

### Critical success factors toward a safe city as perceived by selected medium enterprises in the province of Nueva Ecija: A crafted business development policy model



 **Angelo Reyes Santos**

*Nueva Ecija University of Science and Technology, Cabanatuan City, Philippines.*

*Email: [15angelosantos@gmail.com](mailto:15angelosantos@gmail.com)*



#### ABSTRACT

#### Article History

Received: 26 December 2022

Revised: 6 February 2023

Accepted: 20 February 2023

Published: 15 March 2023

#### Keywords

Business development

Business policy

Critical success factor

Enterprises

Safe city

Success criteria.

The purpose of this study is to further characterize and evaluate the important success criteria of a safe city for medium-sized businesses in Nueva Ecija in the Philippines, which will be used for the business development policy model. A descriptive method was employed to collect quantitative data. In order to determine or estimate the degree to which the values for the variables are related or vary in a discernible pattern, the descriptive design is an appropriate method for enabling the collection of accurate and trustworthy data through survey measurement of two or more variables. Purposeful sampling, also known as judgment, selective, or subjective sampling is used. This is a sampling strategy in which researchers utilize their own judgment when selecting members of a population to participate in a study. A group of 100 owners of mid-sized businesses in Nueva Ecija served as the study's respondents. Other initiatives outside of Nueva Ecija are also included in this report. The Critical Success Factor (CSF) Model was created and served as the foundation for the questionnaire. The research indicates that the city government and the LGU effectively promote objectives, guidelines, safety, and security. Cities are evolving into smarter places using new technologies for monitoring, analyzing, and planning to increase efficiency and quality of life. Coordination between government and stakeholders is necessary to foster smart cities, and robust economies drive the adoption of safer city programs. The research recommends continuous development of law enforcement, new integrated systems, and recovery assistance after business emergencies. Additionally, the research suggests continuing to develop a long-term program for public space enhancement that integrates crime prevention, designs inclusive public spaces, implements traffic safety campaigns, and promotes safer driving practices.

**Contribution/Originality:** This study can help readers to focus on efforts to work more effectively on what matters most in the business industry. Further, this study may provide valuable insights about the security and safety required to protect citizens from crime and other untoward incidents that will affect business as well as mitigate the impact of natural disasters and other threats as much as possible.

## 1. INTRODUCTION

Small and medium-sized enterprises (SMEs) are crucial to the prosperity of the nation. By lowering poverty and unemployment rates and encouraging entrepreneurship, a robust SME sector makes a significant contribution to the economy's gross domestic product (Sitharam & Hoque, 2016).

A "safe city" empowers local governments, law enforcement agencies, and the police to stop violence in both public and private settings. The technological stack gathers and examines anonymous, crowdsourced reports of violent crime in order to spot trends and important information.

Initiatives that promote safe cities rarely establish measurable success criteria. This is explained by the difficulties in determining how the program will affect the degree of urban security. However, a number of projects caution against becoming overly fixated on formal measurements and maintain that it is vital to define criteria. A good alternative that is frequently used is the degree of stakeholder satisfaction.

A problem owner's involvement and ongoing communication and cooperation across stakeholders were emphasized as being crucial to the success of the program. This is because feedback from stakeholders determines the project's direction and support, and ongoing engagement helps the initiative stay current with changing demands, requirements, and technical improvements (HSD Foundation, 2019).

Safe cities impinge on individuals' privacy for good reasons. Governments should be forthright and honest about the nature of the intrusion in order to prevent privacy concerns from impeding the achievement of a safe city. In order to do this, information about citizens who are going about their daily lives will be collected and stored. Most citizens will be pleased to know that there is a clear policy on how long that data will be kept before it is erased, as well as that the data has only been collected and securely held for lawful purposes related to making their communities safer.

Micro, small, and medium-sized enterprises (MSMEs) account for 99.5% of all registered firms in the Philippines and employ close to 62% of the workforce. Approximately 60% of all exporters in the Philippines are micro, small, and medium-sized businesses, which also provide 25% of the overall export revenue for the nation. They are crucial to the expansion of the economy because they increase the number of businesses, create jobs, ensure growth of output and exports, supply goods and services to enterprises of all sizes, help to reduce poverty, empower women in the workforce, and distribute wealth more widely (Ruiz, 2015).

Due to the SME sector's crucial contribution to the creation of new jobs, economic growth and innovation, these economic entities are acknowledged on a global scale as the principal agents of socioeconomic progress (Karadag & Hande, 2015).

This study is focused on the critical success factors of safe cities for selected medium enterprises, which will help in building business development policy models.

