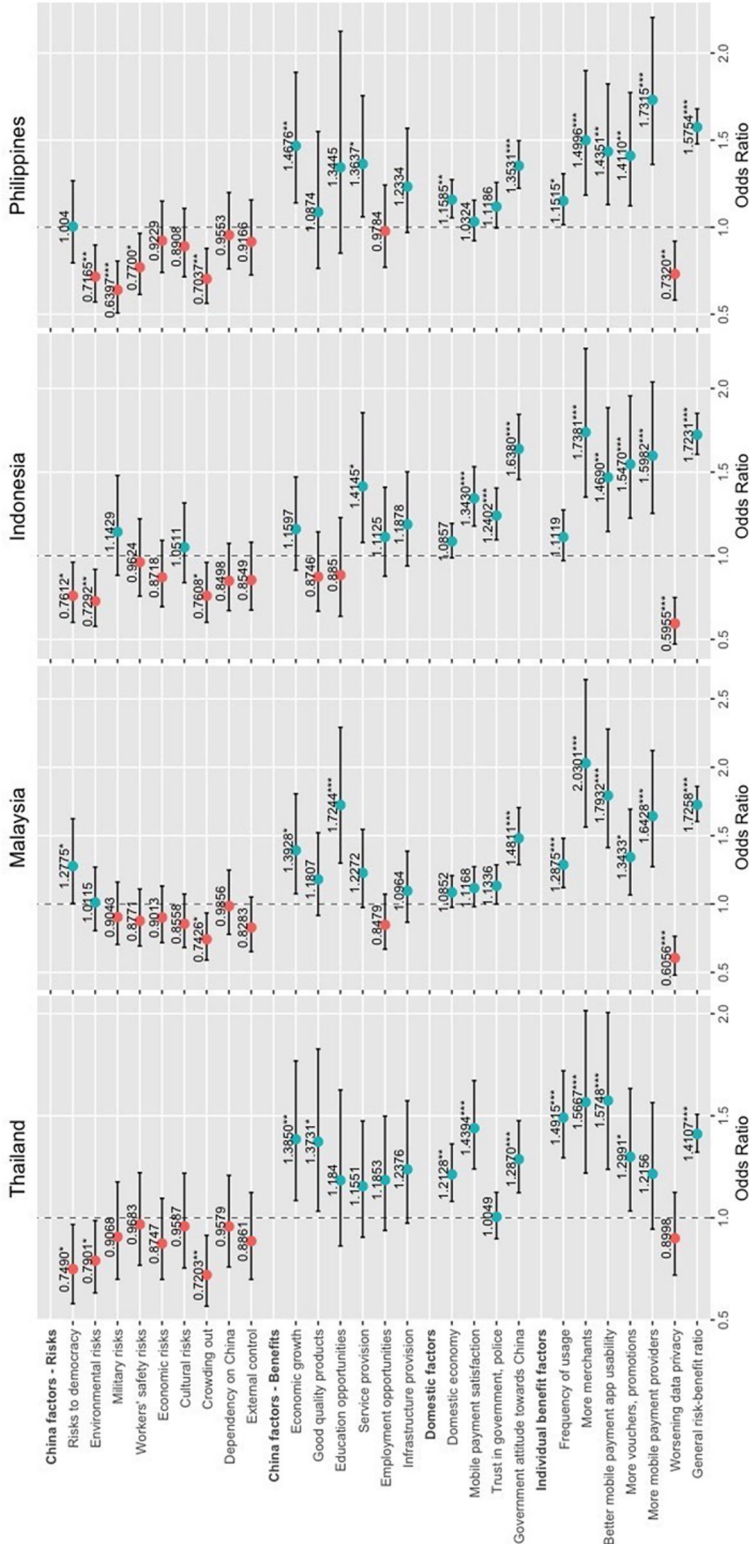


Figure 5. Odds ratios of effects on citizens' approval of CIM.
 Note: * $p < .10$, ** $p < .05$, *** $p > .01$

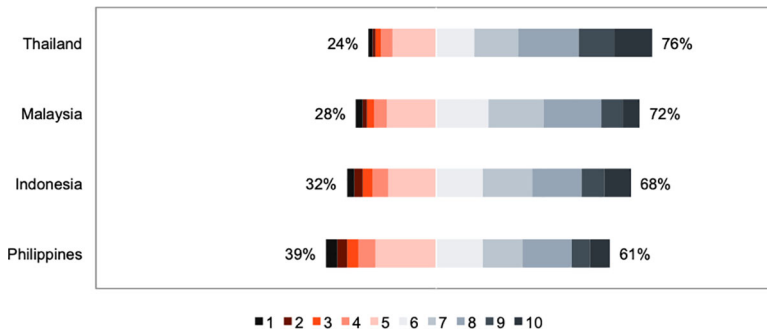


Figure 6. Citizens' perceived risk-benefit ratio of CIM in four countries (risks-1 to benefits-10).

