

The Role of Safe Cities in Increasing Public Safety & Tackling Rapid Urbanization in Pakistan

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Introduction

The China Pakistan Economic Corridor (CPEC) comprises a range of infrastructural projects such as road, railways, and fiber optic links, which connect the Kashgar province in the Western end of China to the Gwadar port in Pakistan. The Gwadar port then serves as a linkage between China and several Asian as well as European countries. While Gwadar physically links China and Pakistan, digital CPEC allows technological linkages to be formed between the two countries through fiber optic cables, data centers, and safe cities.² Fiber connectivity results in virtual integration of Pakistan and China. Digital connectivity under CPEC will also provide Pakistan with an opportunity to improve its IT sector. After Pakistan and China are linked digitally, this sector will be more likely to obtain foreign investments from Chinese companies, which will increase the country's GDP and strengthen the economy.³ Thus, it seems that CPEC is a game changer and it has altered the geopolitics of the region.⁴ These investments can generate employment, thereby mitigating the “anti-state sentiment” in the public as well as improving the safety of Pakistani citizens.⁵ Digital linkage also includes construction of safe cities, which use “command centers, CCTV cameras, intelligent video surveillance, facial and license plate recognition technology”⁶ to ensure public safety as well as maintain law and order. These projects include construction of more secure buildings in urban areas, use of cameras as well as lighting to create “safe zones”⁷, and training of police officials in Pakistan. Safe cities are likely to have a substantial community wide and cultural impact. They will help increase the security of Chinese workers, develop urban areas, decrease crime rate, and help maintain law and order in Pakistan.⁸ This paper examines the potential of safe cities formed under CPEC in enhancing the safety of the public

¹ The authors were working as interns at the Centre for Chinese Legal Studies at the time of this publication.

² Abdul, Latif & Yu, Tao-Fang. “Resilient Urbanization: A Systematic Review on Urban Discourse in Pakistan.” *Urban Science*, vol. 4, no. 4, 2020, www.mdpi.com/2413-8851/4/4/76. Accessed 25 May 2021.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Hillman, Jonathan E., & McCaplin, Maesea. “Watching Huawei’s ‘Safe Cities.’” *Center for Strategic & International Studies*, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/191030_HillmanMcCalpin_HuaweiSafeCity_layout_v4.pdf](https://www.csis-website-prod.s3.amazonaws.com/s3fs-public/publication/191030_HillmanMcCalpin_HuaweiSafeCity_layout_v4.pdf). Accessed 4 June 2021.

⁷ Ibid.

⁸ Farr, Grant. “Pakistan’s Role in China’s One Belt One Road Initiative.” *E-International Relations*, www.e-ir.info/2017/07/10/pakistans-role-in-chinas-one-belt-one-road-initiative/. Accessed 25 May 2021.

and in reducing the impact of rapid urbanization in Pakistan. It discusses problems of inclusivity and implementation of safe city projects in Pakistan.

Literature Review

The Long-Term Plan, which outlines developmental milestones regarding CPEC and is a joint project of the Pakistani and Chinese governments, recognizes information network infrastructure as one of the key areas for cooperation. This network infrastructure includes safe cities. President Xi Jinping has drawn attention to the fact that smart cities are vital for the “Digital Silk Road”, since higher connectivity and more effective data management will allow states to effectively tackle issues of rapid urbanization and high rates of population growth. Deploying Machine-to-Machine communication (M2M), in which autonomous machines communicate with each other independently without human interaction, will resolve the issues faced by the provincial governments in Pakistan.¹⁰