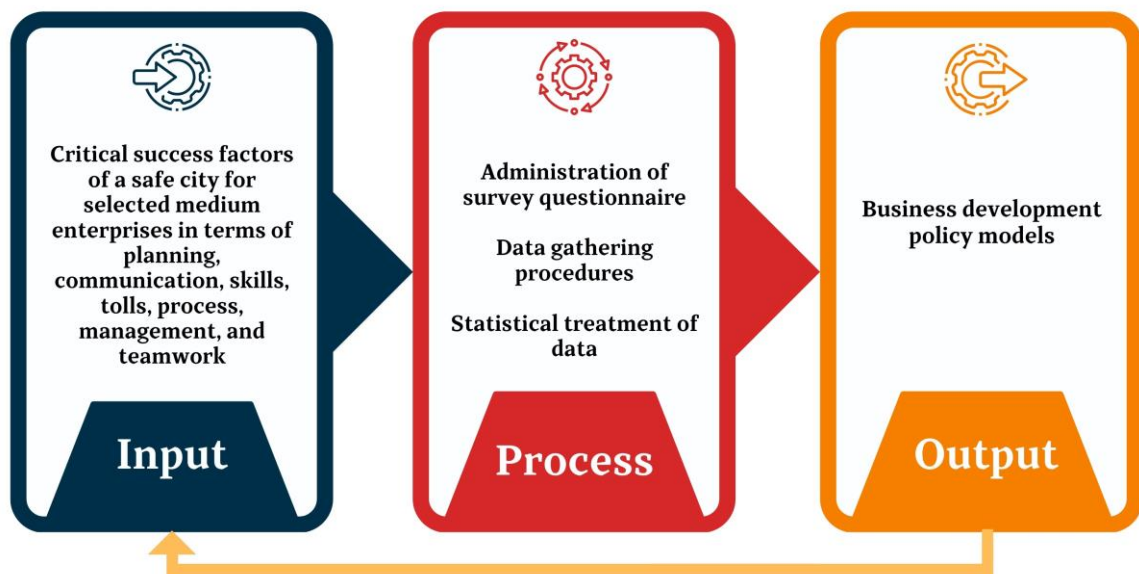


Figure 1. Research framework.

Figure 1 illustrates the flow of the study using the IPO (Input–Process–Output) model. The Input comprises the critical success factors of a safe city for selected medium enterprises in terms of planning, communication, skills, tools, process, management and teamwork. It also gathers information regarding any problems that are encountered by the city as far as the critical success factors are concerned on selected medium enterprises. The Process includes the administration of survey questionnaires, data gathering procedures and the statistical treatment of data. Finally, the Output explains how the study will achieve its goal of proposing a business development policy model.



Figure 2. Critical success factor model.

Source: (Rockart, 1979).

Figure 2 shows the Critical Success Factor (CSF) model, which is a framework developed by Harvard Business School professor Jerry Rockart in 1979. The model is used to identify and prioritize key factors that are critical to the success of an organization or project. According to Rockart, a CSF is considered essential for an organization to achieve its goals and objectives. CSFs can be thought of as the "must-haves" that must be in place for success to be achieved. Examples of CSFs might include having a strong leadership team, having adequate resources, having the right technology, or having a clear strategy. Furthermore, the CSF model is based on the idea that organizations can increase their chances of success by focusing on the key factors that are most important to their goals. By identifying and prioritizing CSFs, organizations can allocate resources and efforts more effectively and ensure that they are addressing the most critical issues. Lastly, the CSF model is widely used in various industries and has been applied in organizations of all sizes, from small businesses to large corporations. The model can be adapted and modified to fit the specific needs and objectives of any organization.

## 2. THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

This study is built on the Critical Success Factor (CSF) Model (Rockart, 1979). This model is suitable for the study because it explains how critical success factors are essential for accomplishment in a company. The key success factors must be put together and tailored to departments in order for that to be achievable, with each role having a unique "key success area". This assures a company's success based on rules and specifications that must be followed to offer better service for clients or partners.

This illustration shows how cities are evolving into smarter places that can monitor, understand, analyze, and plan the city to increase efficiency, equity, and quality of life for its residents in real time (Batty, Huovila, Pinto-Seppä, & Airaksinen, 2015). Smart cities can automate routine tasks that serve individual people, buildings, and traffic systems. A growing body of research on this topic has resulted in international publications and books. Although numerous attempts have been made to define a safe city, there is no set definition that is employed consistently throughout the literature, making it rich but also fragmented (Tranos & Gertner, 2015).

Traffic officials will be alerted to a problem by smart transportation, which might lead to an instant surveillance reaction and eventual unit deployment. Smart grids and smart energy are essential for monitoring vital infrastructure and could lower the likelihood of power outages. Graphical information systems (GIS) can use the data from smart cars to identify regions of the city that may be dangerous (due to traffic congestion, accidents, etc.). Through global positioning systems (GPS) and WiFi, smart gadgets (such as smartphones and tablets) allow for the mapping of individuals. This is another essential component of having graphical data regarding human mobility (Timber, 2016).

The fundamental driver for the adoption of Safer City programs is robust economies. Each city's rate of technological adoption is influenced by its rate of growth. New infrastructure is built when cities grow to sustain the expanding population. Cities are more inclined to adopt new, integrated systems if they can develop security solutions based on intellectual property (IP) infrastructure as opposed to redoing massive legacy systems. The increasing anonymity of those who might pose a threat is another effect of urbanization. There is a relationship between city size and crime, and as a nation's rate of urbanization rises, the demand for integrated security solutions becomes more critical.

The implementation of future safer city projects will also be influenced by security and safety threats. The threat of internal and external terrorism that a city faces is a component of the security element. A city is more likely to launch a safer city initiative if the internal or foreign threats of terrorist attacks are greater. Natural catastrophes, crime, and other factors are also included in the security and safety threat factor, with crime being the component that is most crucial. The major goals of safer cities are to lower crime rates and give people a greater sense of security.

As the organization in charge of a city, the government is obligated to carry out reforms that would benefit the community as a whole. The term "smart city" is used to describe a city where current networks and services are made more flexible, efficient, and sustainable with the use of information technology, digitalization, and telecommunications to improve their operations for the benefit of their residents (Cho & Park, 2017).

