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Public Administration and Policy (PAP) – An Asia Pacific Journal has been published online in open access on the Emerald Insight Platform since 2018. PAP now publishes three issues per year and is indexed and abstracted by: CrossRef, EBSCO Discovery Service, Google Scholar, Summons (ProQuest), WorldCat. It has already applied for Emerging Sources Citation Index (ESCI), and will soon apply for Scopus for impact ranking. Academics and practitioners in public administration, management, public policy, and related fields are welcomed to contribute papers to PAP.

This third issue of 2020 consists of eight articles covering a wide range of topics in various countries and region, including the United States, China, Hong Kong SAR, Japan, India, Bangladesh, Indonesia, Nigeria and Pakistan contributed by academics and practitioners.

The first article is “A big-data analysis of political rhetoric relating the developments of the United States, China, and global powers” by Patrick Carter, Jeffrie Wang and Davis Chau. This article adopts big data analysis to examine whether or not China is on the same path to becoming a world power like what the U.S. did a hundred years ago. Through a novel approach by identifying the most common words and political trends from speeches made by leaders of both countries from three periods: 1905-1945 and 1977-2017 in U.S. and 1977-2017 in China, it illustrates how China is likely in a transitional stage of becoming a world power.

The second article is “A review of the strategic planning process in the Hong Kong Police Force” by Hoi-yan Cheung and Eddie Yu. This article reviews the strategic planning process and its outcome of the Hong Kong Police Force (the Force) for the planning cycle of 2019-2021 based on an insider’s perspective. It applies the 3H (Heart-Head-Hand) framework and futures studies approach to analyze the Force’s five-step strategic planning process. This article shares the Force’s experience which is insightful for practitioners in other public organizations when facing the volatile, uncertain, complex and ambiguous world in achieving their strategic goals.

The third article is “Social and health sector reform towards 2040 in Japan” by Tomonori Hasegawa, Kunichika Matsumoto, Ryo Onishi and Koki Hirata. This article examines the health sector reform toward 2040 for a super-aged society in Japan. The authors propose a useful Community-based Integrated Care System which takes into account the perspective of health care users. It is essential for Japan to have more consensus by removing the obstacles and paying attention to the change of paradigm and the purpose of care. The case of Japan serves as a reference for other East Asian countries entering into super-aged societies soon.

The fourth article is “Impact of Artificial Intelligence on the Health Protection Scheme in India” by Raul Villamarin Rodriguez, Sanjivni Sinha and Sakshi Tripathi. This article discusses the applications and roles of Artificial Intelligence (AI) in the healthcare industry through the Ayushman Bharat health protection scheme in India. It reveals that AI certainly enhances experiential services. However, it cannot surpass the human touch which is an



essential determinant of experiential healthcare services. Inevitably, AI acts as an effective complementary dimension to the future of healthcare.

The fifth article is “Public-Private Partnership for achieving Sustainable Development Goals: a case study of Khulna, Bangladesh” by Md. Nazmul Haque, Mustafa Saroar, Md. Fattah and Syed Morshed. This article examines and evaluates the case of a Public-Private Partnership project of the landscaping done on road medians in the Central Business District of Khulna, Bangladesh. This case study demonstrates a triple-win situation for the public authority, private parties and community, as well as successfully achieving the Sustainable Development Goals at a subnational level.

The sixth article is “Governance and administrative process of the Light Rail Train project in Palembang, Indonesia” by Muhammad Akbar Hairi. This article investigates the governance and administrative process in the Palembang Light Rail Train project in Indonesia by adopting both the STEEP (social, technological, environmental, economic and political) analysis and desakota technopole theoretical framework. It concludes that Palembang needs smart urban transportation to solve the traffic problems, and it is critical for national, provincial, and local governments to adopt a desakota technopole framework strategy to meet the long-term targets.

The seventh article is “Stakeholders’ perspectives of public participation in landuse policy: the Nigeria experience” by Adewumi I. Badiora. This article evaluates and identifies the facilitators and limitations to have effective public participation in landuse planning in Nigeria. There is consensus amongst stakeholders that early public consultation was preferred, and yet the opinion varied on whether relevant information was provided to the public, and the level of satisfaction with the process. The limitations include the insufficient feedback to the participants, corruption, and shortage of resources to complete the process promptly.

The last article is “Effects of red tape in public sector organizations: a study of government departments of Pakistan” by Sana Rauf. This article explores the emergence and integration of red tape in the government departments of Punjab, a province of Pakistan. Through a questionnaire survey, it reveals that when there are excessive rules and regulations, employees are prevented from completing assigned tasks effectively and resulted in decreased work commitment. It also impacts the overall performance of public sector organizations. In conclusion, the author makes several recommendations for improving the situation.

I wish to thank the authors for contributing their papers to this issue and the reviewers for their critical but constructive comments in helping the authors to improve their papers. Finally, I thank Emerald and our editorial team as well as the members of both Asia Pacific Editorial Board and International Editorial Advisory Board for their contributions in making the successful publication of this issue possible. We hope these papers will enhance the understanding of various issues on public administration and policy across the regions.

Peter K.W. Fong

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About the Editor-in-Chief

Professor Peter K.W. Fong, PhD (New York University), is President of Hong Kong Public Administration Association and Editor-in-Chief of PAP Journal. He teaches strategic management and supervises DBA students’ dissertations of University of Wales and lectures Public Policy Values at the Chinese University of Hong Kong. He holds Advisory/Visiting Professorships in Tongji, Tsinghua, Renmin, Tianjin Universities and HK Poly U. He is a

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Editorial

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A big-data analysis of political rhetoric relating the developments of the United States, China, and global powers

Big-data
analysis of
political
rhetoric

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Abstract

Purpose – The similarities between the developments of the United States (U.S.) and China into global powers (countries with global economic, military, and political influence) can be analyzed through big data analysis from both countries. The purpose of this paper is to examine whether or not China is on the same path to becoming a world power like what the U.S. did one hundred years ago.

Design/methodology/approach – The data of this study is drawn from political rhetoric and linguistic analysis by using “big data” technology to identify the most common words and political trends over time from speeches made by the U.S. and Chinese leaders from three periods, including 1905-1945 in U.S., 1977-2017 in U.S. and 1977-2017 in China.

Findings – Rhetoric relating to national identity was most common amongst Chinese and the U.S. leaders over time. The differences between the early-modern U.S. and the current U.S. showed the behavioral changes of countries as they become powerful. It is concluded that China is not a world power at this stage. Yet, it is currently on the path towards becoming one, and is already reflecting characteristics of present-day U.S., a current world power.

Originality/value – This paper presents a novel approach to analyze historical documents through big data text mining, a methodology scarcely used in historical studies. It highlights how China as of now is most likely in a transitional stage of becoming a world power.

Keywords Political rhetoric, Big data, United States, China, Global powers

Paper type Research paper

Introduction

According to popular legend, the French Emperor Napoleon once said about China, “let her sleep, for when she wakes, she will shake the world.” Despite Napoleon having never actually uttered these famous words, they appear to have come true. In recent years, China has dominated the headlines of global news as the Asian giant has caught the attention of all world leaders. Academics debate and write on the possibilities of a Chinese superpower with global power projection while making their countless analyses of China’s situation. Journalists continue to produce an unending amount of reports and articles heralding the

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successes of the Chinese government in turning China into a world power, or criticizing a more assertive Chinese leadership, or warning of the rise of China and decline of the United States. And it is not hard to understand why. China's rapidly growing economy, expanding military, and greater participation in global affairs have shaken the world and shifted the balance of world power. However, while as spectacular as China's growth has been, this sort of progress is nothing new. The emergence of the United States onto the world stage also came about in a fashion similar to what China is doing today.

Literature review

In the modern world, a country's power can be analyzed through two different lenses: hard power and soft power. Joseph Nye, the Harvard political scientist behind the theories of hard power and soft power, described hard power as coercion of other countries using military or economic power, and soft power as "[a country's] culture. . .its values. . .and its policies" being used to coerce foreign powers (Nye, 2009, p. 161). When a country maintains both a powerful military and significant soft power, they are more likely to be considered a global power. Through this, similarities between the rises of U.S. and China into superpowers can be drawn.

Most visibly, U.S.'s hard power developed in a manner that can also be seen in China today. In *The Rise and Fall of the Great Powers*, Kennedy (2017) attributed U.S.'s development to its "unique combination of having both a populous *and* a highly industrialized society" (p. 257). This would be proven in the late-nineteenth century as the American population dramatically increased from a population of 50,189,209 people in 1880 to 92,228,496 people in 1910, or a 184 percent increase in only thirty years (Bureau of the Census, 1975). This substantial population ensured the existence of a large labor force, which allowed U.S. to become the world's factory, much like China is today. American manufacturing increased from "20 percent of U.S. exports in 1890 to 35 percent by 1900 and nearly 50 percent by 1913" (Irwin, 2006). Then to build off of this huge manufacturing increase, U.S. established "a customs union for the Western Hemisphere, a free-trading sphere that would become an economic counterpart to the Monroe Doctrine" as said by UC Irvine history professor emerita Emily S. Rosenberg (Rosenberg, 1982, p. 53). By keeping mass-produced American goods cheaper than European counterparts, the economy soared and quickly became the world's largest economy.

Interestingly, this same story towards economic prosperity applies to China as well. In 1949, China already had a massive population of 541.67 million people, but by 1979 (30 years) the population had increased by 429.25 million to 970.92 million people, or an increase of approximately 180 percent (Jowett, 1984). This massive workforce was then utilized through the creation of special economic zones or SEZs where free trade was practiced with low tariffs, allowing for exports to increase through cheap Chinese products like past U.S. did with their goods (Lin and Shen, 2018). Chinese free markets thus allowed for industry to compose 29.303 percent of Chinese GDP by 2017 as reported by The World Bank (2019), an amount very similar to that seen in U.S. For example, in 2016, the World Intellectual Property Organization (WIPO) found that China produced the most patent applications in the world at more than double U.S. due to increased R&D funding from a developed economy (Santacreu and Zhu, 2018). Similarly, for U.S. in 1900, they were the drivers of "the marvelously convenient evolution of modern technology" as they, with inventors like Edison, rose to the top of patent-filing nations (Kennedy, 2017, p. 312). This relation is perhaps evidence of how similar the two countries' economic strategies are, as they both reached the same result of innovation. Clearly, the two countries have had very close paths of economic development.

Soft power has also seen similar developments. One major area of relation between the global powers is the emergences of distinctive national identities built on patriotic principles.

Recently, in China's case, the government has worked extensively to develop a unique Chinese identity for its citizens and Chinese people abroad, according to a professor of Chinese politics at Harvard University (Perry, 2015). China has also been developing and exporting the term "Chinese nation" or "Zhonghua minzu" and encouraging "popular sovereignty, or minzhu" by promoting a "growing pride [in] the Chinese nation" not only to "a domestic constituency, but also to overseas Chinese" (Perry, 2015, p. 910). As part of this global development of national identity, the establishment of hundreds of Confucian Institutes that teach Chinese culture around the world is China's investment in growing its image around the world and in the eyes of Chinese people (Ungerer *et al.*, 2010). Through these means, China intends to establish a growing pride amongst Chinese people towards their country, a clear indicator of how much the government values it for its development. All in all, "the three liberal pillars – unrestricted trade and investment, free enterprise, and free flow of cultural exchange – became the intellectual rationale for American expansion", and now quite possibly, of Chinese expansion (Rosenberg, 1982, p. 37). During the early twentieth century, the American identity became increasingly developed with events like Roosevelt's sending of the Great White Fleet around the world, the adopting of the current national anthem, and Buffalo Bill leading the cultural expansion (Rosenberg, 1982). From these notable examples, there are clearly many commonalities the actions undertaken by U.S. and China as they developed their soft power capabilities.

However, while these similarities are readily available and significant literature has already been dedicating towards considering these results, one area less studied is political rhetoric. China economy and culture may be growing in the modern world, but what do its leaders have to say about China's policies and direction? What did American leaders say about their own policies? This is worth considering specifically because political speeches have historically played a large role in deciding the policies of countries as this is indeed the case for U.S. A research report by Matthew Eshbaugh-Soha, a professor at the University of North Texas, concluded that through elements like policy signals in speeches, "presidential speeches are an effective means of influence over bureaucratic activity" and thus shape domestic policy (Eshbaugh-Soha, 2008). Further research also stresses the importance of political speeches in shaping not only domestic affairs, but also foreign policy. Michelle Murray Yang's research on President Nixon's speeches in China found that presidential speeches "played a vital role in cultivating a personal and professional relationship" between the U.S. and China (Yang, 2011). These speeches then in turn shape how future leaders decide to frame their speeches on both domestic and foreign policy and how they may convince their audiences (Yang, 2011; Osborne, 1980). Thus, taking into consideration the importance of speeches in American policy, it is worth considering that a similar case exists for China.

Speeches and the rhetoric used within them even hold significant importance to their effectiveness and in turn how they can affect policy. In a case of study of President Kennedy's speeches, Osborne found that "patterns of arrangement do exist in presidential speechmaking" and that "presidential speeches differ according to audience" with humorous words being especially with college speeches (Osborne, 1980). Other researchers have also noticed the importance of words in speeches and have based their research around it as well. In a study on metaphors in Taiwanese presidential speeches, Lu and Ahrens used character counts and word analyses to conclude that "linguistic studies of metaphors probe conceptual-level mappings as well as. . .[presidential] language via metaphor use for their own worldview" (Lu and Ahrens, 2008, p. 401). Or another example being Seider's research into business ideologies, which while not strictly political, made conclusions into business through content analysis of words that effectively show the significance of word analysis (Seider, 1974). Evidently, political rhetoric has been and is a source of significant insight into the actions of political leaders and why they choose to do the things they do. Knowing this, rhetoric serves as a base for significant insight into a country's policies.

While there is significant literature pointing to the relevance of linguistic analysis, its usage to specifically compare trends between countries has seen little usage among researchers. Therefore, this paper seeks to address this and conduct further research into this subject. Through analyzing the rhetoric and the types of words used in political speeches, trends can be identified between the two countries, and such trends can be used to compare and relate the unique histories of these two countries as they emerged as 21st century world powers.

While China does indeed have differences from U.S. like in ideology, they do not detract from the similar paths they took and are taking to world power. American and Chinese analysts and politicians today continue to try and lead their countries towards the path they believe to be correct. They each have their own attitudes towards their countries. They give speeches and make powerful oratories, but by continuously adding to the comprehension of the connections between the developments of U.S. and China, there can be a better understanding of China today and where it may choose to go tomorrow.

Research methodology

To add to the investigation of how great powers develop and what similarities China and U.S. may have in becoming global powers, linguistic analysis was used. This method of analysis was conducted using “big data” software, or programs that allow for the efficient gathering and content analysis of text from large quantities of primary sources. Using programs such as RapidMiner, more than a thousand speeches from U.S. and Chinese leaders were downloaded from public online databases like the Miller Center. It is also worth noting that the data base from which the Chinese speeches were sourced had already translated the speeches to English. Each downloaded document was classified into their respective time period of 1905-1945 U.S. (its developmental period), 1977-2017 U.S. (its modern period), or 1977-2017 China (its current developmental period). These time periods were decided upon because 1905-1945 and 1977-2017 are approximately the ranges of time when U.S. and China developed (or are developing) into world powers, respectively. 1977-2017 U.S. was also added as a means by which to measure how U.S. has changed since its developmental phase and how similar modern U.S. is to present-day China within the same time frame.

RapidMiner scans all the documents within each time period without the need for manual examination by counting how many times every word appeared in a transcript. Trivial words that have no meaning of themselves such as “because” or “the” were ignored during this process. This process would continue until every speech was scanned by the program (in a time period). Once all downloaded documents for a time period were scanned, the program then produced the sixty-three most-common words in each time period alongside how many times those words appeared across all documents in a certain time period. The range of only the top sixty-three was chosen because beyond that number, words appeared in amounts too small and similar to each other to make observations.

The data were then manually analyzed by classifying each word under one of five categories: economy (E), military (M), national identity (N), societal development (S), and foreign affairs (F). Economy contains words that relate to economic or commercial affairs. Military contains words relating to a country’s strength and power. National identity covers words that reflect the national image the politician is trying to create, the morals that the country chooses to stand by, and the public image of the country. Societal development contains words that relate to the general development of its country and governmental functions. Foreign affairs contain terms that are related to how a country deals with foreign countries and its position in the international community.

For each of the three time periods (U.S. 1905-1945, U.S. 1977-2017 and China 1977-2017), the amount of words in each of the five classifications were totaled. Based on these numbers,

it can be seen what areas political leaders from U.S. and China placed most of their focus on. For example, if the topic of the economy made up the highest proportion of the content discussed in speeches, then it is clear that economy is the premier focus of the leaders. Furthermore, the average number of times each word category appeared per speech for each time period were analyzed. This offered another lens by which to consider the attitudes of global powers and developing powers. In addition, trend analysis was conducted to see how each time period changed over the course of time and if any comparison and conclusion could be drawn from this.

Data and results

Table 1 shows the top twenty most common terms from each time period with the amount of times they appeared, ordered from the most frequent to the least frequent (Appendix). Each word is labeled under one of the five categories of national identity (N), societal development (S), foreign affairs (F), economy (E), and military (M). Tables 2-4 show the amount of words from Table 1 under each classification.

The most visible trend amongst these three tables is that national identity is by far the most frequent of the five categories, with it having approximately fifty percent of the top twenty most common words across all time periods as seen in Tables 2-4. Furthermore, the most common national identity words are all concentrated towards the top of the time periods in Table 1 as the most common words, with national identity terms rarely appearing towards the bottom of the chart in Table 1.

Furthermore, there appears to be a substantial gap in word-frequency between national identity words and words in other categories. For example, in China 1977-2017, the national identity word, “China”, appeared 25,912 times while the next non-national identity word, “economy”, appeared only 12,514 times (Appendix A). U.S. 1977-2017, however, appears to be the exception to this rule as economic terms seem also to have a similarly high usage compared to national identity words during that time period. Overall though, this trend of

U.S. 1905-1945 Word	Amount #	U.S. 1977-2017 Word	Amount #	China 1977-2017 Word	Amount #
state(s) - N	5190	america - N	4939	china - N	25912
nation - N	3964	work - E	4430	develop - N	17562
great(er) - N	3852	country - N	3835	party - N	14635
government - S	2980	economy - E	3452	development - N	14116
people - N	2005	nation - N	2544	people - N	13292
united - N	1685	world - F	2424	economy - E	12514
world - F	1497	presidential - S	2394	promote - S	10573
country - N	1483	life - N	2322	strength - M	10532
congress - S	1424	state(s) - N	2272	comrade(s) - N	8426
national - N	1026	freedom - N	2044	build - S	7992
business - E	1018	united - N	1949	central - S	7899
work - E	1012	strength - M	1933	work - E	7591
peace - S	950	economic - E	1880	chinese - N	7214
power - M	890	government - S	1783	economic - E	7058
free - N	877	people - N	1567	national - N	5779
nations - N	772	security - M	1553	committee - S	5763
service - N	765	americans - N	1426	country - N	5269
purpose(s) - N	749	effort(s) - N	1268	political - S	4968
force(s) - M	693	peace - S	1223	world - F	4961
system - S	675	Congress - S	1179	system - S	4806

Table 1.
Top 20 most common
words for each time
period

high uses of national identity terms is indicative of the prevalence of national identity in American and Chinese politicians' speeches, and its importance in the development of a country. After national identity, societal development then composed the second most every time, followed by the military, economy, and foreign affairs categories, which all appeared in similarly low amounts. These trends can also be seen through a macro view when classifying all of the sixty-three terms in Appendix and including how many times each categorized word appeared across all speeches.

Figures 1-3 show what percentage each of the five classifications make up of the total amount of words analyzed by RapidMiner and are indicating similar trends to those seen in Tables 2-4. Like Tables 2-4 indicated, national identity evidently again composes by far the greatest amount of words used by American and Chinese politicians across all three time periods, followed by societal development and then the other three categories. Other than reinforcing trends seen in Tables 2-4; however, these graphs also highlight more detailed similarities and differences between the three time periods that Tables 2-4 did not show.

Firstly, it is evident that there are substantial differences between the U.S. 1905-1945 and the U.S. 1977-2017. Between the two time periods, societal development and foreign relations remained equal in frequency; however, there are very distinct differences in national identity, economy, and military. National identity words appeared to drop considerably in usage while economy or military terms became significantly more frequent from 1977 to 2017 compared to 1905 to 1945. This not only shows that modern U.S. leaders are much more diverse in what they focus on in their speeches, but also that they perhaps have placed significantly less importance on national identity. This could be indicative that modern U.S., as an established world power, has much less need for national identity than when they were becoming a global

Table 2.
Classification of five
categories of 20 words
– U.S. 1905-1945

Type of classification	Amount #
N (national identity)	11
S (societal development)	4
F (foreign affairs)	1
E (economy)	2
M (military)	2

Table 3.
Classification of five
categories of 20 words
– U.S. 1977-2017

Type of classification	Amount #
N (national identity)	10
S (societal development)	4
F (foreign affairs)	1
E (economy)	3
M (military)	2

Table 4.
Classification of five
categories of 20 words
– China 1977-2017

Type of classification	Amount #
N (national identity)	9
S (societal development)	6
F (foreign affairs)	1
E (economy)	3
M (military)	1

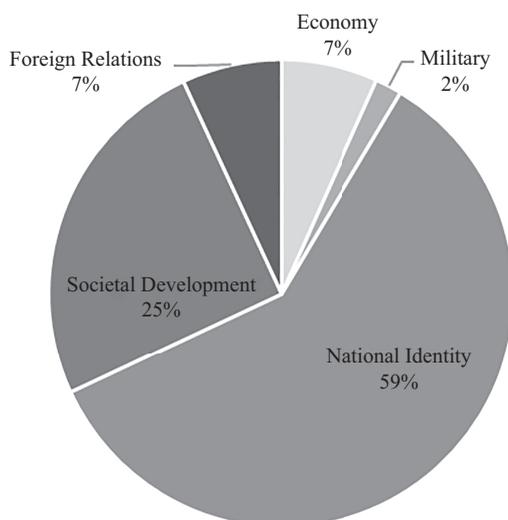


Figure 1.
Classification of five
categories by
percentage – U.S.
1905-1945

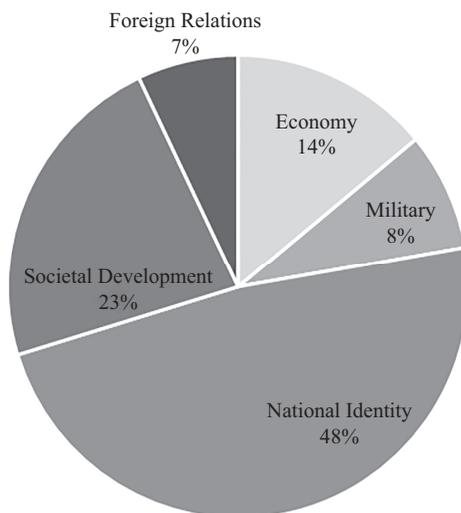


Figure 2.
Classification of five
categories by
percentage – U.S.
1977-2017

power. China from 1977 to 2017, generally accepted as a rising power, also supports this idea as they have similar degrees of societal development and foreign relations usage to both U.S. time periods. However, national identity, military, and economy appear in percentages in-between those of the U.S. 1905-1945 and of U.S. 1977-2017. China appears to place significant focuses on economy and military like modern U.S., but still utilizes much more national identity words than modern U.S. These trends are further continued when looking at how many words are used in each category for each time period, and how many times on average words of each category appeared in each speech.

Tables 5-7 show the average per speech usage of each word category. Similar trends as before are seen here; between U.S.'s developmental period (1905-1945) and its modern period

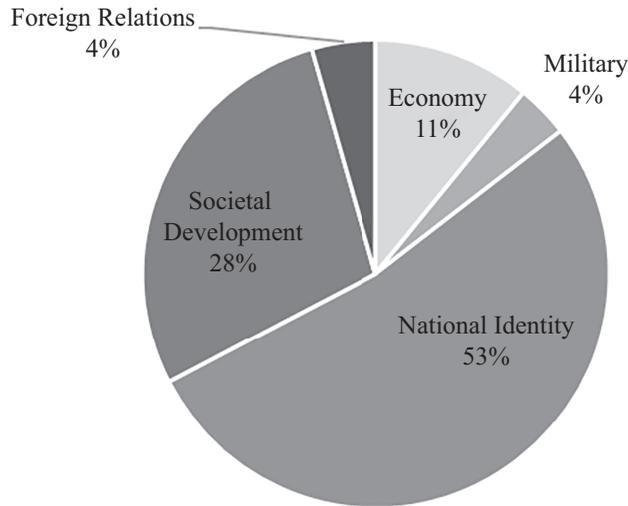


Figure 3.
Classification of five categories by percentage - China 1977-2017

(1977-2017), national identity dropped from an average of 157 to 147 per speech. China sits in between these values at around 150 national identity terms per speech from 1977 to 2017. This further confirms the information presented by Figures 1-3 and highlights how China is possibly in a transitional stage, as its focuses are shifting to increased focuses on economy, military, and less on national identity like the modern U.S., a global power. This trend is further highlighted when each countries' political focuses on national identity, the most prevalent word category, is analyzed over time.

Figures 4-6 reflect each countries' usages of national identity in speeches over time, with the dotted lines being the overall average number of national identity words per speech as from Tables 5-7. It is clear that in Figure 4, U.S. speeches in 1905 used very high amounts of national identity words, but gradually made less use of national identity until around 150 words per speech in 1945. Figure 5 shows how U.S. speeches in 1977 largely continued this

Table 5.
Per speech usage - U.S. 1905-1945

National Identity	Societal Development	Foreign Relations	Economy	Military
30477 (≈157/speech)	12817 (≈66/speech)	3553 (≈18 per speech)	3449 (≈17/speech)	947 (≈5/speech)

Table 6.
Per speech usage - U.S. 1977-2017

National Identity	Societal Development	Foreign Relations	Economy	Military
34398 (≈147/speech)	16244 (≈69/speech)	5071 (≈22 per speech)	10019 (≈43/speech)	5916 (≈25/speech)

Table 7.
Per speech usage - China 1977-2017

National Identity	Societal Development	Foreign Relations	Economy	Military
152991 (≈150/speech)	81710 (≈80/speech)	12880 (≈13 per speech)	31572 (≈31/speech)	10532 (≈10/speech)

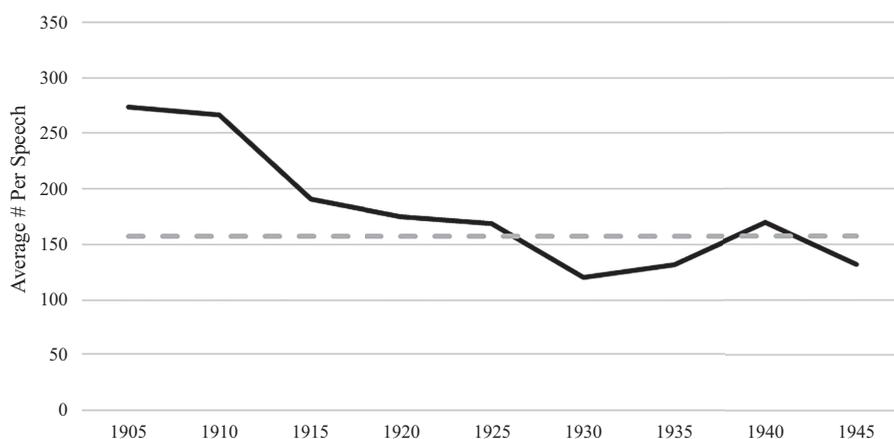


Figure 4.
National identity usage
– U.S. 1905 to 1945

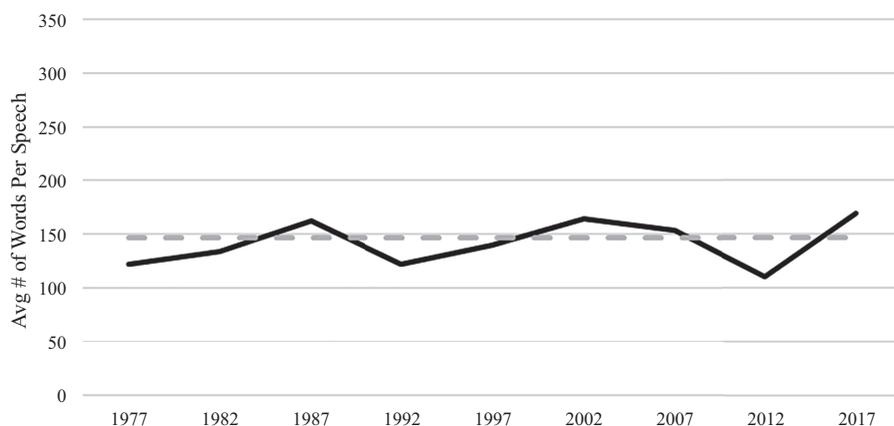


Figure 5.
National identity usage
– U.S. 1977 to 2017

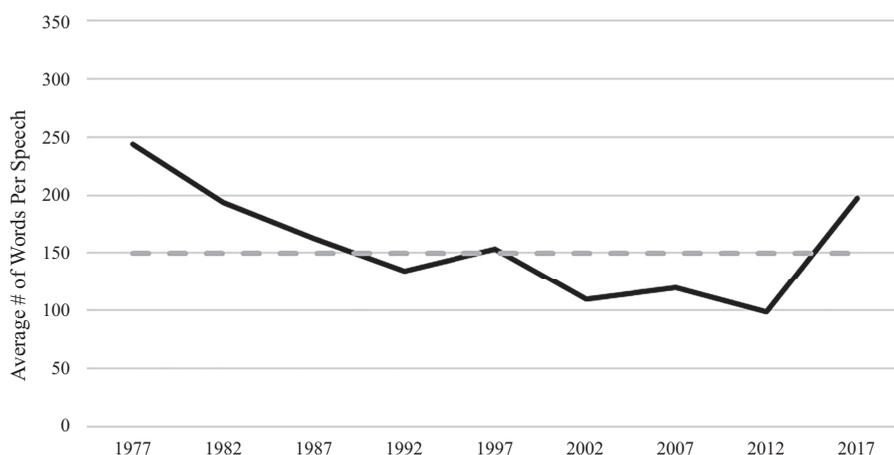


Figure 6.
National identity usage
– China 1977 to 2017

trend from 1945 with decreased importance placed upon national identity, and it remained largely below around 150 with a resurgence towards the present-day. It is noteworthy that the U.S. 2017 surge in national identity usage seems to contradict previous evidence that highlights how when a global power develops, national identity becomes less of a focus. Overall though, from these two figures, it is clear that there is a significant contrast between the importance placed upon national identity for presidents like Theodore Roosevelt in 1905 and for presidents like Barack Obama in 2012, showing the differences in attitudes between a growing power and an established one. China from 1977 to 2017 appears to be in a similar position to that of U.S. from 1905 to 1945, with political speeches in 1977 including high amounts of national identity words then steadily dropping until experiencing a resurgence in 2017.