The Chinese tech giant, Huawei, is constructing smart cities around the globe. These safe cities are capable of collecting and analyzing large as well as complex data sets, which can increase the security of citizens and tackle rapid urbanization in host countries. Huawei was awarded a contract to construct smart cities in Pakistan in 2016, by the Punjab Safe Cities Authority (PSCA) — an intra-national police authority.¹¹ The consistent monitoring of civilians by PSCA cameras makes them realize that they are, or could be watched at any given time. Individuals realize that they are either being watched, or could be watched, at any given moment. This, coupled with video surveillance which can provide evidence of crimes, deters civilians from partaking in criminal activities. They are encouraged to regulate their own behavior and act in accordance with social norms. In addition to police surveillance, PSCA’s cameras are also used in urban planning and management. They are used to observe the dilapidated conditions of roads, solid waste in public spaces, and leakage of water on the streets.¹² In fact, the Chief Minister of Punjab, Usman Buzdar, instructed representatives of the Water and Sanitation Authority (WASA) to set up their desks in offices of the PSCA.¹³ This enabled the representatives to observe the on-ground situation on a daily basis and take measures to solve problems. It should be noted that enhancing urban infrastructure is an additional benefit of safe cities, which is beyond the scope of the original project as it solely focuses on police surveillance¹⁴. So, there is a gap in the

⁹ Kitson, Andrew & Kenny, Liew. “Sustainability Trends: Influencers, Drivers and Implications By Industry.” *FitchSolutions*, store.fitchsolutions.com/all-products/sustainability-trends-influencers-drivers-and-implications-by-industry. Accessed 25 May 2021.

¹⁰ Ibid.

¹¹ “Huawei Announces Safe City Compact Solution To Protect Citizens in Small and Medium Cities.” *Huawei*, 15 October 2018, e.huawei.com/ph/news/smart-cities/201810150942.

¹² Khan, Akbar N. *Safe And Smart Cities of Pakistan: A Cultural Change in Pakistan Police*. Kindle ed., Amazon, 2020.

¹³ Ibid.

¹⁴ Ibid.

literature about the role of safe cities in increasing public safety and tackling rapid urbanization in Pakistan. This paper aims to fulfill that gap.

In 2011, China lent \$124 million to Pakistan at concessional rates to allow it to invest in Huawei technology which would allow construction of a “Safe City project in Islamabad.”¹⁵ The PSCA was founded in 2015 to partner with Huawei in the construction of safe cities in Punjab. PSCA and other regulatory bodies looked favorably upon Chinese technology due to its ability to effectively tackle problems related to urban governance.¹⁶ Huawei was selected as the leading partner to the PSCA to provide equipment for numerous safe cities in Punjab. For example, the Lahore Safe City Project (under ambit of PSCA) instructed the company to build a command-and-control center spanning “76,000 square feet”¹⁷ through usage of cloud technologies and ICT in 2016—a contract amounting to 84.7 million dollars. Huawei was also tasked with installing “10,000 surveillance cameras”¹⁸ in the city. It stated at the time that this was the “largest comprehensive Safe City architecture in the world.”¹⁹ In 2019, a memorandum of understanding was signed between Pakistani government and Huawei, which was tasked with making a data center in the country.²⁰ This project involves a system of monitoring and surveillance being developed and cameras being installed in marketplaces and near roads, which will allow the state to maintain law and order in the country.²¹ Safe city projects are underway in other cities as well such as Peshawar, Karachi, Gwadar and Quetta.²² These smart city projects will be connected via the information network infrastructure as envisaged by the Long Term Plan.²³

Theoretical Framework

The effectiveness of these smart cities could be explained by the fact that surveilling people is sufficient to control them, to a significant degree.²⁴ Discipline is maintained in the population through

¹⁵ Kitson, Andrew & Kenny, Liew. “Sustainability Trends: Influencers, Drivers and Implications By Industry.” *FitchSolutions*, store.fitchsolutions.com/all-products/sustainability-trends-influencers-drivers-and-implications-by-industry. Accessed 25 May 2021.

¹⁶ Erie, Matthew S., & Streinz, Thomas. “The Beijing Effect: China’s ‘Digital Silk Road’ As Transnational Data Governance.” *New York Journal of International Law and Politics*, vol. 5, no. 4, 2021, papers.ssrn.com/sol3/papers.cfm?abstract_id=3810256. Accessed 5 June 2021.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ Kitson, Andrew & Kenny, Liew. “Sustainability Trends: Influencers, Drivers and Implications By Industry.” *FitchSolutions*, store.fitchsolutions.com/all-products/sustainability-trends-influencers-drivers-and-implications-by-industry. Accessed 25 May 2021.

