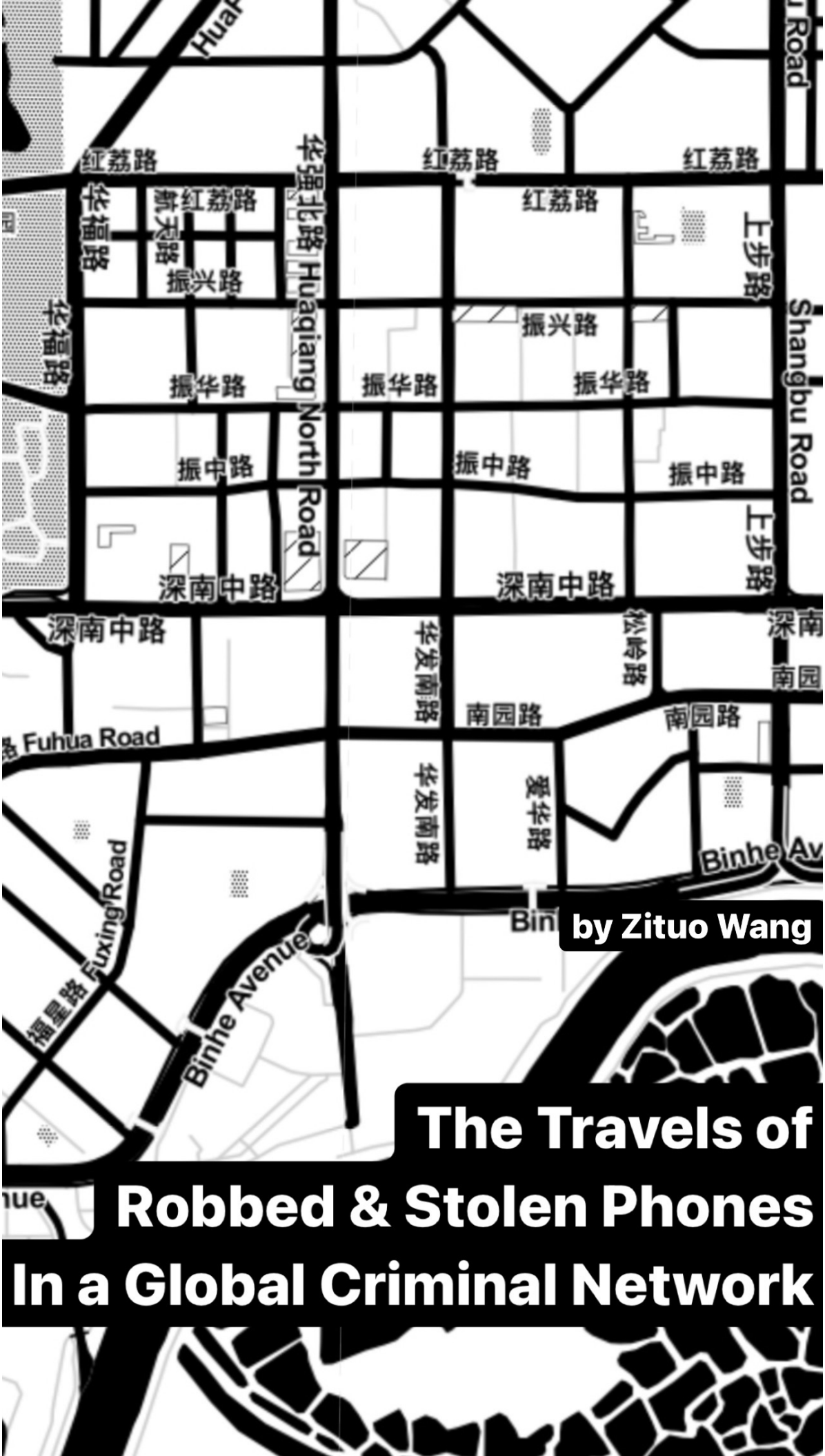

The Travels of Robbed & Stolen Phones In a Global Criminal Network

by Zituo Wang

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0. The “Brother Orange”

In 2015, Matt Stopera, an editor working for BuzzFeed, found his iCloud album updating irrelevant photos including selfies of an unknown man with orange trees, and the location was in China. Back in 2014, Matt’s iPhone was stolen at a bar in New York City, and now it traveled across the Pacific Ocean to its birthplace where it was manufactured. Matt shared his bizarre experience on social media, which immediately went viral in China. Enthusiastic Chinese netizens quickly found the "orange tree man" who was later called “Brother Orange” by Matt. “Brother Orange” was a businessman in the rural area of Meizhou, Guangdong, which is 200 miles from Shenzhen. He registered on Weibo and established a friendship with Matt through the Chinese social platform. It didn't take long for “Brother Orange” to invite Matt to visit China and then entertain him in Guangdong and Beijing (Stopera, 2015).