When overlaying these trends over time onto each other as shown in Figures 7-8, multiple observations can be made. It is evident that the decreases in focuses on national identity

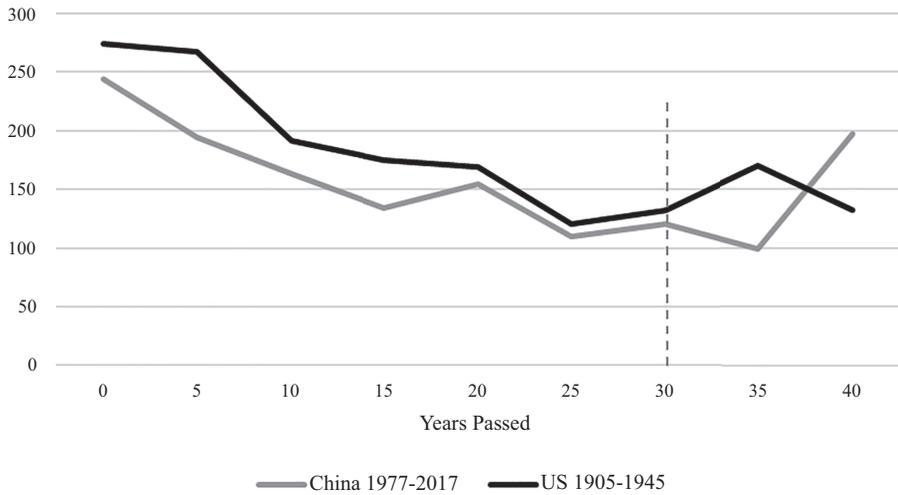


Figure 7.
National identity over
40 years – U.S. 1905-
1945 and China
1977-2017

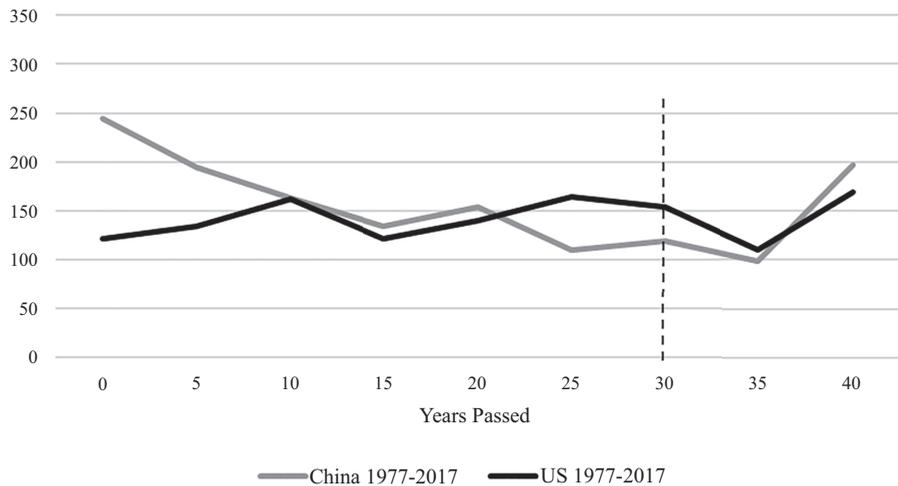


Figure 8.
National identity over
40 years – U.S. 1977-
2017 and China
1977-2017

between U.S. 1905-1945 and China 1977-2017 match each other very closely in Figure 7, with them both following very similar trends until about 30 years, where they start to diverge. This shows how China's development until now, from a national identity usage standpoint, closely matches that of U.S.'s development and is perhaps an indication of where China stands in its current position in development. This point is further continued in Figure 8, where the trends for China 1977-2017 and for U.S. 1977-2017 do not appear to follow each other as closely as in Figure 7, and only match after 30 years. This indicates that as China developed over 40 years, it, like U.S. 1905-1945, decreased its focus on building a national identity until it possibly reached a position of power around 30 years. From here, its reversal to matching the U.S. 1977-2017 is evidence of China shifting its attitude towards that of a global power. While it would be assumed that both countries, as world powers, would continue to decrease in national identity usage, their common increases after 30 years are perhaps the two countries attempting to match with one another as China emerges as a global power. The more unique (compared to their predecessors) national policy actions of present-day's U.S. President Trump and Chinese President Xi could also have played a role in this sudden change in trends. Another interesting point is that China appears to be very quickly shifting attitudes towards that of a superpower while U.S. took much longer to do so, as only after 30 years their trends are looking more closely to modern U.S.

Discussion

The results of this research offer multiple conclusions about the nature of the development of global powers, and the current position of China as an emerging world power.

Firstly, the data from the three time periods (U.S. 1905-1945, U.S. 1977-2017, and China 1977-2017) make it foremost clear that national identity is the most prevalent word category used in political speeches, which is understandable as "national identities change and redistribute the *motivation* to use power, just as national power changes and redistributes the *capacity* to use power", making them key to forming policy (Nau, 2001, p. 585). It also appears conclusive that no matter the stage of development for a country, whether a developing power or an established global power, the distribution of political focus is largely as follows: national identity being the most used, then societal development, then economy, and then foreign relations. The particularly high national identity usage for U.S. 1905-1945 may support the idea that national identity is key to starting and developing a global power. National identity was also consistently the most common focus in speeches as seen in the data. This trend proves how important national identity is to politicians, which seems to be as important as factors like a country's population or military size. The research goes further by indicating that national identity may be more important to politicians than the other traditionally regarded classifications like the economy. Aside from identifying the most prevalent political focuses of a country, it importantly highlights the behavior of global powers.

The data proves that there is a noticeable change in the attitudes of a country, or in this case U.S., as it transitions into the role of a world power. For example, the distinct shift towards a more military and economy focus from U.S. 1905-1945 to U.S. 1977-2017 shows the differences between how a developing power focuses its policy and how an already developed power does so. Or as notably, the dramatic drop in national identity word usage after 1977 shows how a global power may act differently from a developing one, and what could be an indicator for a developing global power. A global power may already have an established national identity that propelled it to a position of strength, and as such may find it more useful to focus politically on other matters. This makes sense given national identity's importance for early U.S. and decreased prevalence in later speeches of American leaders.

When considering how these indicators of a global power apply to China, similar developments can be seen. China's political focuses being overall "in-between" those of U.S.

1905-1945 and U.S. 1977-2017 indicate that it is possibly in a sort of transitional phase, a conclusion supported by its current position in world affairs. The changes that occurred between U.S. 1905-1945 and U.S. 1977-2017 could possibly be occurring in China right now, explaining why its distribution of political focuses, like national identity appearing on average 150 times per speech (U.S. 1905-1945 is 157 times, U.S. 1977-2017 is 147), appear in-between developmental U.S. and present U.S. While many may claim China's rapidly growing economy and global influence leverages it the title of a global power, its political focuses tend to indicate that it is still transitioning from a developing power to a developed one.

The trends over time as seen in the data also support this conclusion. U.S. 1905-1945 and China 1977-2017's both general decreases in national identity usage over time indicate that Chinese policies are much more reflective of a growing power than an already established global power. Both U.S. 1905-1945 and China beginning their developments with a very high prevalence of national identity in political speeches indicate that these two countries were working to establish their national identity as they began their development into global powers. This supports the previous conclusion that national identity is critical to starting the growth of an influential country; however, the trends over time add to this conclusion by also making it evident that national identity is possibly less important to political leaders in *maintaining* a global power. With this idea in mind, it makes sense that China today still has higher uses of national identity than U.S. because they are not yet at the point of maintaining their global influence. They are still trying to develop it. If China were already a global power, then it is likely that its political rhetoric like those regarding national identity would more closely resemble that of an already established world power – the present-day U.S. – rather than U.S. in 1905. Overall, from the point of view of the content of political speeches, it appears that China does not share the same mentality of the current global power.

These conclusions are not to say, however, that China is not currently in a position of power nor that it will not reach that position soon. Firstly, the data corroborates the idea that China is nearing a global power position because it is evident that China's political focuses are still generally diverse and less national identity focused like current U.S. Also, the trends of China's decreasing national identity indicate that it has long been on the path of development as it shares the same attitude towards national identity as U.S. did during its respective development from 1905 to 1945. In ten years from now, it is very possible that China's political focuses could shift much more to match present-day U.S. Indeed, the beginnings of that can be seen in the trends over time like in Figures 7-8 at year 30, where China's national identity trendline diverges from U.S. 1905-1945 and instead switches to match that of U.S. 1977-2017. It is possible that China has reached a point where it is now approaching global power status, as its attitude towards national identity and policies seem to reflect that. It is interesting though that while these two countries match at year 30, they match in that they are both increasing their uses of national identity. This is perhaps indicative that the current leadership of U.S. and China today have very different interests from past leaders, or possibly that with the likely emergence of two global powers – U.S. and China – competing with each other, both countries are boosting their national identities to become stronger as world powers.

With these conclusions in mind, it is important to understand that U.S. and China still hold many differences that can make comparisons difficult. China is a country with a long prestigious history that it keeps in mind when conducting policy – as evidenced by its many Confucius Institutes around the world and President's Xi's many speeches promoting ancient Chinese art or the position of power that China will reclaim. U.S. is a relatively young country that has no history of being a global power until 1945, and it is not trying to reclaim any sort of past strength because U.S. is still the world's preeminent power. This differences in mentality and history between the two countries mean that something like national identity could possibly mean different things to both countries and politicians who could utilize rhetoric in different ways. However, while this is important to understand, it does not detract from this

study as it is clear from the data that there are indeed similarities and trends that can be identified. Further linguistic analyses into Chinese and U.S. political rhetoric could always be used to further understand what comparisons between China and U.S. can be made rhetorically sound.

Furthermore, despite this study, there remains a significant amount of research to be done to investigate why national identity plays such a significant role in political rhetoric, why national identity decreases in prevalence as countries become more globally influential, and if China is set to become a world power. This research's data identifies the existence of these patterns like national identity being important and it is decreasing in use over time, but why these trends exist requires further inquiry. Future research in this area could produce more insights into the nature of global powers. Likewise, to confirm the similarities between the respective rises of U.S. and China, big data analyses of other great powers like the United Kingdom or Germany could be done to find whether or not national identity is a unique focus for U.S. and China or simply important for all global powers.

Also, for this study, the amount of speeches analyzed differed between each time period. The data for China 1977-2017, for example, came from big data analysis of 1000 speeches, while the data for U.S. 1977-2017 came from 300 speeches. Equalizing these numbers could possibly make for more fair and accurate data sets. Nonetheless, this also reflects the relatively larger number of Chinese speeches, and the authors would like to incorporate all relevant data for analysis. Another limitation is that the data were derived from primary sources and organized through manual examination. Thus, even with set definitions for each of the five classifications, the amount of words under national identity or societal development, for example, could vary depending on the researcher. This could result in researchers coming upon differing conclusions, but this issue is offset somewhat through the publication of all data for anyone to analyze and use for research.

Therefore, the data and method of collecting itself is critical to the importance of this paper. The collection of data and use in analysis of countries highlights the capabilities for big data to contribute to social science research through the digital humanities. Big data has so far not been widely used to investigate the history or nature of global powers. Hence this paper can contribute by filling in this gap. Also, by proving the applicability of big data to the social sciences, it is showing how versatile the new technology is. In this research, big data analysis has been used to explore possible similarities between the developments of two great powers. It can also be used for research into other subjects. For example, one could investigate the specific diction used by U.S. and Chinese politicians based on the word list generated for this study. Also, further proving the usability of big data, it is possible to derive more analyses from the same data set in this paper, leaving a wide variety of options by which to use big data. Thus, this approach exemplifies the host of new possibilities to research social sciences.

By the same token, the results of this paper and the conclusions drawn from it add to the importance of political rhetoric when analyzing growing world powers. The works of historians like Paul Kennedy (2017) have been instrumental to global power research. The data of this study proves that more material can be used in the study of global powers than things like GDP figures or landmark foreign policy actions. Speeches and words themselves are significant sources of information and can be used for far more than just big data analysis. Past research using linguistic analysis have made significant discoveries like the study on speeches of Taiwanese presidents without the use of big data, showing the versatility and effectiveness of using political rhetoric for studies (Lu and Ahrens, 2008). This paper provides one method by which to use political rhetoric in drawing conclusions on world powers.

Conclusion

This paper demonstrates the importance of national identity to leaders of great powers because of national identity words being used in consistently high amounts for both U.S. and

Chinese leaders. From this finding, new research opportunities into the role of national identity in global powers have been made and should be utilized in future studies. Also, many similarities between the political interests of U.S. and China can be seen in the data, making the case that China is perhaps on the same road that U.S. was when it began its development into a world power. While it may not provide a conclusive answer on whether or not China will become a superpower, it does indicate that China's current political focuses are much like those of the leaders of early-modern U.S.

This study also exemplifies the importance of linguistic analysis and how the interactions between political rhetoric and the progress of a country can be investigated. Big data is an effective means to do so and much research can be done under the same framework as this paper so as to encourage a growth in knowledge on the nature of global powers.

In conclusion, with the knowledge that the development of China can be seen in U.S.'s past as well, analyzing the current state of China and how it may develop in the future can be facilitated by recalling how U.S. became a world power a century ago.

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(The Appendix follows overleaf)

Appendix A
Raw data for 63 most common terms

US 1905-1945	
Word	Amount #
state(s)	5190
nation	3964
great(er)	3852
government	2980
people	2005
united	1685
world	1497
country	1483
congress	1424
national	1026
business	1018
work	1012
peace	950
power	890
free	877
nations	772
service	765
purpose(s)	749
force(s)	693
system	675
action	669
life	608
foreign	574
policy	569
labor	558
order	546
america	543
freedom	506
economic	492
control	473
interest	472
duty	466
presidential	440
international	427
rights	423
future	421
believe	413
land	409
justice	400
progress	387
hope	380
further	371
industry	369
political	366
citizens	345
spirit	326
individual	321
common	316
self	295
become	286
help	283
opportunity	281
house	269
problems	264
security	254
continue	251
responsibility	251
human	246
support	245
liberty	240
history	238
wish	227
reason	209
confidence	192
Total	51,243

US 1977-2017	
Word	Amount #
america	6684
work	4430
people	4200
nation	3944
country	3835
state(s)	3772
life	3322
freedom	2544
economy	2452
world	2424
presidential	2394
united	1949
government	1783
strength	1696
americans	1426
effort(s)	1268
peace	1223
congress	1179
help	1164
security	1053
believe	975
future	969
children	961
great	910
economic	770
nations	769
support	668
free	654
hope	651
families	642
history	627
national	625
system	619
military	615
change	598
human	590
citizens	568
power	562
continue	545
women	539
forces	534
rights	529
opportunity	494
policy	455
countries	429
build	420
progress	417
force	413
leaders	411
problems	402
forward	396
responsibility	396
house	380
action	356
political	344
protect	338
face	334
fellow	328
provide	324
lead	322
common	310
friends	285
share	285
order	241
Total	75,760

China 1977-2017	
Word	Amount #
china	25912
develop	17562
party	14635
development	14116
people	13292
economy	12514
promote	10573
strength	10532
comrade(s)	8426
build	7992
central	7899
work	7591
chinese	7214
economic	7058
national	5779
committee	5763
country	5269
political	4968
world	4961
system	4806
countries	4519
reform	4409
achieve	3917
social	3752
construction	3692
socialist	3615
great	3569
international	3400
situation	3166
state	3029
government	2925
improve	2611
leadership	2333
community	2172
society	2078
continue	1982
spirit	1975
problems	1953
characteristics	1881
general	1855
overall	1847
issues	1838
support	1681
life	1668
study	1570
chairman	1551
forward	1549
stability	1508
policy	1478
further	1470
interests	1453
beijing	1428
progress	1424
increase	1399
actively	1321
order	1314
become	1287
strive	1249
focus	1219
attention	1215
efforts	1201
future	1193
create	1185
achievement	1131
Total	289,685

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A review of the strategic planning process in the Hong Kong Police Force

Strategic
planning in
Hong Kong
Police Force

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Abstract

Purpose – The purpose of this paper is to review the strategic planning process of the Hong Kong Police Force (the Force) and its outcomes for the planning cycle of 2019-2021.

Design/methodology/approach – Based on an insider's perspective drawn from documentation, internal reports and field observation, this study is an analysis of the five-step strategic planning process of the Force as a case study over the two-year period by using the 3-H (Heart-Head-Hand) framework and futures studies.

Findings – This study demonstrates the Force's strategic management in practice. The 3-H framework and the Six Pillars Foresight Process are found to be useful tools in strategic planning. When the Heart, Head and Hand elements are developed and integrated as a mindset during the process, they help theorise the practice and experience of police officers towards a holistic and effective strategic management. Coupled with the foresight process, the Force will be more agile and outward focused in the Volatile, Uncertain, Complex and Ambiguous (VUCA) world.

Originality/value – This is the first study to apply the 3-H framework and futures thinking in analysing the process in a police organisation in Hong Kong. While strategic planning is an important process to set directions for an organisation to move forward, this study describes the process in terms of relevant practice and theoretical concepts. It is hoped that such experience can serve as reference for practitioners in other government departments and police organisations.

Keywords Strategic planning, 3-H framework, Six Pillars Foresight Process, Futures studies, Hong Kong Police Force

Paper type Research paper

Introduction

Strategic planning is considered to be an important process in large organisations, both public and private. It has become more prominent on the public organisations' agenda due to the new public management reforms, but literature reveals that there are very few studies exploring how public organisations apply strategic management in practice and what tools are being used (Höglund *et al.*, 2018). The police organisation operates for the benefit of the whole society and is therefore having a specific mission to ensure a high level of performance of statutory tasks by complying with existing legislation and protecting citizens from crime (Dworzecki and Hryszkiewicz, 2016). It is of utmost importance for police organisations to adopt strategic planning in order to set strategic directions to move forward, achieve a shared vision and shape the future.

As a pre-emptive introduction to the concept of futures thinking, it is important to ask the management of an organisation to respond to a series of questions relating to the most

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challenging aspects of today's world and how they envisage this challenge in the future. Since 2006, the Hong Kong Police Force (the Force) has introduced the Strategic Planning Process (the process), which is a five-step approach to formulate the Strategic Directions (SDs) and Strategic Action Plan (SAP) for the next three years. The five steps include environmental scan, identifying issues, setting directions, formulating options and developing plan (Hong Kong Police Force, 2020).

Research methodology

Given the popularity of strategic planning in the public sector in the past decades, there has been little research on this topic (Zhao *et al.*, 2008). This paper aims at applying the 3-H (Heart-Head-Hand) framework (Yu, 2019) to review and reflect on the Strategic Planning Process and its output conducted by the Force between June 2017 and June 2019. It is one of the first attempts to examine and reflect on the strengths and weaknesses towards a more holistic approach to improve the Force's strategic management process.

The first author provided an insider's perspective by conducting content analysis of transcripts created from 28 interviews with targeted senior officers, internal reports and key documents including the Legatum Prosperity Index 2019 (Legatum Institute, 2019), the Environmental Scan Report 2018 (Hong Kong Police Force, 2018b), the Management Information Pack (Hong Kong Police Force, 2018c), the Strategic Directions 2019-2021 (Hong Kong Police Force, 2019a) and Strategic Action Plan (Hong Kong Police Force, 2019b). Each step of the process was observed through the lens of the 3-H framework and futures studies. The content analysis, field observations and the output of the process were synthesised to produce the findings which were found to be meaningful in the relevant management theory. This paper also examines how this process can be improved with enhanced effectiveness and efficiency to address the compelling needs of future policing, especially when the operating environment is increasingly complex, politicised and hostile.

By adopting a case study approach, this study has made use of the first author's unique position as the driver of the whole strategic planning process with a view to generating greater insights into this area of inquiry. When compared to other methodology in conducting research, Harrison *et al.* (2017) stated the strengths of case study designs being able to assist researchers to address complex issues through exploration, explanation, description, evaluation, and theorisation in context. Through conducting case study, researchers would be able to have an in-depth understanding of behaviours of the protagonists, planning processes, practices and relationships through the research outcomes in context. The efficacy of case study approach being a powerful form of qualitative research had been strengthened through application of and sound debate about the value, validity, and capability of case study research (Harrison *et al.*, 2017).

The Hong Kong Police Force in context

The Force is the largest government department in Hong Kong, which has a strength of 29,268 disciplined staff as at 30 April 2018 (Hong Kong Police Force, 2018a). The Force is commanded by the Commissioner of Police (CP) who is assisted by two Deputy Commissioners (DCP) as in June 2019. The Force Headquarters is made up of five departments: Operations (Department A); Crime and Security (Department B); Personnel and Training (Department C); Management Services (Department D); and Finance, Administration and Planning (Department E). Each department is headed by a Senior Assistant Commissioner of Police (SACP). The DCPs and SACP form the Senior Directorate Group (SDG). Under the SACP, there are 18 Assistant Commissioners of Police (ACP) including two Auxiliary Police Commanders and two civilians. These 28 key officers are referred as Commissioner Rank Officers (CRO) and form the Force senior management cadre

(Hong Kong Police Force, 2018a). The first author of this paper was the Head of Efficiency Studies Bureau who was responsible for driving the Force's strategic planning process from 2017 to 2019.

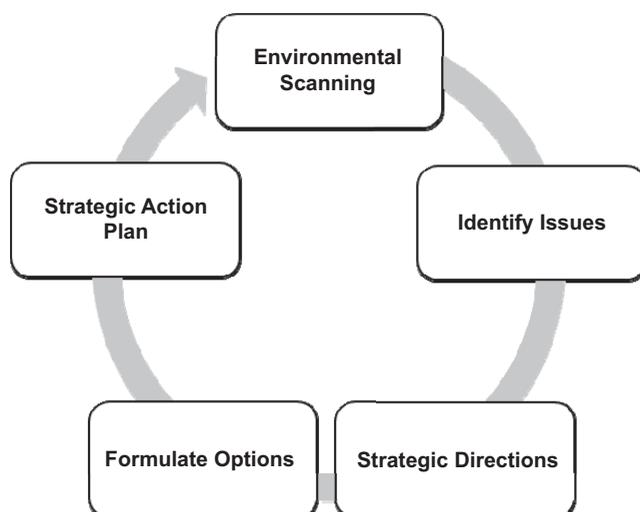
The Force's strategic planning is an essential tool to drive continuous quality service delivery and organisational excellence long into the future (Booth, 2018). It refers to the process by which an organisation determines and articulates its strategy and how it intends to achieve it. Literature reveals that strategic planning has become increasingly popular in the public sector as standard practice on the belief that strategic planning can lead to better organisation performance. However, there has been insufficient research on public-sector strategic planning and its connection with implementation and performance (Bryson *et al.*, 2017).

Five-step approach in strategic planning

The process was first introduced in the Force in 2006 and the first set of SDs and SAP were published in 2008. Both have a 3-year life cycle and the current process commenced in June 2017 to formulate the SDs and SAP 2019-2021. The process consists of five distinct stages (Figure 1). The process guides the Force through a deliberate, long-term view of development and aims at identifying areas for improvement to meet current needs and any additional capabilities required to face anticipated and emerging challenges.

The process begins with a detailed environmental scan of worldwide and local trends, the Force's internal developments, and advances in the fields of international policing and law enforcement. Following comprehensive discussions and reviews through CRO interviews and scenario planning, Senior Management prioritises the strategic issues and determines the SDs for the Force. In support of the SDs, options are carefully considered, and the SAP is formulated in the form of a coordinated set of Key Initiatives.

The Force's Environmental Scan Report 2018 (the Report) consists of three parts. Part one presents new areas of development in the world under the PESTEL model representing political, economics, society and demographics, technology and science, environment and health as well as legal. Part two identifies the emerging challenges and issues from across the



Source: By first author (2020)

Figure 1.
The Five-step
approach of strategic
planning

Force. Part three highlights contemporary initiatives in international policing. The Report was published in January 2018 (Hong Kong Police Force, 2018b).

Between February and May 2018, individual interviews with the 28 CROs were conducted to identify strategic issues that would impact the Force in the next three to five years. The interviews were recorded as transcripts and consolidated into a Management Information Pack (Hong Kong Police Force, 2018c) which included strategic issues, enterprise risk management information, future scenarios and survey results. In this cycle, the Enterprise Risk Management process and scenario planning were newly added. The ISO 31000:2009 framework of Risk Management was adopted to manage risk effectively and allow an organisation to perform well through identification of anticipated threats and allocation of resources for risk treatment. This task was carried out by a team of officers who were either academically qualified or having experience in the field of risk management. The risk assessment results were included in the Management Information Pack. Scenario planning, sometimes referred as “scenario and contingency planning”, is a useful tool for organisations to ponder the future in a structured way. Due to the rapid changing environment, scenario planning was conducted and four plausible scenarios in 2028 which presented significant impacts on future policing were derived and discussed among CROs at the first CROs Strategic Planning Conference. Three surveys were conducted by the Force in January and February 2018, namely the Police Service Satisfaction Survey, the Public Opinion Survey as well as the Staff Opinion Survey. The Management Information Pack was produced one month before the first CROs Strategic Planning Conference in August 2018, for internal consumption. During this conference, all CROs discussed the most compelling strategic issues and presented their findings at the end of the conference.

After the first CROs Strategic Planning Conference, insights were incorporated in an internal report as a reference for the formulation of the SDs. As a result of the conference held in September 2018, three new SDs were set by the CP and Senior Directorate officers aiming to steer the Force in facing emerging challenges and rising public expectations in the next three years. A second CROs Strategic Planning Conference was held in November 2018, to solicit input from the ACPs with a view to finalising the objectives of each SD. The Strategic Directions 2019-2021 (Hong Kong Police Force, 2019a) was officially published and a briefing to all senior commanders was held in February 2019. Between January and June 2019, a series of meetings by the Senior Directorate officers was held to formulate options (step four) for the SAP 2019-2021 (step five), which was finalised with an online version (Hong Kong Police Force, 2019b).

Literature review

Over the past decades, there have been a variety of strategic planning definitions. Strategic planning can be defined as an upper management-initiated process aiming to set specific goals for an organisation and to identify possible steps for success through implementing planned changes within a span of two to five years (Zhao *et al.*, 2008). Strategic planning aims to shift traditional focus on existing challenges towards the exploration and understanding of possible futures. Literature reveals that strategic planning in police departments has transformed from the traditional reactive orientation to a more proactive focus with a view to responding to the need for adapting to a changing operating environment (Zhao *et al.*, 2008).

As law enforcement was originally organised on a territorial basis, this strong territorial approach partially explains why police forces nowadays are less properly suited for the borderless and high-paced crime landscape. Another significant theme is the recognition of the shift in crime levels from predominantly traditional areas such as burglary, robbery, and delinquency being replaced by technology-enabled crime (Dworzecki and Hryszkiewicz, 2016). Consequently, the need for adaptive, dynamic and flexible law enforcement responses to crime is particularly important.

Managing a large police organisation is extremely challenging, in particular in this Volatile, Uncertain, Complex and Ambiguous (VUCA) world (Gupta and Gupta, 2018). Given the popularity of strategic planning in many western countries, such as the US and the UK, academics still question its usefulness and doubt has been expressed over the effectiveness of strategic planning in police forces (Elliott *et al.*, 2019; Zhao *et al.*, 2008). Therefore, this research attempts to fill this gap by examining the strategic planning process in the Force and presenting findings to inform knowledge and future practice in this field.