Numerous requirements must be met for a city to be developed as a smart city, and security is one such element. Threats to public safety are significant issues, and it is necessary to prevent threats from all types of crimes that might be committed against the public. The idea of a "smart city" gives the administration a fresh approach to guaranteeing the safety of all municipal residents. In order to reduce crime and terrorism threats, provide its residents with a healthy environment and easy access to healthcare, and achieve readiness and quick responses to threats or emergencies, a city is classed as a "Safe City" where technology and the natural environment are integrated to increase the effectiveness of its safety processes (Fesenko, Fesenko, & Bibik, 2017).

Security programs have been promoted in several countries. The 2017 National Electrical Code (NEC) security campaign (Ismagilova, Hughes, Dwivedi, & Raman, 2019) claims that Asian countries have relatively low security in comparison to other countries. Despite the fact that the NEC often assigns cities a score based on the same assessment approach, the Philippines' low score, for instance, can be due to the fact that every nation has a unique makeup. In this research, a valuation model for the city security index in Asian countries is built using indicators that have been customized to the needs of cities. A safe city evaluation tool goes through several steps, from collecting literature to having tools ready for use at a later stage.

Five goals have been established in order to achieve the vision of a world class city. In Malaysia, the improvement of living circumstances is one of the goals. However, it should be noted that crime is rapidly increasing in Malaysia, particularly in the cities (Anuar, Bookhari, & Aziz, 2012). There has reportedly been a considerable increase in violent crimes, and as the frequency of crime in Malaysia has increased, so has the population's fear of crime.

Urbanization has contributed in some manner to the rise in the crime rate (Mohanty, Choppali, & Kougianos, 2016). People moving to urban areas in pursuit of employment, a better standard of living, and other economic opportunities is the cause of urbanization.

Due to the high standard of living, city populations will continue to rise. However, due to urban overpopulation brought on by the rapid population growth, criminality will be one issue that arises.

It is essential to continually develop techniques to reduce crime if we want to make our communities safer. This will aid the general population in feeling less fearful of crime and make it safer for them to use public transportation and travel from one location to another. Our cities are not safe if people who live there constantly worry about being a victim of crime, even in their own homes. Approximately 90% of crimes in Malaysia occur in residential areas, according to Mohanty et al. (2016).

To create a city devoid of crime and violence, a hierarchy of needs must be met in order to create a sustainable ecosystem and safety, which includes protection, security, and the rule of law. In the UK, people frequently associate "excellent places to live" with safety and a low level of crime (Raj, Pethuru, & Anupama, 2018).

In addition to having a psychological effect on the public, safety issues in cities also have an economic impact. Australia reportedly spends a sizable chunk of money every year to deal with concerns including property loss, fraud, emotional toll, and other issues relating to safety and crime (Tao, Zhang, Liu, & Nee, 2018). An earlier study found that crimes have a financial cost, both in terms of the repercussions and the precautions that must be taken. It is also clear that more carbon dioxide is being released due to increased commuting, medical visits, repairing damaged property, and other activities.

"Clustering" refers to nighttime gatherings where people gather, loiter and ultimately instigate violence. Peaceful streets are frequented by drunk people in regions where there is a high risk of crime and violence, including rape, theft and homicide. Furthermore, Bromley & Nelson concur that alcohol usage and criminal activity are related in the United Kingdom (Tao et al., 2018).

Even though it is agreed that nocturnal activities may boost the economy (Hu, Wu, & Wan, 2022), the main streets are mostly empty as a result of high rent and the presence of "deadening facades" such as showrooms. Communities are outraged that nightclubs are now free to operate on side streets.

Alcohol-related crimes are far more likely to occur late at night in bars and clubs. This observation highlights the significance of considering both the location of pubs and clubs as well as the variety of nighttime activities when trying to reduce crime at night.

Unsafe areas could promote late-night activity, boosting economic value. To reduce the fear of crime, one might alter both the physical environment and evening activities. In a Dutch study, participants reported feeling safer in an area with door staff or bodyguards than they did when under CCTV surveillance. The participants were also impacted by the ethnicity of the door staff, who felt more exposed around those of Arab or other non-Western heritage. However, this result is influenced by people's perceptions and presumptions about various cultures. Different countries could have different preferences regarding the race of door staff or bodyguards. According to Lacinák and Ristvej (2017), having both CCTV and human surveillance can reduce the feeling of fear of crime throughout the night.

The behavior of criminals toward visitors, including those of different genders and ages as well as those who use public transportation, is one facet of safety that we must take into account in order to create a safer city. Walking the streets and taking public transportation can also make people feel more afraid, particularly in high-



crime areas. People should always be aware of their surroundings due to the substantial risk of theft, pickpocketing, kidnapping, etc.

The areas where children can walk or play safely must be devoid of traffic and the possibility of violence. An Intelligent Transportation System (ITS), which uses the concept of environmental adaptation, can be used to provide services to drivers to ensure appropriate driving behavior, protect children, and implement the infrastructure to adapt it for pedestrians (Murray, 2017).

Yigitcanlar et al. (2019) focuses on how female tourists in Kuala Lumpur are viewed. According to the findings, while respondents felt safe traveling through Kuala Lumpur during the day, they did not feel safe throughout the evening. They believed that they were vulnerable to pickpocketing, violence, rape, and theft. How individuals view safety is significantly influenced by traffic. The level of safety for men and women differs because women usually attract more attention and face greater problems. The respondents' emphasis on feeling safer in places with CCTV was prompted by the results. However, it might be argued that CCTV won't deter illegal activity; rather, it will simply help with investigations after a crime has been committed.