During this exciting tour, Matt finally learned that his iPhone was bought by “Brother Orange”'s cousin in Shenzhen and given to him as a gift, and this iPhone’s final location shown by Apple’s “find my iPhone” function was in Hong Kong. So the phone actually crossed the continents from New York to Hong Kong, bypassed multiple customs to Shenzhen, and finally arrived in Meizhou, where “Brother orange” lived.

Although this story is legendary and lucky, it also revealed the tip of the iceberg of a huge global criminal network of robbed and stolen phones. This study will describe how this network operates in a global demand-driven market with data and evidence, and explain why it was formed with each node in it playing a specific role. Besides, this study will analyze what impact the network creates and provide feasible suggestions to fight the crimes by building a new network.

1. The Chinese demands: Paralleled markets to drive supplies

In 2009, Apple products entered the Chinese market for the first time (Dormehl, 2021). Since then, its market in China has been growing and become the second-largest market after the United States (Laricchia, 2022). However, the two markets are fundamentally different, which is directly reflected in the market shares. According to Counterpoint's research (2022), Apple maintains a dominant market share in the US market, while in China, it can only rank among the top 5 in recent years. The main reason is that the household income and consumption expenditure of Chinese consumers are generally lower than that of American consumers (NBS, 2022), and the regional disparity is also substantial due to the urban-rural and coastal-inland economic developing gap. Thus, highly competitive companies in the Chinese smartphone market divide up not only the low-end market, but also the mid-to-high end, such as Huawei, Xiaomi, Vivo, and Oppo (Counterpoint, 2022). It's not surprising that Apple has far fewer official stores in China than in the United States — only 44 (in contrast to 272 stores in the US) as of April 2022, and fewer before (Apple, 2022). Besides, Apple's authorized stores are also very few, and their market coverage is relatively limited (Zhang, 2013). Another difference is the huge demand for secondhand or smuggled iPhones contributed by the fast-rising consumer class in China. According to McKinsey's China consumer report (2020), the middle-class population has been rising for more than a decade, which creates potential users who intend to buy an iPhone but can only afford it at a lower-than-official price, resulting in the need for secondhand or smuggled products.

Demand drives supply. These fundamental differences provide a huge opportunity for a large number of third-party non-authorized stores and repair services in China, which

brings numerous unsolicited phones or accessories easily reaching consumers through these unofficial channels. As China became the world's top destination for used iPhones, accounting for more than a third of active devices around the world as of July 2017 (Newzoo), a parallel market to Apple's official market is formed. In this parallel market, customers can get everything they need: the latest iPhone, any repairs, and even more advanced repairs than Apple's official service can offer. However, the products and services in this market are very diverse, and the quality is uneven.

In terms of iPhones, besides fake iPhones (*"shan zhai"* phones in Chinese), there are brand new iPhones and secondhand iPhones. By smuggling through Hong Kong, some of the brand-new iPhones are bought locally in Hong Kong or abroad through official channels at cheaper prices to avoid customs, and then brought to the mainland for sale (will be discussed in detail in Part 4). Other new iPhones are from Apple's repairs, named "officially replaced iPhones" which mainly come from sophisticated fraud schemes run by organized teams (Ma, 2018). They replaced their cheap or even fake products with new ones by making use of the loopholes in Apple's warranty policy of "replacing instead of repairing" and then selling them at high prices. After losing $2 billion in 2013 and having its store in Shenzhen temporarily closed because of the overwhelmed fraudulent repairing requests, Apple revised its warranty policy by tightening the requirements for replacing phones (Mayo, 2018). As for secondhand iPhones, some come from normal voluntary sales, but some belong to a large number of robbed and stolen phones, which not only come from all over China but also from foreign countries. Those secondhand phones that could be unlocked and normally used are sold to buyers. According to the "Research Report on Secondhand Mobile Phone Industry" (36Kr, 2019), more than 70% of secondhand mobile

phone transactions in China are still done offline, making it hard to track those illegal transactions of robbed and stolen phones.

In terms of repairment, unauthorized third-party repairers cannot obtain Apple's original accessories that are strictly managed, and can only use third-party accessories, some of which are authorized by Apple, but others are not. However, most repair services claim they provide "original Apple accessories" to replace. Some of them are indeed real and originally taken part from robbed and stolen phones which can't be unlocked (Zhang, 2017). The reason why customers choose those "original Apple accessories" is the gap between the official Apple repairing service with the high-price accessories and the third-party cheap accessories of low quality that create a market position for those services.