3-H Framework

The question of what constitutes a good management is always asked. According to Yu (2019), “a good management is an art and science of getting things done effectively and efficiently through people and other required resources guided by 3-H framework.” 3-H framework (Yu, 2019) is a mindset for managing people and organisational issues in a holistic way. Each H domain of the 3H framework has an array of established theoretical groundworks rooted from well-established literature in respective fields. For instance, transformational leadership, which forms a key part of H1 Heart domain, can be represented by the seminal works of Bass (1995; 2010), strategic planning for H2 Head domain by Mintzberg (1987; 1994) and Senge (1990; 2003), competence H3 Hand domain by Barney (1996; 2001).

Instead of separating the domains into three categories, Nicholls (1994) focused on creating a construct of leadership with three perspectives: inspirational, strategic and supervisory. Inspirational leadership focuses on people’s personal beliefs while the other two focus on the organisation and the operation. On the contrary, Yu (2019) by categorising established literature of each H domain as illustrated above and represented by metaphoric expressions of “Heart, Head and Hand” as necessary factors and together with an integration strategy, as sufficient condition, to synergistically complement all three H domains together to create a holistic approach to manage the entire strategic planning process and to achieve intended strategic goals. Such relationship can be simply expressed by the following formula (Yu, 1997):

$$OP = f(H1cH2cH3)$$

- OP = Organisational Performance
- c = Complement
- H1 = Heart (leading, motivating and engaging people ability)
- H2 = Head (strategic, organisational, cognitive ability)
- H3 = Hand (operational/functional ability)

H1, H2 and H3 are necessary factors for effective organisational performance. Level of cohesive complement and integration of all 3H domains, as sufficient condition, shall determine the level of efficiency and effectiveness of the organisation’s long-term performance.

The process of the Force is analysed through the lens of 3-H framework in the next section.

(a) The Heart-oriented approach

Heart-oriented dimension means caring about motivational and human aspects in management practices aiming to motivate employees to commit in achieving organisational goals. It is the most challenging part among all three dimensions because dealing with people and changing their attitudes and behaviour is the most difficult job. The Heart dimension has to be tackled well before the management pushes through the implementation of any new initiatives or changes (Yu, 2019).

Motivation represents a key part of Heart domain. In the past century, motivation has been studied widely by researchers who explored motivation through constructs such as needs satisfaction. These perspectives provide a different understanding of the implications for comprehending motivation in the workplace (McRee, 2018). The five basic human needs including physiological, safety, love, esteem and self-actualisation form the foundation of seminal work on human motivation (Maslow, 1943). People tend to seek a “higher” motivation once a basic need is satisfied. Maslow (1943) further elaborates that individuals who become self-sufficient from their physical and social environment will attain self-actualisation drawing on latent resources within. McClelland (2010) developed human motivation theory in the 1960s, referred to as learned needs theory. He stated that this theory included need for achievement, need for affiliation and need for power, that were translated into motivational drivers driving behaviour. Ryan and Deci (2008) identified three psychological needs as basic and universal to all people: autonomy, competence and relatedness. If these three psychological needs were not satisfied, self-determination theory pointed to the social environment and then to the developmental environment to understand which need had been or was being frustrated.

Apart from motivation theories, a Heart domain also includes other key constructs such as leadership and values. Two empirical studies on the police organisations evidenced that perceived supporting leaders and conducive core values had significant impacts on the motivation and work engagement with the police officers (Basinska and Däderman, 2019; Gillet *et al.*, 2013). It is envisaged that motivated and engaged officers are more willing to make extra effort – ‘want to’ get the job done well (Yu, 2019). However, even the entire organisation is motivated and enthusiastic in supporting its initiatives, if strategies are poorly planned (weak in H2 Head), the organisation will not be able to achieve its strategic goals. Hence, we need to examine the integrity of the Head (H2).

(b) The Head-oriented approach

The metaphor of ‘Head’ means the mind of strategists, strategic planners and commanders, and they have visionary, strong planning, organising and control expertise. The framework believes strategy planning is what Mintzberg (1987) advocates: a crafting rather than a mechanical or engineering process. The strategists are required to possess strategic thinking, planning, creative and analytical skills. Other qualities include mindfulness of developing a competence that is adaptable to a dynamic environment and is of critical importance to the sustainability of that competence. Equally important is about developing an organisational process, which is conducive to synthesising the organisation’s human, technical, physical and financial resources together to create the organisation’s core competence (Yu, 2019).

To complement the Head-oriented approach, the “Six Pillars Approach” as a conceptual framework of futures studies, elaborated below, is a useful tool to reinforce the strategic thinking of the Head-oriented approach. The “Six Pillars Approach of Futures Studies” (Inayatullah, 2008) can be used as a theory of futures thinking or as a tool in a futures workshop. The six pillars (MATDCT) are as follows:

- i. mapping futures
- ii. anticipating futures
- iii. timing
- iv. deepening futures
- v. creating alternative futures
- vi. transforming futures

Head-oriented implementation concerns the formulation of strategy from viewing the world in new ways. Strategy also starts with an ability to think in new and unconventional ways (Hamel and Breen, 2007). Head approach manifests outcomes typically evidenced by the organisation's generic competitive advantages of CRIAQES (Yu, 2019):

- Citizen responsiveness – to their needs and preferences;
- Innovation – in managing operation process and offering new services with new IT and AI technologies;
- Agility – flexibility and dexterity in deployment to cope with odd incidents;
- Quality – delivering citizen expected standard of service and meeting performance pledges;
- Efficiency – yielding cost effectiveness in all operations;
- Speed – in response to, e.g., 999 calls and other emergencies.

In practice, Hand (H3) domain facilitates CRIAQES in service delivery and implementing the H2-organised programmes and activities. When the 'soft' side of H1 Heart factors are duly considered in the strategic planning process, the workforce will be more motivated to implement the strategic action plan. As the entire operation system and H3 Hand competence issues have been well addressed and organised, the Force will be more likely to efficiently achieve operational goals. On the other hand, even a sound strategic plan is developed, if the H1 Heart dimension issues have not been well dealt with, the police, especially the rank-and-file police officers may not be committed to achieving its goals. If H3 Hand competence is lacking, implementation of the strategy will be slow and erroneous. That leads us to discuss the final H - Hand-oriented perspective of the 3-H framework.

(c) The Hand-oriented approach

The metaphor of 'Hand' means the competences for police officers, such as crime investigation, crowd control, handling emergencies and knowledge of criminal laws. No matter how great the strategy or plan is, all organisations have to rely on the frontline workforce to implement programmes and plans. The core function of the Hand domain is to implement the Force's strategic and tactical plans to achieve its respective strategic goals. Guiding by Barney's (1996) resource-based theory, the Force's management has to ensure the resources, especially its police officers, are well developed and refined for building a stronger Force.

Futures studies

Futures studies is the systematic study of 'possible, probable and preferable futures' (Inayatullah, 2007). Futures studies has become more structured and no longer rely solely upon external forces in predicting the future such as astrology and prophecy. According to Inayatullah (2007), the planning departments and organisations around the world have started to adopt futures studies in their planning processes. Planning tends to attempt to control and close the future, while on the contrary, futures studies seeks to shape and open up the future so that more alternatives can be developed (Inayatullah, 2007). Ultimately, the objectives and intention behind the futures studies are not only academic but about transforming or shaping the future in order to build a more sustainable world. Research suggests that human is extremely interested in what will happen to them, but they generally rely heavily on histories or past experience, regardless of success or failure, to decide their action in the future (Inayatullah, 2007). This is what Marshall McLuhan suggested decades ago, "the future with a rear-view mirror" (Carmody, 2011).

One of the distinctive characteristics of futures studies is to investigate the 'range' of futures. The goal is not only to explore new organisational directions but also to challenge and clarify current management decisions. Although the future remains unknown to us, we can distinguish probable and preferred futures and determine what we desire (Inayatullah, 2007). This is particularly important to the process of strategic planning because during the planning process, we not only want to have a shared vision on what we want our organisation to be, but also to shape the future to our favour. Futures studies is vision-oriented which gives individuals and organisations a possible vision of the future world. It is hoped that every individual will be inspired to focus on the longer term instead of the short term in order to achieve the greater good. In the end, it seeks to help align individual goals with organisational or institutional goals (Inayatullah, 2007).

Analysis of the strategic planning process

With reference to the 3-H framework and futures studies theories, this paper aims to review and analyse through the lens of the 3-H perspectives in the Force's strategic planning process between June 2017 and June 2019. To recap the five-step approach, the process includes environmental scan, identify issues, set directions, formulate options and develop plans (Hong Kong Police Force, 2020). The effectiveness of the process is examined based on content analysis of public documents, internal reports, interview transcripts and field observation.

In step one, Heart domain calls for transformational leadership for the commanders to identify needed change, creating a vision to guide the change through engagement with all levels of the Force to execute the change and to meet the challenges emerging from the increasingly complex and hostile environments (Bass, 1995). In practice, the senior management allowed the planning team to have full autonomy on compiling and designing the Report, which represented the buy-in process suggested by Heart (H1) initiative. The Report had a brand-new format based on new research. All topics were presented using compelling info-graphics and thought-provoking questions. It was designed to inspire strategic thinking through the posing of poignant questions and the presentation of pertinent data across the spectrum of factors that constituted the future operating environment. All commanders were expected not only to identify the issues relating to the challenges and opportunities the Force would face in the near future, but also attempted to go beyond the obvious, to fully embrace an uncertain future in the search for solutions, directions and innovations (Hong Kong Police Force, 2018b). The Report was a tool to identify the challenges of the future so that commanders might take steps to prepare the organisation. The new design and the selection of topics with future focus were well received. The entire process is characterised as what Mintzberg (1987) suggests a crafting rather than formulating nature of activities. In summary, Head (H2) guides environmental scanning on identifying the key drivers in the Force's task environment which were analysed to ascertain material impacts to the Force, as these have to be addressed in subsequent steps.

During step two, all 28 CROs were interviewed individually by the first author and invited to identify strategic issues impacting the Force in the next three to five years. The length of the interviews ranged from forty-five minutes to one and a half hour. Their responses were recorded as transcripts and consolidated anonymously into the Management Information Pack (Hong Kong Police Force, 2018c). Their commitment and devotion were fully reflected in their input and contribution in the interview records. Their full participation and invaluable comments demonstrated their leadership and people-oriented (H1) mindset.

The two CROs Strategic Planning and the CP & SDG Strategic Review Conferences formed the third step of the process. All CROs actively participated in the discussion and unpacked the strategic issues identified. A sense of collective ownership was demonstrated during the conferences and they had a shared vision and strategic goals. These were

important elements to communicate their vision to their staff and gain buy-in in implementing their formation action plans subsequently. Heart (H1) purpose-sensing is important in the buy-in process for reception to the plan and subsequent smooth implementation. As Carton (2018) alludes, people are often motivated to achieve organisational goals if they feel purposeful in carrying out their duties. Such effect is applicable to management and frontline staff.

During step four (formulating options) and step five (strategic action plan), the senior management held a series of meetings from January to June 2019 to formulate options under each SD and finalise the SAP by using the Six Pillars Foresight Process under Head (H2) dimension to map the futures of the organisation. “Futures Triangle” and “Backcasting” were adopted during the discussion of the strategic options in the meetings. “Futures Triangle” (Inayatullah, 2007) on policing was developed based on the operating research question or a strategic issue taking into account of four areas: i) the futures triangle concept; ii) images of the future; iii) quantitative pushes of the present; and iv) weights of history. These allow senior management to think strategically in formulating options under each SD and to develop new and unconventional ways in drawing up the strategic action plan.

The implementation of the Heart and Head-oriented approaches during the first three steps of the process were considered to be successful based on field observation and content analyses. The publication of the SDs 2019-2021 and formulation of SAP (Hong Kong Police Force, 2019a; 2019b) represented the outputs of the process. The new SDs aimed to focus the Force’s efforts in three key areas to ensure that Hong Kong remains one of the safest and most stable societies in the world which is the Force Vision. In the last two steps of the process, the Six Pillars Foresight Process under Head (H2) dimension and the tools of “Futures triangle” and “Backcasting” were used to secure success in formulating options (step four) and the SAP (step five). It is important to ensure that all officers share the organisation vision, mission and values. The objectives of maintaining a high standard of professionalism, personal conduct and integrity at all times were included in the strategic vision under the new SDs. Officers of all ranks, especially frontline police officers, who are required to carry out the action plans on a daily basis must be motivated (Heart-H1 dimension). The overall plans and activities have to be cascaded down to the frontline effectively and the officers are equipped with new occupational skills and competences (Hand-H3 dimension). In order to adapt to emerging challenges in the next three years, all levels of the Force’s members must be trained with new skills and capabilities for policing in the digital era (Hong Kong Police Force, 2019a). Apparently, the moment of truth only occurs when the 3H necessary factors have been effectively integrated to deliver a holistic approach to embrace the five-step strategic planning process as depicted in Figure 2 below.

Discussion

This paper aims to review how the Force strategic planning process can be improved with enhanced effectiveness and efficiency to address the compelling needs of future policing. Through synthesising content analyses, field observations and the output of the process, the authors produced the findings which were found to be meaningful in the relevant management theory. In the contemporary world, crimes have become increasingly transnational and empowered new roles in society due to globalisation. The use of novel technologies has become popular among criminal groups. Technologies continue to have positive and negative impact in our world in a faster pace.

Competent strategists are required to adopt a holistic mindset to envision the business and social trends, identify opportunities, foresee challenges and threats as well as to effectively respond faster than others (Yu, 2019). Without foresight, our strategy and innovation will only, at best, be based on a narrow understanding of the future. At worst, they are based on assumptions only informed by the past (Woodling and Jones, 2018). Given the pace of change



Source: By authors (2020)

Figure 2.
An integrated 3H
approach driving the
Force's strategic
management process

and complexity of the operating environment, it is found that strategic planning should be driven by a new thinking process rather than a conventional or mechanical way. Like most organisations, the Force adopts a routinised and structured process that the component of creative strategising is yet to be developed (Heracleous and Jacobs, 2011). In other words, a static strategy fixed for a set period of term will become increasingly ineffective. A strategic plan should be a living and breathing document that can respond to the need of an organisation constantly, rather than a 'set-and-forget' instrument (Paton, 2018).

Meanwhile, digitalisation reproduces or even worsens inequality in the global community as a result of unequal access to technology and data. While some groups benefit from advancement in technology, others remain left out. Law enforcement agencies worldwide are facing increased gap in policing capabilities among countries and this results in more complex global security challenges (Dworzecki and Hryszkiewicz, 2016). In view of the challenges arising from the applications of artificial intelligence and robotics, it is a common consensus that law enforcement must continuously respond to changes and develop more innovative skillsets and technological solutions to tackle emerging crimes (Hong Kong Police Force, 2019a). These skillsets and capability building within an organisation become the focus of the Hand-oriented approach. Only by continuously seeking improvements in a changing environment can a police organisation stay ahead of the wave. As a result, it has been a good practice for global law enforcement agencies to start looking into how policing can leverage on technology in the digital age.

Technologies will maximise the time frontline police officers spend on delivering their core services and meeting the needs of the community. It is of utmost importance that police forces look into technological solutions that will enable public access to service and improve operational efficiency and effectiveness (Hong Kong Police Force, 2019a). Police may even deter criminal activities through proactive actions driven by data analytics and evidence-based policing strategies. The ultimate aim is to deliver a faster and more focused response through real-time information sharing and effective decision-making. Among these key drivers of strategic changes from the task environment, our findings reveal that the impacts from technologies to the Force operations have not been adequately assessed with H2

perspective. Consequently, it may affect the development of CRIAQES competence at the H3 level, especially on agility and speed in collecting, analysing intelligence and service delivery.

There are a lot of possibilities, disruptions and changes in the next ten to thirty years. Since the existing and most challenging policing issues are mainly in an international context, instead of focusing on solutions at national or regional level, there has been a strong demand for interactive dialogues among law enforcement agencies. It is generally agreed that co-creation and proactive partnership with different law enforcement agencies, academia and private sectors becomes the focus of future policing strategies in addressing the current and emerging threats in the global operating environment (Inayatullah, 2018). These rely on the Heart-oriented approach adopted by different levels of staff to be committed and determined in making extra effort. To get true involvement of staff, a vertical slice right down through the organisation is necessary so that this consultation becomes a powerful aid for senior leadership to understand the daily challenges of the frontline staff and to inform the strategy in the process (Paton, 2018). Under the police context, in order to allow police officers more flexibility in executing their duties, real-time mobile access to all required information and the capability for remote briefings, digital devices and dynamic scheduling technology are amongst the top priority in enabling the efficient use of an officer's time and creating a more flexible working environment (Hong Kong Police Force, 2018b). This may also attract and retain the new generation who are more 'tech-savvy' and innovative in their ways of thinking.

While this study makes it possible to review and reflect on the Force's strategic planning process through the lens of 3-H framework and futures studies, it does not cover the other two main processes in Force's strategic management, namely implementation and review. As a result, the Hand-oriented approach referring to new skillsets and competences in order to solve future problems (Yu, 2019) is not fully applied in this study. One way of building on this research might be to extend it to cover the whole Force's strategic management and more research is needed to generate understanding of how frontline officers perceive the Force strategic management through empirical studies. According to Heracleous and Jacobs (2011), the component of creative strategizing is yet to be developed in most organisations, which can be a direction for future research. Strategic planning is how the people in an organisation make sense of where it wants to go and how it is going to get there (Booth, 2018). Whether the Force can maintain the organisational agility and legitimacy has become the most challenging question to be answered.

Conclusion

Having reviewed years of design, key documents and the analysis of the strategic planning process experience with 3-H framework, our findings reveal the following key lessons. First, top management's genuine commitment and support during the entire process is vital to the success of strategic management. When people believe that their leaders mean business and the leaders walk the talk, subordinates would seriously follow. Second, an effective heart-to-heart communication, which indoctrinates purposeful cause helps the buy-in process as it will yield people's 'want to' commitment to achieve the strategic goals. Third, creating a 3-H conducive culture is important to support effective implementation of the strategic plan. Fourth, trust bonding will glue each H domain of the framework together to boost team spirit among different divisions within the police organisation. Last but not the least, synergistic alignment among 3-H domains to create a holistic approach to drive the strategic planning process is crucial to an effective strategic management in the Force.

In conclusion, this study has thoroughly reviewed the Force's strategic planning process. The authors attempt to theorise the existing strategic planning practice with the

3-H framework – strategic planning with Head-oriented foresight process with the elements of futures studies, strategy to be executed with Hand-oriented competence approach by Heart-driven highly committed Force. We posit a holistic strategic planning and execution approach is the way to maintain Hong Kong as a safe and stable society amidst the VUCA world. The lessons drawn from this review created important positive impacts to the future strategic management for the Force – we know better how to achieve intended strategic goals and we can explain why and how we do it with relevant theories.

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Social and health sector reform towards 2040 in Japan

Social and health sector reform in Japan

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Abstract

Purpose – The purpose of this paper is to examine the health sector reform toward 2040 of Japan as a super-aged society.

Design/methodology/approach – This paper discusses the current healthcare policies adopted in Japan and projects the challenges in future as a super-aged society.

Findings – Through Japanese experiences, it is considered that Community-based Integrated Care System is useful, which takes into account the perspective of health care users. Being a super-aged society, it is essential for Japan to have more consensus by further removing obstacles, and paying attention to the change of paradigm and the purpose of care.

Originality/value – Based on the case of Japan, this paper serves as a reference for other East Asian countries, which would sooner or later encounter the similar situation of becoming super-aged societies in the 21st century.

Keywords Health sector reform, Community-based integrated care system, Super-aged society, Japan

Paper type Viewpoint

Introduction

Japan has implemented health sector reform to enable the maintenance of a healthcare supply system in times of low economic growth and rapid aging, which the world has never experienced before. A new medical and long-term care (LTC) framework for a super-aged society has been created; however, there are still many problems to be solved before 2040, when the absolute number of the elderly population is expected to peak. Currently, the Japanese government is reforming the social security system, aiming for 2040 (Ministry of Health, Labour and Welfare, 2018a).

In other East Asian countries, as in Japan, society is aging rapidly, and health sector reform has become an urgent issue. In 2007, Japan's aging rate exceeded 21 percent for the first time in the world (the so-called “super-aged society”). According to an estimation from the United Nations, South Korea will enter the super-aged society in 2027, Singapore in 2028, Thailand in 2033, China in 2035, and Vietnam in 2050 (United Nations, 2019). In this context, examining health sector reform in Japan, regardless of its success or failure, is considered beneficial for those East Asian countries that will become super-aged societies following Japan.

The authors first review the trends of health sector reform in Japan from the mid-1980s to the present, noting the background in which the reform was implemented. Then, the existing problems occurring in the aging of Japan are discussed. Based on those considerations, the issues for preparing a healthcare system for 2040 and what can be learnt from the Japanese experience will be summarized.



Review of health sector reform

With the introduction of the universal health coverage insurance system in 1961, medical demand increased significantly in Japan. However, after the two oil shocks (the first in 1973, and the second in 1979), when high economic growth came to an end, policy shifts were implemented to curb medical expenses. In the mid-1980s, when Yasuhiro Nakasone became Prime Minister (1982–1987), the Elderly Health Law was enacted, and the Medical Care Act, which had never been revised since its enactment in 1948, was amended. The Elderly Health Law removed elderly people aged 70 and older from the existing medical insurance system, and put them under a new system, in which financial resources are provided by each medical insurer (regional/occupational insurance). Moreover, free (of copayment) medical care service for the elderly since 1973 has come to an end (Hasegawa, 2020).

The revision of the Medical Care Act (the first amendment) initiated a Regional Medical Plan. This amendment aimed to allocate appropriate resources and resolve the uneven distribution of acute care hospitals as the healthcare market expanded, and prefectures came to play a major role in creating a Regional Medical Plan. In the Regional Medical Plan, prefectures established medical areas (secondary medical areas) to provide general medical services and set the upper limit for the number of beds in each medical area. Construction of new hospitals is only allowed in secondary medical areas in which the number of existing beds is below the upper limit. Although this plan set an upper limit on the number of new beds added, existing hospitals were not forced to reduce beds. This approach served to facilitate consensus among stakeholders such as hospital owners regarding Regional Medical Plans.

These Regional Medical Plans are to be revised by the prefectures at least once every five years, and the setting of secondary medical areas is also revised. A major change in the overall Regional Medical Plan was implemented in the fifth revision, and a new plan came to play a role in establishing a healthcare delivery system for each of four diseases and five medical services. The four diseases are cancer, stroke, acute myocardial infarction, and diabetes; the five medical services are emergency care, disaster medical care, medical care for remote areas, perinatal medical care, and pediatric medical care (including emergency pediatric medical care). Mental diseases and home health care have been added, and the construction of a cooperative medical system to provide for the five diseases, five medical services, and home health care is being promoted. The five diseases were selected based upon their burden on society, and the five medical services were selected given they were important issues in securing regional medical care. Prefectural governments should: (1) clarify “necessary medical functions”; (2) specify “the names of the medical institutions that perform each medical function”; and (3) set “the numerical targets” in their Regional Medical Plans according to the actual situation of each region, such as patient trends and medical resources. The medical plan is created by each prefecture independently and does not provide medical services at a uniform level nationwide (Ministry of Health, Labour and Welfare, 2012). However, this revision means that quantitative medical planning, such as bed regulation, has changed to a medical plan focusing on quality.

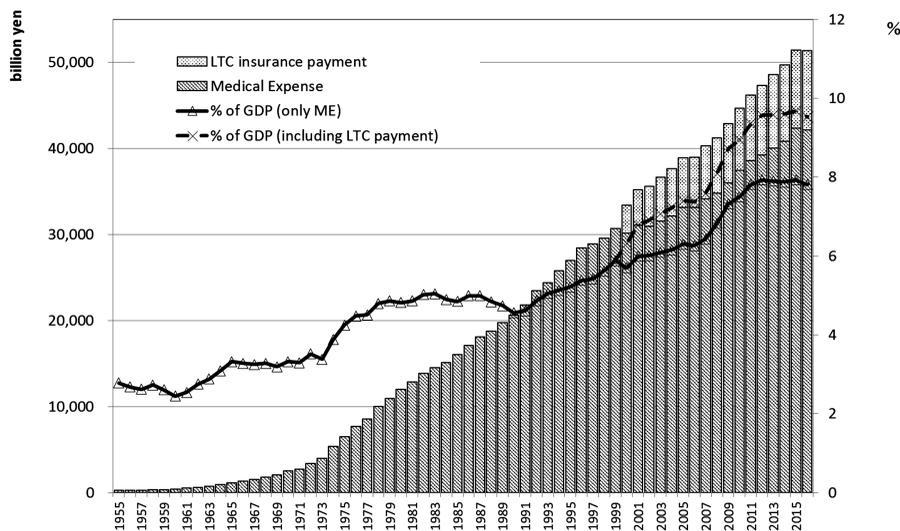
On the other hand, along with the development of the medical provision system, LTC services have become important. The post-Nakasone Cabinet Japanese government had been preparing for an upcoming aging society, and the 10-year General Strategy for the Promotion of Health and Welfare for the Elderly (Gold Plan), formulated in 1989, included the provision of special elderly nursing homes, home helpers, day services, and short stays. The New Gold Plan, launched in 1995, has implemented a plan for securing human resources for LTC, aiming to create 170,000 home helpers (Ministry of Health, Labour and Welfare, 2002).

Until then, LTC for the elderly was expected to be provided in each household, and LTC was considered within the framework of welfare. In 2000, LTC insurance was introduced with the aim of socializing LTC (Ministry of Health, Labour and Welfare, 2002). After the introduction of LTC insurance, the demand for LTC increased, and from 2000 to 2015,

the number of insured persons aged 65 years or older increased from 21.65 million to 33.08 million (1.53 times); the number of persons with care need and support need certification increased from 2.18 million to 6.08 million (2.79 times); home health care users increased from 0.97 million to 3.82 million (3.94 times); facility service users increased from 0.52 million to 0.90 million (1.73 times); and the total number of users increased from 1.49 million to 5.11 million (3.43 times).

With the expansion of medical services and LTC services, national medical expenses have increased. Figure 1 shows the growth in national medical expenses and its share of GDP from 1955 to 2016. Until the introduction of LTC insurance, national medical expenses included LTC expenses; thus, the LTC insurance payments are shown from 2000 onward. Healthcare expenditures, including LTC insurance payments, have increased at approximately the same rate since the 1970s.

Although the demand for medical and LTC services has increased significantly, Japan is currently in a phase of population decline. The young population and the working-age population are declining, and the demand for medical services in the acute phase will decrease at first. The elderly population over the age of 65 peaks in approximately 2040 and is expected to decrease thereafter. In other words, in the future, the market for medical services, which has expanded thus far, will be shrinking. In light of these future changes in the demographic structure, the Regional Medical Vision was created in 2015 (Ministry of Health, Labour and Welfare, 2015). The goals of the Regional Medical Vision are to redistribute hospital beds (from the supplier's perspective), to reduce the total number of beds, and to convert beds from acute care to recovery/chronic care. Based on the population structure in 2025 and the inpatient and outpatient rates in 2013, the estimated medical care demand can be calculated and, the redistribution/reduction of beds can be planned. Prefectures are expected to play a key role in facilitating cooperation among hospitals with financial incentives. Voluntary adjustment of hospital beds/functions mediated by prefectures is expected. However, it is difficult for hospital administrators to imagine a shrinking market, and society's traditional



Source: Ministry of Health, Labour and Welfare (2019a); Ministry of Health, Labour and Welfare (2017a)

Figure 1. Healthcare expenditure trends

medical culture was likely to regard chronic care as different from what had been taught, given chronic care recently began to attract attention. In fact, almost all university teaching hospitals are acute care hospitals, and few universities provide chronic care teaching programs for young doctors. Hospital administrators have hesitated to move to chronic beds. Prefectures have only a coordinating function, with no power to enforce changes. Therefore, compared with the Regional Medical Plan, the Regional Medical Vision has less power and is likely to have a difficult time with implementation.

Medical care and LTC for the elderly must be closely linked instead of separate entities. The Community-based Integrated Care System was proposed in 2016 to build a care system in which five services (housing, prevention, and life support, in addition to medical care and LTC services) can be provided simultaneously in the area where the elderly live (Figure 2). The Community-based Integrated Care System is intended to establish a system that matches the local situation and its characteristics (Morikawa, 2014; Song and Tang, 2019). Each municipality (there are 1,741 municipalities) plans the care system with its own aims, focusing on health care users rather than nationwide common aims. This system is created by each municipality according to the local situation, and many cases are open to the public by the Ministry of Health, Labour and Welfare (Ministry of Health, Labour and Welfare, 2016). In this system, four principles are proposed: self-help, mutual-help, help by social insurance, and help by social safety net. This system assigns a mid-sized hospital to support daily life, including home health care.