²¹ *Ibid.*

²² Erie, Matthew S., & Streinz, Thomas. “The Beijing Effect: China’s ‘Digital Silk Road’ As Transnational Data Governance.” *New York Journal of International Law and Politics*, vol. 5, no. 4, 2021, papers.ssrn.com/sol3/papers.cfm?abstract_id=3810256. Accessed 5 June 2021.

²³ *Ibid.*

²⁴ “Michel Foucault.” *Stanford Encyclopedia of Philosophy*, 2 Apr. 2003, plato.stanford.edu/entries/foucault/.

imposing specific and detailed norms.²⁵ This system demonstrates how the installation of surveillance cameras can help PSCA prevent crime and punish the transgressors in time. This disincentivizes violators from committing similar actions in the future.²⁶

In a similar vein to the modern day surveillance state, Foucault perceives Bentham's panopticon as an architectural model which enforces "disciplinary power"²⁷ in a society. It is a circular design for a prison, which is built in a manner that inmates can always be seen by a monitor in the central tower.²⁸ However, they are segregated from each other and cannot view anybody else.²⁹ Even though the monitor may not be surveilling them at a given moment, the fact that it could be, forces individuals to behave as if they are being watched.³⁰ The same is the case with inhabitants of safe cities. The realization that they are being watched, or could be watched at any given moment, prevents them from partaking in criminal activities. It should be noted that this consistent surveillance is internalized by civilians. They engage in self-monitoring, to ensure that they are complying with social norms, which eliminates the need for physical punishments or constant supervision to control their behavior.³¹ Foucault calls this "power of mind over mind."³² In the context of smart cities, this is the power that the government or safe city authorities exert over the minds of civilians. Moreover, this system shows how the human body is regulated and supervised, rather than tortured, in the modern system, with the overall aim of reforming the soul.³³ This reform in the safe cities has led to greater control, as its rationale is "to punish less, perhaps; but certainly, to punish better."³⁴ Foucault argues that ideas such as good behavior are created by a specific regime of power and knowledge.³⁵ So, the government decrees what ideas or behaviors are desirable and forces the public to adopt these ideas and behaviors.

Foucault predicts that the power and techniques to punish are contingent on the knowledge that creates as well as classifies individuals. So, the power of safe city authorities is contingent on massive surveillance, which allows civilians to be consistently monitored and placed into categories depending on their behavior. On the one hand are law abiding citizens, while on the other are the deviants, who violate laws or social norms and are punished accordingly. In other words, "in knowing we control and in controlling we know."³⁶

²⁵ Ibid.

²⁶ Ibid.

²⁷ "Michel Foucault." *Stanford Encyclopedia of Philosophy*, 2 Apr. 2003, plato.stanford.edu/entries/foucault/.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Foucault, Michel. "'Panopticism' from Discipline & Punish: The Birth of the Prison." *Indiana University Press*, vol. 2, no.1, 2008, www.jstor.org/stable/25594995. Accessed 5 June 2021.

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

Safe Cities

PSCA was founded by the Punjab government to modernize and institute a cultural change in the police force.³⁷ Akbar Nasir Khan, former CEO of the PSCA and Deputy Inspector General of Police, has stated that “inclusive security”³⁸, which includes protecting the rights of citizens, is the goal of this project. He has claimed that use of smart technology has decreased the response time of police in Lahore to less than fifteen minutes. He further states that combining traffic, counter terrorism, and emergency responses under the PSCA has resulted in greater cost efficiency.³⁹ The 135-million-dollar cost of the Lahore Safe City Project was touted as lower than similar projects in other countries.