As the second-largest Apple market, the Chinese market is characterized by being official and unauthorized at the same time, in which a gray flow of smuggling, stealing, robbing, and selling phones links the two inner paralleled markets together, reflecting the rooted unequally developing eco-social context and the rising new customer class, finally driving a global criminal network for robbed and stolen iPhones.

2. The foreign supplies: Rising crimes escaping local forces

In the United States, 3.1 million consumers were victims of smartphone theft in 2013, doubling the number reported in 2012, according to Consumer Reports (2013). The cost paid by consumers on mobile device theft is $30 billion each year (Federal Communications Commission, 2014). Phone-related robberies accounted for a larger percentage of total robberies — nearly half of all robberies in San Francisco are phone-related (AP, 2012). In Britain, 0.75 million victims lost their phones to theft in 2012 according to Coalition Government (2014), and the growth in the moped enabled robbery

has become a concern (Metropolitan Police Service, 2018). As Hodkinson (2019) argued, global smartphone theft is on the increase related to street crimes.

Regarding the fact that phone theft and robbery have been increasing in many industrialized countries is now much more recognized (Farrell, et al., 2014), Thompson (2014) discovered that the increases are the result of the greater availability of new, valuable phones that are attractive to thieves and carried on the person. The increasingly high quality and price of the products ensure thieves make a handsome profit after successful sales. Another reason is that thefts or robberies by teenagers are rarely caught and if they are, the juvenile court gives them light sentences which usually means no jail time (Schulte, 2018). Local legislations such as Prop 47 in California classify low-level crimes as misdemeanors rather than felonies (Fraser, 2021). Thus, the job offers a high return with low risk. Besides, communication technology enhances criminals to embed themselves in a network with flexibility and versatility (Castells, 1997) which improves their ability not only to connect with each other and recruit new members (McKinney, 2012), but also to find places in the gray area beyond law enforcement and trade with downstream runners and traffickers more conveniently and secretly.

After buying the phones from the thieves and robbers, those local runners and traffickers usually don't deal with the phones in the same place. Selling the phone to a final customer or disassembling the phone into parts at the node where it's robbed or stolen may be risky. Because the owners can track the location and come to look for it while the local police can still intervene. And technically, telecom carriers such as AT&T can put the device on their blacklist to block phones from being used on their network, making the device almost impossible to be sold to and used by a domestic customer (2022). These

local actors including the owners, police, and telecommunications companies build up the resisting force to burden the resale locally.

In order to escape the local forces against themselves, the criminals have to transport the phones to the next nodes which locate in other places. As those local forces are separated in different places, especially in different countries, those phones are handed in a network from runners and traffickers to the exporters. By the exporters, the criminal organization finally starts the gray flow in the global network.

3. The global gray flows: From everywhere to China

In 2015, Jason Floarea was sentenced to one year in prison and restitution fines of $600,000 for trafficking stolen and fraudulently obtained phones through his company, Ace Wholesale (Scarambone, 2015). Investigators discovered that Floarea's business bought and sold almost 400,000 stolen phones for more than $151 million in less than two years, and the majority of the phones were obtained through credit muling and sent to Hong Kong, China. In 2021, "Operation Cash Out" revealed the illicit sales of more than 70,000 stolen devices valued at nearly $100 million, and 101 individuals were indicted in transnational phone trafficking (Department of Justice, 2021). Those criminals were alleged to have stolen electronics through armed robberies, then sold phones abroad by shipping the merchandise to foreign import companies located in Hong Kong.

To further explore the gray flows in the global network, an investigation on social media was conducted. This study used Python 3.10.4 to crawl users' posts on Twitter, Reddit, and Chinese social media Weibo, Red (an increasingly popular social media platform whose first batch of users are overseas students), then summarized all the posts including "robbed phone" and "stolen phone", and filtered out those posts with specific

locations, obtaining 962 items all translated into English. After further classification, those cases in which the phones were found back or never left the victim's country were excluded. Finally, the remaining 118 items of data were all related to China. Below are the details of the phones' origins, along with the incident's time cited by victims, and the cases that mentioned specific Chinese locations (shown in Table 1,2,3).

Table 1. Number of cases of robbed and stolen phones occurring in China shared on social media (by origins)

	United Kingdom	United States	Italy	France	Spain	Canada	Ireland	Brazil	Australia	Unknown	Total
cases	56	23	11	7	5	3	1	1	1	10	118

Table 2. Number of cases of robbed and stolen phones occurring in China shared on social media (by time)

	2017	2018	2019	2020	2021	2022	Total
cases	6	3	9	9	58	33	118

Table 3. Number of cases mentioning specific Chinese locations

	Hong Kong	Guangdong	Shenzhen	Huaqiangbei	Guangzhou	Chengdu
cases	35	58	18	23	3	1

As shown in the tables, most cases of robbery and theft took place in the United Kingdom and the United States, and others mainly occurred in Europe, except for one case in Brazil and ten cases with unknown origin. There's also an increase over time in cases that are shared on social media. Among those cases mentioning Chinese locations, Hong Kong and Guangdong province including its capital Guangzhou, and the special economic zone Shenzhen are the top names. For those posts mentioning the detailed route of the travel of phones, most of them include both Hong Kong and Guangdong province, demonstrating the further and hidden route inside China.