The Japanese experience until 2016 has taught us that care must be integrated, that the perspective of the health care user is important, that the culture of a medical society is important and sometimes difficult to change, and that establishing consensus is difficult but essential. The COVID-19 pandemic in 2020 revealed the presence of significant number of vulnerable populations in a super-aged society, and the outbreak in elderly care facilities can

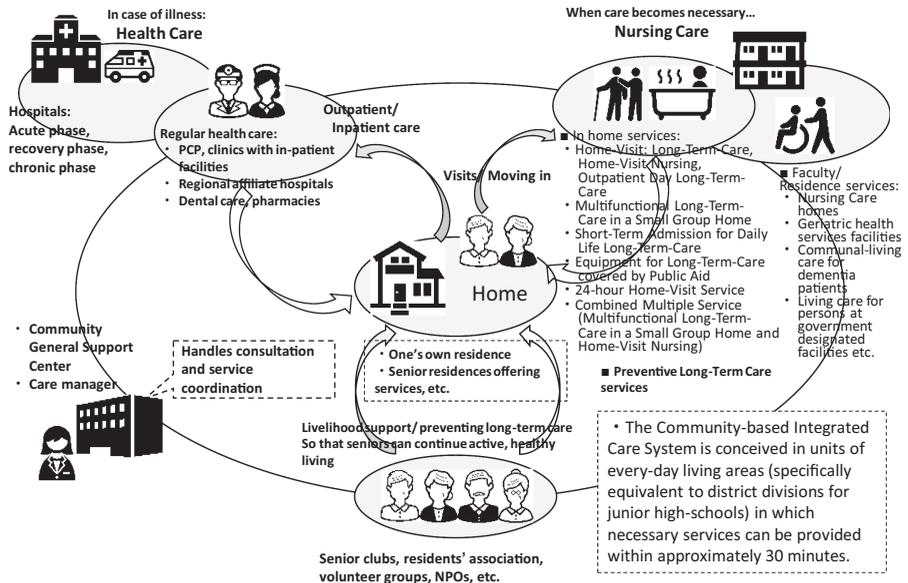


Figure 2.
Community-based
Integrated Care
System model

Source: Adapted from Ministry of Health, Labour and Welfare (2017b)

be disastrous. Local governments including prefectures and municipalities were forced to support hospitals and elderly care facilities taking the local needs into account. Infection control may be included in the Regional Medical Plan in near future, and local governments would be willing to play an important role in healthcare delivery.

Current condition of aging in Japan

Table 1 summarizes statistics on the aging situation in Japan. The Japanese population is already in a phase of decline. The elderly population had risen to 28.1 percent by 2018 (compared with 5.0 percent in 1950), the highest among the OECD countries (Figure 3) (Cabinet Office, 2019). Life expectancy has also increased to 81.1 years for men and 87.3 years for women (2017). One of the salient features of Japan's aging population is that the speed of aging was extremely fast. Development from an aging society (aging rate of 7 percent) to an aged society (aging rate of 14 percent) took only 25 years, from 1970 to 1995; much faster than France (115 years), Sweden (85 years), Germany (40 years), or the UK (47 years) (United Nations, 2015). This process, of course, has been accompanied by an increase in life expectancy; however, the effect of the declining birthrate is significant. The total fertility rate, which was 4.32 in 1948, was 1.43 in 2018. In addition, strict limitation of immigration – foreigners living in Japan account for only 2.2 percent of the total population in 2019 according to Ministry of Justice (2019) – has also contributed to Japan's rapid aging, given immigrants are generally young and their total fertility rate is high. If this trend continues, an even more significant aging problem is expected by 2025, when the baby boomers (born in 1947–1949) will enter the old-old stage, and in 2040, when the second baby boomers (born in 1971–1974) will enter the old-old stage.

Regarding the causes of death, the top 3 causes are malignant neoplasms, heart diseases, and cerebrovascular diseases. The average age of death in these diseases is also increasing. The number of hospitals has been declining, with 8,372 in 2018. In addition, the average length of hospital stay in acute care beds, which was once considered to be very long, has been shortened due to progress in the division of bed function. It was 16.2 days in 2017 (Table 1).

In addition to the aging of society, the family structure has also been changing. Figure 4 shows the trend of the number of households and the number of household members in Japan. Senior citizen households have also been increasing: single elderly account for 11.1 percent, and elderly couples account for 9.8 percent of all households. Such a reduction in the number of household members and an increase in the number of senior citizen households have led to a great decline in the ability to care for the elderly at home. The problem of 'elderly care by the

Population	126.2 million (−0.22 % from the previous year) (2019) ¹⁾
Aging rate (% of 65+ population)	28.1% (under 15: 12.2%, 15–64: 59.7%) (2018) ¹⁾
Total Fertility Rate	1.43 (2018) ²⁾
Life expectancy	male 81.1 years old, female 87.3 years old (2017) ³⁾
Leading cause of death	1. malignant neoplasm, 2. heart disease, 3. CVD ²⁾
National medical care expenditure	4,213 billion yen (7.81% of GDP) + LTC expenditure 9,229 billion yen (1.72% of GDP) (2016) ⁴⁾
Number of hospitals	8,372 (2018) ⁵⁾
Average length of stay	16.2 days (2017) ⁶⁾

Notes: 1) Population Estimates, 2) Vital Statistics, 3) Life Tables, 4) Estimates of National Medical Care Expenditure, 5) Survey of Medical Institutions, 6) Hospital Report

Source: Statistics Bureau, Ministry of Internal Affairs and Communications with collaboration of Ministries and Agencies (2020)

Table 1.
Aging situation
in Japan

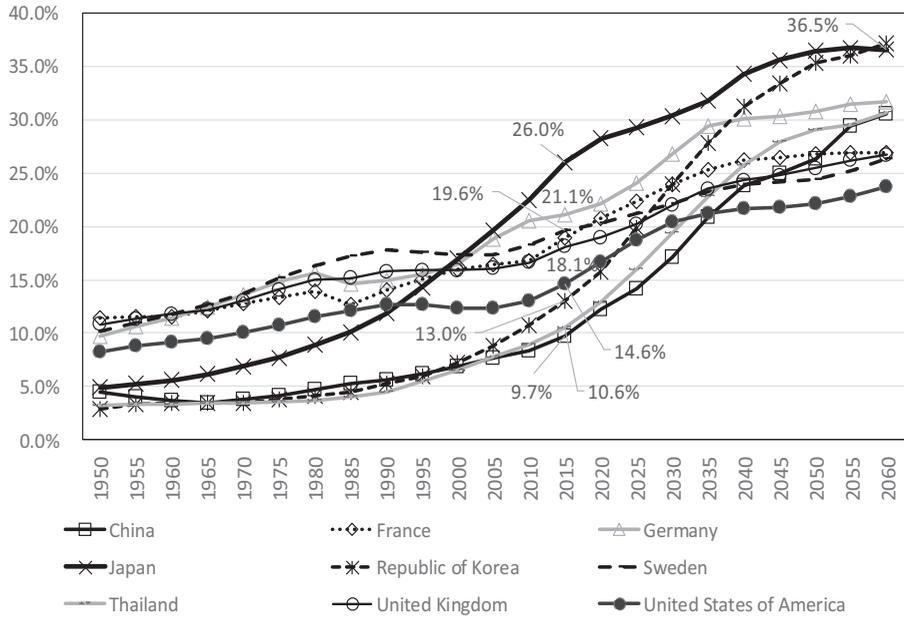


Figure 3.
Percentage of
population aged 65
and older

Source: United Nations (2019)

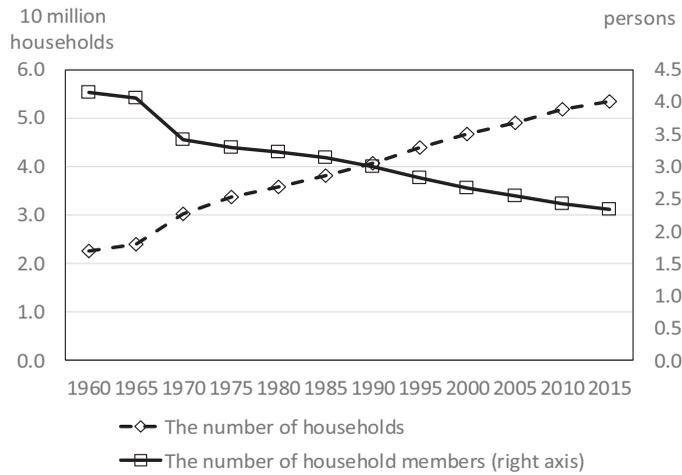


Figure 4.
Trend of number of
households and
household members

Source: Ministry of Internal Affairs and Communication (2016)

elderly' and the problem of care for the elderly with dementia by the other elderly with dementia are increasing.

As shown in Figure 1, medical expenses and LTC expenses have risen in response to such aging, but the use of medical and LTC services is also biased toward the elderly. In regard to

medical expenses in 2017, elderly people (older than 65 years), which account for 27.7 percent of the population, use 62.4 percent of the medical expenses. Thus, medical expense per capita of those older than 65 years is more than 4 times that of people younger than 65 years. The burden of medical insurance premiums is largely dependent on the working-age population, which is thought to have increased disparities between generations.

The largest challenge of this super-aged society

To analyse the largest challenge in this aging society, four main factors will be discussed: (1) government funding; (2) human resources; (3) effectiveness of the current healthcare policies; and (4) a sense of solidarity.

Government funding

Figure 5 shows the future projection for social security costs. In 2018, the social security cost of 121.3 trillion yen is expected to increase to about 190 trillion yen in 2040, and its share of GDP is expected to increase from 21.5 percent to 24.0 percent. The largest share of social security costs is pensions and medical expenses, which account for three-quarters of the total.

With regard to the increasingly social security costs, the problem of pensions is inevitable. The government created the “100-year Relief Pension Plan” in 2004, in which the government rather than beneficiaries are provided with relief (Kato, 2019). Pension consists of two parts: capitation-based part and income-based part. The funding for the capitation-based part comes from taxation, even though social insurance is applied in general in Japan. Taxation contributions have been increased from 33 percent to 50 percent of the funding. This is

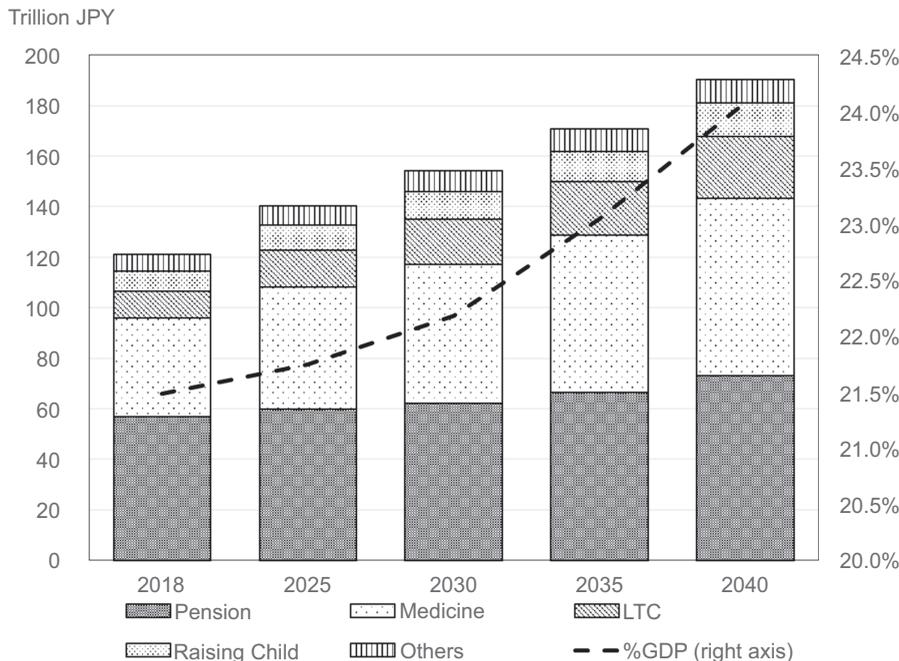


Figure 5. Predicted social security costs

Source: Ministry of Health, Labour and Welfare (2018b)

support for contributions by young active generations to pay basic pension costs, and it is a measure to secure stable financial resources for basic pension. The macro-slide system, reflecting economic growth, and a premium ceiling (18.7 percent of income) were also introduced, in which the pension funds can be adjusted so that the total payment will be less than the financial resources determined by the economic growth rate and payers' income. Moreover, in order to prevent pension fund exhaustion, it appears necessary to delay the age of starting pension payments. In the current Japanese system, the pension age is 65 years; whereas, the age in the United States is 67 years, in Germany is 67 years, in the UK is 68 years, and in 19th century Germany, when the public pension system was first established, payment started from 70 years. Raising the pension age is a matter of considerable debate. In addition, the government requests that companies delay the retirement age and it encourages the elderly to continue working.

Human resources

The human resources shortage is another major problem in a super-aged society. Figure 6 predicts the required amount of human resources required for healthcare, nursing, and other elderly welfare. The line graph shows the change in the percentage of healthcare and welfare human resources for all employees. Figure 7 shows how the number of healthcare workers has increased and about 40% of new adults are engaged in healthcare. Although the number of healthcare workers has already increased significantly, it is expected that more will be needed in the future, and the shortage of human resources will become one of the major problems.

Effectiveness of the current healthcare policies

Under these circumstances, the demand for improvements in medical and LTC effectiveness has been increasing. In 2018, the reform plan for medical and LTC services was finalized, with the aim of improving the effectiveness of medical and LTC services by 5 percent. In terms of concrete plans, there are currently four items: (1) promotion of robots, artificial intelligence,

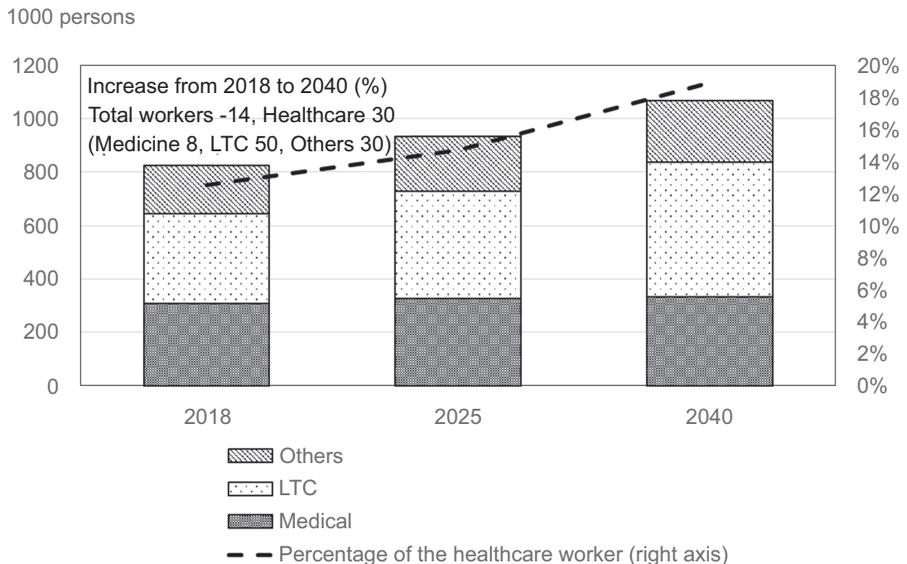
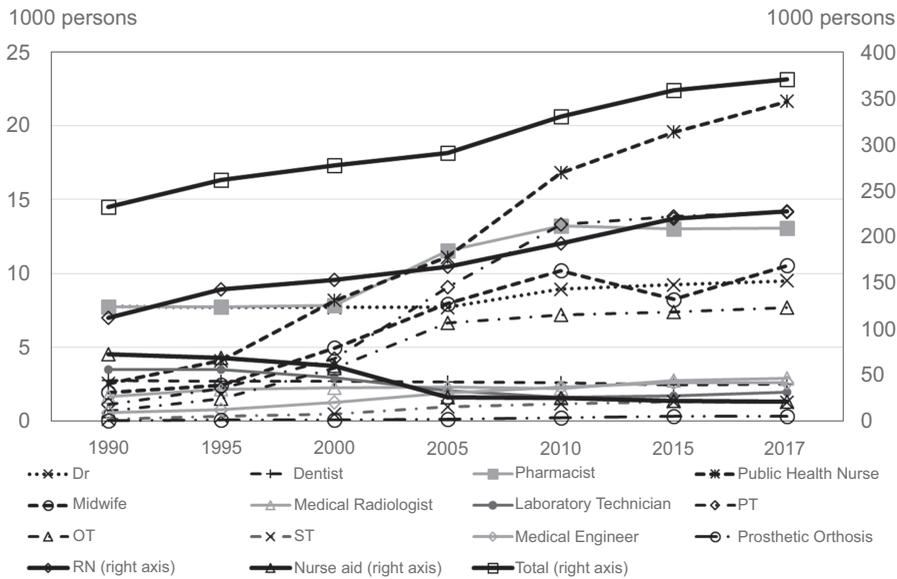


Figure 6.
Shortage of human
resources

Source: Ministry of Health, Labour and Welfare (2018b)



Source: Ministry of Health, Labour and Welfare (2019b)

Figure 7. Healthcare workers and number of admission capacity by professions

and ICT, including data health reform; (2) developing human resources by task shifting/sharing and promoting the use of senior human resources; (3) organizational management reform; and (4) expansion of service providers and promotion of collaboration. However, to define the output of healthcare, of which LTC comprises a significant portion, is quite difficult. With the growing importance of chronic care and home health care, which are labor intensive, improved effectiveness is expected in limited areas, such as remote medicine, monitoring, and primary prevention.

In pursuit of medical efficiency, it is necessary to measure outputs and inputs and to estimate how many health services are needed in the community. It is difficult to estimate how much medical care will be needed. How to measure demand, including medical treatment and LTC in the chronic phase, has not been well established. As an example of a method of estimating demand in a region, the authors proposed the Comprehensive Cost of Illness (C-COI) method (Matsumoto *et al.*, 2017; Matsumoto and Hasegawa, 2019; Hirata *et al.*, 2019). C-COI is a method of calculating the social burden of a disease, including the burden of medical care and the burden of LTC. It consists of medical direct costs (MDC; annual medical expense), morbidity costs (MbC; loss of labor value caused by treatment of a disease), mortality costs (MtC; loss of human capital value), LTC direct costs (LTC costs covered by public LTC insurance), and informal care costs (family burden of LTC). C-COI is defined as follows:

$$C - COI = MDC + MbC + MtC + LTC \text{ direct costs} + \text{informal care costs}$$

Figure 8 shows the per capita C-COI of cerebrovascular diseases in 47 prefectures, which are also the main actors of the Regional Medical Plan and Regional Medical Vision. The prefecture with the highest C-COI per capita (Kochi) is approximately 1.71 times that of the smallest (Aichi). Although Japan has achieved universal coverage, and access to health care among regions should be less variable than in other countries, C-COI per capita still varies widely. Also, the composition ratios of C-COIs vary; for example, the prefecture with the

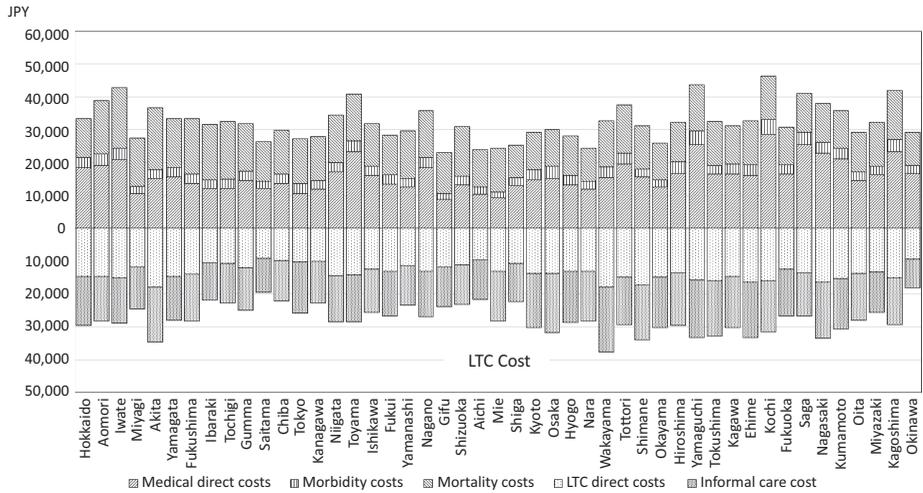


Figure 8.
C-COI of
cerebrovascular
diseases in 47
prefectures

Sources: Compiled from data extracted from e-Stats (2020), including Patient Survey, Vital Statistics, Survey of National Medical Care Insurance Services, Basic Survey on Wage Structure, Labor Force Survey, Estimates of Monetary Valuation of Unpaid Work, Comprehensive Survey of Living Conditions, and Statistics of LTC Benefit Expenditures.

highest proportion of LTC costs (LTC direct costs + informal care costs) (Okayama) accounts for 53.9 percent, whereas that with the lowest (Okinawa) is 38.4 percent. Medical needs should be noted, considering the difference in social burden of such diseases, in order to provide medical care services with an emphasis on the health care user’s perspective.

Healthcare is expected to change significantly in 2040. Table 2 summarizes this change in paradigm. The aim of care will change to “care management” from “cure disease,” and the role of the physician will be as manager of a medical team. New concepts and a consensus will be needed regarding quality and safety assurance, as well as for establishing evidence.

A sense of solidarity

A sense of solidarity has become the final but critical factor in supporting a super-aged society. The sense of solidarity within the same generation and the solidarity amongst different generations are both important. The introduction of effective but expensive medical technologies has made it possible to treat diseases that had previously been incurable. Japanese public medical insurance covers almost all medical technologies, irrespective of

Table 2.
Paradigm shift from
“cure disease” to “care
management”
toward 2040

	2020	2040
Aim of care	Cure of disease	Management of care
Target of care	Acute disease, trauma	Chronic disease
No of conditions	Single	Multiple
Treatment options	Choose one most effective treatment	Multiple treatments according to patients’ preference and timeline
No of providers	Single	Multiple
Evidence establishment	Randomized controlled trial	Big data

their cost. The cost of newly developed technologies is skyrocketing, and it is not certain whether this policy can continue. Access to healthcare could be limited, especially among the poor or elderly when expensive treatments are not fully covered by medical insurance. Japanese society is not accustomed to this situation and it could reduce the sense of solidarity.

From the Japanese experience, it can be learnt that aging has caused various problems. First, in terms of financial resources, pension costs might be as important as care costs. It is important to delay the age at which pensions can be received and to support employment to the age of 65-74. In terms of human resources, as modernized care requires more varied specialists, it can be the most serious challenges. As for healthcare effectiveness, with the growing importance of chronic care and home health care, improved effectiveness is expected only in limited areas, such as remote medicine, monitoring, and primary prevention. Finally, it is necessary to consider the impact of disparities in access to healthcare services on social solidarity. Among these, the shortage of human resources and a sustained sense of solidarity appear to be the most important areas for further consideration.

Conclusion

Japan has experienced rapid aging and is one of the most rapidly aging countries in the world. Since the mid-1980s, the health sector reform has been underway to build a better healthcare system and hence support a super-aged society. The circumstances of health sector reform as well as the purpose should be noted. The Japanese experience has shown that a kind of Community-based Integrated Care System is essential, particularly to be considered from the perspective of health care users. As a super-aged society, it is critical for Japan to have more consensus to further remove potential obstacles, paying attention to the change of paradigm and the purpose of care. The most important challenges to a continuously aging society tend to be the lack of medical staff and also the maintenance of a sense of solidarity throughout the whole society. The influence of COVID-19 pandemic is to be investigated in future, but local governments would be willing to play an important role in healthcare delivery, and this kind of commitment is needed in a super-aged society. In a long run, this paper is expected to serve as a pioneer or at least a reference for other East Asian countries that would encounter the aging problem after Japan in the 21st century.

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Impact of Artificial Intelligence on the health protection scheme in India

Impact of
Artificial
Intelligence
in India

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Abstract

Purpose – The purpose of the paper is to highlight the role of Artificial Intelligence (AI) in the healthcare industry through the Ayushman Bharat health protection scheme by analyzing various technologies being integrated to improve the customer service and experiences in India. The key focus lies on the understanding of the influence of AI in the healthcare system services, the clinical treatment, and the facilities to progress with accurate and precise health screening in India.

Design/methodology/approach – A systematic study on the emerging technologies of AI and the applications in the healthcare sector is presented in the form of a viewpoint.

Findings – AI certainly enhances experiential services; however, it cannot surpass the human touch which is an essential determinant of experiential healthcare services. AI acts as an effective complementary dimension to the future of healthcare.

Originality/value – This viewpoint discusses the applications and role of AI with the help of relevant examples. It highlights the different technologies being applied and how they will be used in the future focusing upon the Ayushman Bharat health protection scheme in India.

Keywords Healthcare, Health protection scheme, Technological change, Artificial Intelligence, India

Paper type Viewpoint

Introduction

Artificial Intelligence (AI) is defined as intelligence that is demonstrated by machines which mimic human cognitive functions (Jiang *et al.*, 2017). Nowadays, AI is being used in several fields such as defense, healthcare, banking and more. In order to provide quality healthcare, AI will be mainly utilized to tackle structural factors such as shortage of professionals, discriminatory access to healthcare or concentration of healthcare facilities in Tier 1 and Tier 2 cities (PwC, 2018). Indian healthcare will be worth US\$280 billion by 2020; thus, it is one of India's largest professional sectors in terms of employment and revenue (India Brand Equity Foundation, 2019). Some of the growth drivers are rising income level, more diseases due to lifestyle, increasing level of health awareness and accessible insurance policies. Ayushman Bharat (which means "bless India with long healthy life") Scheme represents the largest health protection program funded by the government with a budget of US\$887.04 million for the year 2019-20. The program targets to achieve 600 million beneficiaries, and approximately

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120,000 citizens have received treatment under this scheme by February 2019 (Government of India, 2018).

Artificial Intelligence in healthcare

AI is a game-changer, and the healthcare sector will be able to avail several opportunities from this technological development. The areas where AI has been rapidly emerging include machines that can sense, comprehend, learn and act in order to execute administrative and clinical healthcare functions (Radick, 2017).

AI increases the scope of activities that can be done by machines such as natural language processing, chatbots, computer vision or machine learning. For example, machine learning can be deployed to understand the overwhelming healthcare data while reducing the decision processing time (Westgate, 2017). IBM's Watson is used in oncology procedures to prescribe the treatment which is more suitable for the patients (Reddy *et al.*, 2015). There are new startups in India using AI to address challenges related to the quality delivery, automatic diagnosis, detection and screening of diseases or predictive healthcare diagnosis. Similarly, it will be conducive towards the eradication of discriminatory treatments based on social or structural backgrounds.

Government initiatives

Some factors which will be highly affected by the integration of AI in the healthcare industry are cost, quality, efficiency and reach of healthcare to the underserved areas. The major focus is on providing services to those areas where the infrastructure is not yet available or primary healthcare quality is questionable. However, a full-fledged replacement of physicians and doctors by automation is still a debatable topic which will be socially addressed in the future. On the other hand, the larger impact of AI in India is focused upon addressing issues related to economic disparity. Some of the initiatives taken by the government include the tie-up of its think tank, National Institution for Transforming India Aayog (NITI Aayog) with Google to encourage AI research, hence, contributing to the technology-empowered New India (NITI Aayog, 2018). Furthermore, NITI Aayog is working at a national level to deploy an analytical portal with the help of AI which aims to make National Health Scheme (NHS) a centralized health record system which will help in the effective management of health information with the use of big data analytics and machine learning (Dhupar, 2017).

The Indian government pursues initiatives in boosting the AI impact in healthcare to enhance the quality of health protection in the rural parts of India. Ayushman Bharat National Health Protection Scheme was an initiative to provide quality and affordable healthcare to all citizens. It is the world's largest healthcare scheme dealing with strategic management challenges such as database maintenance and quality controls. The Indian government has deployed AI, deep learning and machine learning to deal with such situation.

Challenges

There are several opportunities for AI in India, but challenges related to technology management need to be dealt with first. On the one hand, we must discuss the ethical implications AI use in healthcare and the possible options to solve such situations. AI will be falling under four main types of ethical difficulties: bias, lack of consciousness, lack of data privacy and singularity - the growth of AI intelligence beyond humans. The key framework to tackle these issues is to assure the backend programming and data implementation are sufficiently versatile among different software engineers originating from socio-cultural backgrounds along with the utilization of reinforcement learning in AI, which is the learning by trial and error in order to achieve the desired target (IBM, 2014).

An adequate progression is possible only when there is a robust legal framework in place. Some of the challenges are the institutional regulation of authority, appropriate certification

mechanisms, infrastructure, economic investment, unanswered legal queries and information asymmetries and perceptions. Currently, India lacks a regulating body regarding AI impact in the healthcare sector to assure data security which will prevent the data from being misused (Stead, 2018). India is devoid of such mechanism which leads to expensive clinical trials, excessive time consumption and lack of standard quality certifications resulting in the unacceptability of the data (Stead, 2018). Therefore, one of the possible solutions could be to have doctors as panel members while deploying AI in the sector.

Infrastructure is a tremendous challenge in India when it comes to AI implementation as it requires adequate cloud computing, high speed internet and computing power which are yet largely unavailable in several regions of the country, leading to hosting servers abroad (Srivastava, 2018). Additionally, AI is underfunded by the public sector in India and is currently limited to just a few professional areas.

Information asymmetries and perceptions are another area of concern as doctors and coders do not have any specific standards to meet the uniformity, resulting in hesitation to adopt new software and adaptability to use them. Moreover, there is a lack of understanding about the required policies, terms and conditions to use such technology along with a large set of unanswered legal questions which will ensure responsibility in case of any error committed by the professionals involved (Gupta and Kumari, 2017). Therefore, it is of utmost importance to formally establish rules and regulations which will adhere to the situational instances and working circumstances.