Note: Citizens were asked 'Do you think that the risks or the benefits of Chinese companies investing in Southeast Asian mobile payment companies are stronger?'

approval rates of CIM. These findings thus confirm that *citizens' approval of CIM is higher among citizens who perceive personal benefits from CIM (H.9)*.

Finally, we ascertained whether concerns over data privacy are associated with citizens' approval rates of CIM. Our analysis shows a significant, strong, and even very strong negative relationship with approval rates of CIM across three of the countries, but not for Thailand. Except for Thailand, we therefore accept our hypothesis that *citizens' approval of CIM is higher among citizens who believe CIM to cause worsening data privacy (H.10)*. However, we also accept H.11 for all four countries, that is that *citizens' approval of CIM is higher among citizens who believe that the benefits of CIM outweigh the risks (H.11)*. Figure 5 illustrates the odds ratios of our results based on ordered logit regression.

Most of our socio-economic control variables, with the exception of age, were not significant in all four countries. The exception does suggest that younger citizens also have higher approval rates of CIM than older citizens.

Discussion

Individual benefit factors outweigh abstract and personal risks

Based on our analysis, survey respondents in the four selected Southeast Asian countries view the benefits of CIM as more important than the risks. Almost two thirds of the respondents viewed more choices of mobile payment platform providers and more merchants linked to e-commerce to be a major benefit of CIM. In addition, around half of the respondents regarded more vouchers, promotions and price reductions, as well as better usability of mobile payment apps, to be additional benefits of CIM. A possible explanation could be that the perceived personal material gains might appear to be more tangible and short-term in nature, whereas risks are more abstract and long-term. The variation of perceived benefits and risks across the four countries is also likely to provide some explanation for the variation in approval rates themselves. Figure 6 shows that a larger proportion of respondents in Thailand and Malaysia regarded the benefits of CIM to be much greater compared to the risks involved, amounting to 76% and 72% of respondents, respectively. In contrast, respondents in Indonesia who regarded the benefits as outweighing the risks amounted to 68%, and to 61% in the Philippines.

Relatedly, our findings show that technological affinity, measured in frequency of usage, might add explanatory value to the variation between the four countries. Respondents use mobile payment platforms for multiple purposes, including living consumption, public services, financial services, sending money to family and friends, mobility, online gaming, and shopping from Chinese websites. Yet, citizens in Thailand and Malaysia use mobile payments more frequently on a daily and weekly basis when compared to citizens in Indonesia and the Philippines, which suggests that citizens in Thailand and Malaysia might have a greater technological affinity, and might therefore be more receptive to CIM (see [Figures S4](#) and [S5](#) in the [supplementary material](#)).

Context-specific risk perceptions

In addition to individual benefit factors which are important in all four countries under investigation, we also identify some context-specific factors. These factors show levels of significance in some countries, but not in others. This applies, for instance, to the general risk factors. In Thailand, for example, 30% of the respondents believe that China brings risks to democracy to their country, a factor which is also significantly and negatively associated with approval rates of CIM. In fact, throughout 2020 and 2021 anti-government protests occurred in Thailand, and some protestors expressed solidarity with protest activities in Hong Kong against mainland China (Yang, 2021). Thus, citizens who felt that China does not bring accompanying risks to democracy were also more likely to hold positive views of CIM. Furthermore, in the Philippines, which has the lowest approval level of CIM, military risks show a significant and very strong negative association with approval rates of CIM. In essence, territorial disputes between China and the Philippines have been a recurring source of tension, especially over the Scarborough Shoal (Wong, 2014). Such disputes have been accompanied by protests, as was the case with the 2019 Philippines general protest against China's presence in these disputed sea areas (Robles, 2019). Similarly, both in the Philippines and in Indonesia, environmental risks are significantly and negatively associated with citizens' approval rates of CIM, and environmental protests have occurred in recent years against Chinese-funded energy projects. A series of environmental protests in the Philippines, which occurred in protest to a Chinese hydropower project designated to be constructed in an area that is home to indigenous communities (Santos, 2018), is one example. Similarly, environmental protests in Indonesia were directed against a Chinese hydropower project planned for a location in the rainforest, which protesters argued would fragment the habitat of endangered orangutans (Leahy, 2019). Hence, some factors show context-specific features as they emerge in specific political, social and economic environments in the respective host countries, while being absent in other contexts.