4. One country, two systems? The smuggling that bypasses the customs

The smuggling between Hong Kong and mainland China has a long history. After the signing of the *Treaty of Nanjing* (1842), Hong Kong Island became a British colony. Since then, Hong Kong has gradually become a transportation node through which people, goods, and ideas flowed (Thai, 2021). Thai (2021) argued that Hong Kong's special political status enhanced local authorities to adopt a relatively lax attitude toward China-bound trafficking, frustrating Chinese anti-smuggling efforts. When China decided to implement reform and opening-up in the late 1970s, the city of Shenzhen north of Hong Kong, grew up to be not only the most successful special economic zone, but also the biggest smuggling node in China (Shenzhen Customs, 2016). This is partly because although China resumed the exercise of sovereignty over Hong Kong in 1997, Hong Kong retains the status of a free port and a separate customs territory (Basic Law, 1990) and does not levy import duties except on four categories of goods for domestic sales that account for a total of 0.5% (Trade and Industry Department, 2021). As the result, the flow of people between the free trading node of Hong Kong and the mainland has increased due to the political reunification and advanced transportation, while the market difference including the gap in commodity prices and the regulation of different products still exist, creating favorable conditions for a substantial amount of smuggling. In 2021, a total of 460 smuggling crimes were filed and investigated by Shenzhen Customs (2022), involving a value of ¥10.18 billion.

The main smuggled items are ordinary goods or products including mobile devices and cosmetics, due to their characters of relatively high price and small size. According to the judgments released by the courts in Shenzhen (2019), there were 214 smuggling cases in Shenzhen in 2017, including 139 crimes of "smuggling ordinary goods or products"

which made up 65% of the total cases, and crimes of smuggling drugs, weapons, animals, etc. Among 139 crimes of "smuggling ordinary goods or products", 43 cases were mobile devices related, marking up the most smuggled type of products (shown in Table 4).

Table 4. Smuggled items among cases released by the courts in Shenzhen (2017)

	Ordinary goods or products	Drugs	Precious animals or animal products	Weapons or ammunition	Precious metals	Waste	
Cases	139	63	5	3	2	2	214

Most smugglings are caught by going through the customs (208 of 214 cases) but hiding the products with bodies (188 of 208 cases) or in vehicles (11 of 208 cases) (shown in Table 5). Those inbound and outbound travelers who are employed by smuggling gangs to smuggle between Hong Kong and Shenzhen to earn salaries (Cao, 2014) are called "water travelers" (*"shui ke"* in Chinese) because they go back and forth between two places like flowing water, and the smuggled products are called "water products" (*"shui huo"* in Chinese). "Water travelers" are characterized by: 1) living around the border and being able to travel through it multiple times in a short period of time; 2) being employed by smuggling gangs to receive payment by bringing items not for personal use (Liu, 2006). The flexibility of "water travelers" who flow among places enables the smuggling gangs to disperse large quantities of smuggled goods at different times and ports by employing a large number of labor to lower the risk of getting caught. Sometimes, "water travelers" even take the initiative to provoke conflicts with the customs to cover smuggling completed by their accomplices. "A third administrative penalty in a year constitutes the crime of smuggling ordinary goods" in the Chinese Criminal Code (1997) to punish "water travelers" to some extent also offers a safe zone for them to evade violating the Criminal Code and consumes more law enforcement resources.

Table 5. Smuggled methods among cases released by the courts in Shenzhen (2017)

	Through the customs				Purchased domestically	By sea	Bypassing the customs	
	Hidden in persons or luggage	Hidden in vehicles	Deceived price	Sent by mail				
Cases	188	11	6	3	3	2	1	214

Besides, technologies create more difficulties for the local customs to detect and punish those smuggling by bypassing customs, mailing, or other methods. In 2018, 26 suspects were arrested for using drones to fly two 660-feet cables between Hong Kong and Shenzhen to transport refurbished iPhones (Zhang and Lee, 2018). Through the cables constructed by drones every evening, bags carrying 20 phones for each were sent to the other side, and 15,000 phones could be smuggled across the border per night. The case involving ¥0.5 billion remarked how emerging technology increases the flexibility and versatility of smuggling to escape not only the traditional places of customs but also the time limit of smuggling through customs.