Applications of AI in the various healthcare segments in India

The impact of AI in big data in research has been ever-growing in recent years with the development of chatbots, personalized clinical diagnosis, and a higher degree of disease predictive accuracy setting a differentiation benchmark between traditional IT and AI. Some hospitals in India have witnessed the employment of descriptive and predictive AI first-hand. For example, Manipal Group of Hospitals implemented such technological advancements in order to help doctors to provide accurate treatments to cancer patients through IBM Watson, in its oncology specialization.

Another example of AI being used in disease detection is Aravind Eye Care, where the data collected are analyzed for early detection of diseases such as diabetes, blood pressure, among others (Vadakkepat *et al.*, 2015). In the pharmaceutical industry, AI can be helpful in enhancing the value proposition, sales automation and market differentiation. For example, Pharmarack utilizes AI within the supply chain to ensure optimization of the line (eHealth, 2019).

In the field of diagnosis, startups and MNCs are harnessing the potential of AI in premature disease detection and diagnosis, including Google and IBM. Alongside this, several startups are using deep learning and machine learning to detect the early symptoms and recommended personalized care actions. In the startup universe, examples are Cureskin, which focuses upon skin diseases such as scars, pimples and warts, as well as Qure.ai, which uses deep learning to enable early detection and further procedures.

Another area where AI is extremely helpful is in the counselling psychology industry. Depression is generally seen as a stigma by Indian society. Hence, AI helps providing chatbots (e.g. Wysa) which assure empathetic support and suggest when to consult human practitioners. Anonymity is a vital factor in this case which helps the patients sharing their feelings without being concerned of being judged or categorized.

Moreover, Telemedicine helps in providing quality and affordable treatment in the rural parts of India, and AI eradicates the discriminatory factor among the masses (Chandwani and Dwivedi, 2015). An example of business activity in this field is, SigTuple, an Indian startup which analyzes blood samples and generates reports without the help of pathologists. Another example is Philips Innovation Campus (PIC), which enabled healthcare to become affordable and accessible by use of AI. Philips, in partnership with Fortis Escorts Heat

Institute, Delhi, has created IntelliSpace Consultative Critical Care, which helps monitoring different intensive care units from a central command center.

Ayushman Bharat - National Health Protection Scheme

India's population is about 1.3 billion which is just slightly less than China's population. Consequently, one of the main challenges is to provide quality healthcare to all its citizens. Though India's majority of the population (65%) are young and under 35 years old, the remaining are mostly aging and require quality and affordable health protection system. As such, the Indian government launched one of the world's largest health schemes covering approximately 100 million underprivileged and 500 million vulnerable families by providing coverage up to Rs 50 lakhs rupees per family for secondary and tertiary care. This is the Ayushman Bharat National Health Protection Scheme (Singh, 2018), originated in 2018 under Ministry of Health and Family Welfare.

According to Lahariya (2018), some of the key features of Ayushman Bharat are:

- (1) The scheme has specified coverage of Rs 5 lakhs rupees per family per year.
- (2) It is transferable in nature across the country. The beneficiary can avail cashless coverage benefit from any empaneled hospitals across the country.
- (3) The National Health Protection Mission is based on entitlement which is decided based on the Socio Economic and Caste Census database.
- (4) Both public and private hospitals are listed from where beneficiaries can avail the scheme.
- (5) In order to restrict payments for treatments, pre-defined package is made.
- (6) Core governing principle of Ayushman Bharat is co-operative federalism and state flexibility.
- (7) To have robust and scalable IT platform, National Health Protection Mission has partnership with NITI Aayog to have paperless, cashless transaction.
- (8) AI will be implemented in order to assure higher accuracy and diagnosis performance through intelligent systems based on machine and deep learning. This will be highly beneficial for the patients.

The scheme includes Rs 5 lakhs rupees insurance per year which can be utilized not only by individual users but family members alike. In case of multiple surgery requirements, the highest package is provided followed by 50% waiver for the second time, and 25% waiver for the third time. The cashless treatment is shared between the central government and state government in the 60:40 ratio (Jha, 2018). "The beneficiaries, once verified as genuine, receive the card which can be shown to any empaneled hospital to utilize the service. Most of the critical diseases are included in the scheme, barring few like cosmetic surgery and fertility related procedures. The scheme's aim is to provide quality healthcare to all the citizens" (Keshri and Gupta, 2019, p. 65). However, there are many challenges which Ayushman Bharat faces. In the subsequent sections, the authors will detail how AI could overcome such difficulties.

AI utilization in solving the Ayushman Bharat challenges

One of the success stories of AI for Ayushman Bharat is enabling cashless transaction at multiple levels (Bakshi *et al.*, 2018). In case of an emergency, patients can go to any hospitals and procure the treatment. In addition, they receive notifications from the recommendation system which listed the best hospitals to visit in order to diagnose their symptoms. As for the doctors, they could now acquire information about the patients via

an online channel. This has reduced the stress level of the patients, eased the transaction system and helped in procuring the required treatment. In addition, with the help of AI, all the transactions are cashless. Ayushman Bharat is currently facing a lot of strategic management challenges like data handling of all the patients and citizens enrolled in the scheme, minimizing the cost of service, improving data security and quality of care. In order to enhance the service, the Government of India has deployed AI, machine learning and deep learning.

Below are four challenges along with respective solutions on how AI can resolve the problems.

A. Minimizing the cost of services at the expense of clinical care

In India, every year more than 60 million people, who are below the poverty line, are not able to avail healthcare due to its high cost (Angell *et al.*, 2019). Currently, it is observed that the Indian healthcare delivery system lacks standardization and, as a result, the cost of providing the service is exorbitant. Therefore, one of the most important challenges Ayushman Bharat faces is reducing costs in order to meet the volume and quality. An alternative way in which hospitals can reduce costs is using AI in emergency cases, where lot of tests need to be done in a short period of time (Angell *et al.*, 2019). AI not only reduces the time taken for getting the results of tests, but also decreases the doctor's time in performing those functions. As a result, the doctors can treat more patients at lower cost and standardization can be achieved.

Online platforms and gateways are required to maintain detailed information on medicines, drugs, and instruments available so that it can be accessed easily by everyone. The supply chain management is important for managing any healthcare organization (Bakshi *et al.*, 2018). One of the applications of AI is to automatically send the inventory orders when the level of medicines reach certain a threshold, while considering the doctors' feedback about how the medicine works on the patients. In case any medicine has a negative feedback, AI would filter it out and raise an alarm so that correct intervention by doctors can be taken and medicine can be replaced, or further investigation can be directed.

There are many startups worldwide which are or will be legally stationed in medical fields to help doctors and patients in several ways.

- (1) **Ada:** It is a machine learning chatbot which provides a platform to directly communicate with the patients to give recommendations. The application communicates with the patient about symptoms and issues which s/he is experiencing. Consequently, the chatbot provides proper feedback and offers specialist details for remote consultation (Ada, 2020).
- (2) **Lunit:** Lunit is a medical AI software company devoted to conquering cancer and advancing medical intelligence to the next level. Lunit develops and provides novel AI-powered solutions for cancer diagnostics and therapeutics which can save time and save lives. It is utilizing deep learning and 3D visualization so that it can be used to detect the unnoticed diseases like airway cancer, colorectal cancer etc. It aims to perform with 83% to 86% accuracy (Lunit, 2020).
- (3) **Sense.ly:** This chatbot is similar to Ada but has some different and advance services like reminder for medications, visit to the doctor as well as insurance recommendations (Sense.ly, 2020).
- (4) **Insilico Medicine:** It was developed in 2014 and performs one of the most important tasks in the medical field - drug discovery at minimal cost and time rate. The company aims to make a better living for all human beings (Insilico, 2020).

- (5) PathAI (Boston): A graduate from Harvard medical school, Andy Back developed this software to help the doctors find accurate cell images, which helps them identify the patient's disease (PathAI, 2020).
- (6) Aira (San Diego): It provides vision to visually impaired people. With the help of Artificial Intelligence, a smart glass helps the person seeing the world. For the blind, it can perform a simple task like reading (Aira, 2020).
- (7) Julia: It helps in diagnosing diabetic retinopathy through appropriate use of deep learning. It provides accurate reports of the respective test (Anantharaman and Shah, 2016).

B. Ensuring quality of care

With the assurance of quality of care in Ayushman Bharat, the hospitalization rate of lowest 40% of the population is expected to increase from 2.45% to 2.75%, which is about 17 million patients per year (National Health Authority, 2018). AI plays an important role in ensuring the quality of care provided to the increasing number of patients. With the help of Artificial Intelligence, both quality and cost will be affected, as efficient work minimizes the time period, which consequently reduces a large conglomerate of people at various places like reception, diagnosis centers, medical store and alike. Although machines play a major role in improving the quality of service, the accumulation of bacteria on those machines can lead to hospital-acquired diseases (National Health Authority, 2018). However, with the help of bacteria or infection tracker devices, which are fully automated, the infection rate can be decreased. An accurate alarming system can be devised to monitor and provide an indication when the rate of infection reaches a certain point.

C. Quality and security of data

Ayushman Bharat relies heavily on the development of data which have to be maintained effectively. Data privacy is another issue which needs to be addressed as it provides security to patient stakeholders, service providers and so on (National Health Authority and Quality Council of India, 2019). A proper structure of the data follows some guidelines such as collection, storage, completeness and exchange, which ensures that the data is reliable and in an accepted format. However, due to lack of proper system, one of the challenges faced by the patients includes inaccessibility of their medical records and therefore, they fail to present the necessary documentation to another consultant which causes inconvenience in case of emergencies. The second challenge is the securitization of the data, i.e., ensuring security of data and its privacy during storage, standardization and exchange among different entities (National Health Authority and Quality Council of India, 2019). Nowadays, collection of amounts, receipt, storage facility and transfer of sensitive information by service providers to respective authorities are subjected to the Information Technology Rules, 2011 which are safeguarded under the Information Technology Act, 2000. Information and data shared among hospitals, diagnostics centers and clinics need to be maintained properly.

Both challenges can be overcome through deep learning. For example, in hospitals, by utilizing various software, data and information are secured and easily accessible. Similarly, IT heads can lead and circulate information between hospitals and authorities with the help of programming languages such as R and Python.

D. Reducing frauds

Globally, it has been reported that US\$260 billion (5.59%) of global healthcare spending is lost in frauds yearly (Reuters, 2010). Healthcare schemes, insurance policies and programs, which are mainly organized by the government, do not obtain consistent information from the subordinates, leading to fraudulent activities in the entire system. This results in malpractices, providers' persuasive demands, fake policyholders, fake beneficiaries and

alike. In order to address these malpractices in Ayushman Bharat, there is a framework subjected to Anti-fraud Guidelines, 2018, that aims to detect, prevent and deter fraudulent and abusive activities in the system (Dey, 2019).

The Government of India has placed an extra layer of protection by means of AI to monitor the trend and formulating standard treatment protocols to check the irregularities caused due to over-billing or over charging, over testing, wrong beneficiary information and abuse in referral mechanism. The scheme touched almost 300,000 beneficiaries within 10 months. The Government has employed the National Health Authority (NHA) for the prevention of deception in the scheme, which continuously detects the potential scams and carries a detailed investigation before taking any measures against them (National Health Authority, 2018).

The NHA had detected anomalies in 48 hospitals across the country, out of which 31 were suspended due to the following reasons:

- (1) Doctors' inconsistencies during working hours in public hospitals.
- (2) Doctors in public hospitals illegally referring their patients to private hospitals by issuing referral slips for pecuniary benefits.
- (3) Referring patients from private clinics to the private hospitals.
- (4) Hospitals falsified information related to a clause under the scheme, which stated that a patient will be granted benefits from the scheme if s/he is admitted in the hospital for 6 hours and more.

As a result of these irregularities, the NHA designed an IT system with the help of machine learning, which helps hospitals and diagnostics centers to access real-time information including activities such as beneficiary identification, fund flows, transaction management, claims payment, referred patients' details, etc. With the help of this system, the NHA maintains stringency in the system for tightening the noose around insurance companies, private and public hospitals and ensuring the smooth distribution of healthcare benefits to the beneficiaries. With the established parameters defining the fraudulent activities, and through the implementation of facial and voice recognition software in CCTV cameras, plausible frauds could be prevented by AI.

Conclusion

Artificial Intelligence, machine learning and deep learning bring several opportunities in all the professional arenas, but healthcare must be highlighted as one of the most prominent areas wherein AI can be helpful in managing administrative difficulties, process standardization, cost reduction, among others. The government intervention has also enhanced the AI ecosystem by providing opportunities for startups to address this new venture, while encouraging well-established technology firms to collaborate with hospitals and employ the same technology. However, challenges such as the lack of a proper regulatory body and software certification, have made doctors question the future outcomes of this implementation. Therefore, in order to increase the level of acceptance, the government needs to address the prevalent issues at the earliest possibility.

AI is being used in hospitals to detect diseases, handle pharmacy supply chain management, detect fraudulent activities, and organizing numerous administrative activities. Ayushman Bharat, one of the Indian government's flagship schemes, seeks to provide healthcare insurance to all the citizens of India. The scheme is likely to succeed as AI has and will play a major role in its smooth functioning. In order to provide quality healthcare to rural India, telemedicine has been deployed and data securitization is confirmed by using AI. Furthermore, the government has added extra layer in reducing frauds and ensuring high quality service. In a nutshell, AI will help healthcare sector in standardizing the process, reducing cost, eliminating frauds and making quality healthcare service available for all.

It is important to mention that AI will not be able to replace healthcare professionals permanently, instead it will enable them to increase their performance accuracy as well as the diagnosis rate. On the other hand, psychological distress and anxiety might present due to the fear of job loss. It can be reduced by slowly introducing physicians to the concept of AI implementation and providing them with an adequate time frame for adjustment.

The Ayushman Bharat scheme serves about 50,000 underprivileged citizens who can avail the benefits outside their districts and states from 2019. Similarly, the true effectiveness of the scheme should be evaluated by the end of 2022 as per the initial government plans and directives (Government of India, 2018) in an ethnographic mode and experiencing the service first-hand.

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Public-Private Partnership for achieving sustainable development goals: a case study of Khulna, Bangladesh

PPP for achieving SDG in Bangladesh

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Abstract

Purpose – Public-Private Partnership (PPP) is a common practice in both the public and private sectors. PPP has been an important instrument to achieve Sustainable Development Goals (SDGs) at the national level. However, the role of PPP at the subnational level is often scarcely studied. Using Khulna city of Bangladesh as a case, this paper aims to assess the role of PPP projects in the attainment of SDGs.

Design/methodology/approach – The research was conducted in the Central Business District (CBD) of Khulna, on a total of 4.6 kilometers stretches of road medians in the CBD where landscaping was done through the PPP approach. Besides the collection of secondary data from official records, primary data were collected through site visits, field surveys and interviews of PPP project partners.

Findings – The result shows that 89 percent of the respondents (road users) were pleased with the landscaping done on the road medians. Similarly, about 86 percent of the respondents felt more comfortable and safer to use the roads. Well-maintained road medians allow road-crossing at a regular interval which reduces the chance of an accident. The private parties have installed promotional billboards on the road medians and saved BDT 10.82 million a year. The public authority saves the maintenance budget amounting to BDT 23 million a year. The project achieves a triple-win situation. Despite some limitations, this PPP project has taken Khulna a step forward to achieve SDGs.

Originality/value – The findings have policy implications as the PPP project has enhanced the resilience of Khulna by addressing the relevant SDGs.

Keywords Public-Private Partnership, Resilient city, Sustainable Development Goals, Khulna

Paper type Research paper

Introduction

Humanity is approaching very fast toward an urbanizing world (UNFPA, 2007). About 55 percent of the global population became urban in the year 2018. By 2030, of the 5.2 billion city dwellers in the world, 2.8 billion will be in the Asia-Pacific cities (UNPD, 2018). The Asia-Pacific region has experienced an unprecedented pace of urbanization over the last two decades or so (Dahiya and Das, 2020). As the urban areas account for 70 percent of the global Gross Domestic Product (GDP) and with the increased pace of urbanization, the Asia-Pacific region experienced sustained economic growth (UN-Habitat, 2016a). The cities have played a



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transformative role in the region, and are at the forefront of economic, social, political, and informational and technological change.

While cities become engines of economic growth, due to numerous reasons including the limited financial capacity of the governments to invest in social, economic and physical infrastructures in many countries, cities become a symbol of disparity in the provision of income, basic services and infrastructure development (UN-Habitat, 2016b; Dahiya and Das, 2020). For instance, governments in Asian countries would require US\$4.7 trillion over 10 years to meet urban infrastructure requirements, and an additional US\$1.6 trillion to replace aging infrastructure which is beyond the capacity of most of the countries (ADB, 2008; IMF, 2009). Without addressing urban issues and problems holistically, the attainment of Sustainable Development Goals (SDGs) would be even more difficult. Cities that manage their infrastructure and services well can maintain healthy living environments for their residents.

Accordingly, the United Nations (UN) has adopted the New Urban Agenda (NUA) which is intricately linked with the implementation of the 2030 Agenda for Sustainable Development (United Nations, 2015). The SDGs and targets, including Goal 11 – make cities and human settlements inclusive, safe, resilient and sustainable (United Nations, 2018) – can be achieved by building partnerships among actors operating at multiple levels and scales. Among various forms of partnerships to be discussed in this paper, Public-Private Partnership (PPP) is crucial to promote innovation, provide funding, technology, and transfer of knowledge and skills. Therefore, the partnership has appeared as an important vehicle for achieving SDGs related to urban issues and problems (UN-Habitat, 2016a).

Bangladesh has been experiencing a very fast pace of urbanization during the last four decades or so. Official statistics show that the percentage of the population living in urban areas has increased from about 9 to 32 percent during this period. However, according to the Agglomeration Index, an alternative measure of urban concentration, the share of Bangladesh's population living in areas with urban characteristics in 2010 was 45.7 percent. This suggests that there exists considerable hidden urbanization in Bangladesh (The World Bank, 2016). It is estimated that well ahead of 2050 more than 50 percent population will be living in areas having urban characteristics. That is about 120 million people living in urban areas. Although Bangladesh has 570 urban centers, only 25 cities are having over 100,000 (one hundred thousand) population. The major concentration of urban population is observed in Megacity Dhaka and the other three metropolitan cities (populations over one million).

Urbanization in Bangladesh is due primarily to push-pull factors. The capital city Dhaka and other three metropolitan cities such as Chittagong, Khulna, and Rajshahi are the main destinations of migrants from the rest of the country. This huge influx of internal migration in these four major cities is largely attributed to the economic and other roles played by these cities. The contribution of urban areas in Bangladesh's National GDP is about 70 percent, half of which generates from Dhaka city alone (The World Bank, 2013). The massive pressure exerted by the increased number of the urban population is manifold and extremely critical. Particularly high density, poorly developed water, sanitation, drainage, and waste management infrastructures and inadequate social and physical infrastructures including city-road networks have posed a formidable challenge to attain SDG 11, which aims for a safer, resilient and sustainable city.

To overcome the challenges posed by the fast pace of urbanization, there is a need for coordinated effort under long term investment planning. According to a World Bank 2013 study, the Milken Institute (2014) cites that, by 2020, the government of Bangladesh has to spend US\$7.4 to US\$10 billion a year to improve its power grids, roads, and water supplies to support its growing population. Only the transport sector will require investment in the range of US\$36 to US\$45 billion by 2020. It is very unlikely to have such big investment for infrastructure development from the government budget as it will divert limited resources from other priority sectors such as water and sanitation, education, health and rural development (Gurara *et al.*, 2018). Based on the experience of Latin America, Caribbean countries, and East-Asia,

Bangladesh could explore the potential of PPPs for closing the rising funding gap in infrastructure investment (United Nations, 2013; Dewulf and Garvin, 2020).

Bangladesh's government in cooperation with many multilateral, bilateral agencies/institutions, private sector, and non-government organizations (NGOs) has implemented many programs and projects to attain the SDGs. The role of the private sector has been very instrumental in certain types of investment projects (Rashed *et al.*, 2014). The central government could leverage its revenue generation power and authority. Over the decades, it has attracted finance from the private sector under the PPP model. About 72 PPP projects at different stages of development and delivery have been undertaken by the Bangladesh government in the areas of energy, transport, port, water supply, real estate, tourism, and health, many of which are transnational investments. Investment under the PPP model has reached about US\$22.7 billion by the fiscal year 2018-19. Bangladesh has experienced the three phases of PPP and institutionalized clear guidelines for PPP (Public Private Partnership Authority Bangladesh, 2019).

Despite a large number of PPP projects under the central government, very few PPP projects are under the local government such as the City Corporation or municipality. As the local government revenue base is still weak, PPP could help the financing of the various innovative projects with the attainment of SDGs. However, most of the PPP projects under the local government unit (City Corporation) are confined to solid and clinical waste management. Recently four large City Corporations such as Dhaka, Chittagong, Khulna, and Rajshahi have initiated the beautification and (minor) maintenance of city-roads projects under the PPP/quasi-PPP model. Although PPP projects under local government are gaining popularity, there is a scarcity of research that has systematically appraised PPP projects of local government in the transport sector.

Literature reveals that a large majority of the recent research have investigated the challenges of PPP projects in various contexts (Nguyen and Garvin, 2016; Agarchand and Laishram, 2017; Dewulf and Garvin, 2020). Sajan *et al.* (2014) and Rashed *et al.* (2014) critically analyzed the policy framework of PPP in Bangladesh. Similarly, the ILO (2019) study analyzed the impacts of PPP projects in the labor sector. Very scanty of empirical research has been conducted to appraise PPP in a local context. The only exceptions are Abedin (2010) and WSUP (2017) who have examined the health benefit of the water and sanitation projects on the poor city dwellers. No study has appraised the beautification and maintenance of the city-roads project of City Corporation taken under the PPP model.

This study fills this research gap in three ways. First, it examines the institutional arrangement of PPP project in beautification and maintenance of city-roads; second, it investigates the role of the PPP project in attaining the SDG 11 with particular focus on city resilience, economic efficiency, comfort and safety of the city dwellers. Finally, it identifies the local challenges that PPP project encounters and gives policy suggestions to better address the problems to help attain the SDGs.

A succinct review of the theory and models of PPP with SDGs

Partnership as a concept implies joint and voluntary endeavors toward a common purpose. Therefore, the partnership is about sharing power, responsibility, and achievements (Farazmand, 2018). Harriss (2000) conceptualized partnership as a kind of relationship between individuals and groups to accomplish a common goal. The United Nations framed partnerships as voluntary and collaborative relationships between various parties to achieve a common purpose (United Nations, 2015). Partnerships enable the sharing of experiences, knowledge, skills, technology, and financial resources to materialize concrete actions for sustainable development. Farazmand (2004) has outlined five partnership models including the autonomous model, the independence model, the globalization-convergence model, the hybrid

model, and the elite model. Each of these models includes alternative premises, strategies and global frameworks. However, the bedrock elements of any form of a partnership are mutual dependence, respect, and trust, as well as accountability and transparency (Farazmand, 2004). Therefore, partnerships can take many forms of collaboration; partnerships with businesses, academia, NGOs, and international organizations.

Among various forms of partnership, the PPP approach of collaboration has been gaining popularity since 1990 (Brinkerhoff, 2002). The partnership is one of the five thematic areas identified in the Preamble of the Agenda 2030: People, Planet, Prosperity, Peace, and Partnership – known as the 5 Ps of the SDGs. There are various models of PPP each reflecting the characteristics of the partnership agreement (Farazmand, 2018). For all models of PPP, it is believed that PPP would (a) improve the quality and the performance of public services to the benefit of users/consumers; (b) reduce or, at least, ease the time-profile of the tax-payers' burden; (c) help the public authorities, which are responsible for delivery of the services, to optimize the realization and quality of those services (The World Bank, 2012).

The PPP is expected to complement governments' efforts at the national and subnational/local levels (Sunam *et al.*, 2018). Developing state-NGO partnerships to ensure the delivery of basic social services to all in the developing world is integral to contemporary development thinking (Joshi and Moore, 2004). The government of Bangladesh has introduced PPP in 1996 after approving the private sector power generation policy of Bangladesh (Rashed *et al.*, 2014) to facilitate the development of public infrastructure and services. The present government has reinforced the PPP with the policy guideline to help achieve relevant goals of the Vision 2021 aligned with the Global Agenda 2030 (Public Private Partnership Authority Bangladesh, 2019). Since the introduction of PPP in 2009, many private entities have been working together with the public authority and contributing to improve water supply, sanitation, health, environment, energy, and physical infrastructure all aimed at achieving the SDGs in Bangladesh.

Study area

Khulna is one of the four major cities in Bangladesh which has more than one million populations. The government body, Khulna City Corporation (KCC) has developed the city, locating on the bank of Bhairab-Rupsha River, as the main center of trade, commerce, industry, administration, health, and education in the southwest region for a half-century. Khulna is well connected with the capital city Dhaka and other regional cities with a multimodal transport system (rail, road, water, and air transport). As this city offers all kinds of city services and has a well-developed transportation network, a huge influx of people from nearby cities has created enormous pressure on services and infrastructures provided by the city authority (Haque *et al.*, 2019). In Khulna, the total number of various types of all-weather roads is about 1215 of which about 80 kilometers are major roads, with width ranging from 10 to 25 meters (two-lane and four-lane road). These major roads are located around and directed to the city core area/ city center. Every day, about 15,000 motorized transport (mostly slow-moving small vehicles) ply along these roads. Apart from the transport of goods and services, about 100,000 city dwellers and commuters use these roads every day.

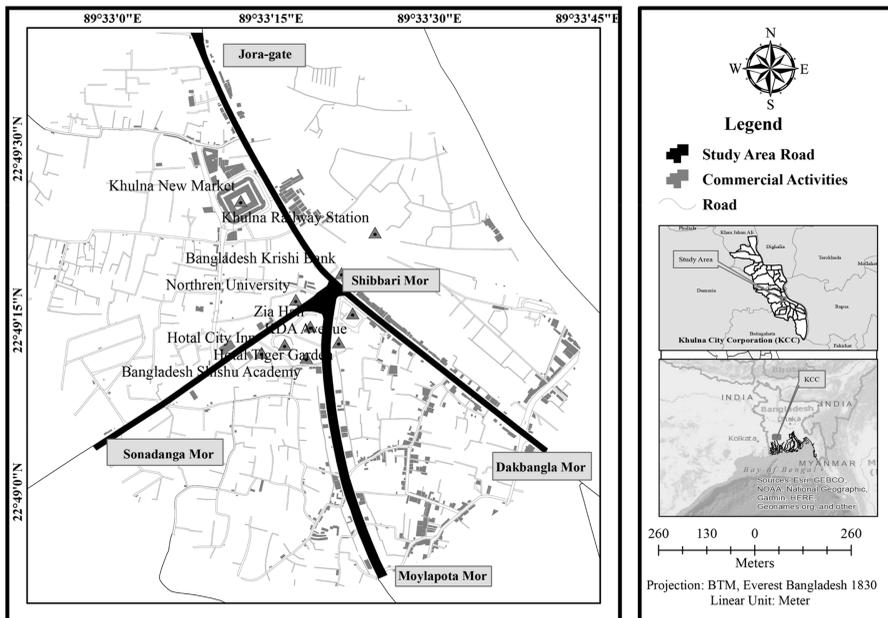
The major roads are usually constructed by the Roads and Highways Department (RHD) and the Khulna Development Authority (KDA) in Khulna; however, the portion of all types of roads (except national highway) that are within the city corporation area has to be maintained by the city corporation. Like most local governments in developing countries, the Khulna government (KCC) often faces serious budgetary pressure to construct, expand, and maintain the services and infrastructures required for the livable city environment. Particularly, the major roads encounter massive pressure from the increased volume of traffic and seasonal waterlogging resulted from poorly managed drainage networks along the major roads (Haque *et al.*, 2019). To ease the budgetary pressure and to ensure proper maintenance of

streetscape along the road median of major roads, the KCC has entered a kind of PPP with private entities/businesses.

For this study among the major roads/ road segments that are bought under PPP for maintenance, only four major roads/ road segments such as the Jora gate intersection to Shibbari intersection (Khulna-Jessore Road), Shibbari intersection to Dakbangla intersection (Upper Jess ore Road), Shibbari intersection to Moylapota intersection (KDA Avenue Road), Shibbari intersection to Sonadange Bus terminal intersection (Majid Sarani Road) are selected based on their importance (Figure 1). These road/ road segments are within a one-kilometer radius of the main city center of Khulna where different government offices, public halls, public parks, wholesale markets, commercial establishments (banks, insurance, hotels, restaurants, and shopping malls), museums, hospitals/ clinics, railway station, and bus stations are located. Therefore, these road/ road segments generate all kinds of traffics (including pedestrians).

Research methodology

This study draws on a mixed method of research; it has used both qualitative and quantitative research protocols. Apart from these, literature concerning PPP in varied contexts is reviewed to have a solid basis for positing findings of this research from a comparative perspective. Finally, office records from relevant departments of KCC, and private parties involved with the PPP process in Khulna are also consulted. Particularly the PPP contract-related documents, terms and conditions, and financial issues are examined. Initially, during January-February 2019, a reconnaissance survey was done in each of the road segments to get familiarized. Later more in-depth information about the technical specification of the road median trips, type of landscaping elements used, routine maintenance and plan for improvements of the landscaping in the road medians,



Source: By authors (2020)

Figure 1.
Map of the study area –
Khulna, Bangladesh

promotional billboards use in the road medians, the challenges of ongoing PPP, etc. are obtained through close consultation with the relevant personnel from KCC, and the local promotional agents of Grameen phone mobile operator, Banglalink mobile operator, and Kabir Steel Re-rolling Mills (KSRM).