The Punjab Police Integrated Command Control and Communication Centers (PPICCs) were founded to assist the Punjab police in ensuring the security of citizens through usage of smart technology such as ANPR, which is used to document and produce “geo-positioning data”⁴⁰ and tag vehicles within the safe city. Technology such as CCTV cameras is used for surveillance of citizens. Usage of cameras allows the police to consistently monitor public spaces and identify areas where crime is taking place. Police officers can then be speedily dispatched to such areas to protect civilians. For instance, if a motorcyclist is mugging an individual near an Automated Teller Machine (ATM), facial recognition technology of cameras can be used to identify the culprit through his or her image. Since the PSCA has access to the NADRA database, it can obtain biometric information as well as the address of the suspected individual, which makes it easier to catch criminals. In situations where the face of the criminal cannot be identified, ANPR can be used to track their number plate and find out their location. This process is less cumbersome than manually identifying the owner of a vehicle and tracking them.

By monitoring citizens around the clock, the police can identify areas where crime is taking place and quickly dispatch officers to such locations to prevent crime.

An issue that arose was the usage of old number plates introduced in 2006, which were not readable by the machine, so they could not be identified by the safe city cameras installed in 2016.⁴¹ The PSCA and Excise department made joint efforts to acquire international standard number plates, which are large enough to be identified by sensors.⁴² This would result in the entire province having a standard “number-plate design and format.”⁴³ Additionally, an E-ticketing system, which uses cameras to

³⁷ “Punjab Safe City Authority is much more than security’: Interview with SSP Akbar Nasir Khan.” *Brecorder*, 19 Feb. 2018, www.brecorder.com/news/4578694/punjab-safe-city-authority-is-much-more-than-security-interview-with-ssp-akbar-nasir-khan-20180219345429.

³⁸ *Ibid.*

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ *Ibid.*

identify drivers exceeding the speed limit on roads, has been implemented and involves fines being delivered to the homes of traffic law violators.

The PSCA Public Safety Application, which has been developed for mobile phones and serves as an alternative to the police helpline, requires users to input their location and their private data to enable the police to track them, which reduces the response time of the police.⁴⁴ For instance, if a report is made for a missing vehicle, then relevant data can be used to track that vehicle and cameras can monitor its movement.⁴⁵ It was pointed out that the areas covered by the CCTV cameras were not exhaustive. However, this problem was tackled, to a certain extent, by individuals installing cameras on or near their property. This links to Foucault's point that individuals often internalize the norms of their society and surveil themselves, and others, in an effort to conform to the said norms, which changes their position from "objects of discipline"⁴⁶ to self-monitoring subjects.

Urbanization Crisis in Pakistan

Smart cities are used by governments and public agencies (involved in urban planning and management) to achieve sustainable development, greater economic growth, and higher quality of life for residents.⁴⁷ Urbanization is a process through which rural areas are converted to urban settlements which alters the spatial distribution of population from rural to urban areas.⁴⁸ Economic growth coupled with high rates of rural to urban migration have resulted in rapid urbanization in Pakistan. The United Nations Population Division states that over 50 percent of Pakistan's population will reside "in urban areas by 2025."⁴⁹ Even though cities contribute substantially to the country's GDP — up to 55 percent, according to the United Nations Development Program — they are plagued by problems such as haphazard and unplanned expansion, shortage of houses, and a lack of public facilities.⁵⁰ Unplanned and unmanaged urbanization can result in urban slums, environmental degradation, widespread poverty, and inequality.⁵¹ As such, there is massive potential to utilize data

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ "Michel Foucault." *Stanford Encyclopedia of Philosophy*, 2 Apr. 2003, plato.stanford.edu/entries/foucault/.

⁴⁷ Mir, Saeed & Moosavi, Mir S. "The Smart City; Challenges and Opportunities in Developing Countries." *Iranian Online Journal of Urban Research*, vol. 3, no. 1, 2018, www.researchgate.net/publication/340261608_The_Smart_City_Challenges_and_Opportunities_in_Developing_Countries. Accessed 25 May 2021.

⁴⁸ Abdul, Latif & Yu, Tao-Fang. "Resilient Urbanization: A Systematic Review on Urban Discourse in Pakistan." *Urban Science*, vol. 4, no. 4, 2020, www.mdpi.com/2413-8851/4/4/76. Accessed 25 May 2021.

⁴⁹ Hassan, Maheen & Malik, Umer A. "Development Advocate Pakistan: Sustainable Urbanization." *United Nations Development Program*, 8 May 2019, www.pk.undp.org/content/pakistan/en/home/library/development_policy/dap-vol5-iss4-sustainable-urbanization.html. Accessed 25 May 2021.