With all those diverse methods in a flexible network to escape the limits of places and times, the flow of "water smuggling" links together both the node of transportation and the node of the biggest electronics market, leading the phones to arrive at the first and most important stop in mainland China: Huaqiangbei.

5. Hua Qiang Bei: The dirty node to handle everything

China is the biggest market for secondhand phones, generating not only demands but also solutions. Located in Shenzhen, Huaqiangbei is the world's greatest electronics market and the node to handle everything related to phones in the global criminal network.

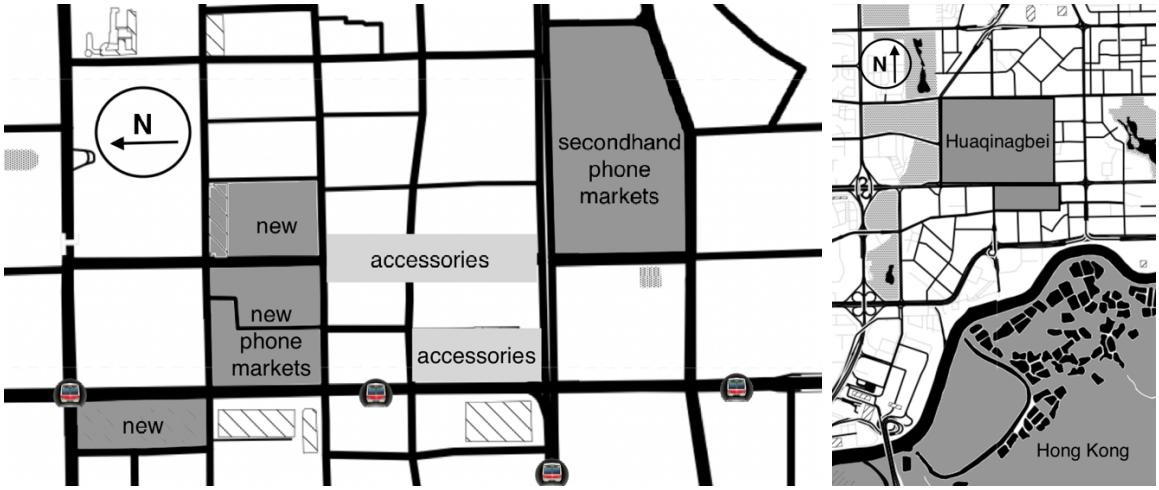
In the early days of reform and opening-up, three military companies located in northern Guangdong moved to Shenzhen. They were renamed "Huaqiang" after a merger

and turned to the production of electronic home appliances (Liang, 2020). Since then, Chinese ministries of the government also moved their own factories to this southern town around Huaqiang, gradually forming an industrial zone called “Huaqiangbei” for electronics manufacturing. In 1986, those state-owned enterprises merged to form Shenzhen Electronics Group Corporation (later renamed SEG Electronics Group), then established China's first electronics market after two years, transforming Huaqiangbei from an industrial zone into a trading market. In the beginning, the market mainly dealt with electronic products such as computers, MP3s, radios, and their accessories, gradually growing into the world's largest market for electronic components. The prosperity of Huaqiangbei also gave birth to the earliest batch of technology companies in China. In 1998, Ma Huateng founded Tencent in an office building in Huaqiangbei, running its earliest business of Internet paging service (Wu, 2017).

With the rapid popularity of mobile phones in the new century, Nokia and other brands producing feature phones have established a dominant position. However, the feature phones’ high price and low trading volume resulted in the success of “little smart” in the low-income market (Liu, 2004) and encouraged Huaqiangbei to start phone wholesale businesses initially by selling stolen phones (Li, 2017). Then, after mastering the chip technology of world-renowned phone manufacturers around 2003, Huaqiangbei became the nest of making “shanzhai” phones (Cao, 2020). “Shanzhai” phones are those counterfeit or copycat products at cheaper prices but have similar features to branded phones, quickly detonating domestic and foreign markets, making Huaqiangbei the largest mobile phone trading center in the world.

In 2010, Apple launched the iPhone 4, ushering in the era of smartphones. Due to the complicated ecosystem of software such as iOS and the rectification of the government, “shanzhai” phones gradually disappeared, and Huaqiangbei focused on selling new phones, secondhand phones, and accessories, and offering repair services. At Huaqiangbei, a whole iPhone can be built only by using black-market accessories (Merchant, 2017). The robbed and stolen phones arrive here not only for technical support, but also for the huge market. Huaqiangbei covers an area of 1.45 square kilometers (shown in Figure 1). Its average daily flow of people is around 500 thousand, and the average daily capital flow reached ¥1 billion (Su, et al., 2017). The northern part accommodates the stores selling brand new phones from different channels, most of which are “water products” smuggled from Hong Kong; The southern part sells secondhand phones, some of which are robbed or stolen, and some are called “bomb” phones which are made from unknown accessories performing at poor quality; Accessories for electronic products are sold in the middle part.