Apart from the above, a short questionnaire survey was conducted among 215 road users selected randomly in the month of February-March to explore how the road users appraised the various aspects of PPP-based landscaping in the road median project. However, while selecting the respondents for the survey, high emphasis was given to pedestrians, drivers, employees of commercial enterprises, and office workers whose workplaces were located around the road segments studied and who used the road segments regularly. In the survey, along with other questions such as the changes in cleanliness, aesthetic quality, walkability, and traffic-flow, etc. the main emphasis was on the following aspects.

- If they are satisfied with the quality of landscape elements and their maintenance;
- If they feel more comfortable/ safer and secure to use these roads than earlier when the landscaping project was not done;

Finally, qualitative data were grouped to form some patterns for analysis. Financial data were used to come up with a kind of cost-benefit analysis of PPP projects, and survey questionnaire data were analyzed through excel spreadsheets. Moreover, the illustrative figures (photos, maps, graphs) and tables are used to aid the result and discussion section.

Results and discussion

Institutional aspects and nature of PPP in Khulna

In line with the SDG 11 (make cities and human settlements inclusive, safe, resilient and sustainable), the KCC has been making its best effort to make Khulna an ideal place for living and working. To make the city environment livable, the city authority has to ensure proper maintenance of its various physical infrastructures including drainage and transportation network in the city. Conventionally, KCC implements a 5-year project from government funding every five years. Most parts of the financing are for new road construction and drainage network development in the expanded area of the city. Only a very insignificant share of investment goes to the maintenance of existing roads. Road maintenance fund is used for engineering and civil construction-related activities such as carpeting of damaged road surface, repair of footpaths and walkways, repair of street lighting, etc. Maintenance of streetscape, roadside plantation, landscaping along the median strip of major roads have been always neglected issues due to budget constraints. For a safer, resilient and sustainable city, there is a strong need for landscaping of street elements including its median strips because it offers not only aesthetics, but more importantly, it regulates microclimate (temperature control), regulates waterlogging (by increasing infiltration), prevents topsoil erosion (of road median), and provides a pleasant environment for road users (Leal Filho *et al.*, 2019).

Among a total of 30 kilometers road that has wide road median, about 20 kilometers road where the width of road median is more than 1.5 meters has been brought under landscaping. Part of the road median landscaping is done under the City Region Development Project (CRDP I) which was mostly financed by the donor, GIZ. Landscaping in road median strips of other roads has been done in partnership with private enterprises. The landscaping in the road median strips in the five study roads/ road segments has been done by the local promotional agents of private companies such as Grameen phone mobile operator, Banglalink mobile operator, Kabir Steel Re-rolling Mills (KSRM) under a contractual arrangement. They got the contract through unsolicited application for rendering the landscaping service for a fee. As per the contract the KCC has handed over the road medians

to the promotional agents of these companies. These companies' agents are allowed to alter the landform inside the median strips for landscaping. They have planted both local and exotic varieties of tree, shrub, and grass. The companies' agents have employed outsourced workers for planting, watering, and pruning of the plantation in the median strips. In the study, road/ road segments government authorities such as KCC, KDA and RHD have constructed the median. The private companies' agents have developed the median and made the landscape of the median strips aesthetically more appealing (Figures 2–4). Particularly the shrubs planted on the median strip of the KDA avenue road catch the attention of the road users for their iconic beauty.

City residents' perception of the benefits of PPP projects

As mentioned in the methodology section, a public perception/ satisfaction survey was conducted to understand the perceptions of road users about the benefits of PPP projects on



Source: Field survey in 2019

Figure 2. Landscaping done in the median strips of KDA Avenue road (Shibbari intersection to Moylapota intersection) under the PPP project in Khulna



Source: Field survey in 2019

Figure 3. Landscaping of road median strips under PPP project in Khulna offered long interval cross-walk which helped change habit of frequent road-crossing



Source: Field survey in 2019

Figure 4.
Landscaping of road median strips under PPP project in Khulna offered clean and green corridor

the landscaping of road median strips in Khulna. They were asked to respond to four possible benefits from this project listed as follows. Their responses were coded in binary format (yes or no).

- If they are satisfied with the quality of landscape element provided along the median strips of the roads;
- If they are satisfied with the quality of maintenance of the landscaping done along the median strips of the roads;
- If they feel more comfortable/ safer to use these roads than earlier when the landscaping project was not done;
- If they feel more secure to use these roads particularly at night than earlier when the landscaping project was not done.

Their responses are summarized in Figure 5. Figure 5 reveals that about 89 percent of road users are satisfied with the quality of landscape elements used in the road median strips. The satisfaction of a very high number of respondents could be attributed to the greenery and the pleasant environment that the landscaping in the median strips offers. For landscaping,

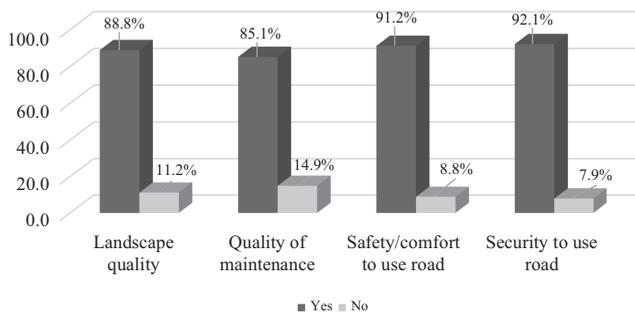


Figure 5.
Road users' assessment of various beneficial aspects of the landscaping of road median strip projects under PPP approach

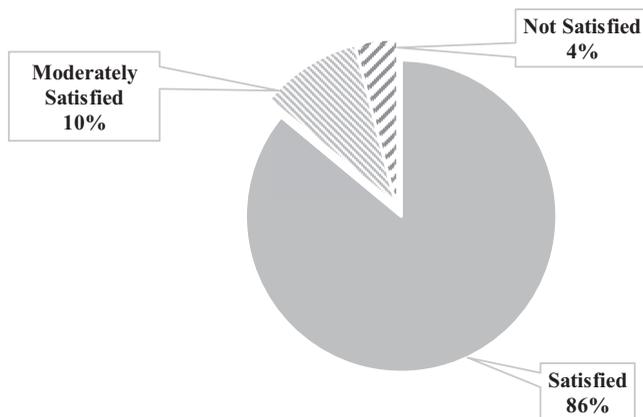
Source: By authors (2020)

different types of plants, shrubs, flowering trees, and creeper plants have been planted which has increased the aesthetic quality of these road segments. Consultation with company representatives reveals that their appointed staff/ workers regularly do replanting (when necessary), watering, and pruning of the landscaping elements. This also has contributed to reducing environmental pollution such as noise and dust-blown pollution along the streets. As regards the quality of maintenance of the landscaping, about 85 percent of respondents have shown their satisfaction. A high proportion of satisfaction about the maintenance of landscaping could be related to private companies' effort to maintain regularly. Company representatives have claimed that their appointed staff/ workers repair, clean, and decorate the median strips apart from taking care of the greeneries regularly. Therefore, these road segments are seen as much cleaner than other roads in Khulna (Figures 2–4).

Landscaping in the median strips screens out the glare of headlights coming from the opposite direction which has increased the comfort of the road users, particularly at night time. About 91 percent of respondents have acknowledged that they feel more comfortable/ safer to use the roads than they used to feel before the project implementation. Moreover, as the median strips work as a physical barrier, the road-crossing behavior of pedestrians has been changed a lot. This has ensured the smooth flow of vehicular traffics and reduced the rate of accidents. Finally, about 92 percent of respondents have mentioned that they feel more secure to use the roads after the implementation of the landscaping in the road median strip project under PPP. Perception about increased security of road users particularly at night is attributed to a few reasons. First, to beautify the landscaping, the companies have installed garden lighting arrangements along the median strips. Second, to promote their products and services, the companies have installed digital billboards having high power led lights. These two lighting arrangements have increased the visibility all along the road corridors. Therefore, road users feel more secure from the threat of snatching/ hijacking during the night time. Because of the numerous benefits that the regular road users get from the landscaping of road median trips under the PPP project, about 86 percent of respondents are very satisfied and 10 percent are moderately satisfied with the project. Only 4 percent are not satisfied with the project (Figure 6).

Public sector's benefit from the collaboration

The function of public authority in PPP is to create opportunities for private entities to invest so that they can serve the nation without compromising with their company's interests. In



Source: By authors (2020)

Figure 6.
Road users' level of satisfaction about the outcome of the landscaping of road median strip project under PPP approach

Khulna, government agencies such as KDA and RHD have constructed road medians in some road segments within the city. However, maintenance of these roads (except national highway) in the city rests with the KCC. The internal revenue base of KCC is not very sound and the Annual Development Programme (ADP) allocation receives from the government is highly variable due to political reasons. For instance, if the elected Mayor of the KCC is from the ruling party, ADP allocation is different as compared when the Mayor is from the opposition party. During 2009-2015, Mayor was from the ruling party, and KCC constructed about 205 kilometers long new metal/ all-weather roads. However, the maintenance budget is always very low; to overcome this, KCC has initiated PPP projects for maintenance of about 5 kilometers road median strips.

In the financial year 2018-2019, from the PPP project partners (private companies), KCC has received about half a million BDT as tax. Moreover, as the project partner companies have invested for maintenance of the road median trips under the PPP, this has helped KCC to save about BDT 2.3 million (original allocation for road median maintenance) in a year. The KCC's allocation was BDT 5000 for the maintenance of every 1-meter of road median in Khulna. If the PPP project could be implemented in all roads' medians in Khulna which is about 20 kilometers long, this would have saved about BDT 100 million in a year from KCC's earning (Table 1).

A planned expansion of this type of partnership in other working areas/ sectors of KCC such as waste management, health and sanitation, slum improvement, and recreation facility development could further help to reduce the expenditure of KCC. However, the government must develop a policy framework for the private sector to collaborate with local government on a sustained basis which would help the local government like KCC to achieve the SDGs within 2030.

Private sector's benefit from the collaboration

Every year, private companies spend billions of dollars for promoting their name and fame, goods to boast up their revenues. They use various platforms and media including billboards

Road Name (c1)	Length of road median (km) (c2)	Tax rate per meter length of road median (BDT) (c3)	Under PPP revenue earns from companies per year (BDT) (c4 = c3*c2)	Budget for Maintenance per year (BDT) (c5 = 5,000*c2)	Net benefit of KCC (BDT) (c6 = c4+c5)
Jora-gate intersection to Shibbari intersection	0.90	150.00	135,000	45,00,000	4,635,000
Shibbari intersection to Moylapota intersection	1.20	150.00	180,000	60,00,000	6,180,000
Shibbari intersection to Sonadanga bus stand	1.20	55.00	66,000	60,00,000	6,066,000
Shibbari intersection to Dakbangla intersection	1.30	77.00	100,100	65,00,000	6,600,100
Total	4.6	-	481,100	2,30,00,000	23,481,100

Table 1.
Appraisal of benefits of KCC from PPP project

Source: By authors (2020)

for the promotional campaigns of their products and services. Under the PPP project studied in Khulna, private companies like mobile operator Grameen phone, Banglalink, and stainless-steel manufacturer KSRRM have been using modern billboards placed/ installed in the road median to promote their products and services. According to the private companies, in absence of PPP type collaboration, they would have to pay an average BDT 6500 per meter of road median use for promotional purposes.

As there are many important establishments and buildings such as New Market (main shopping district), KDA building, high-end hotels, restaurants, banks, insurances, hospital, clinics, electronics markets, shopping malls and varieties of commercial buildings situated along the road connecting Jora gate intersection with Moylapota intersection, the advertisement cost is more in this road. Table 2 shows that for promoting advertisements in the road medians, the private companies would have to pay BDT 29.7 million as tax each year. Under the PPP, as the private companies' local agents have taken the responsibility of the maintenance of the road medians, they pay a relatively very little amount to the government as tax (Table 1). Leveraging the PPP, the private companies are jointly spending about BDT 18.9 million each year for the maintenance of the road medians and in return using the road medians for promotional purposes. This PPP has helped them save about BDT 10.8 million in a year (Table 2). This huge reduction of promotional expenses of the private authorities might encourage them to collaborate further for the expansion of this project or doing closely related PPP projects in Khulna.

The analysis shows that apart from public benefits, the PPP model at the local level has created a win-win situation for the public authority and private companies as well. Long-term collaboration could improve the quality of the environment in the study roads in Khulna city on a sustainable basis which would help to enhance the livability in Khulna and ultimately

Road Name (c1)	Length of road median (km) (c2)	Under PPP tax paid to KCC for use of road median (BDT) (c3)	Under PPP operation & maintenance cost of companies per year (BDT) (c4)	Under PPP total project expenditure of companies per year (BDT) (c5 = c3+c4)	Without PPP companies had to pay per year if they wanted to use road median for promotional purposes (BDT) (c6)	Under PPP net gain of companies per year (BDT) (c7 = c6-c5)
Jora-gate intersection to Shibbari intersection	0.90	135,000	36,00,000	37,35,000	63,00,000	25,65,000
Shibbari intersection to Moylapota intersection	1.20	180,000	48,00,000	49,80,000	84,00,000	34,20,000
Shibbari intersection to Sonadanga bus stand	1.20	66,000	48, 00, 000	48,66,000	72,00,000	23,34,000
Shibbari intersection to Dakbangla intersection	1.30	100,100	52,00,000	53,00,100	78,00,000	24,99,900
Total	4.6	481,100	184,00,000	188,81,100	297,00,000	108,18,900

Source: By authors (2020)

Table 2. Appraisal of the benefit of private parties from PPP project

contribute to the attainment of the SDG 11. The whole study findings could be summarized through the following graphical presentation (Figure 7).

Figure 7 shows that the PPP project has opened up new avenues of collaboration between the local public authority and private parties. The local public authority provides infrastructures and exercises regulatory control. The private companies upgrade the services/ infrastructures provided by public authority and ensure their maintenance. The collaboration offers a triple-win situation: (a) city residents enjoy clean and green transport corridors, safety and security while using the roads; (b) the city authority maintains well-functioning streets without incurring cost from its revenue; and (c) the private parties achieve cost advantage to promote their products and services and to build a public image. The outcome of this PPP is moving forward to achieve resilient, safe and sustainable Khulna in line with SDG 11. At the heart of this triple-win outcome is the partnership strategy outlined in SDG 17. The SDG 17 emphasizes building partnerships across levels and sectors for achieving SDGs. By initiating this PPP project, Khulna city authority has shown its strong commitment to building partnerships with multiple actors including the private sector for leveraging the private sector's capacity to provide technology and finance.

Challenges to PPP in Khulna

Earlier it is seen that PPP projects in the study roads have contributed substantially toward the achievement of SDG 11 at the local level in Khulna. Based on the result of this study, policymakers might think of moving forward with this kind of PPP project covering larger areas in Khulna or elsewhere. However, a couple of challenges that the projects encounter have to be addressed on a priority basis in order to harness the full potential of this type of PPP project. The challenges are discussed as follows.

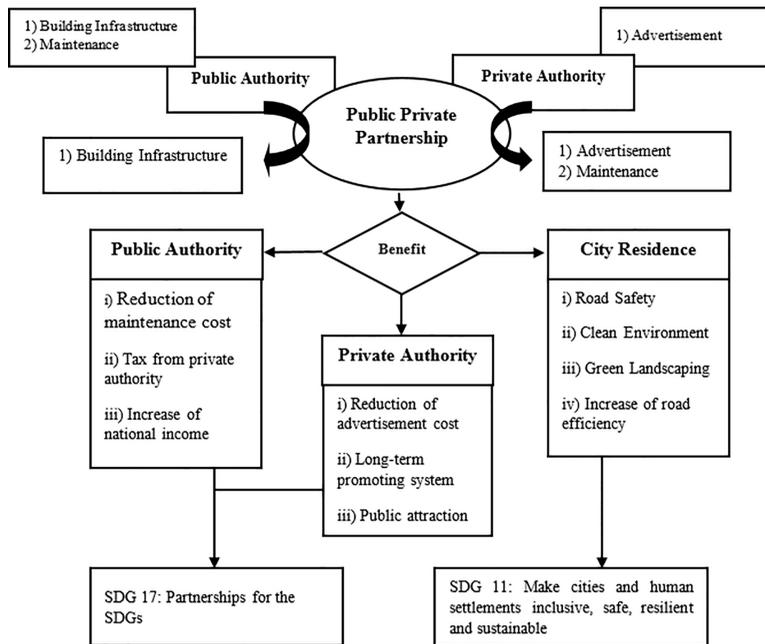


Figure 7.
The local operational model of PPP in Khulna to achieve SDGs

Source: By authors (2020)

- (1) The first challenge is related to the institutional framework. Until now KCC does not have any policy framework to work with a business entity for PPP types of collaboration in landscape improvement in road median. Everything is done on an ad hoc basis. This acts as an impediment for the private party to invest from a long-term perspective. To obtain results from any landscape development project, there is a need for certain years as planted trees/ shrubs take time to grow (Flemer III, 1984). Any big investment in a landscaping project of this scale requires a longer-term contract; however, in absence of a stable policy framework, it is less likely that private party would cooperate for any longer horizon as there exist huge uncertainty that the contract might not renew particularly where political process dominates over everything.
- (2) The second challenge is that in the absence of an open, transparent and competitive tender procedure, parties making unsolicited applications and willing to pay the fee as per the government rate schedule (rate of per meter length of road median is determined by the government) are awarded the PPP contract for landscape improvement in road median. This is problematic for two reasons. First, if two or more parties approach the city authority for the same segment of road median, how the contract is awarded is not clear. Second, even when only one party makes an unsolicited application, the contract is awarded without opening the opportunities to other potential parties.
- (3) The third challenge is the absence of any institutional monitoring system. In the absence of this kind of monitoring from the part of the regulating agency, the private party does its best to serve its interest. For instance, in every kilometer length of road median strip how many billboards could be installed is not specified in the contract; therefore, billboard outnumbered the landscaping element (assuming billboard is not a landscaping element).
- (4) The fourth challenge is the specification of landscape elements. The landscaping is done as per the wish of the private party. There is no specification of plants, shrubs, creepers to be planted. This is important because, in a coastal climate, not all species of plants/ shrubs/ creepers provide the best environmental benefit for the city residents; some not even survive (Hasanuzzaman *et al.*, 2014).
- (5) The fifth challenge that has been emerged from this study is: KCC does not give specific guidelines about the density of plants/ shrubs to be planted in the road median strips. In humid subtropical areas, for single row plantation in road median, 333 plants per kilometer/ length are planted; this is done in India (Government of India, 2015). But in the study, road segments density of plantation (both shrub/ leafy low height tree/ palm tree) is very low in the count. There are several reasons for that; first, due to poor site condition (water logging in the root zone and salinity), the mortality rate is high but replacement is not done very often; second, the companies install small promotional billboards of their products and services in the road median strips; third, to increase the visibility of those billboards, they maintain a low density of plants/ greeneries.

However, for installing the billboards, they beautify the road median through cleaning and visually appealing painting/ decoration. Therefore, the road users' survey revealed that the median strip of the study roads/ road segments were found much cleaner, greener, and nicer than other road medians in Khulna. The mobile phone operator Grameen phone's local promotional agent claimed that the paint is applied once every year in the median including cleaning twice a week. This initiative greatly reduced the government's responsibility for the

maintenance of the median strips and influences the private sector to collaborate with the local government for achieving long-term environmental benefits in Khulna. Achieving this alone from the government budget is a difficult undertaking for KCC. In addition, to improve the transparency, instead of direct awarding the PPP contracts to selected agencies, open tendering procedures could be adopted.

Conclusion

The study has investigated the nature and role of PPP projects on the landscaping of road medians in Khulna of Bangladesh in achieving the SDG 11. The findings suggest that the project creates a triple-win situation. The city residents benefit from a clean and green environment, enjoy the safety and secure mobility along the landscaped road corridor. The collaborating private companies enjoy estimated benefits of BDT 10.82 million a year and the KCC saves about BDT 23 million a year. The implementation of PPP in all of the medians of Khulna roads will increase the revenue of the government and will increase the eco-friendliness of the road median in Khulna along with the increased road safety and safe pedestrian movement. The outcome of the analysis shows that public authority is benefitting the most due to PPP. The city residents are satisfied with the landscaping in the road median and its maintenance in Khulna. The research highlighted the significance of PPP to achieve SDGs and showed how impactful a local level PPP project can be on the public, governments, local economy and environment. Despite some challenges such as awarding PPP contracts without a competitive tendering process, this PPP project has taken Khulna a step forward to achieve SDGs. This study can serve as a reference for making a long-term sustainable plan for the implementation of PPP in road medians across the country. Finally, the outcome of this research could influence the policy-making process to make local level PPP success in many other sectors/ areas in Khulna or elsewhere to achieve SDGs.

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Governance and administrative process of the Light Rail Train project in Palembang, Indonesia

Light Rail
Train project in
Palembang,
Indonesia

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Abstract

Purpose – The paper investigates the governance and administrative process in the Palembang Light Rail Train (LRT) project in Indonesia and gives suggestions on the strategic development of the LRT project for creating a *desakota* technopole in Palembang.

Design/methodology/approach – This paper adopts both STEEP (Social, Technological, Environmental, Economic, Political) analysis and *desakota* technopole theoretical framework. The STEEP analysis is used to explain the Palembang LRT project which is to meet one of the city's high-tech urban transportation goals. The *desakota* technopole framework is used as a strategic urban planning guideline for the further development of Palembang.

Findings – This paper has three findings. First, based on STEEP analysis, Palembang needs smart urban transportation, such as LRT, to solve the present and future traffic problems. Second, the governance and administrative process in the LRT project is mandated to national companies as part of a national government infrastructure policy financed over multiple years through the national budget. Third, it is critical for national, provincial, and local governments to adopt a *desakota* technopole framework strategy to meet long-term targets.

Originality/value – This paper highlights Indonesia experience towards making a *desakota* technopole, using the Palembang LRT project policy as the key driver under investigation.

Keywords Palembang LRT project, Governance, Administrative process, *Desakota* Technopole, Indonesia

Paper type Research paper

Introduction

Making a proper city is a kind of art, based on strong principles that go far beyond conventional formulae for architecture, engineering, and land-use planning (Landry, 2006). Accordingly, Palembang in Indonesia has to embrace its cultural uniqueness and its combined *desa* (village) and *Kota* (city) (also called “*desakota*”) characteristics (McGee, 1991) to facilitate its becoming a more creative city (Scott, 2006). The very definition of “smart” is evolving to include full integration of transport, electricity, healthcare, education, city services, water-heating, work, and leisure activities, coordinated through the Internet of Things (IoT) framework, which brings the crucial elements of life together into a single, unified picture (McClelland, 2015). Previous research and academic publications related to Palembang discourses are used as a foundation for this paper.

To balance the goals of becoming a smart city and preserving local cultural uniqueness requires not only “art and design” traditions, but also a knowledge system and innovative approach to management and technology that stresses empathy (Ip and Yip, 2017). Palembang is widely regarded as one of Indonesia's most rapidly growing cities (*Vivanews*,

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2018) and is identified as one of 100 planned new smart cities in Indonesia's national policy agenda (*Kominfo*, 2017).

Local government policy requires that Palembang's cultural heritage be supported (Prima, 2014) to improve tourism and benefit the town's economic development (Lussetyowati, 2015). At the same time, domestic infrastructure investments are being made to make Palembang more accessible and facilitate visions for its future (Podlaszewska, 2017). The Palembang LRT project is a matter of both public governance and investment to improve accessibility to Palembang. It is relevant and attractive as a subject study in the public administration field, particularly in the context of governance and administrative processes related to the Palembang LRT project.

Palembang has to embrace more strategic and innovative ways of maximizing the long-term benefits of not only the Palembang LRT, but also ongoing *desakota* technopole development. Therefore, the following research questions (RQs) are pursued:

RQ 1: What are the unique development characteristics of Palembang regarding creating a *desakota* technopole?

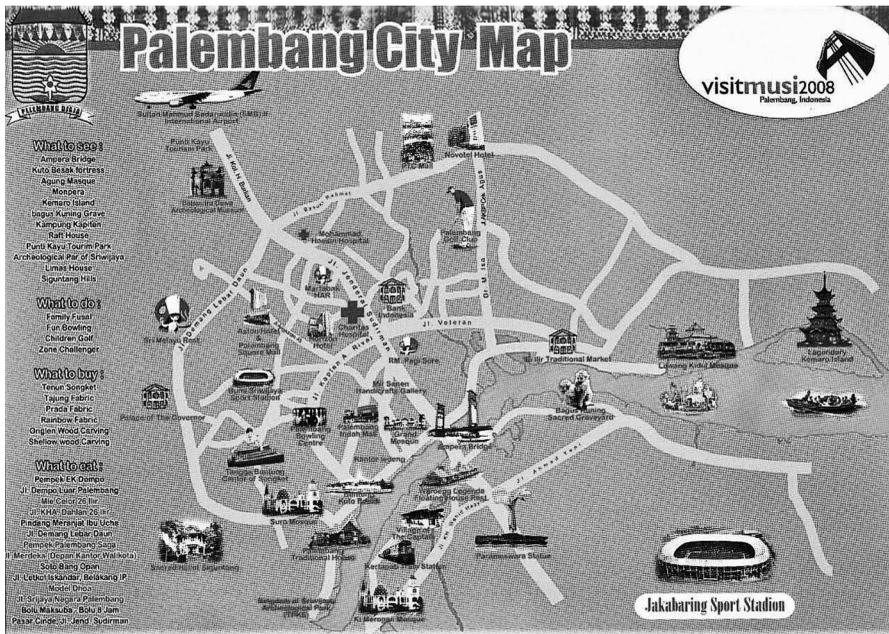
RQ 2: What are the governance and administrative process problems in the Palembang LRT project and what should Palembang Municipality do to improve and maximize the LRT's contribution to the city's *desakota* technopole development?

This paper starts by discussing the unique development characteristics of Palembang towards a *desakota* technopole (RQ 1). This paper is a case study, using *desakota* technopole theory as its framework, supported by interviews and document analysis. In addition, the governance and administrative processes of the Palembang LRT project, how national infrastructure policy acts as a key driver, who are the key policy actors, and the results of the Palembang project are discussed (RQ 2). The *desakota* technopole framework strategy is used to maximize the Palembang LRT's benefit to the city and avoid its becoming a "white elephant" (RQ 2). The paper ends with a summary, in which the findings and positive and negative results of the Palembang LRT project are reviewed.

Unique development characteristics of Palembang towards *Desakota* Technopole

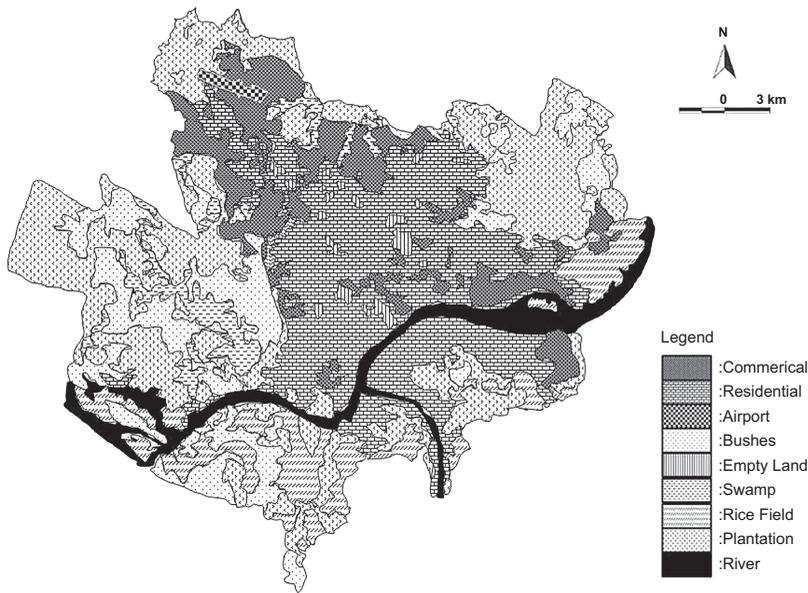
Palembang is the capital city of South Sumatera Province in Indonesia. Since 1998, as the beginning of Indonesia's political reform era, Palembang has had a significant decrease in criminal activity (*Sripoku*, 2019). Its development activity is split between the old town (near the *Musi* and *Ampera* bridge) and the new town (a commercial area in north-eastern and north-western Palembang). The LRT is a part of high-tech urban transportation scheme to connect and improve accessibility to both towns, following the examples set by Singapore's LRT, Tokyo's MRT, and Shanghai's MRT.