Women's travel safety was also the subject of Yigitcanlar et al. (2019), specifically those who use public transport. The study discovered that women's concerns about safety were influenced by their age, the distance traveled, and the length of the trip. Instead of focusing on incident-related factors that make female travelers feel unsafe, this study focuses on the impact of poor public transportation services that lead to unsafe situations. Therefore, investment in safety policies and public transportation is highly recommended. The public transportation system needs to be reviewed to ensure that there are no delays or technical issues that can lengthen journeys.

Yigitcanlar et al. (2019) highlighted visitors' unease caused by the physical characteristics of train stations. Participants in the study stated that they would feel more at ease in a station with an open layout where all areas are clearly visible. Giving the general public access to and visibility of their surroundings without any barriers preventing them from learning what is happening around them will aid in allaying fears regarding their safety. In addition to visibility, better lighting, CCTV, and clean train stations all help to make the public feel safer.

CCTV cameras are not positioned in high-crime zones, according to an examination of land use, building use, urban infrastructure, and CCTV location (Lim, Edelenbos, & Gianoli, 2019). To create a safer environment, a detailed investigation of the optimal location for CCTV installation is needed. It is suggested that by improving the urban physical environment, a safer city can be created (March, 2018).

It has been found that a city's populace generally feels safer when it is busy and crowded. While CCTV might be seen as surveillance to assuage public safety concerns, crime still happens. The fact that crime is more likely to occur in darker regions raises similar concerns about street lighting, but this does not encourage people to become less fearful of crime. Although authorities are essential to the implementation of laws and policies, little has been done to understand how people feel about their safety in urban settings (Martinez, Martinez, & Solka, 2017).

Small and medium-sized businesses (SMEs) are companies with fewer than 250 people that operate on a small scale. Technically speaking, the definition varies from nation to nation but is typically based on assets, employment, or a combination of the two. The majority of foreign nations are becoming aware of the fact that SMEs contribute significantly to gross domestic product (GDP) and the economic activities of their nations, hold a significant position, and experience similar effects when a government establishes business policies for larger businesses. The majority of south-eastern nations are monitoring the expansion and motivation of the people in charge of SMEs as they recognize their contribution to the nation's productivity.

Small and medium-sized businesses are viewed as global drivers of economic growth. In this perspective, creating jobs to reduce poverty is one of the most significant function of SMEs. SMEs that are capable of advancing the economy of any country are extremely beneficial for both established and emerging nations. They have a significant impact on the transformation of economies and the creation of new jobs. Implicitly, SMEs are better able

to create dynamic economies of scale in the sectors they have successfully penetrated. Due to their position in the middle of the distribution of sizes and resource intensities in a growing economy, SMEs play an important role in the establishment of productive employment.

According to the Landry (2015), more than 50% of the world's population resides in cities. As a result, city governments must address a variety of issues, including the need to foster innovation, prosperity, and sustainability. Cities should be clean, safe, and thriving in terms of culture (Landry, 2015). Cities must also be able to accommodate rising populations with diverse ethnic, religious, and socioeconomic backgrounds. Recently, De Andrade et al. (2016) asserted that "mayors run the world" and that local governments are essential to resolving global issues. Academic interest has been paralleled by the contemporary administrations' emphasis on cities as centers of governance. Although urban governance is a mature academic field, it has only recently been linked to fields that concentrate on technology and innovation (Pierre, 2015). Urban governance is related to e-government and innovation research to generate strategies that can make cities smarter (Nam & Pardo, 2015).

### 3. RESEARCH DESIGN

A descriptive method was utilized to gather quantitative data to analyze and explain the critical success factors of safe cities that can be used for the business development policy model. In order to conduct a descriptive research project, a researcher can choose from three different approaches: (1) observational, which is defined as a method of observing and documenting the participants; (2) case study, which is defined as an in-depth analysis of a single person or group of people; and (3) survey, which uses a research tool containing the critical success factors of safe cities for the chosen medium enterprises that will be used for the development of a business policy.

#### 3.1. Sample Selection and Description

Purposive sampling was used to select a group of 100 owners of mid-sized businesses in Nueva Ecija, and the Critical Success Factor (CSF) Model, created by Rockart (1979), served as the foundation for the questionnaire, which was amended according to the purpose of this study. The review panel members and subject-matter specialists served as critics. Based on their feedback, the required changes were made to the survey to ensure its validity.

#### 3.2. Data Sources

The instrument is made up of two parts. For the chosen businesses, the first section identifies the crucial aspects of the success of a safe city in terms of planning, communication, skills, tools, process, management, and teamwork.

The second section identifies the issues that the city causes for medium-sized businesses in terms of the crucial success components.

To identify the significant differences between the critical success factors of a safe city and the success of medium enterprises, the data collected from the first and second sections as described in the preceding paragraph were processed using the Statistical Program for the Social Sciences (SPSS) version 20.0.

In order to establish business development policy models, a researcher-modified questionnaire was employed to help identify the crucial success elements of a safe city for the chosen group of medium-sized businesses. An impartial adviser was given the questionnaire and asked for their opinion and any suggestions for improvement. The option to select "indifferent" was eliminated, so the four-point Likert scale was used. After that, the researcher showed the tool to additional specialists, including statisticians, research professors, and subject-matter experts. These experts' feedback and recommendations were taken into account and only a few changes were made.

Each business owner was given adequate time to complete the questionnaire, which was sent via Google Forms as face-to-face surveys were not permitted. Answers were requested to be provided within a maximum of 15

minutes. However, a percentage of the respondents asked for more time to answer because of the lengthy questions included in the instrument.