Figure 1. The map of Huaqiangbei and its location in Shenzhen



The management over Huaqiangbei has always existed, and its characteristics have changed from government control to government supervision, rooted in the dynamics of

the state-owned enterprises' transformation and movement and the market playing a greater role. At first, the operation of Huaqinagbei was dependent on the government's order and approval. However, in the "shanzhai" era, private enterprises formed the industry chain of manufacturing copycat mobile phones on the basis of the electronics industry achieving a synergy effect, which then triggered the government's regulatory action "Double Fight" (fight both the infringement of intellectual property rights and the production and sales of fake and shoddy goods) forcing 3575 stores to close (Zheng and Xie, 2012). Besides, as the research of the smuggled mobile phone market by Lin and Wang (2006) found, under the influence of factors such as land rent and information, even the non-increasing-return industry will reflect the market characteristics of an increasing-return industry, forming a cycle and agglomeration to proceed the sales of smuggled phones, taking advantage of the economies of scale. The water smuggling boom has been accompanied by increasingly intensive anti-smuggling campaigns by the government. From January to October 2013, the Anti-Smuggling Bureau of Shenzhen Customs filed a total of 290 smuggling cases, involving a tax of 4.5 billion yuan achieving a year-on-year increase of 70.7% (Yang, 2014). But those campaigns never shut down the whole market, and the government recognized the importance of Huaqiangbei's unique market position. Huaqiangbei was awarded the official title of "China's First Electronics Street" in 2008 (Ministry of Commerce). In 2011, the State Council of the People's Republic of China included the Huaqiangbei index as an important reference data for carrying out policy and regulation.

The progress of Huaqiangbei is the epitome of Shenzhen's development. It reflects how this special economic zone has benefited from the policy of reform and opening-up, and has used foreign technology and cheap labor to serve domestic and foreign markets.

The early industrial base and market establishment of Huaqiangbei originated from the relocation and transformation of state-owned enterprises: military-industrial companies turned to civilian electronics production here. Besides, its proximity to Hong Kong facilitated it to be the first to introduce foreign investment and advanced technology for undertaking the transfer of Hong Kong's electronics industry and becoming a new center of the electronics industry (Wu, 1999). Then, an electronics market was established to trade the products to the growing customers — from electrical appliances to computers to mobile phones, the dynamics of Huaqiangbei's main business demonstrate Shenzhen's unique role of being both a key node in production and market, not only committed to meeting the domestic demand that keeps pace with the times, but also deeply involved in the global technology network.

However, it also became the origin of "shanzhai" phones and a sales node for smuggling electronic products in the global criminal network. Its complete industrial chain enabled robbed and stolen mobile phones to be reused, and substantial channels helped sellers reach a huge market. This raised the government supervision to decrease those illegal businesses, but not fully shutting down the market, marking the interaction between the Chinese government and the market involving from controls to regulations which are rooted in the shift from a concept of "government" to "governance" in the nature of government in China (Sigley, 2006).

6. The extended route under the Covid-19 pandemic: Increasing traffic time & cost

Since the Covid-19 pandemic started at the end of 2019, time and costs for the operation of this global criminal network have risen, largely because governments across the world have imposed restrictions on the flow of people to control the spread of the virus.

At the supply nodes, the crime rate has temporarily decreased. An analysis of crime rates in 27 cities across 23 countries in Europe, the Americas, Asia, the Middle East has found that stay-at-home policies during the pandemic led to an overall drop in police-recorded crime of 37%, with robberies falling an average of 46% and theft falling an average of 47% (Eshelby, et al., 2021). In the United States, the property crime rate decreased by 7.19% from 2019 to 2020 (FBI, 2021). Violent crimes such as aggravated assaults and robberies also fell substantially at the onset of the pandemic because mobility remains low in major cities in the United States before stay-at-home orders and much of the rise in COVID-19 diagnoses and even after the easing of Covid-19 related restrictions (Abrams, 2020). The dropping crime rate limited the number of cases of phone robberies and thefts, impacting the supply side.

As for the flow, the passenger traffics entering through customs at the transportation nodes including airports of Hong Kong and Shenzhen has decreased significantly, falling by more than 80% for two consecutive years. This is mainly due to the strict entry policies adopted by both the Chinese mainland and Hong Kong governments. For example, the "Five One" policy of the Civil Aviation Administration of China allows mainland airlines to fly just one flight a week on one route to any country and foreign airlines to operate just one flight a week to China (Qiu and Freed, 2021), and Hong Kong once banned transit travelers from 150 countries and territories by listing them as high-risk areas (Lee, 2022). Those restrictions have significantly reduced the number of flights (shown in Table 6). In addition, the most important channel for water smuggling to survive: the passenger flow through land ports between Hong Kong and Shenzhen has dropped by more than 90% for

two consecutive years, while the chances of customs inspections have relatively increased (shown in Table 7), creating fewer opportunities and higher risk for phone smugglings.