Modern lifestyles have influenced Palembang citizens through rapid development and greater demand for higher education, as shown by the construction of a new private academy, higher education institutes, and universities at the centre of the town. Commercial areas began to spring up in Palembang when the city hosted several international events in the 2010s. Five modern malls – Palembang Trade Centre, Palembang Square, Palembang Icon, Palembang Trans Mart, and OPI Mall – highlight the variations in business infrastructure development in Palembang's new town. The new town has attracted foreign investment to Palembang, including four- and five-star business hotels, such as Novotel Hotel, Excelton Hotel, Aston Hotel, Ibis Hotel, Arista Hotel, Windham Opi Hotel, and Hotel Santika Bandara Palembang. The following three figures (Figure 1–3) describe Palembang's tourism, land use development, and *desakota* characteristics:



Source: Adapted from Visitmusi2008 (2007)

Figure 1.
Palembang city map
for leisure activity



Source: Adapted from Podlaszewska (2017)

Figure 2.
The development land
usage map in
Palembang city 2010

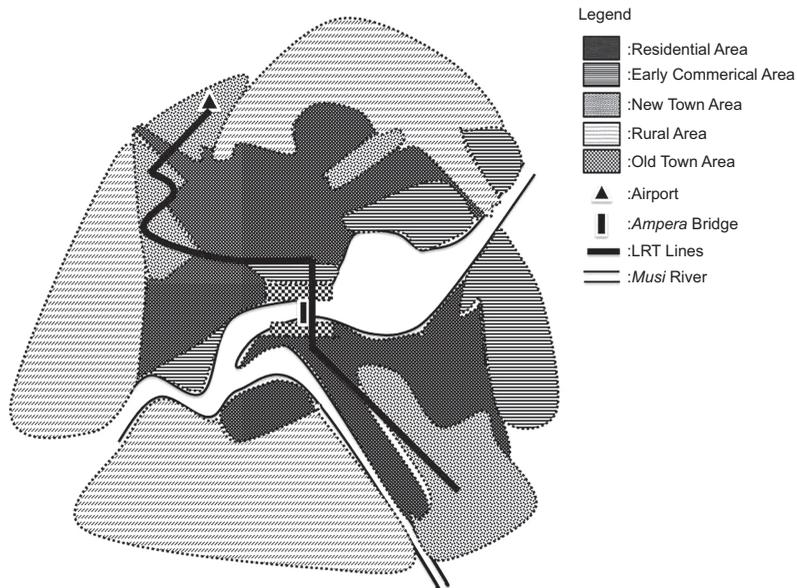


Figure 3.
Desakota
characteristic map of
Palembang city with
Palembang LRT lines

Source: By author (2019)

Verma *et al.* (2019) offered a salient discussion of Palembang, using STEEP (i.e., **S**ocial, **T**echnological, **E**nvironmental, **E**conomic, **P**olitical) analysis. STEEP analysis offers a better understanding of Palembang’s current achievement and conditions, from a systematic perspective.

First, the *social* aspect relates to the population composition, cultural values, and literacy of Palembang citizens. In 2018, the total population of Palembang was 1.6 million, with a population growth rate of 1.42 percent per year. According to a 2009 official national social-economic survey (BPS Indonesia, 2019), over half of all Palembang citizens had obtained a high school diploma or higher education degree and had Internet access, more than 80 percent used smartphones and sophisticated gadgets, and almost 100 percent were literate. Palembang’s human development index reached 69.39 points in 2019 (BPS Kota Palembang, 2019). Furthering human resources development is becoming a priority and a key part of national efforts to improve education, vocational ability, training quality, and other skills (Aggarwal, 2019). At the same time, however, those living in old town areas must still preserve heritage sites, such as their traditional houses (Prima, 2014). Finally, religion greatly influences Palembang citizens’ lifestyles and traditions. According to a Department of Religion report (*Kemenag Sumsel*, 2016), Palembang citizens embrace a range of religious beliefs, with 91.9 percent being Muslim, 4.52 percent Christian, 3.46 percent Buddhist, and 0.08 percent Hindu.

Second, from a *technological* perspective, Palembang is not considered a high-tech city, in terms of productivity. Most industries in Palembang – e.g., electric power generation and distribution, water utilities, food producers, transportation, and clothing – use low- to mid-level technology in their daily operations. A national electricity company, PLN (*Pembangkit Listrik Negara*) oversees electrical power generation in Palembang, using such non-renewable fuels as petroleum and liquid petroleum gas (LPG) (Interview Head Manager of Palembang PLN). Technology in the water utility is still below modern city standard, with water quality and quantity depending greatly on the climate and topography of the

residential area. In terms of public transportation technology, Palembang has a railway station with a medium-technology, medium-speed train, while city buses run on LPG. The most famous industry in Palembang with national scale production is *PT Pusri*, which produces urea fertilizer for agricultural uses. However, the food, clothing, and local handcraft industries follow the home-industry model, with all its inherent productivity limitations.

Third, in terms of *environment*, Palembang has had, since its early days, unique development characteristics. The *Musi* River has been the main driver of Palembang's development since the Majapahit kingdom era, leading to the city being regarded as 'the Venice of the East' in the 11th century (Podlaszewska, 2017). The river not only provides Palembang with river access to the outside world, it also supplies primary life consumption resources for its native people, such as fishes, water, and vegetables. The river divides Palembang's old town into two major areas (Figure 2) with two distinct cultural identities and vernacular architecture – the *iliran* (Palembang's northeast region) and *uluan* areas (Palembang's southwest area) (Podlaszewska, 2017). The earliest and flagship development in Palembang's commercial area (Figure 3) was near the *iliran* and *uluan* areas of Palembang (Podlaszewska, 2017). The *Ampera* bridge, a Palembang icon, is also beside the river.

The old town area is the city's main source of domestic and international tourism. Its many heritage sites, public spaces for urban mega-events, native residential areas, local restaurants, and trading and economic activities affect the development of other areas of the city (Podlaszewska, 2017). As such, the area was rebuilt and reconstructed by the local municipality to include green, open spaces and tourist vistas representative of Palembang. Part of this reconstruction involved increasing urban mobility, both for improved resident access and visitors' convenience.

Palembang's 40,062 square kilometers area has a low-lying topography, which causes large puddles during the rainy season, with most of the unspoiled rural area near the *Musi* River becoming a swamp at the rainy season's peak (BPS Kota Palembang, 2019). Some flat areas located near the river or swamp are used for agricultural purposes, including growing rice, sweet potatoes, and peanuts (BPS Kota Palembang, 2018).

Fourth, from an *economic* perspective, the purchasing power of Palembang's citizens has increased significantly, with economic growth reaching 6.69 percent in 2018, and only 10.95 percent of its citizens being considered poor (BPS Kota Palembang, 2018). Palembang citizens' day-to-day consumption averages ±100 US\$ per month, among which 35.77 percent is used for drink and food and 11.61 percent for cigarettes (BPS Kota Palembang, 2019). In 2018, the labour participation rate was 60.71 percent; the labour opportunity rate was 92.79 percent; the part-time job rate was 35.86 percent; and the unemployment rate was 7.21 percent. Most urban workers in Palembang were in service, trade, wholesale/retail, food processing, manufacturing, conventions, or primary functions, such as water treatment and waste disposal; others were in the transportation, warehousing, and communication sectors. China has become a top-ranked export and import trading partner of south of Sumatera Province, especially under the President Jokowi regime (BPS Kota Palembang, 2018).

Finally, in terms of *politics*, although most Palembang citizens are Muslim, the five top-ranked political parties in the local assembly are nationalist or non-Islamic in nature (BPS Kota Palembang, 2019). The political system includes checks and balances between the municipality and the local assembly. The two bodies coordinate and evaluate city progress annually in such areas as tax revenue, investments, and city budgeting.

Based on the above STEEP analysis of Palembang, the environmental aspect is the dominant force in forming *desakota* development. The old town's support for tourism development makes it the city's flagship development area, which in turn further fosters its tourism. This triggers other areas to develop more rapidly in social, economic, and technological aspects. Accordingly, infrastructure development aims to facilitate and connect the old town area of Palembang, with the Palembang LRT project connecting the new and old

town areas being a “piece of the puzzle” to create a *desakota* technopole. The political aspect (local government) provides policy direction and support for the environmental aspect (continuing the development of the old town area) (Prima, 2014).

High-tech investment in other industries will further benefit Palembang. For example, the high-tech processing industry will benefit from increased quality in such service areas as water, electricity, waste disposal, and food production and processing. High-tech communication technologies will not only contribute to such sectors as the culinary industry – a core element of Palembang’s tourism – allowing it to recruit more employees and absorb more of the city’s low-income, low-educated men and women into the job market (Wang *et al.*, 2019; Saner and Yiu, 2019), but also foster the city’s information, visualization, and propaganda efforts. Similarly, switching from its current non-renewable sources of energy to green technologies, such as solar or hydro-electric energy systems, will benefit Palembang by improving its air quality. Moreover, Palembang should also consider improving other aspects, such as supporting local art inclusion (Cheung *et al.*, 2019).

The Desakota Technopole theoretical framework on the smart city context

Cities have to adopt new technical innovations to review existing systems or challenge the present situation in order to be more cohesive cities (Gerometta *et al.*, 2005). A crucial problem facing the city is traffic (Bulu, 2014), making the introduction of new supports for effective and efficient public transport – including interconnected, convenient facilities – a priority (Bibri, 2018).

Integrating smart transportation systems improves cities’ operational efficiency by optimizing the time, cost, reliability, and safety elements of urban transportation (Bhagya *et al.*, 2018). Smart mobility is one of six pillars of the smart city (Giffinger *et al.*, 2007). Giffinger and colleagues defined smart mobility as physical capability supported by ICT infrastructures; it should be sustainable and innovative, with secure data transportation and feature local, national, and international network connections.

The LRT project is part of Palembang’s new smart transportation infrastructure and one of its initiatives to ensure efficient transportation in the future. According to Castells and Hall’s (1994) technopole framework, McGee’s (1991) *desakota* framework, and Seitinger (2004), the *desakota* technopole can be the foundation of emerging cities’ rural-urban transformation, social and economic development efforts, and urban high-tech transportation development initiatives. They describe the concept, its range, and its aims as follows:

Depending on its orthography, technopole indicates an independent urban entity or a centre of attraction (a pole or node) within the broader urban context when spelling technopole (Castells and Hall, 1994, p.1).

Relevant within technopole framework, *desakota* areas are described as outside the periurban zones, sprawl alongside arterial and communication roads, and characterized by high population density and more urban than rural characteristics (McGee, 1991, pp. 6-7).

The range of technopoles meaning reflects the diversity of projects, which not only resembles mega-projects and urban development schemes, but also includes specific characteristics to make them high-tech business environments and live-work areas (Seitinger, 2004, p. 18).

Technopoles attempt to plan and promote the concentration on technologically innovative and industrial-related production, like technology parks, science cities, technopoles, and so forth (Castells and Hall, 1994, p. 8).

Thus, a technopole conceptualizes an independent urban identity that depends on the city’s orthography. Technopole concepts do not focus on specific schemes for projects, mega-projects, or urban development; rather, they build on existing city characteristics to create

high-tech business environments and live-work areas. Technopoles aim to promote innovation, industrialized productivity, technology parks, or science cities.

Furthermore, technopoles require continuous investment to synergize production through social, institutional, organizational, economic, and territorial structures and create new jobs and new industries to cross-fertilize business formation. However, though entrepreneurship is a vital component, a technopole should not focus on fostering economic competition alone and abandon human imagination (Castells and Hall, 1994).

Technopoles reach their full potential by developing a skilled labour force and abundant supplies of capital for private, public, and non-profit entrepreneurs' business activities (Seitinger, 2004). Internet Communication Technology (ICT) infrastructure and specialized research encourage project developers to implement new ideas and become more innovative (Castells and Hall, 1994). Innovation comes from both scientific and artistic knowledge that can be commercialized for added value. Seitinger (2004) emphasized the technology requirement in technopoles, saying:

The most effective way to promote better urban spaces with the help of technology is to emphasize the reciprocal relationship between user and developer with specific technologies over time and to adjust the measures to different conditions in terms of present situation and experimentation (Seitinger, 2004, p. 57).

To support economic development, cities should approach technology through careful design, taking advantage of technologies and their special functions and uses (Castells, 2001). Technopoles create high-technology information products, but are themselves born out of the high-technology information process that comprises the mines and foundries of the information age (Castells and Hall, 1994). Although there are similarities and differences in the economic situations of developed and developing countries, the spread of ICT has proven advantageous for implementing low-cost, high-value planning and design strategies, which particularly benefit developing countries. A country that successfully implements a technopole is not only rewarded with greater economic growth and better quality life of its citizens, it also acquires more cultural and political influence, increasing its soft power relative to other countries (Mitchell *et al.*, 2001).

Research methodology

This paper is based on a STEEP analysis of Palembang's unique characteristics. STEEP analysis provides a snapshot of the city's progress in, potential for, and essential needs regarding Desakota Technopole. From a technology perspective, one of Palembang's requirements is smart transportation technology to form new modes of urban transportation. The technopoles framework will provide new knowledge systems to spur the city's further economic development.

It is essential to understand the city's governance, administrative process, and related details. The synergy and investments created by the LRT project will spur innovation and enhance economic development. Additionally, the project will generate short-term revenue for the city by attracting other investors, both local and foreign. A case study of Palembang is critical for providing the empirical evidence necessary for a developing country like Indonesia.

This paper is a case study that uses document analysis and interviews as its research foundation (Yin, 2013). It begins with a literature review of relevant international journal articles, academic and other publications in the government official statistics in BPS Kota Palembang (online and offline) and the national and international press. Based on the literature review and document analysis, the author identifies the significant relations between the Palembang LRT project and the desakota technopole framework, in the context of Palembang. The author also highlights information from key interviewees, especially local

public figures and municipal managers, to enrich the desktop analysis. A list of the interviewees and interview outline are presented as below:

Governance and administration in Palembang LRT project

The beginning of the Palembang LRT project: context and key drivers

The Palembang LRT project began on 20 October 2015 as authorized by President Jokowi. Under the terms of the LRT project approval, the central government contributed approximately 10.2 trillion rupiahs (±US\$755 billion) in financial support. This project was carried out by two state-owned companies – *PT Waskita Karya* to handle the LRT infrastructure, and *PT INKA* to manufacture the LRT components – both of which were financially supported through the Ministry of Finance’s budget (Setkab, 2018; *Suara*, 2017).

Palembang was selected to host the 2018 Asian Games, having previously gained worldwide reputation for successfully hosting significant national and international events. According to Governor Alex Noerdin of South Sumatera (*Indopos*, 2018), there were three reasons underlying the decision.

First, South Sumatera Province (Palembang), has never experienced any ethnical or religious conflicts, which showed that the region is conducive. Second, Palembang has already been tested as host in PON 2014 (National Sports Events), Sea Games 2011, Islamic Solidarity Games 2013, ASEAN University Games 2014, Asian Triathlon Championship 2017 and many other events on a national and international scale. Third, it has the sport facilities that are fully integrated into one place. All athletes only need to walk 1-10 minutes from the dormitory to the arena for access. Besides, in 2017, Jakabaring Sports Centre has already acquired a certificate of class two facilities from the International Association of Athletics Federations.

The initial plan for the Palembang LRT project was to build a connection linking the Palembang airport to Jakabaring Sports Center, so the latter could serve as the main venue for the 2018 Asian Games. Palembang LRT project includes 13 stations over a total length of 23.4 kilometres, with some stations being connected to unique Palembang sites, such as Palembang Icon (new town), *Masjid Agung*, and *Ampera* bridge (old town area). The project’s short-term purpose was to carry all Asian Games athletes from the airport to the sports centre, without causing traffic problems in downtown Palembang.

Palembang LRT project as part of National Strategic Project

The Republic of Indonesia and the People’s Republic of China first began bilateral economic discussions in 1993. The two countries’ movements towards cooperation intensified in the 2000s, after China arguably became one of the world’s leading economic powers. Although economic cooperation between China and Indonesia was first discussed in 2001, China did not officially cement its investments until 2015, after a bilateral conversation between President

Table 1.
Types of interviewees

<i>Interviewees</i>	<i>Role</i>	<i>Occupation</i>
A	Municipality	Mayor of the City
B	Local Politician	Head of Local Assembly
C	Company Manager	Local PLN

Table 2.
Interview outline

1.	A personal view about the present problems, the city potential, and future challenges of the city.
2.	Palembang LRT project in the context of city planning and local municipality’s concern.

Xi Jinping and President Jokowi at the Asia-Africa Conference in Bandung (*Kompas*, 2015). At the conference, the two nations reached a formal agreement that specified every aspect of infrastructure policy needed to implement the cooperation smoothly.

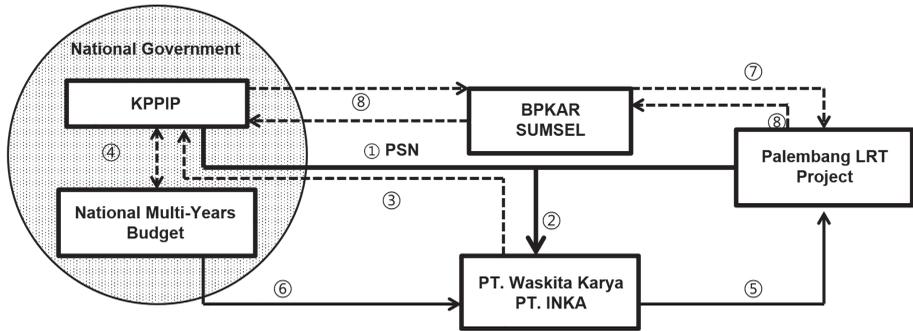
In 2014, Indonesia's national government had formed a Committee for the Acceleration of Priority Infrastructure Development (KPPIP) which coordinates six ministries to enhance various national strategic projects (under the master plan of PSN). China's government also introduced the China International Contractors Association (CHINCA), an infrastructure contracting organization that would be involved in and contribute to investment in Indonesia's PSN (*Media Indonesia*, 2019) as part of the Regional Comprehensive Economic Corridor (RCEC) and the Global Maritime Fulcrum-Belt and Road Initiative between Indonesia and China. It also indicated that CHINCA members would become consultants for KPPIP (*Media Indonesia*, 2019).

The Palembang LRT project and Jakarta-Bandung High-Speed Rail (HSR) have different situations and processes in the PSN project. Specifically, the HSR project followed the China National Company's and the Indonesia National Company's Business to Business (B2B) scheme (Kementerian Keuangan Indonesia, 2016). The project began with *PT Pilar Sinergi BUMN Indonesia* (an Indonesian national company), which later formalized a Joint Venture Agreement with China Railway International Co. Ltd (a Chinese state enterprise); eventually, the two established a consortium, called *PT Kereta Cepat Indonesia China*.

In contrast, the Palembang LRT project was perceived as part of national infrastructure policy, with *PT Waskita Karya* (a national company) authorized to complete the project. Furthermore, according to Sri Mulyani (Minister of Finance in President Jokowi's cabinet), the budget for the Palembang LRT project was provided by the national budget (APBN), due to the urgency of having the project operating in time for the 2018 Asian Games (*Suara*, 2017). After the project's cost and a payment mechanism were agreed upon by the contractor, the Ministry of Transportation, and the Ministry of Finance, the Palembang LRT project was carried out by *PT Waskita Karya* and *PT INKA*, with the help of KPPIP consultants.

Chinese capital and business developers have played critical roles in Indonesian infrastructure projects under Jokowi's regime, including the Palembang LRT project. For example, as leader of the Palembang LRT project, *PT Waskita Karya* received financial support from the Guangxi Road and Bridge Engineering Group (GRBG) to complete the project (*Warta Ekonomi*, 2019). Under the terms of its formal agreement with KPPIP, *PT Waskita Karya* invested in Palembang LRT project using its own company funds, first; then, the Indonesian government reimbursed it, plus the investment interest, using the national APBN's multi-year program. After the project's completion, the daily operation of the Palembang LRT was managed by a local company, *BPKAR Sumsel*. All income from Palembang LRT tickets is transferred to KPPIP, which assumes all maintenance costs (Kementerian PPN/Bappenas, 2015) (Figure 4).

China played a key role in Indonesia's national infrastructure policy under President Jokowi in order to realize its Belt and Road Initiative. Among ASEAN countries, Indonesia received the greatest proportion of China's infrastructure investments (*Tempo*, 2019). Investment in transportation technology was one of the prime targets involving developers and contractors from China, who had experience in extensive mass transit projects. The Palembang LRT project adopted the "Build, Operate, and Transfer (BOT)" contract scheme, a transportation planning and development plan in which the "process" remains in the hands of the contractor/builder until all work has been completed, to minimize risks. However, as the Palembang LRT project was mainly financed through the national APBN budget and there was a chance Jokowi would not win the 2019 Presidential election, Indonesia's political stability was a major concern for foreign investors (Aggarwal, 2019). Jokowi did win, however, retaining the presidency until 2024, reducing the anxiety of Chinese investors and ensuring infrastructure projects with China would continue under Jokowi's national infrastructure policy.



Notes:

- ① KPIIP, based on *Peraturan Presiden No. 116 Tahun 2015*, executed a PSN (Palembang LRT project) for the 2018 Asian Games.
- ② KPIIP gave a mandate to *PT Waskita Karya* and *PT INKA* to develop the project.
- ③ *PT Waskita Karya* and project consultants accepted the mandate and proposed a budget for the Palembang LRT project to KPIIP.
- ④ KPIIP consulted with the Ministry of Finance and agreed to invest in the Palembang LRT project, using its national multi-year budget. However, the Ministry of Finance requested *PT Waskita Karya* use its company budget to develop the plan until the project had been completed. The national government agreed to pay the project costs, plus interest, from the national budget every year.
- ⑤ *PT Waskita Karya* and *PT INKA* began to develop the Palembang LRT and met the project deadline.
- ⑥ Ministry of Finance started to repay *PT Waskita Karya*'s debt and interest, including 350 billion rupiahs in 2016; 1.7 trillion rupiahs in 2017, and 4 trillion rupiahs in 2018; the total cost of 10.9 trillion rupiahs is to be paid off by 2020.
- ⑦ After Palembang LRT began operating, a local company (*BPKAR Sumsel*) took over its daily operation.
- ⑧ *BPKAR Sumsel* collects LRT tickets revenue and transfers it to KPIIP. In turn, KPIIP is responsible for maintenance of the Palembang LRT. Any revenue surplus becomes national revenue.

Source: By author (2019)

Figure 4.
Governance and administrative process on Palembang LRT project

Develop Technopole framework strategy in Palembang LRT project to avoid “Big White Elephant” phenomenon

According to the technopole theoretical framework, it was salient for policymakers to apply creative and clear strategies to maximize the Palembang LRT benefit. First, policymakers understood the Palembang LRT's short-term goal and reviewed the obstacles to the project. The project successfully met its short-term aim, which was to transport athletes from Palembang airport to and from the 2018 Asian Games venue. However, various obstacles and shortcomings appeared after the Games, including insufficient passengers (*Liputan6*, 2019) and technical operation problems (*Kompas*, 2018), that had to be reviewed to realize the Palembang LRT project's long-term strategy.

Second, policymakers and LRT management considered creative solutions to the problem of insufficient passengers, such as giving fare discounts for special events (e.g., national and local holidays) and particular passengers (students, teachers, civil servants, loyal customers).

This strategy aimed to develop a sense of belonging among citizens and encourage them to view the LRT as a city utility trademark. LRT developers were expected to cope with technical operation problems by themselves; however, it was deemed essential that they inform the local municipality of the source of those problems. Furthermore, the national government and national companies were expected to build a synergistic relationship with local institutions with entrepreneurial capacities – such as municipalities, local political leadership, and universities – to facilitate further creative and innovative approaches to LRT operations.

As mentioned earlier, there is an urgent need to build a reciprocal relationship between users and developers to create an experimental environment that will benefit both (Seitinger, 2004). KPPIP, as an authorized operator of the LRT, should involve Palembang municipality in further long-term strategies for its operation, as local districts can better understand the specific characteristic of the city. More importantly, without political support from local municipalities, the Palembang LRT will not work efficiently to increase the city's productivity and revenue. The daily operation of the Palembang LRT is under the provincial government (*BPKAR Sumsel*). The national government should avoid political storms and learn from the experiences of other cities that have suffered from conflicts between the local and the national governments due to a lack of sensitivity (Tsang, 2019) and political dissatisfaction (Cheung, 2019). In their interviews, Palembang's mayor and the head of the Local Assembly expressed their concerns and identified certain discrepancies:

To measure whether the Palembang LRT project is successful requires at least five years of operation after the project is done. One problem is that the Palembang LRT is not linked to other Palembang transportation modes yet. Indeed, the Palembang LRT is perceived as the political product of Alex Noerdin (the previous South Sumatera Governor), not Herman Deru (the present South Sumatera Governor). This influences the debate in the governor's office over whether to continue the project or not. Our local budget is only sufficient to subsidize *Trans-Musi* (not the Palembang LRT) (Municipality-Interviewee A).

We have already discussed with the Ministry of National Transportation the short- and middle-term plans for the Palembang LRT. We told them, "Please place Palembang LRT under Palembang municipal control, if it has not been agreed how long the Ministry will subsidize Palembang LRT tickets." This is because we cannot cover all the maintenance costs of Palembang LRT and the local budget has been subsidizing *Trans-Musi*. I think the Ministry of National Transportation should talk with the mayor of Palembang to find win-win solutions. If it has been agreed, allow Palembang municipality to use space in Palembang LRT stations for advertisement revenue. The national government should understand, if the mayor fails to maximize the benefit of Palembang LRT, it will affect local assembly performance and credibility. Both parties need each other's political support to support the further development of Palembang (Local Politician-Interviewee B).

However, according to Kementerian PPN/Bappenas (2015), Palembang LRT will remain under national government supervision until at least 2020, until all project costs have been paid off by the annual national budget. The national government should use Palembang LRT's profits to support national revenue and decrease its reliance on loans from China. Jakabaring Sports Center, as an icon of Palembang's new town area, has to maintain its history of excellence when hosting national or international events to help foster spectator loyalty and give a feeling of spectacle to competing athletes. Students at nearby universities or schools can also be developed into loyal spectators.

Long-term planning for Palembang LRT should align with the STEEP analysis of city characteristics. For example, the city's culinary outlets are a tourist destination and leading source of revenue and local economic activities, as one local politician explained:

Palembang is not a city with beaches and not a tourism city; our profile is food and service. Our local government revenue comes from food tax and service. That is why our mayor pushes to open new

restaurants, hotels, and pedestrian districts, to increase local government revenue. Because Palembang does not have any scenic spots, we focus on our entertainment industry; that is why we build so many entertainment venues, such as hotels, cinemas, and discotheques (Local Politician-Interviewee B).

Previous data show that more than 80 percent of Palembang citizens use smart communication technology/gadgets (BPS Kota Palembang, 2018). Local government also uses social media as information and communication tools for customers and sellers, as most Palembang citizens are familiar with sophisticated gadgets.

To further Palembang's economic development, the national government should consider emulating China's experience with Alipay and WeChat to build connectivity between customers and sellers and boost economic development in the culinary sector. Future development of the Palembang LRT line should include new routes that connect other places, especially in the western part of the city. If Palembang LRT does not embrace a development vision that reflects a STEEP analysis of Palembang's unique *desakota* technopole characteristics, it risks becoming a "white elephant" – a possession that is not wanted by its owner but is difficult to dispose of, or whose expense is out of proportion to its usefulness or value.

Conclusion

This paper discusses Palembang's uniqueness *desakota* characteristics, based on STEEP analysis and the *desakota* technopole theoretical framework. It has found there is urgent need for the government to support tourism in Palembang's old town area, while the new town area continues to develop. As shown in Figure 3, Palembang LRT connects the business areas in the city's new town and old town areas to spur productivity and economic development. To understand the Palembang LRT, as smart urban transportation, it is useful to investigate the key drivers of and administrative governance processes for the project from a local-experience perspective. In smart cities, it is critical to study governance public policy from the perspective of different countries (such as Indonesia's) implementation experiences (Pratama and Imawan, 2019).

Three lessons have been learnt. First, the Palembang LRT project connects the city's new town and old town areas, based on *desakota* characteristics and STEEP analysis, as a part of its urban mobility development strategy. Second, the Palembang LRT project is also a part of the national infrastructure policy (PSN) instituted under President Jokowi's regime, which provided financial support due to its urgent need to have the LRT functioning in time for the 2018 Asian Games. Third, after successful operation during the Games, Palembang LRT should be further used and developed, such as connecting the western part of Palembang (another new town). The national government should join the local municipality in creating innovative development, adopt strategies and solutions to solve technical problems.

This paper proposes that China should continue its technological and financial supports for and contributions to infrastructure development under the Belt and Road Initiative in ASEAN countries. However, the risk of political instability is becoming a primary concern of Chinese investors and this may lead to the hindrance of Chinese infrastructure investments in Indonesia. National and local governments should collaborate and maintain political stability for the sake of not only Palembang LRT, but also other projects in Palembang. This also reflects the technopole theoretical framework, which suggests reciprocal relationship between users and developers in urban high-tech advancement schemes. If the *desakota* technopole framework is not followed, it is possible that the Palembang LRT will become a "white elephant".

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Stakeholders' perspectives of public participation in landuse policy: the Nigeria experience

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Abstract

Purpose – It has long been recognised that the top-down approach is prevailing over bottom-up approach in landuse planning in African countries. The purpose of this paper is to evaluate and identify the facilitators and limitations to have effective public participation (PP), and suggest how the practices can be improved in Nigeria.

Design/methodology/approach – Using Nigeria as a case study, this paper involves interviews of various stakeholders, including government staff, representatives of interest groups, general public, members of the planning board and planning commission. Information is analysed by narrative techniques of reporting.