The limits of favorable views

The high positive approval rates of CIM displayed by citizens in the selected Southeast Asian countries do not mean that Chinese investors are, overall, generally welcomed as investors. Rather, as shown in [Figure 4](#) earlier, when citizens

were asked which companies they would like to provide other infrastructure, such as roads, railways, and energy infrastructure, in their countries, only 7% of the surveyed citizens ranked Chinese companies first, whereas all others ranked them below domestic companies, Western companies, and other Asian companies. Furthermore, the high levels of approval of CIM do not suggest that citizens welcome investments without concern; for instance, 50% of the respondents from Thailand said they would have negative feelings if Chinese companies had information about their financial transactions, and 50% of the respondents said they would feel positive or somewhat positive. 58% of the respondents from Malaysia said they would feel rather negative on this matter, followed by 60% of the Indonesian respondents and 70% of the respondents from the Philippines. Similarly, when given the option to consciously choose a company to provide mobile payment services, the majority of respondents indicated a preference for domestic companies, followed by a preference for Southeast Asian companies, with Chinese companies ranking third. Furthermore, 87% of the respondents ranked data privacy first to third (around 50% at first) on a scale of seven most significant factors² when choosing a mobile payment application. Relatedly, around half of the respondents reported having concerns over worsening data privacy as a result of CIM.

Hence, citizens' perceptions of CIM do not develop in a vacuum. Instead, our survey respondents view China's presence in the region with some skepticism. This is specifically reflected in the risk perceptions of respondents in these countries. In fact, 50% of the respondents in Thailand believe China brings environmental risks to their countries. These numbers amount to 44% in Malaysia, 43% in Indonesia, and 56% in the Philippines. Furthermore, 28% of the respondents in Thailand think China brings military risks to their countries, while 31% in Malaysia, 25% in Indonesia, and 56% in the Philippines hold this view. Finally, 30% of the respondents in Thailand believe China brings risks to democracy. These figures are even higher for Malaysia (36%), followed by Indonesia (38%) and the Philippines (50%).

Vitaly, these findings show that 'the appeal of the China model' is not by itself an explanation for citizens' high approval rates of CIM. In essence, citizens hold various perceptions of risk relating to China in line with critical views of China's economic presence in their countries. These risks, however, are more abstract, indirect, and long-term than the personal economic gains associated with CIM which are tangible, direct, and short-term. As a result, citizens rate the benefits associated with CIM as more important than the risks. In turn, this finding suggests that China is gaining support among citizens of these selected Southeast Asian countries through economic means, despite these citizens' views on the existence of long-term risks as a result of China's presence in the region.

Conclusion

In this research, we explained levels of approval of Chinese investments in mobile payment platforms (CIM) among citizens of four selected Southeast Asian countries, as a case study of citizens' views on China's global digital reach. Based on an online survey conducted in Thailand, Malaysia, Indonesia, and the Philippines, with a total of 6,204 responses, our results show high rates of approval of CIM held by surveyed citizens in all of the examined countries. These levels of approval are highest for Thailand and Malaysia, followed by Indonesia and the Philippines.