The survey results were reviewed to ensure that the necessary data were included. The responses were totaled and encoded using MS Excel. SPSS version 20.0 was used to import the raw data and process it using the appropriate statistical techniques. A statistician was also hired to ensure that the data received the proper statistical treatment and to offer guidance in the interpretation and analysis of the results.

The quantitative data were analyzed using SPSS software, and statistical tools, such as frequency distribution, percentages, weighted mean, chi-square and analysis of variance (ANOVA), were used to process the raw data into meaningful information.

Weighted Mean (WM): This was used to treat the responses pertaining to the critical success factors of a safe city for the selected medium enterprises.

Chi-square Test: This was used to test the significant differences between the critical success factors of a safe city and the success of the selected medium enterprises.

**Table 1.** Frequency and percentage distribution of the respondents in terms of planning.

Planning	Mean	Verbal interpretation
The city government provides guidelines for business operations in terms of safety and security	3.62	Highly agree
The city government gives direction the organization since it is necessary to understand its current position and the possible avenues through which it can pursue a particular course of action	3.54	Highly agree
The city government creates universal buy-in and understanding of the objectives and puts operational processes in place to guide the organization toward the achievement of their goals	3.78	Highly agree
Mechanisms are in place for evaluating emerging opportunities and challenges with leadership willing to take action	3.56	Highly agree
Safe and smart cities are livable ecosystems – they enable people, families, and communities to live the lives they want to pursue	3.76	Highly agree
Composite mean	3.65	Highly agree

#### 4. EMPIRICAL TEST RESULTS

Table 1 presents the frequency and percentage distribution of the respondents in terms of planning, with a composite mean of 3.65, and the results show that the respondents highly agree with the statements.

The vast majority of respondents strongly agree that the city government promotes a widespread understanding of the objectives and implements operational processes to direct organizations toward achieving them in terms of planning ( $x = 3.78$ ); provides a livable ecosystem that allow individuals, families, and communities to pursue their desired lives ( $x = 3.76$ ); and provides guidelines for business operations in terms of safety and security ( $x = 3.78$ ). Additionally, the respondents strongly agree that the city government provides direction for organizations because it is important to comprehend their current situation and the potential paths that they can take to pursue a particular course of action ( $x = 3.54$ ), and that there are mechanisms in place for assessing new opportunities and challenges with leadership ready to act ( $x = 3.56$ ).

The findings show that the respondents are encouraged by the municipal government's crucial contribution to making the city a safer and more advantageous place to conduct business.

Table 2 shows the frequency and percentage distribution of the respondents in terms of communication, with a composite mean of 3.75, which is interpreted as highly agree.

Respondents strongly concur that the local government unit (LGU) integrates command centers to assist local business communities to secure their communications networks ( $x = 3.91$ ); law enforcement and emergency services need quick, reliable, and secure communications channels that enable them to respond quickly and effectively to



businesses' potential threats ( $x = 3.75$ ); and public officials need reliable and up-to-date communications in order to make decisions.

**Table 2.** Frequency and percentage distribution of the respondents in terms of communication.

Communication	Mean	Verbal interpretation
Public officials need reliable and up-to-date communications in order to make informed decisions on emergency responses, resource allocation, and priority-setting for business owners	3.74	Highly agree
The city needs to upgrade their telecommunications facilities so their residents and law enforcement can gain the benefits of technology innovation	3.67	Highly agree
Some of the new projects in the city involve infrastructure development that creates platforms for digital communication and engagement for business	3.69	Highly agree
LGUs integrate command centers to help local business communities secure their communications networks	3.91	Highly agree
Law enforcement and emergency services need quick, reliable, and secure communications channels that enable them to respond quickly and effectively to possible threats to businesses	3.75	Highly agree
Composite mean	3.75	Highly agree

The findings validate the idea of "safe," which is anticipated to motivate additional advancements in connectivity and communication to improve safety (Smith, 2017). Smart buildings, smart transportation, smart energy, smart grid, smart cars, and smart devices are all included when discussing smart technologies. The primary forces behind city connectivity are these brand-new cutting-edge technologies. Any deviation in the information flow can alert first responders, and the information flow from smart buildings will give an overview of the state of current utility usage. Traffic officials will be alerted to any problems with smart transportation, which can then be dealt with accordingly.

**Table 3.** Frequency and percentage distribution of the respondents in terms of skills.

Skills	Mean	Verbal interpretation
Training and seminars are given to continuously develop law enforcement in protecting the safety of the city	3.69	Highly agree
Skills assessments are conducted periodically to ensure the quality of safe city promotion	3.64	Highly agree
The LGU assists local businesses in protecting their ability to sustain safety and security and combines skill sets	3.82	Highly agree
The LGU creates widespread appreciation of the target skills, as well as organizational processes that direct the company toward achieving them	3.83	Highly agree
In terms of safety and protection, the city government offers skills guidelines required for business operations	3.67	Highly agree
Composite mean	3.73	Highly agree

Table 3 presents the frequency and percentage distribution of the respondents in terms of skills, with a composite mean of 3.73, which is interpreted as highly agree.

Most of the sample highly agree that the LGU creates widespread appreciation of the target skills and organizational processes that direct companies toward achieving them ( $x = 3.83$ ), and that the LGU assists local business organizations in protecting their ability to sustain safety and security and combines skill sets ( $x = 3.82$ ). Further, training and seminars are given to continuously develop law enforcement in protecting the safety of the city ( $x = 3.69$ ), and in terms of safety and protection, the city government offers skills guidelines required for business operations ( $x = 3.67$ ).