⁵⁰ Abdul, Latif & Yu, Tao-Fang. "Resilient Urbanization: A Systematic Review on Urban Discourse in Pakistan." *Urban Science*, vol. 4, no. 4, 2020, www.mdpi.com/2413-8851/4/4/76. Accessed 25 May 2021.

⁵¹ Hassan, Maheen & Malik, Umer A. "Development Advocate Pakistan: Sustainable Urbanization." *United Nations Development Program*, 8 May 2019, www.pk.undp.org/content/pakistan/en/home/library/development_policy/dap-vol5-iss4-sustainable-urbanization.html. Accessed 25 May 2021.

driven approaches and move towards smart cities.⁵² Data is pivotal for the smooth functioning of municipal services and can help tackle persistent inefficiencies.⁵³ Furthermore, by increasing transparency and allowing citizen-led innovations which use data to be implemented, technology can help cement democracy within the country.⁵⁴ This highlights the decentralized, bottom-up planning approaches which can be implemented in urban planning, as opposed to the conventional top-down ones.⁵⁵ Emphasis will be placed on the software, such as information flows and processes, as well as the hardware of cities.⁵⁶ Decisions can be made rapidly through real time communication.⁵⁷ These changes have had a huge impact on urban planning and management across the globe.⁵⁸

Problems & Prescriptions

1. Chinese governance frameworks may not be implementable in Pakistan

The safe cities project has garnered global criticism due to its extensive surveillance mandate. China has been accused of “exporting authoritarianism”⁵⁹ via technology. Ostensibly, the way China looks at privacy is different, since there is greater acceptance for the state to collect and monitor data of citizens to maintain social order. There is growing apprehension that the same surveillance network will be adopted in Pakistan. In order to address these concerns, it is important for any imported technological surveillance framework to be adapted to local needs. As a Center for Strategic and International Studies report points out: “Huawei’s partners are not blank canvases. Their laws, institutions, and relative power among competing interest groups shape how technology is used.”⁶⁰ Furthermore, China is a one-party state and the balance of relative power among competing interest groups is skewed heavily towards the ruling elite. Whereas Pakistan contains multiple political parties with competing interests and a decentralized system where power is devolved to provinces, rather than concentrated in the center. In order to foster and protect its diversity and democracy, Pakistan will need to rethink its use of Huawei’s technology and introduce strict measures for accountability to limit institutional misuse. Measures must also be taken to both, increase transparency in institutions handling surveillance data as well as to protect said data from cyber-attacks. All these factors merit a closer look at the adaptive framework Pakistan has followed so far and sets out clearly the potential disadvantages of adopting China’s surveillance measures as is.

⁵² Hussnain, Muhammad Q., et al. “Shaping Up the Future Spatial Plans for Urban Areas in Pakistan.” *Sustainability*, vol. 12, no. 42, 2020, www.mdpi.com/sustainability. Accessed 25 May 2021.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Hillman, Jonathan E., & McCaplin, Maesea. “Watching Huawei’s ‘Safe Cities.’” *Center for Strategic & International Studies*, www.csis-website-prod.s3.amazonaws.com/s3fs-public/publication/191030_HillmanMcCalpin_HuaweiSafeCity_layout_v4.pdf. Accessed 4 June 2021.

⁶⁰ Ibid.

2. Lack of Consistency

The federal and provincial governments need to ensure greater consistency in its policies; changes in political leadership often translate into massive shifts in the priority and spending certain projects receive. Not only does this lend massive blows to development, but it also renders useless any progress made under previous policy initiatives and sows distrust with citizens who refuse to invest and partake in new projects for fear they will end with the government. For example, in order for smart policing to be effective, extensive reforms were needed to repair the strained citizen-police relationship, to encourage people to turn to the police for help rather than look towards other non-state actors and seek informal settlements. Inconsistent measures, however, have only increased citizen apprehension when it comes to dealing with the police institution. According to recent surveys only seven percent of urban citizens who reported a crime through PSCA's '15' emergency response number (similar to 911 in the US) had their cases resolved formally through the state's system.⁶¹ Furthermore, only a few people knew about government efforts to improve the quality of conflict resolution: only eight percent of respondents had heard of the PSCA's emergency response number when asked about it.⁶² In order to strengthen justice systems, citizens need to be encouraged to interact with the state regularly.⁶³ In such a scenario, half-hearted policy measures that aren't consistently followed through, end up doing more harm than good.