We find that respondents' high approval rates are significantly associated with the respondents' perceived personal short-term benefits derived from CIM in all four countries, which are prioritized over long-term risks and include more choices between mobile payment service providers, more choices of merchants who are linked to e-commerce, and more price reductions, vouchers, and promotions. Since these individual factors play out in all the surveyed countries, despite their different economic and political relations with China, we hypothesize that citizens in other contexts might also behave in a personal benefit-maximizing manner, focusing on personal short-term gain even when perceiving abstract, long-term risks. This hypothesis aligns well with Davis and Meunier (2011) on the separation of business and politics in consumer behavior, and their finding that political disputes are rather unlikely to change consumer behavior (Davis & Meunier, 2011). Similarly, we also see consumers in other countries making use of technologies despite geopolitical tensions. For instance, the number of new users of TikTok, a Chinese entertainment app, increased by 85% in the US in 2020 (Statista, 2021b), despite that country's trade conflict with China. In a similar way, products from the US tech company Apple have remained high in popularity across China, as exemplified by the millions of pre-orders of the iPhone 13 in 2021 (Ye, 2021). Our results thus align closely with prior research on international perceptions of China, which found that citizens' perceptions of China tend to be more positive when citizens view China's presence as beneficial to their local economies (Hanusch, 2012; Nassanga & Makara, 2016; Sautman & Yan, 2009; Wang & Elliot, 2014). Aside from geopolitical considerations, research should therefore pay close attention to local economic aspects of the host countries' institutions' acceptance of overseas projects financed by investors from non-democratic countries in general, and from China in particular (Blanchard & Flint, 2017; Ferdinand, 2016).

However, citizens' high approval rates of CIM do not mean that personal gains can be taken for granted as an explanatory factor. In some countries, context-specific risk perceptions of China in general might moderate approval rates. This shows that citizens' concerns over China's military presence in the region, as well as concerns over risks to the environment and to democracy, play a role in citizens' approval rates of CIM in some countries. Respondents in our survey may, hence, not hold favorable views of China *per se*. Instead, the high approval rates of CIM stand on a fragile basis which has the potential to be moderated by intervening factors, especially when the perceived benefits of CIM decline.

Lastly, we also find that citizens are concerned for their personal data security when choosing a mobile payment platform and making financial transactions. These findings align with previous works on technology acceptance that identify data privacy as a major concern regarding acceptance rates of new technologies (Kostka et al., 2021). Our findings show that citizens who perceive worsening data security as a potential risk of CIM tend to be less likely to also show approval of CIM. Hence, China's increasing digital reach is met with concerns over worsening data privacy. However, the perceived benefits might remain of higher importance than the perceived, abstract risks, as long as individuals see direct and personal value in the use of these digital technologies, based on individuals' cost-benefit calculations. In that way, our work aligns with research that finds that citizens are willing to trade off personal data privacy concerns for increased security and convenience (Acquisti, 2004; Davis & Silver, 2004).

Since global digital investments are an emerging phenomenon, it is important to collect more comparative evidence of global perceptions of it. This concerns both cross-country comparisons as well as extensions of our findings to other digital infrastructures and technologies, subpopulations, and home countries. A core question remains for international political economists: under what conditions do global views on the political systems of host countries inherit the potential to alter citizens' consumer behavior and their views on global investments? Such a question is essential against the background of the increasing generation and use of digital data and tech companies' related digital clout.

Notes

1. Chinese companies have increasingly been investing abroad especially since the early 2000s which is when China included its 'Go Global Strategy' into the 10th Five-Year Plan with the aim to further Chinese companies' internationalization.
2. The seven factors include: data privacy; speed of transaction; scope of services offered; financial benefits such as reward points, vouchers or free delivery of goods; interface of the app; using a mobile payment platform service which your friends, colleagues and family are also using; others.