Table 4 presents the frequency and percentage distribution of the respondents in terms of tools, with a composite mean of 3.74, which is interpreted as highly agree.

Regarding the use of tools, respondents strongly concur that the LGU adopts a comprehensive approach to the causes of and solutions to crime, violence and other antisocial behavior, injury, and drug and alcohol issues in the 24-hour city context ( $x = 3.88$ ), that developing proactive partnerships and ensuring coordination of our efforts is essential to the development of a safer community ( $x = 3.85$ ), and makes sure that every business owner feels safe, especially those who are disadvantaged and vulnerable.

**Table 4.** Frequency and percentage distribution of the respondents in terms of tools.

Tools	Mean	Verbal interpretation
The LGU takes a broad view of the causes of and solutions to crime, violence and other antisocial behavior, injury, and drug and alcohol issues in the 24-hour city context	3.88	Highly agree
Proactive partnerships are developed to ensure coordination of our efforts, which is critical to the creation of a safer community	3.85	Highly agree
The LGU ensures that each business owner, including those who are disadvantaged and vulnerable, feels safe and welcome and is able to participate in city life	3.76	Highly agree
Responding to community safety across all settings and for all populations is critical to the success of the business strategy	3.72	Highly agree
The proper design and effective use of the business environment can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life	3.48	Highly agree
Composite mean	3.74	Highly agree

These findings show that cities are evolving into smarter places, not only in terms of their ability to automate repetitive tasks for specific people, structures, and traffic systems, but also in terms of their capacity to monitor, comprehend, analyze, and plan the city in order to increase efficiency, equity, and quality of life for its residents in real time (Batty et al., 2015).

**Table 5.** Frequency and percentage distribution of the respondents in terms of process.

Process	Mean	Verbal interpretation
Sustainable urban transport includes business strategy improvement	3.82	Highly agree
The effectiveness of business plans hinges on the ability to adapt to community safety in all environments and for all communities	3.83	Highly agree
The city government provides competence requirements for business activities in terms of safety and protection	3.67	Highly agree
The city must update its business registration process so that citizens and law enforcement can benefit from these advances	3.69	Highly agree
Mechanisms for assessing potential opportunities and threats are in place, and leadership is ready to act	3.91	Highly agree
Composite mean	3.78	Highly agree

Table 5 presents the frequency and percentage distribution of the respondents in terms of process, with a composite mean of 3.78, which is interpreted as highly agree.

Based on the results pertaining to process, the respondents highly agree that mechanisms for assessing potential opportunities and threats are in place, and that leadership is ready to act ( $x = 3.91$ ), the effectiveness of business plans hinges on the ability to adapt to community safety in all environments and for all communities ( $x = 3.83$ ), and sustainable urban transport includes business strategy improvement ( $x = 3.82$ ).

Fragmentation is reproduced by the notion of a secure city administration. The public management perspective, which emphasizes that tackling societal problems needs more than just adopting effective policies, is consistent with the widespread consensus that government policies must play a significant role in fostering smart cities (Yigitcanlar, 2015). Torfing, Thierstein, Wiedmann, and Salama (2015) state that effective coordination between the government and other stakeholders is needed. Concepts need to be defined and repositioned in

theoretical perspectives for various disciplines to connect productively. Urban governance experts are developing an interest in technology, and researchers in the subject of e-government studies are starting to show an interest in local government.

Table 6 presents the frequency and percentage distribution of the respondents in terms of management, with a composite mean of 3.65, and is interpreted as highly agree.

In terms of management, respondents highly agree that actions are in place that can be taken by LGUs to stabilize an incident and minimize potential damage to the business ( $x = 3.72$ ), that the safety management practice that is frequently applied by small business employers more than any other is the communication of known safety and security issues ( $x = 3.71$ ), and that management has contingencies in place for emergencies that might hamper operations ( $x = 3.70$ ).

**Table 6.** Frequency and percentage distribution of the respondents in terms of management.

Management	Mean	Verbal interpretation
A practice of safety management that is frequently applied by small business employers more than any other is the communication of known safety and security issues	3.71	Highly agree
Safety management standards are applied	3.65	Highly agree
The management has contingencies in place in case of emergencies that might hamper operations	3.70	Highly agree
Actions are in place that can be taken to stabilize an incident and minimize potential damage to the business	3.72	Highly agree
Stabilizing an emergency should involve different actions, including firefighting, administering medical treatment, rescue, containing a spill of hazardous chemicals or handling a threat or act of violence	3.48	Highly agree
Composite mean	3.65	Highly agree

The fundamental driver for the adoption of Safer City programs is robust economies. Each city's rate of technological adoption is influenced by its rate of growth. The likelihood of purchasing technology that can incorporate existing security systems, such as closed-circuit television (CCTV), sensors, and detectors, will increase as the economy grows (Young, 2016). A greater likelihood of acquiring new solutions and integrating all security measures is indicated by newer city economies and anticipated long-term growth. New infrastructure is built when cities grow to sustain the expanding population. Cities are more inclined to adopt new, integrated systems if they can develop security solutions based on IP infrastructure instead of modernizing large legacy systems. The increasing anonymity of those who might pose a threat is another effect of urbanization. There is a relationship between city size and crime, and as a nation's rate of urbanization increases, the demand for integrated security solutions becomes more critical.