Table 6. The flights under the pandemic (2019-2021) (in millions)

		2019	2020	2021
Hong Kong airport	Customs passenger throughput	48.998	5.709	0.677
	Total passengers	71.543	8.836	1.351
	Total flights	0.420	0.161	0.145
Shenzhen airport	Customs passenger throughput	5.957	0.669	0.093
	Total passengers	52.932	37.916	36.358
	Total flights	0.370	0.320	0.320

Table 7. The passenger flows under the pandemic (2019-2021) (in millions)

	2019	2020	2021
Hong Kong - Shenzhen land port passenger throughput	236.169	17.469	0.994
Passengers stopped and searched by Hong Kong Customs	0.161	0.020	0.021
Hong Kong total passenger throughput	301.264	24.207	1.952
Shenzhen total passenger throughput	240.000	24.600	7.939

Moreover, even under such strict restrictions, the virus could still find its way to spread, and impact transportation across the Shenzhen River. At the beginning of 2022, the fifth Coivd-19 wave attacked Hong Kong, then affected Shenzhen which temporarily went on lockdown in March. According to Shenzhen Port (2022), only 150 thousand people entered and exited through Shenzhen Port, a year-on-year decrease of 78%. As a result, the border controls were in turn strengthened to prevent those people from carrying the virus through the barbed wire. Police increased patrol frequency and encouraged citizens to report stowaways, and Shenzhen Procuratorate recently arrested a 36-year-old man on suspicion of organizing others to cross the country (border) without permission (Xiang, 2022).

At the sales node, markets in Huaqiangbei faced unprecedented uncertainty. In 2020, the market has closed for two months due to the pandemic. After reopening, stores were facing dual financial pressures from rental and salary payments, while it was difficult for their revenue to return to normal in a short term. Therefore, stores had to consider shifting some of their business online and being more hesitant about increasing inventory (Mu, 2020). The international delivery was affected by the restrictions and was required to be sanitized and set aside for a period of time before delivery (Shenzhen Port, 2022), and domestic delivery faced the risk of regional lockdown at any time, which increases the time and cost for the stores to receive and deliver products.

7. Criminals are in the network, but resistance remains local

Those criminals who conduct robberies and thefts do not directly confront local resistance, but easily evade these resistances by establishing a global network to escape separated and isolated local forces and transporting phones to the other side of the world. When facing the customs on both sides of the Shenzhen River, smugglers smartly bring the phones to Huaqiangbei by extremely flexible ant-moving water smuggling to avoid the limitations of place and time. The network is indeed effective and creates impacts on the economy, politics, and social trust.

The water smuggling between Hong Kong and Shenzhen has a powerful direct effect on China’s national taxation. According to the Ministry of Finance (2022), customs taxes account for 11.65% of the state's fiscal revenue in 2021. As the city with the largest number and involved value of investigated smuggling cases (460 smuggling crimes investigated, involving a value of ¥10.18 billion) in the country, water smuggling in Shenzhen (336 smuggling crimes investigated, involving a value of ¥9.34 billion) has accounted for 73.04%

of the total cases and 91.75% of the total value. According to the usual method of measuring the smuggling value (Cao, 2014), the number of investigated cases is around 10% of the actual smuggling scale, so the overall water smuggling value through Shenzhen Customs in 2021 may reach ¥93.4 billion. According to the Ministry of Commerce (2022), the average tariff rate in China is 12.47% (the tariff rates of those "water products" are higher), so the tax loss due to water smuggling may be higher than ¥11.65 billion in 2021.

Besides, the cheaper smuggled phones reduce the competitiveness of products in the mainland's local market and weaken the protective effect of tariffs on domestic producers, especially these local mobile phone manufacturers (Liu, 2006). The travel of phones from Hong Kong to Shenzhen creates not only the flow of products, but also the flow of money. Some "water travelers" carry a large amount of Hong Kong dollars out of Shenzhen, which has caused the loss of China's foreign exchange reserves, destabilizing the implementation of China's financial policies and capital market (Yang, 2014). As a result, the network brings more challenges for governments to control nationally based economic processes (Castells, 1997).