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References

- Acquisti, A. (2004). *Privacy in electronic commerce and the economics of immediate gratification [Paper presentation]*. Proceedings of the 5th ACM Conference, On Electronic Commerce, 21–29. Retrieved from <https://doi.org/10.1145/988772.988777>
- Aljazeera. (2021, September 10). *Philippines vows to ignore China maritime law, seeks US help*. Retrieved from <https://www.aljazeera.com/news/2021/9/10/dutertes-defence-chief-says-manila-got-less-from-us-pact>
- Armony, A. C., & Velásquez, N. (2015). Anti-Chinese sentiment in Latin America: An analysis of online discourse. *Journal of Chinese Political Science*, 20(3), 319–346. <https://doi.org/10.1007/s11366-015-9365-z>
- Blanchard, J.-M F., & Flint, C. (2017). The geopolitics of China's maritime silk road initiative. *Geopolitics*, 22(2), 223–245. <https://doi.org/10.1080/14650045.2017.1291503>
- Breslin, S. (2011). The 'China model' and the global crisis: From Friedrich List to a Chinese mode of governance. *International Affairs*, 87(6), 1323–1343. <https://doi.org/10.1111/j.1468-2346.2011.01039.x>
- Buckley, O., & Nurse, J. R. C. (2019). The language of biometrics: Analysing public perceptions. *Journal of Information Security and Applications*, 47, 112–119. <https://doi.org/10.1016/j.jisa.2019.05.001>
- Cadell, C. (2017, April 12). China's ant financial extends mobile payments empire to Indonesia. *Reuters*. Retrieved from <https://www.reuters.com/article/ant-financial-emtek-idUSL3N1HK3TX>
- Casella, B., & Formenti, L. (2018). UNCTAD insights: FDI in the digital economy: A shift to asset-light international footprints. *Transnational Corporations*, 25(1), 101–130. <https://doi.org/10.18356/cb688e94-en>
- Chen, L., Huang, Y., Ouyang, S., & Xiong, W. (2021, July 7). The data privacy paradox of alipay users. Retrieved from <http://www.voxchina.org/show-3-240.html>
- Choudhury, R. N. (Eds.). (2021). *The China-US trade war and South Asian economies*. Routledge.
- Chu, Y., Kang, L., & Huang, M. (2015). How East Asians view the rise of China. *Journal of Contemporary China*, 24(93), 398–420. <https://doi.org/10.1080/10670564.2014.953810>
- Coins.ph. (n.d.). *coins.ph. Sign up for a free account*. Retrieved from <https://app.coins.ph/welcome/signup>
- Curtis, B., & Curtis, C. (2011). *Social science research. A practical introduction*. SAGE Publications.
- Davis, C. L., & Meunier, S. (2011). Business as usual? Economic responses to political tensions. *American Journal of Political Science*, 55(3), 628–646. <https://doi.org/10.1111/j.1540-5907.2010.00507.x>
- Davis, D. W., & Silver, B. D. (2004). Civil liberties vs. security: Public opinion in the context of the terrorist attacks on America. *American Journal of Political Science*, 48(1), 28–46. <https://doi.org/10.1111/j.0092-5853.2004.00054.x>
- de Sartiges, D., Bharadwaj, A., Khan, I., Tasiaux, J., & Witschi, P. (2020). *Southeast Asian consumers are driving a digital payment revolution*. Retrieved from <https://www.bcg.com/de-de/publications/2020/southeast-asian-consumers-digital-payment-revolutions>
- DealStreetAsia. (2020, June 26). Alibaba and tencent cash in on Southeast Asia e-payments boom. *Nikkei Asia*. Retrieved from <https://asia.nikkei.com/Spotlight/DealStreetAsia/Alibaba-and-Tencent-cash-in-on-Southeast-Asia-e-payments-boom>
- Degli Esposti, S. & Santiago Gómez, E. (2015). Acceptable surveillance-orientated security technologies: Insights from the surPRISE project. *Surveillance & Society*, 13(3/4), 437–454. <https://doi.org/10.24908/ss.v13i3/4.5400>
- Dekker, B., Okano-Heijmans, M., & Zhang, E. S. (2020). Unpacking China's digital silk road, *Clingendael Report*, Retrieved from https://www.clingendael.org/sites/default/files/2020-07/Report_Digital_Silk_Road_July_2020.pdf