**Table 7.** Frequency and percentage distribution of the respondents in terms of teamwork.

Teamwork	Mean	Verbal interpretation
Communicating frequently through multiple channels should serve as an option for businesses in any situation	3.54	Highly agree
Strategies should include specific steps in promoting a safe city	3.78	Highly agree
The LGU facilitates recovery assistance after business emergencies	3.78	Highly agree
Volunteer efforts are coordinated with the organization to have common goals regarding safety	3.56	Highly agree
Customer service is maintained while responding to security and safety threats	3.76	Highly agree
Composite mean	3.68	Highly agree

Table 7 presents the frequency and percentage distribution of the respondents in terms of teamwork, with a composite mean of 3.68, which is interpreted as highly agree.

In terms of teamwork, respondents highly agree that LGU strategies should include specific steps to promote a safe city and facilitate recovery assistance after business emergencies ( $x = 3.78$ ), and continuously provide services to customers while responding to security and safety threats ( $x = 3.76$ ). Further, it can also be seen that they coordinate volunteer efforts within the organization to have common goals with regard to safety ( $x = 3.56$ ).

**Table 8.** Significant differences between the critical success factors of a safe city and the success of the selected medium enterprises.

Sources of variation	Pearson's r	Interpretation	Sig. value	Decision	Remark
Planning	-0.801	Fairly strong correlation	0.000	Reject H <sub>o</sub>	Significant
Communication	-0.655	Moderate correlation	0.000	Reject H <sub>o</sub>	Significant
Skills	-0.702	Moderate correlation	0.000	Reject H <sub>o</sub>	Significant
Tools	0.894	Fairly strong correlation	0.000	Reject H <sub>o</sub>	Significant
Process	-0.541	Moderate correlation	0.001	Reject H <sub>o</sub>	Significant
Management	0.745	Moderate correlation	0.000	Reject H <sub>o</sub>	Significant
Teamwork	-0.804	Fairly strong correlation	0.002	Reject H <sub>o</sub>	Significant

Note: +/- 1 = Perfect correlation; +/- 0.80 = Strong correlation; +/- 0.60 = Moderate correlation.

Table 8 presents the significant differences between the critical success factors of a safe city and the success of the selected medium enterprises.

The sig. values for planning (0.000), communication (0.000), skills (0.000), tools (0.000), process (0.001), management (0.000) and teamwork (0.002) reject the null hypothesis of no significant difference. This means that the critical success factors for a safe city and the success of medium enterprises are significantly different.

## 5. RESEARCH CONCLUSIONS

We can draw the conclusion that the respondents are encouraged by the crucial role the local government plays in making the city safer and more business-friendly.

In order to increase safety, the respondents anticipate that the "Safe City" will encourage further developments in connectivity and communication. Smart technologies include, among other things, smart buildings, smart transportation, smart energy, smart grid, smart cars, and smart electronics.

The majority of respondents affirmed that there are systems in place for evaluating prospective possibilities and dangers, and that leadership is prepared to take action. They also concurred that adaptability to community safety in all settings and for all communities, as well as sustainable urban mobility, are necessary for the business model to be successful.

1. To improve the security, standard, and utilization of public spaces and sites, the LGU should develop a long-term public space enhancement program that integrates crime prevention ideas into environmental design. Additionally, they must promote and initiatives that aim to increase positive public realm activities in the city.

2. For people of all ages, abilities, genders, and cultures, they should design and build pleasant public spaces, including street furniture. Additionally, they ought to design inclusive materials that reflect the diverse social and cultural composition of our community and display them in signage, publications, and advertisements.

3. Traffic safety campaigns should be implemented that concentrate on at-risk drivers and high-incidence locations. Cleaning companies, neighborhood establishments, and locals should work together to maintain the cleanliness and upkeep of our streets and laneways both during the day and after dark. It is also necessary to make sure that the built-up environment addresses the needs of elderly people and those with disabilities by working with significant representative groups. Support initiatives and programs that promote safer driving practices among road users, boost participation, and enhance knowledge of safe driving practices are also recommended.

**Funding:** This study received no specific financial support.

**Competing Interests:** The author declares that there are no conflicts of interests regarding the publication of this paper.