The influence reaches the political side as well. At the nodes of robbery and theft, criminals find the gray space by taking advantage of the communication technology to escape local resistance ending up forming a global network. At the nodes of transportation and sales, smugglers and sellers together improve the network to be more flexible with high mobility and versatility by modifying their organization and decentralizing their structure (Castells, 1997) to escape customs and market supervision just like "water flow". As Castells (1997) argued, the criminal economy adapts itself to the control of nationally bound state institutions by emphasizing local flexibility and international complexity, and

those institutions are losing the battle. Consequently, this network hurts the state's ability to impose law and order, eroding its sovereignty and legitimacy (Castells, 1997).

Furthermore, the network causes a greater impact on social trust. Past studies have shown that crime victimization significantly lowers levels of social capital and reduces trust in the local enforcement (Corbacho, et al., 2015), decreases public support for the justice system (Malone, 2010), creates a negative effect on satisfaction with democracy and hinders social development (Blanco and Ruiz, 2013). Since the indirect effect of institutional trust on interpersonal trust via feelings of security was researched (Spadaro, et al., 2020), the institutional distrust will significantly increase the interpersonal distrust, resulting in a total regression of social trust. However, internal trust is built within the criminal network by cultural identity based on their own history, tradition, and legitimizing ideology (Castells, 1997). Criminals at different nodes who conduct robbery, theft, or smuggling successfully escape the local resistance, but then find a shared identity necessary to maintain their existence in the space of flows.

8. Fighting back, by building a network

At the nodes of robbery and theft, the police are helpless in such cases due to their limited enforcing capacity and cross-regional coordination. Although the phone's location is usually determined, further investigations require search warrants which are hard to acquire when dealing with lost phones (Riley, 2012). Once the location changes to another place managed under a separated law enforcement, the mission of local resistance fails. As a result, there is little incentive for uninsured phone theft or robbery victims to report the crime to the police (Farrell, 2015).

Moreover, the victims are silent and isolated. Only victims themselves can track the phone's location technically, using the function developed by phone manufacturers. Besides tracking the phone's travel in the global flow, victims lack further actions and phone manufacturers are expected to make more progress, such as introducing the "kill switch" to remotely disable a phone's features and stop the transporting flow. As Rietfors and Iyengar (2016) argued, although the "kill switch" was supported by legislators and public safety officials, objections were raised from carriers fearing the susceptibility to hackers. However, Apple added the "activation lock" feature in 2013, which is essentially its version of the "kill switch" (Scarambone, 2015). iPhone 13 released in 2021 allowed users to track the phone's location even when it's turned off. But those measures mostly taken by phone manufacturers are still limited by their position as companies instead of law enforcement.

At the nodes of smuggling, local customs face challenges from the flexibility of water smuggling. They lack information to identify "water travelers" from millions of passengers traveling through the customs and locate criminal organizations' changing trading places and warehouses (Cao, 2014), which means increasing time and labor costs are needed to get sufficient clues. Besides, the cooperations between Shenzhen and Hong Kong, and across departments inside the governments are burdened by different legislation and regulation on smuggling and the diverse objectives when organizing enforcement campaigns. Yang (2014) argued that technologies should be used to detect those unusual customs passing activities to reduce enforcement costs, and different departments should be involved in the network of intelligence to stay updated and take unified actions.

However, the information within the government is still insufficient for efficient identification and tracking of the criminal network.

As long as the resistant forces remain local and separated, the global criminal network forever wins. Only networks can fight over networks. A new network against such crimes should be formed by the flow of information and engage all global resisting forces based on a multidimensional infrastructure of connectivity (Castells, 2010). First, the basic information about robbed and stolen phones including the IMEI number (International Mobile Equipment Identity) and real-time location should be shared widely with the victim's permission to establish a global database of robbed and stolen phones by using the communication technology. Since the number of countries using the current international IMEI database remains small (Farrell, 2015), it should be expanded so that more carriers can block its service whenever someone is trying to use it. It should also include the data on phones' real-time location. Technically, locating a mobile device without turning on and connecting to the internet is possible, proved by iPhone 13 and AirTag (Apple, 2021). They use Bluetooth to connect to other devices nearby and send the location information through these devices, showing the power of a network involving general users and the phone manufacturers. Second, from the police department of Los Angeles to the customs of Shenzhen, all local law enforcement can receive updated intelligence and lower the cost to increase their capacity to get more clues and handle more cases. With the flow of information, international anti-crime cooperation can be more efficient while institutions across borders can keep functionally networked when physically separated (Castells, 2010). Third, the database should be accessible to the public. Because this flow of information links not only the local to the global, but also the private to the public. While those crimes

constitute a threat to public safety, the information about robbed, stolen, and smuggled phones should get enrolled in the public sphere. Once such social problems are on the "public agenda", they become accessible to "debate, reflection, action, and moral-political transformation" (Benhabib, 1992). With the media system being local and global at the same time, the information flow should foster a global dialogue and raise public awareness (Castells, 2008), eventually empowering the new global network to fight the criminal network.

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