- Edison, S., W., & Geissler, G. (2003). Measuring attitudes towards general technology: Antecedents, hypotheses and scale development. *Journal of Targeting, Measurement and Analysis for Marketing*, 12(2), 137–156. <https://doi.org/10.1057/palgrave.jt.5740104>
- Endo, J. (2020, July 19). Digital payment grows in Philippines Amid Covid-19 fears. *Nikkei Asia*. Retrieved from <https://asia.nikkei.com/Business/Companies/Digital-payment-grows-in-Philippines-amid-COVID-19-fears>
- Fearon, J. D., & Laitin, D. D. (2000). Violence and the social construction of ethnic identity. *International Organization*, 54(4), 845–877. <https://doi.org/10.1162/002081800551398>
- Felicitas, S. (2019, August 19). *Mobile payments: Asia leading the world*. Asia Fund Managers. Retrieved from <https://www.asiafundmanagers.com/int/mobile-payments/>
- Ferdinand, P. (2016). Westward ho-the China dream and ‘one belt, one road’: Chinese foreign policy under Xi Jinping. *International Affairs*, 92(4), 941–957. <https://doi.org/10.1111/1468-2346.12660>
- Fintechnews Singapore. (2019, January 4). Thailand accelerates mobile payments adoption. *Fintechnews Singapore*. Retrieved from <https://fintechnews.sg/27825/thailand/thailand-mobile-payments-adoption/>
- Fitriani, E. (2018). Indonesian perceptions of the rise of China: Dare you, dare you not. *The Pacific Review*, 31(3), 391–405. <https://doi.org/10.1080/09512748.2018.1428677>
- Gerstl, A. (2020). Malaysia’s hedging strategy towards china under Mohamad (2018–2020): Direct engagement, limited balancing, and limited Bandwagoning. *Journal of Current Chinese Affairs*, 49(1), 106–131. <https://doi.org/10.1177/1868102620964219>
- Goyer, J. (2021, April 1). *US-China tariff fight leaves SE Asia in the Winner’s Circle*. Retrieved from <https://www.uschamber.com/international/us-china-tariff-fight-leaves-se-asia-the-winners-circle>
- Ha, H. T. (2021, February 18). *ISEAS Perspective 2021/15 „Southeast Asians’ Declining Trust in China by Hoang Thi Ha*. ISEAS. Retrieved from <https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/iseas-perspective-2021-15-southeast-asians-declining-trust-in-china-by-hoang-thi-ha/>
- Hanusch, M. (2012). African perspectives on China–Africa: Modelling popular perceptions and their economic and political determinants. *Oxford Development Studies*, 40(4), 492–516. <https://doi.org/10.1080/13600818.2012.728580>
- Hazlin, H. (2020, January 29). Malaysia targets half its population in e-wallet push. *The Straits Times*. Retrieved from <https://www.straitstimes.com/asia/se-asia/malaysia-targets-half-its-population-in-e-wallet-push>
- Hearn, A. H. (2012). Harnessing the dragon: Overseas Chinese entrepreneurs in Mexico and Cuba. *The China Quarterly*, 209, 111–133. <https://doi.org/10.1017/S0305741011001500>
- Hewison, K. (2018). Thailand: An old relationship renewed. *The Pacific Review*, 31(1), 116–130. <https://doi.org/10.1080/09512748.2017.1357653>
- Huang, Y. (2019, April 24). Construction of Digital Silk Road Lights up Bri Cooperation. *People’s Daily*. Retrieved from <http://en.people.cn/n3/2019/0424/c90000-9571418.html>
- Huawei. (2020, June 19). *Rain and Huawei Jointly Launches Africa’s First Standalone 5G Network*. Retrieved from <https://www.huawei.com/en/news/2020/7/rain-huawei-africa-first-standalone-5g-network>
- Iwamoto, K. (2020, September 4). China’s ant eyes Southeast Asia e-payment dominance with IPO. Shakeup in crowded industry expected as covid pushes cashless demand. *Nikkei Asia*. Retrieved from <https://asia.nikkei.com/Business/Business-Spotlight/China-s-Ant-eyes-Southeast-Asia-e-payment-dominance-with-IPO>
- Johnson, V. L., Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of m-payment services: Understanding the impact of privacy risk on m-payment services. *Computers in Human Behavior*, 79, 111–122. <https://doi.org/10.1016/j.chb.2017.10.035>
- Kelion, L. (2020, July 14). Huawei 5G kit must be removed from UK by 2027. *BBC News*. Retrieved from <https://www.bbc.com/news/technology-53403793>
- Kim, Y., Choi, J., Park, Y. J., & Yeon, J. (2016). The adoption of mobile payment services for 37 “fintech”. *International Journal of Applied Engineering Research*, 11(2), 1058–1061. <https://doi.org/10.1002/9781119227205>
- Kostka, G. (2019). China’s social credit systems and public opinion: explaining high levels of approval. *New Media & Society*, 21(7), 1565–1593. <https://doi.org/10.1177/1461444819826402>