Encouraging investment and improving state-citizen relations requires long term stable policies, as well as the will to follow through. An aggressive public relations campaign along with the introduction of strict reforms to increase transparency and accountability can help rebuild citizens' faith in the state institutions. Policies must be in line with global trends and norms. The rule of law must ensure all stakeholders have a level playing field, irrespective of their political influence or background. All government organizations can benefit from the inclusion of community level outreach programs in their mandate. Streamlined service procedures and an efficient as well as proactive digital presence can help foster an interactive citizen-institution relationship. A responsive justice system, which is open to citizen complaints, will further encourage citizens to participate.

3. Lack of Inclusivity

It is crucial for the Pakistani government to set a smart city vision and move towards it using a systems-based approach which will allow inclusive growth that benefits multiple segments of the society, rather than just the elite. The government must engage with concerns regarding China's extensive share of profits and must further ensure any meaningful progress, as a result of the safe cities project, also

⁶¹ "Khwaja, Asim, et al. "Safe Cities: Improving the Citizen-Police Interface in Pakistan." *Abdul Latif Jamil Poverty Action Lab*, www.povertyactionlab.org/evaluation/safe-cities-improving-citizen-police-interface-pakistan. Accessed 4 June 2021.

⁶² Ibid.

⁶³ Ibid.

extends to the common man. Locals should be provided with jobs in technical roles such as engineers, in addition to being offered jobs such as janitors and cleaners. Initiatives to train local workers to reduce reliance on foreign labor and increased interaction with local businesses will help include a larger share of the population in dividends created under CPEC projects. Greater employment and participation will lead to a more positive public outlook on safe cities as well as CPEC. It will also remove the long-standing grievances of Balochistan and Khyber Pakhtunkhwa that the benefits of CPEC projects are confined to Punjab and Sindh only. This way the provincial governments can be brought together rather than left to argue over an inequitable distribution of resources.

Conclusion

In conclusion, safe cities are a good example of how the development of human knowledge, such as surveillance capabilities via CCTV cameras and location tracking (of license plates) through ANPR technology, reinforces the power dynamics of the status quo. That is, it results in “an auto-functioning of power”⁶⁴ by making individuals self-regulate their behavior and internalize the authority of the PSCA, as well as other related bodies. Even though technology can be used to better plan and manage urbanization in Pakistan, safe city projects face problems of implementation and inclusivity. In order to tackle concerns that safe cities will result in the Chinese surveillance network being adopted in Pakistan, new technology frameworks should be adapted to local needs prior to being implemented. Moreover, the lack of consistency in governmental policies can be addressed by pursuing an ambitious public relations campaign which encourages state-citizen interaction. Developing a responsive justice system which allows citizens to voice their concerns and takes action to address these concerns will encourage citizen participation. Lastly, instead of allowing the development of safe cities to disproportionately benefit the elite in Pakistan, provinces such as Punjab as well as Sindh and Chinese nationals, efforts need to be made to achieve inclusive growth. Provinces such as Balochistan and Khyber Pakhtunkhwa should also reap the benefits of smart cities. Safe city projects should provide locals with employment in both menial as well as technical roles, instead of focusing on Chinese labor. Future studies can examine the potential for safe cities in reducing rapid rates of urbanization through tracking dense urban settlements, providing economic assistance as well as alternative dwellings to inhabitants of these areas.

⁶⁴ Foucault, Michel. “‘Panopticism’ from Discipline & Punish: The Birth of the Prison.” *Indiana University Press*, vol. 2, no.1, 2008, www.jstor.org/stable/25594995. Accessed 5 June 2021.