## REFERENCES

- Anuar, A. N. A., Bookhari, S. N., & Aziz, N. A. (2012). The effectiveness of safe city programme as safety basic in tourism industry: Case study in Putrajaya. *Procedia-Social and Behavioral Sciences*, 42, 477-485. <https://doi.org/10.1016/j.sbspro.2012.04.213>
- Batty, H., Huovila, A., Pinto-Seppä, I., & Airaksinen, M. (2015). What are the differences between sustainable and smart cities? *Cities*, 60, 234–245. <https://doi.org/10.1016/j.cities.2016.09.009>
- Cho, J. T., & Park, J. (2017). Exploring the effects of CCTV upon fear of crime: A multi-level approach in Seoul. *International Journal of Law, Crime and Justice*, 49, 35-45. <https://doi.org/10.1016/j.ijlcrj.2017.01.005>
- De Andrade, J. B. S. O., Ribeiro, J. M. P., Fernandez, F., Bailey, C., Barbosa, S. B., & Da Silva Neiva, S. (2016). The adoption of strategies for sustainable cities: A comparative study between Newcastle and Florianópolis focused on urban mobility. *Journal of Cleaner Production*, 113, 681-694. <https://doi.org/10.1016/j.jclepro.2015.07.135>
- Fesenko, T., Fesenko, G., & Bibik, N. (2017). The safe city: Developing of GIS tools for gender-oriented monitoring (On the Example of Kharkiv City, Ukraine). *Eastern-European Journal of Enterprise Technologies*, 3(2), 25-33. <https://doi.org/10.15587/1729-4061.2017.103054>
- HSD Foundation. (2019). The smart state test: A critical review of the smart state strategy 2005-2015's knowledge-based urban development. *International Journal of Knowledge-Based Development*, 7(1), 75–101.
- Hu, W., Wu, H., & Wan, W. (2022). Decoding the multidimensional structuring of urban poles of growth of Nighttime economics—an inter-discipline study in Lanzhou City, China, based on geomodeling and big data. *Sustainability*, 15(1), 245. <https://doi.org/10.3390/su15010245>
- Ismagilova, E., Hughes, L., Dwivedi, Y. K., & Raman, K. R. (2019). Smart cities: Advances in research—an information systems perspective. *International Journal of Information Management*, 47, 88-100. <https://doi.org/10.1016/j.ijinfomgt.2019.01.004>
- Karadag, M., & Hande, I. (2015). *Doing your literature review: Traditional and systematic techniques*. London: Sage.
- Lacinák, M., & Ristvej, J. (2017). Smart city, safety and security. *Procedia Engineering*, 192, 522-527. <https://doi.org/10.1016/j.proeng.2017.06.090>
- Landry, S. (2015). Wired communities in the city: Sydney, Australia. *Geographical Research*, 42(2), 175–192. <https://doi.org/10.1111/j.1467-8470.2004.00274.x>
- Lim, Y., Edelenbos, J., & Gianoli, A. (2019). Identifying the results of smart city development: Findings from systematic literature review. *Cities*, 95, 102397. <https://doi.org/10.1016/j.cities.2019.102397>
- March, H. (2018). The smart city and other ICT-led techno-imaginaries: Any room for dialogue with Degrowth? *Journal of Cleaner Production*, 197, 1694–1703. <https://doi.org/10.1016/j.jclepro.2016.09.154>
- Martinez, W. L., Martinez, A. R., & Solka, J. (2017). *Exploratory data analysis with MATLAB*: Chapman and Hall/CRC.
- Mohanty, S. P., Choppali, U., & Kougianos, E. (2016). Everything you wanted to know about smart cities. *IEEE Consumer Electronics Magazine*, 5(3), 60-70. <https://doi.org/10.1109/MCE.2016.2556879>
- Murray, S. (2017). *Safe cities index 2017. Security in a rapidly urbanising world. A report from the economist intelligence unit*. Retrieved from <https://dkf1ato8y5dsg.cloudfront.net/uploads/5/82/safe-cities-index-eng-web.pdf>
- Nam, B., & Pardo, D. (2015). Are lessons from eco-towns helping planners make more effective progress in transforming cities into sustainable urban systems: A literature review (part 2 of 2). *Journal of Cleaner Production*, 109, 152–165. <https://doi.org/10.1016/j.jclepro.2014.12.099>
- Pierre, K. (2015). Smart cities in Europe. *Journal of Urban Technology*, 18(2), 65–82.
- Raj, Pethuru, & Anupama, C. R. (2018). *Chapter 3: The role and relevance of software-defined cloud infrastructure. In intelligent cities: Enabling tools and technology*. Boca Raton, US: CRC Press, Taylor & Francis Group.
- Rockart, J. F. (1979). Chief executives define their own data needs. *Harvard Business Review*, 57(2), 81-93.
- Ruiz, W. (2015). Transformation toward an eco-city: Lessons from three Asian cities. *Journal of Cleaner Production*, 123, 77–87. <https://doi.org/10.1016/j.jclepro.2015.09.033>

- Sitharam, Y., & Hoque, Z. (2016). Indicator-based urban sustainability: A review. *Energy for Sustainable Development*, 17(6), 555–563.
- Smith, R. (2017). Developing the plan IT valley: A view on the governance and societal embedding of U-ECO city pilots. *International Journal of Knowledge-Based Development*, 4(2), 109–125.
- Tao, F., Zhang, H., Liu, A., & Nee, A. Y. (2018). Digital twin in industry: State-of-the-art. *IEEE Transactions on Industrial Informatics*, 15(4), 2405–2415.
- Timber, N. (2016). Smart and digital city: A systematic literature review. In Smart city. In (pp. 13–43). Berlin: Springer.
- Torfinn, S., Thierstein, A., Wiedmann, F., & Salama, A. M. (2015). When the Oryx takes off: Doha a new rising knowledge hub in the Gulf region? *International Journal of Knowledge-Based Development*, 6(1), 65–82. <https://doi.org/10.1504/ijkbd.2013.054089>
- Tranos, M., & Gertner, S. (2015). Advancing smartness of traditional settlements-case analysis of Indian and Arab old cities. *International Journal of Sustainable Built Environment*, 5(2), 549–563. <https://doi.org/10.1016/j.ijsbe.2016.08.004>
- Yigitcanlar, T. (2015). Smart cities: An effective urban development and management model? *Australian Planner*, 52(1), 27–34.
- Yigitcanlar, T., Kamruzzaman, M., Foth, M., Sabatini-Marques, J., Da Costa, E., & Ioppolo, G. (2019). Can cities become smart without being sustainable? A systematic review of the literature. *Sustainable Cities and Society*, 45, 348–365. <https://doi.org/10.1016/j.scs.2018.11.033>
- Young, B. (2016). Foundations for smarter cities. *IBM Journal of Research and Development*, 54(4), 1–16.

*Views and opinions expressed in this article are the views and opinions of the author(s). The Asian Development Policy Review shall not be responsible or answerable for any loss, damage or liability, etc., caused in relation to/arising from the use of the content.*