- Kostka, G., & Anzinger, N. (2016). Large infrastructure projects in Germany: A cross-sectoral analysis. In *Large infrastructure projects in Germany* (pp. 15–138). Palgrave Macmillan.
- Kostka, G., & Habich-Sobiegalla, S. (2021). In times of crisis: Public perception towards Covid-19 tracing-apps in China, Germany, and the US. Retrieved from SSRN <https://doi.org/10.2139/ssrn.3693783>
- Kostka, G., Steinacker, L., & Meckel, M. (2021). Between security and convenience: Facial recognition technology in the eyes of citizens in China, Germany, the United Kingdom, and the United States. *Public Understanding of Science (Bristol, England)*, 30(6), 671–620. <https://doi.org/10.1177/09636625211001555>
- Leahy, S. (2019, March 4). Hydroelectric dam threatens to wipe out world's rarest ape. *National Geographic*. Retrieved from <https://www.nationalgeographic.com/animals/article/tapanuli-orang-utan-rarest-ape-threatened-dam-news>
- Liu, L. (2021). The rise of data politics: Digital China and the World. *Studies in Comparative International Development*, 56(1), 45–67. <https://doi.org/10.1007/s12116-021-09319-8>
- Ministry of Commerce, National Bureau of Statistics, & State Administration of Foreign Exchange. (2021). *2020 Statistical Bulletin of China's Outward Foreign Direct Investment*. (2020年度 中国对外直接投资统计公报). China Commerce and Trade Press. Retrieved from <http://images.mofcom.gov.cn/hzs/202111/20211112140104651.pdf>
- Modahl, M. (1999). *Now or never: How companies must change today to win the battle for Internet consumers*. HarperCollins Publishers.
- Nassanga, G. L., & Makara, S. (2016). Perceptions of Chinese presence in Africa as reflected in the African media: Case Study of Uganda. *Chinese Journal of Communication*, 9(1), 21–37. <https://doi.org/10.1080/17544750.2015.1078386>
- National Development and Reform Commission, Ministry of Foreign Affairs, & Ministry of Commerce. (2015). *Full text: Vision and actions on jointly building belt and road*. Retrieved from <http://de.china-embassy.org/det/zt/yidaiyilude/t1250293.htm>
- OECD. (2020). *Digital disruption in banking and its impact on competition*. Retrieved from <https://www.oecd.org/competition/digital-disruption-in-banking-and-its-impact-on-competition-2020.pdf>
- Pavone, V., & Degli Esposti, S. (2012). Public assessment of new surveillance-oriented security technologies: Beyond the trade-off between privacy and security. *Public Understanding of Science (Bristol, England)*, 21(5), 556–572. <https://doi.org/10.1177/0963662510376886>
- Pew Research. (2014). July 14. Chapter 2: China's image. *Pew Research Center's Global Attitudes Project*. Retrieved from <https://www.pewresearch.org/global/2014/07/14/chapter-2-chinas-image/>
- Phua, K. (2020). Why Indonesia is the world's next digital payments battleground. *The Jakarta Post*. Retrieved from <https://www.thejakartapost.com/academia/2020/07/13/why-indonesia-is-the-worlds-next-digital-payments-battleground.html>
- Potkin, F. (2019, December 19). Exclusive: Ant financial takes stake in Vietnam's eMonkey: sources. *Reuters*. Retrieved from <https://www.reuters.com/article/us-antfinancial-vietnam-exclusive-idUSKBN1YNI1DI>
- Reuters. (2021, February 26). *Brazil Regulator Approves 5G Spectrum Auction Rules, No Huawei Ban*. Retrieved from <https://www.reuters.com/business/media-telecom/brazil-regulator-approves-5g-spectrum-auction-rules-no-huawei-ban-2021-02-26/>
- Robles, R. (2019, July 12). Anti-China protests in the Philippines mark third anniversary of Manila's South China sea legal victory. *South China Morning Post*. Retrieved from <https://www.scmp.com/week-asia/geopolitics/article/3018418/anti-china-protests-philippines-mark-third-anniversary>
- Roumeliotis, G. (2018, January 2). *U.S. Blocks Moneygram Sale to China's ant financial on national security concerns*. Retrieved from <https://www.reuters.com/article/us-moneygram-intl-m-a-ant-financial-idUSKBN1ER1R7>
- Santos, A. P. (2018, March 14). *Filipinos resist china-funded dams amid Beijing's growing clout in Southeast Asia*. Retrieved from <https://www.dw.com/en/filipinos-resist-china-funded-dams-amid-beijings-growing-clout-in-southeast-asia/a-42973170>
- Sautman, B., & Yan, H. (2009). African perspectives on China–Africa links. *The China Quarterly*, 199, 728–759. <https://doi.org/10.1017/S030574100999018X>
- Sautman, B., & Yan, H. (2014). Bashing 'the Chinese': Contextualizing Zambia's collum coal mine shooting. *Journal of Contemporary China*, 23(90), 1073–1092. <https://doi.org/10.1080/10670564.2014.898897>

- Schlacht, K. (2021, October 29). *The real winners of the US-China trade dispute*. DW.COM. Retrieved from <https://www.dw.com/en/the-real-winners-of-the-us-china-trade-dispute/a-55420269>
- Silver, L., Devlin, K., & Huang, C. (2019, December 5). People around the globe are divided in their opinions of China. *Pew Research Center*. Retrieved from <https://www.pewresearch.org/fact-tank/2019/12/05/people-around-the-globe-are-divided-in-their-opinions-of-china/>
- Sim, D. (2020, June 25). Huawei loses out as Singapore telecom operators choose 5g providers. *South China Morning Post*. Retrieved from <https://www.scmp.com/news/asia/southeast-asia/article/3090519/huawei-loses-out-singapore-telecom-operators-choose-5g>
- Sim, D. (2021, December 21). *Germany plans to step up Asian deployments after warship's South China Sea foray*. *South China Morning Post*. Retrieved from <https://www.scmp.com/week-asia/politics/article/3160545/germany-plans-step-asian-deployments-after-warships-south-china>
- Sritma, S. (2016, November 1). Ascend money links with Alibaba financial services unit. *The National Thailand*. Retrieved from <https://www.nationthailand.com/business/30298894>
- Statista. (2021a). *Internet penetration in Southeast Asia as of 2020, by country*. Retrieved from <https://www.statista.com/statistics/487965/internet-penetration-in-southeast-asian-countries/>
- Statista. (2021b). *Annual TikTok user growth in the United States from 2019 to 2024*. Statista. Retrieved from <https://www.statista.com/statistics/1100842/tiktok-us-user-growth/>
- Su, Z., Xu, X., & Cao, X. (2021). What explains popular support for government monitoring in China. *Journal of Information Technology & Politics*. <https://doi.org/10.1080/19331681.2021.1997868>
- UNCTAD. (2017). *World investment report 2017: Investment and the digital economy*. United Nations Publication. Retrieved from <https://doi.org/10.18356/e692e49c-en>
- UNCTAD. (2018). *World investment report 2018: Investment and New industrial policies*. United Nations Publication. Retrieved from <https://doi.org/10.18356/ebb78749-en>
- Van Dijk, J. A. G. M. (2005). *The deepening divide: Inequality in the information society*. SAGE Publications. <https://doi.org/10.4135/9781452229812>
- Wang, F.-L., & Elliot, E. A. (2014). China in Africa: Presence, perceptions and prospects. *Journal of Contemporary China*, 23(90), 1012–1032. <https://doi.org/10.1080/10670564.2014.898888>
- Wong, A. C. A. (2014). *Philippines-China relations: Beyond the territorial disputes*. Republic of the Philippines. Foreign Service Institute. Retrieved from <https://fsi.gov.ph/philippines-china-relations-beyond-the-territorial-disputes/>
- Yahuda, M. (2020). China's relations with Asia. In *China & the World*. (pp. 270–290). Oxford University Press.
- Yan, H., & Sautman, B. (2013). The beginning of a world empire? Contesting the discourse of Chinese copper mining in Zambia. *Modern China*, 39(2), 131–164. <https://doi.org/10.1177/0097700412473705>
- Yang, W. (2021, October 28). *Thailand protesters look to Hong Kong's pro-democracy movement for inspiration*. DW.COM. Retrieved from <https://www.dw.com/en/thailand-hong-kong-protests/a-55373873>
- Ye, J. (2021, September 21). *Chinese consumers rush to order Apple's iPhone 13 as cheaper prices lure bargain hunters*. *South China Morning Post*. Retrieved from <https://www.scmp.com/tech/big-tech/article/3149576/chinese-consumers-rush-order-apples-iphone-13-cheaper-prices-lure>
- Yeremia, A. E. (2020). Indonesian Diplomats' and Foreign Policy Scholars' perceptions and their implications on Indonesian foreign ministry bureaucratic responses to a rising China. *The Pacific Review*. <https://doi.org/10.1080/09512748.2020.1851293>
- Zhao, S. (2014). A neo-colonialist predator or development partner? China's engagement and rebalance in Africa. *Journal of Contemporary China*, 23(90), 1033–1052. <https://doi.org/10.1080/10670564.2014.898893>