Findings – There is a general judgment that PP is vital to landuse policy. Early public consultation was preferred, as many respondents pointed out that this would help shape the final policy. Yet, their opinion varied on whether relevant information was provided to the public, as well as their level of satisfaction with the whole process. While the process was fairly seen as giving opportunities for the public to make comments on public policy, the approach appeared not to be fruitful in many cases: (a) when the scope was broad; (b) lack of representativeness and abstruse information; (c) insufficient feedback to the participants; and (d) corruption and shortage of resources to complete the process promptly.

Practical implications – Understanding the facilitators and limitations that impact the success of PP can help provide guidance to improve the decision-making processes of public policies.

Originality/value – This paper fills the knowledge gap by providing the Nigerian experience on stakeholders' perspectives of PP in developing countries.

Keywords Public participation, Stakeholders engagement, Collaborative planning, Town planners, Urban management, Physical development policy

Paper type Research paper

Introduction

Over the years, two main tendencies have marked public policy in landuse planning. On the one hand, it is a tendency towards de-politicizing decision-making. On the other hand, there have been demands for more participation in decision-making and more accountability on the part of politicians. These two tendencies have been regarded respectively, as the top-down and bottom-up approaches (Murray *et al.*, 2009; Nguyen-Long *et al.*, 2019). Regarding the latter, the criticism, or even the remarks on issues like the classification of urban uses, the practice of zoning and the utilization of planning standards, which constitute basic features of landuse planning are totally absent (Pissourios, 2014). This situation underlines the planning theory-practice gap that has been discussed previously (Berardo and Holm, 2018; Nguyen-Long, *et al.*, 2019). As such the top-down approach tends to dominate over the bottom-up approach across a diverse, international terrain, which is the case among African countries. Even if planning practice was dominated by top-down ideas, the quest of a landuse

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decision-making system that considers people's thoughts more and allows greater public participation (PP) comprises an acceptable objective. Intrinsically, such a system tackles the fundamental flaw in top-down models: which starts from the perspective of decision-makers and thus tends to neglect other stakeholders (Oloyede, 2010).

Under the Nigerian Urban and Regional Planning Law (NURP), there is a management system that ensures people are effectively engaged in landuse decision-making. The Town Planning and Land Services Department (TPLSD) which manages and regulates the use of land, engages in rounds of public hearing as part of its statutory landuse planning process (Ojigi, 2012). However, this democracy system had suffered from a series of disappointment under a succession of military coups. After the return to democracy, TPLSD has undertaken many development plans reviews and embarked on intensive meetings and consultations resulting with a new physical development and land policy reform. Some of these are seen in the Land Use Act Cap L.5 of 2004, the establishment of the National Technical Development Forum on Land Administration, and the Presidential Technical Committee on Land Reform among others. According to Ukaejiofo (2010), all these strategies were meant to set the new land policies direction in Nigeria with new land management strategies. In particular, these new policies were supposed to be set in consideration of Nigerians' public opinions and values for places.

Contrary to the above, the media has revealed mounting disapproval from members of the public regarding the alleged failure of the government (TPLSD) to engage in discussion and to improve its PP practices. A lot of questions have been raised as to whether the TPLSD's emphasis on understanding Nigerian values for places; and existing PP processes are too restrictive in terms of encouraging effective public engagement. At the same time, there is concern that while there may be increased awareness by some of the public for the need to be involved and for their opinions to be appropriately heard and considered, few people actually make the effort to become involved in the participation processes. It is unclear whether the TPLSD's existing landuse planning processes are enabling ample PP. However, all these are mere media hullabaloo and yet to be empirically substantiated. Nevertheless, the implications such media racket has on public policy approval can be profound and actually beg the inquiry regarding the effectiveness of PP in the statutory landuse policy review processes.

Previous studies have shown that the challenges of PP are more complex in the traditional cities of Nigeria, owing to socio-cultural, historical and behavioral pattern of the people (Ojigi, 2012; Jiman *et al.*, 2017). Some have argued that the military system of government has been a spell on PP (Oloyede, 2010). Lemanski (2017) argued that democratic government has potentials to support participatory planning since it shares similar principles. Conversely, Jiman *et al.* (2017) have shown that power sharing in participatory planning process is yet to be effectively adopted between citizens and government in Nigeria. Whereas extant studies focused mainly on the perceptions of the general public, this present study gathered information from various stakeholders, not only the general public, but also the staff of TPLSD, representatives of interest groups, members of the planning board and planning commission. Besides, there is scarcity in the literature on evaluations of PP effectiveness among developing countries. This paper fills the research gap by providing the Nigerian experience on stakeholders' perspectives of PP in a developing country. This study therefore evaluates the effectiveness of PP, identifies the facilitators and constraints to effective participatory planning, and areas of possible improvement. Based on the findings of this study, recommendations will be given to improve the practices of PP processes.

The sections of this paper are organized as follows. It starts with the conceptual approach of this study, followed by the methodology to address the research problem. Then, findings and discussion of the results are presented. The last section concludes this paper and highlights the opportunities for future research.

Stakeholder theory as conceptual approach

The rationale of this study draws on the stakeholder theory. According to Freeman (1984), stakeholder theory recognises the existence and importance of various stakeholders and their needs in relation to public policy. Freeman (1984) describes a stakeholder as any group or individual who can affect or is affected by the achievement of a particular goal. In another view, stakeholders are those groups or people from whom the proponent (of a public policy) has voluntarily accepted benefits and to whom the proponent has therefore incurred obligations of fairness (Tambunan, 2015). According to Phillips (2004), two types of stakeholders exist: normative and derivative. The normative stakeholders are owed an obligation by the proponent, while derivative stakeholders hold power over the proponent and may exert either a beneficial or harmful influence on it. Therefore, in the case of landuse administration, the normative stakeholders are government (departments, ministries or agencies), land investors and local residents; while interest groups, environment activists, civil societies and NGOs are not normative but then, proponent must also give attention to their views (Tambunan, 2015).

Stakeholder theory has been applied in many cases, for example in financial and corporate management (Phillips, 2004), natural resources management including landuse administration (Tambunan, 2015) among others. While the stakeholder theory emphasizes the need to consider the perspectives of all stakeholders that are critical for the achievement of a goal, previous studies related to landuse administration, have typically focused on specific landuse (forests, tourism, parks etc.) and general public (local residents) perceptions, paying limited attention to the government staff and interest groups. Furthermore, landuse studies on third-world countries are underexplored. This paper fills the knowledge gap by making available the Nigerian experience on stakeholders' perspectives of PP in landuse policy in developing countries.

Research method

Data for this case were collected through a study conducted by the author with the assistance of the Population Welfare and Empowerment Foundation (a non-governmental organization with a mission to promote population well-being). The approach involved interviews of stakeholders that have, in one time or the other, contributed towards landuse decision. Because the respondents are specific and it is difficult in approaching them openly for this kind of research, the first respondent was identified from the acquaintance of the author who was a relevant stakeholder, that is through convenient sampling. Subsequent respondents were then referred by the previous respondents, that is snowball sampling. A total of eighteen key-informant interviews were conducted. For qualitative research, a minimum sample size of twelve is required to reach data saturation (Vasileiou *et al.*, 2018). Therefore, having eighteen respondents was considered satisfactory for the qualitative analysis and evaluation criteria for this study. The interviews consist of the following respondents: (a) 3 representatives from interest groups; (b) 7 from general public; (c) 5 from government (TPLSD) staff; (d) 2 from Planning Board; and (e) 1 from NURP Commission. The commission and the board are to respectively formulate national and state landuse policies while government staff (TPLSD) implements these policies and undertakes development control within its area of jurisdiction. Members of the public are those who use the land in the proposed plan while interest groups are those concerned with conservation or scientific use of the land.

Based on the NURP Decree No. 88's Section 13 and 16 of 1992 (emulating some of the Ladder of Citizen Participation framework [Arnstein, 1969]), eight evaluation criteria were developed to guide the interview (See Table 1). Among this framework, the interview topics covered: purpose of public involvement, level of involvement, methods for involvement,

Table 1.
Summary of evaluation
structure

S/N	Framework	Definition
1	Early involvement of people	The public must be involved early.
2	Effective forums	The public must be able to participate in an effective environment.
3	Enabling process	The process seeks out the involvement of those potentially affected by or interested in a decision.
4	Feedback	The process communicates to participants how their input affected the decision.
5	Influence	Issues of concern to the public must be taken into account in reaching a decision.
6	Information	The public are provided with the information that they need to participate in a meaningful way.
7	Representation	The process must comprise a broadly representative of the affected public.
8	Timeliness	Deadlines and realistic milestones must be managed during the process.

Source: Adapted from (FRN, 1992) the NURP Decree No. 88 Section 13 and 16 of 1992.

results of PP, the resources and capacity as well as representation of PP. Respondents were asked to comment on landuse review using the selected framework. The interviews were conducted under fairly good conditions in their offices, homes and relaxation centers, and some were conducted by phone conversations. This study upholds an avoidance of harm, confidentiality and informed consent during interview. Information was further analysed by narrative techniques of reporting.

Findings and discussion

Findings and discussion are presented as follows. Unless where otherwise stated, the narratives are the summary of the outcomes of the interviews carried out in September 2016.

(1) General view of public participation

PP was identified by most respondents as a way of “putting the ball in the court of the public”. PP was described by one respondent as being “a process to create collective proprietorship”. A respondent described PP as providing a prospect to get interested party “buy-into” and to “get the public on-board” to back the implementation of the plan, and that it could help build trust between government and stakeholders. While there was an opinion shared by the respondents that PP is vital, the expected level of that participation and the observed importance of the process differed across respondents. Many respondents were distrustful about the PP process and felt that often, TPLSD was just fulfilling “all righteousness”. In an unequivocal statement, a respondent said:

I have little confidence in the PP process. They (TPLSD) have to do it because the law requires it but they don't have to take notes of our comments. When I was involved few years ago, I and most of my co-participants making suggestions did it for just record sake believing it was a futile process, but then, we thought our opinions should be added to the project (Male/Member of the public).

A number of stakeholders, particularly those of TPLSD, board and commission somewhat believed that there are plenty of opportunities for the public to be involved in landuse policy, but people don't really get involved in the process. A respondent said “PP is often a requirement for us (TPLSD); however, it is always optional for citizens”. Another said, “in two instances I had been engaged, public involvement was very low and discouraging”. Another respondent further commented that:

At the end of the whole process, we usually discover that less than what is provided for in the law actually took part in the process. This usually happen because the people's attitudes to PP process is poor (Female/Planning board).

A considerable number of respondents suggested the need to identify causes of low participation. For directions, it seems that respondents unanimously agreed that those people or groups in the society who are discouraged, probably because of a lack of means, previous experience, or motivation may need to be assisted probably through more sensitization, technical advice, social and humanitarian support and incentives.

The regularity of landuse reviews was also raised. There was a wide agreement among respondents of the importance of regularly reviewing landuse plans to take account of urbanization, environmental, social and landuse changes. The demands and pressures on land change over time and a plan review was described as providing the opportunity to keep pace with pressures while maintaining the values of the land. On this account, most respondents commented that a landuse plan review should not be left much longer (than 10 years). Some respondents suggested that ideally, landuse plans should be reviewed more regularly, but this was thought unrealistic by some respondents, as some plans had taken many years to be finalized. In some cases, there had not been an active landuse plan in place for a long period of time. For example, a respondent said:

A serious country should only have a 10-year approach to landuse policy. But it's a problem when it takes even more than ten years to write a plan in this country (Male/Representative of interest groups).

(2) Public participation process

Respondents were asked to evaluate the PP processes they had been involved. Respondents commented on four issues as follows:

(a) Pre-meeting or early involvement of the public

Most respondents who are members of the public and representatives of interest groups said that the process was weak regarding pre-meeting. Many respondents argued that most times, TPLSD did not carry out broad pre-meeting before developing a draft policy. Many respondents believed that this consultation provided an opportunity to solicit ideas, identify potential matters, address any concerns, and look for solutions before the formal process starts. It was also suggested that making contact with stakeholders before the official process can help build people's confidence to engage in the formal process of proposal writing and public hearings. On the contrary, majority of TPLSD's staff interviewed argued that for most of the time, they carried out extensive pre-consultation before developing a draft policy, however, community members did not always respond.

Respondents further showed that one key element for successful early meeting was having the right people involved and "shoulder tapping those important persons in communities". In some cases, TPLSD had invited representatives of interest groups to facilitate discussions. Some respondents suggested that, as previous experiences may have made some people cynical of getting involved in PP processes, these independent representatives can motivate people to become involved. Some respondents noted that it is also essential to have the right personnel representing TPLSD:

I believe relationships are the most important thing in life and also in this process. TPLSD needs to be very careful about who heads their works. The PP process, particularly the early stage should be managed by experienced and well-trained personnel who are good at consulting and dishing out ideas (Male/Member of the public).

While most respondents expected a head-on meeting with TPLSD staff at the pre-formal stage of the PP process, some noted that the emphasis of meeting was more important than

the approach. Many respondents approved that it was important to put limitations around what was before the meeting and to highlight the key issues for discussion. Examples were given where TPLSD staff had gone to have a meeting with communities without a clear purpose or framework for the discussion and had created confusion. Most of these meetings seemed to happen with individual stakeholders or with groups with the same interests. Thus, the provision of fact sheets with synopses of the plan process and key issues was suggested by respondents as a useful guide for pre-consultation meetings. Some respondents suggested this method, as with a compatible group, there is less confusion, annoyance, disagreement and more chances that an accord can be reached promptly.

A number of respondents suggested that there should be more opportunities for different stakeholders to work together and hear the views of one another. The policy consultation process could become a forum for potential conflict between interest groups. A few respondents argued that bringing different interest groups together to discuss topics and problems offered an opportunity to create more integrated solutions for TPLSD:

For the one I took part, there were individual stakeholder meetings, but there could also have been some targeted group engagements. It can be good to listen to other viewpoints, principally for integrated physical planning (Male/Member of the public).

Another respondent said:

To bring about the real change, we need to pick a cross section of stakeholders and interest groups. We should bring groups together to see opposing views in the same meetings and hearing. The process of seeing groups separately is not the best practice and shows a lack of managing skills (Male/Representative of interest groups).

Many stakeholders were aware of cases where there had not been any meeting prior to a draft policy being notified. Conversely, an example was given where an interest group declined TPLSD's offer of pre-meeting and instead, "came down like a deafening lion" in the formal proposal writing process. However, most respondents valued this pre-consultation and requested TPLSD to give people enough notice. It provided an opportunity for TPLSD and stakeholders to build relationships and address any potential issues and problems before the formal planning process began. Early involvement should also assist in time management. The better prepared and more proactive TPLSD is in seeking PP and understanding the range of values affected by the plan, the less likely it is that there will be delays in the process caused by conflicts that could have been foreseen and avoided. The public also needs to be reminded that, irrespective of whether it is involved in the early consultation phases, its members should still comment including where they are in support and against the policy's interventions.

(b) Preparation of proposals

After the pre-consultation and once a draft policy has been notified, the public are invited to make comments on the draft policy. Findings show that respondents attended a public or interest group meeting after the draft plan had been released. Respondents also indicated that the meeting had been helpful in improving their understanding of the issues covered in the policy. However, some believed the meetings were not helpful: "In my own opinion, the meeting did not really change anything."

Respondents confirmed to have received some forms of information outlining the key issues for the review of the proposed landuse policy. Some respondents who received this indicated that the information was very pertinent to their suggestions, and that the information was supportive in understanding the salient issues covered in the proposed policy. But others indicated that the information was irrelevant and criticized that it was not understandable and helpful. A respondent said: "there are too many technicalities. For some of us, it was too difficult to comprehend" (Female/Member of the public). To this end, there

was a general opinion among respondents that people needed to have skills and experience in physical development planning, and that it would be difficult for “just anybody” to engage in this process. A respondent said: “most time, those who complained that the information was irrelevant and incomprehensible also lack skills and knowledge of landuse planning and administration” (Male/TPLSD staff).

Majority of respondents upheld that making a printed proposal was the best way of participating. The reasons highlighted were because it was more convenient; provided the best opportunity to make considered comment; carried the most weight of influence and provided an official record. Just a few respondents favoured meetings to discuss the review. In this regard, respondents who presented their view in a formal public hearing commented on the manner in which the hearings were conducted and their experiences of the process:

It was not well-organized. A lot of participants did not use the hearing as an opportunity to develop their comments. It's quite hard for them, especially those who are not experienced in attending such things. People are not sure whether it is a forum for discussion or not (Male/Representative of interest groups).

Another respondent said: “participants did not know what to expect when coming into a public hearing. Sometimes, they found it intimidating and terrifying.” To assist them, respondents suggested that TPLSD could give community members an idea about what to expect: may be something enlightening on what would happen in the public hearing, and who would be on the panel. While some stakeholders said that public hearings went well in some instances, some remarked that the public hearing was “another combat boulevard as stakeholders with disagreeing ideas engaged in physical fights”. Besides, it was “fear-provoking” or “biased”, with no opportunity for debate.

(c) Provision of feedback

From the findings, a common tune by respondents was the need for feedback. This includes receiving regular feedback during the process, being notified about how the proposal was considered in the final decision. Findings show that less than half of the community members and interest group representative reported receiving feedback with over half saying they did not receive feedback on their suggestion in their previous engagement. Some respondents remarked that it took a lot of resources to prepare and present an effective proposal and they would appreciate a feedback on their proposal.

In this regard, a staff of TPLSD commented that “we should provide some feedback; nevertheless, there is no regulation for compulsory feedback”. Whereas, a number of respondents stated that it was important to provide feedback:

TPLSD needs to let people know how their proposal contributed to the policy in order to create collective proprietorship. . . I'm encouraged about the running of the public hearing but disappointed to see we don't receive any feedback (Male/Representative of interest groups).

It's a big irresponsibility to ask people to come to pre-consultations, write proposal, attend public hearings and not give them feedback on where things are at and also how their proposal was used. . . If TPLSD wants people to participate again and again, let them know how their proposal contributed to the proposed plan (Male/Member of the public).

Findings show that if the justification for why a decision had been made was communicated, the public may be more willing to accept the decision. As there is no right of appeal once a policy has been prepared, it is important that feedback is provided to try and bring people on board, communicate the motivation behind the decision, and create shared ownership. Without any feedback, people can become skeptical about the PP process as evident in this respondent's statement: “There is not much evidence that TPLSD takes notice of proposal. They are seen as a waste of time”. Nevertheless, just a respondent mentioned a case where the

TPLSD personnel ensured that participants received feedback at the time the policy was submitted. He stated that the said personnel kept a detailed record of how decisions were reached which, in the view of this respondent, made the process very transparent.

It was thus suggested that TPLSD should follow this process where the public is informed of the proposed decision before they attend a public hearing and can then contest and discuss it before a final decision is made. Similar to the above, many respondents were concerned about the delays and lack of any communication from TPLSD updating them on the process and letting them know what was happening. The use of the internet was commonly recommended as an avenue to provide up-to-date feedback. Overall, it seems like poor feedback, probably more than any other factor, influences participants to judge their participation experience as not too satisfactory. It is thus recommended that adequate feedback should be provided to participants.

(d) Decision-making

Findings show that stakeholders choose to participate because they expected a satisfying experience and hoped to influence the final decision. However, some respondents commented on the role of the planning commission and board, while a few commented on the right of petition. A few respondents were concerned that when stakeholders through PP processes reached consensus, these should then be binding. However, the TPLSD decision-maker seemed to have a large amount of discretion on what was finally considered. Thus, many respondents believed that PP can be a charade.

The findings from the interviews particularly highlighted that there was inconsistency in the promise that was made to participants in the process and the role of PP in decision-making. For example, some TPLSD staff and stakeholders argued that where accord had been reached during public hearing meetings, neither TPLSD nor the Technical Committee should be able to change the outcome. Overall, there appeared to be a need for greater clarity around the role of meetings at this stage because unclear and/or unrealistic expectations of the role of PP into the planning processes are likely to lead to participants being less willing to contribute in the future and a feeling of “being cheated”.

The right of appeal was another component of decision-making that received some comments. Several stakeholders were concerned that there was no right of appeal once the decision had been made and there was no access to the commission after the public hearing. The need for a transparent, democratic process was strongly stressed by some respondents, and a suggestion was made that a petition could happen before a draft plan was sent to the planning commission. Some respondents believed it was too late to make changes once it had reached the commission, and this has the potential to weaken and undermine the PP process and trust between TPLSD and the community. A respondent commented:

In an ideal world, there should be opportunity to appeal the draft development plan, possibly after it's gone to the technical committee and before going to the planning commission. If there is one point that the public really don't agree with, then they can appeal (Male/Representative of interest groups).

One concern raised by a few respondents was that decision made by TPLSD in consultation with local communities could be amended without any need for further meeting with the communities. However, there appeared to be differing perspectives amongst TPLSD staff about how binding opinion reached during the meeting and consultation process, as shown by the following comment: “I developed good development plan and policy with some user groups but made it clear that this would still be tested through the PP process”.

Regarding decision-making, findings show that conflicts did surface and these were solved through either mutual agreement and/or Planning Tribunal. However, considerable conflict results from agencies, board and commission being directly and/or indirectly seen as judge, jury and plaintiff in contest over decision: “there is yet to be a true independent

committee to arbitrate cases; even the Planning Tribunal established by law is not truly independent of the government or Planning Commission". Many respondents stressed the need for the commission to move towards the role of social facilitators rather than their more known roles of being arbitrators (always influencing planning tribunal) and decision makers all together. To this end, clarification of decision-making roles between the bureaucracy, the public and the legislature will help this process. However, past cases will prevent planning agencies, board and commissions from playing the role of facilitators in issues where they are seen as having a vested interest themselves; or, alternatively, as being the representatives of government. In these situations, independent mediators (probably the court of competent jurisdiction) can be neutral third parties who can help stakeholders move beyond conflict to agreement. The key characteristic for selecting mediators should be mutual acceptability to all stakeholders. The mediator must be able to develop sufficient trust in the even-handedness of the process so that parties can see the possibility of agreement.

(3) Resources and capacity for PP process

Respondents were asked to comment on the resources and capacity necessary to effectively engage in a PP process. In terms of community stakeholders, as previously discussed, many of the respondents interviewed considered themselves to have the skills and resources to engage in the process. In relation to TPLSD's resources and capacity, many respondents expressed frustration with the prolonged process and thought that they were due to a lack of human power to complete the work in time. Importantly, the concern about lack of feedback was exacerbated by the lengthiness of the review processes. Besides, corruption, low recruitment of town planners, combined with a perceived low priority put on policy review in Nigeria, were common reasons given for a lack of impetus and progress:

Corruption and bribery are playing out here. There were instances of bribery, fraud, favouritism, nepotism and clientelism in this process; TPLSD never seems to have enough staff. The process falls over by delay. Some processes we ought to have finished in fifteen months will tarry longer and because it takes so long, the people who wrote proposal are heartily fed up with it (Male/Member of the public).

The discussion revealed that some people have been convicted of corruption while managing planning review process. Some have been sentenced to jail, others have been asked to pay fines while some were served both. Besides, some staff have been dismissed, demoted and suspended from their various positions in the urban planning administration. Where there are fewer staff works on the review, there were some concerns that they may become isolated or take ownership of the document and this made it difficult to undertake an open collaborative consultation process. Findings show that TPLSD staff worked as a team on a policy with less personal ownership of the document. It was also suggested that the town planner is not always the best person to lead and facilitate a PP process but rather, someone with community engagement skills can lead that part of the project:

My few years in public engagement show that TPLSD is lacking in public management skills. People at management level have often come up through the ranks and files and TPLSD hasn't paid enough attention to training these people to develop PP skills (Male/Representative of interest groups).

Few respondents said the open and accessible process was strength to the policy review they have participated in, while political meddling was seen as a weakness. It was generally recommended that, as an improvement, the process should be more open with less political interference. In addition, respondents commented on the length of the review processes, with the length of time it takes for a plan to be finalized being seen as a substantial weakness. While allowing open access for people to be able to participate effectively, more effort needs to be made by TPLSD to ensure that the review processes do not drag on, as they sometimes

take as much time. It is essential that the time periods for policy reviews are revised, and two areas where improvements can be made are in increasing resources and introducing legislative timeframes. This criticism is highlighted by people not receiving updates during the process, or feedback on how their submission was used. The slow process and lack of feedback is likely to result in people losing interest and not bothering to participate in subsequent review processes.

(4) Representation in the process

In this regard, respondents were asked to comment on whether the breadth of public representation in the policy review they participated was adequate. Outcomes suggest that all interests were not sufficiently represented. A respondent said:

It was another ethnic and tribal consultation. The whole process was as if some of us were invited to observe. Only one set of people constituted above fifty percent of the hearing, whereas, this policy affects us all equally. The invitation was said to have been proportional and I asked myself, where is the proportionality? For this first time, I felt I was not part of this country (Male/Member of the public).

Another respondent narrated his experience as follows:

I have only heard of 80:20 rule but I saw it play out for the first time when represented my community in a public hearing. In my case, just few participants determined majority of the outcomes (Male/Representative of interest groups).

Findings from the interviews further suggest that whilst there was some sense of unequal participation and influence, it seemed to be associated more with the lack of feedback (examined further below) delivered, so that respondents did not know whether or how their contributions had been applied. Lack of feedback may well breed conspiracy theories (Nguyen *et al.*, 2015). There was a common view that PP in Nigeria could be tailored to “stakeholders’ consultation”, rather than general. A few of the respondents who have witnessed PP abroad said: “the best global practice for PP is stakeholder consultation”. It seems that the problem with PP in Nigeria has been that of the general PP. In this respect, some respondents commented that the authority could spend a lot of time and resources inviting interest groups and individuals who may not necessarily be interested in the whole process. A respondent said:

In every part of the world, we always, at any point in time, have people who are interested in something and those who are not. It must be noted that interest matters. Where there is no interest, the whole thing (PP) becomes tiresome to participants no matter how attractive it is. Hence, the authority should consider stakeholders’ participation instead of the general public (Male/Representative of the interest groups).

Interestingly however, this view is not shared by all government staff, board and commission members interviewed. Some believed that there is nothing wrong with general PP and that citizens just need some motivations and for them, a respondent said:

For us, we can always beat ourselves up about how we can get the general public to become engaged in PP. For me, I’m convinced that there is an appetite for many more people to be engaged in public issues such as this with some little motivations (Male/Planning commission).

Notwithstanding, many respondents reiterated the importance of the review process providing opportunities for TPLSD to work collaboratively with all stakeholders and to bring interest groups together. Stakeholder consultation was largely supported by the respondents who generally argued that consultation on policy review should be targeted at key stakeholders, not the ‘general public’, and that it would be difficult for the ‘general public’ to engage in the process.

They argued that, stakeholders would be more likely to have the skills, expertise, and resources to participate in the processes. Nevertheless, it was also considered important, by respondents, for TPLSD to understand that key stakeholders in an area will change over time and that it is always important to seek new and emerging stakeholders. Without some form of periodic community assessment, new stakeholders are not likely to be identified. As part of each policy review process, TPLSD will need to identify new stakeholders.

While considering stakeholders consultation, respondents indicate further that planning authorities will need to focus on improving its interest representation. A narrow participant base may lead to unintentional bias, with those stakeholders that are knowledgeable about political processes and decision-making, and organized and articulate, predictably having an advantage over others. Ensuring that there is broad representation will help reduce the potential for unequal influence. At all times, having adequate public and interest representation is very relevant.

Conclusion

This study has examined the PP processes in landuse policy in Nigeria. The provisions for PP in the NURP decree require proposers to actively seek public opinion, allowing sufficient information guide, community-meetings and time. However, the issues emanated in this study refute these provisions. Most importantly, the scope of PP is too broad; there is lack of interest and representativeness, insufficient feedback, lack of resources as well as the public being unclear about the process itself. Thus, in seeking future engagement from the public, TPLSD should actively facilitate involvement of all diverse community groups, particularly when reaching out to new groups of people; ensure prompt release of unambiguous information and sufficient feedbacks; adequate funding; engagement of competent PP experts; as well as transparency of the whole process.

Finally, this study has some limitations. Because of the interview and open-ended nature of this study, there is a likelihood of respondents' preconceived notion. Future study should tend towards closed-ended interview. The findings and discussion are largely built on descriptive narratives without giving focus to the analysis and interpretation on how diverse stakeholders with varying interests interacted. Furthermore, if the contexts of this study can be framed together with other urban planning elements such as transportation and access, housing, commercial and urban-rural migration, they might help generate interests from the stakeholders. Besides, caution should be applied in drawing conclusions from rather small and non-randomized sample selection methods. Relatively bigger respondents and more randomized surveys would need to be conducted to corroborate these findings. Another area of prospect for expanding this research is the development of more case studies. For instance, it would be a sharing of knowledge and experiences between Nigeria and other countries. Future analysis should endeavor to consider using quantitative data. These limitations, however, do not diminish the relevant suggestions for public policy administration that arise from this study.

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Effects of red tape in public sector organizations: a study of government departments in Pakistan

Red tape in
public sector
organizations

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Abstract

Purpose – The purpose of this paper is to explore the emergence and integration of red tape and how its negative effects on public sector organizations' performance have weakened the economies of developing countries such as Pakistan.

Design/methodology/approach – A structured questionnaire survey was completed by 121 respondents working in 35 government departments in Punjab, a province of Pakistan.

Findings – The findings revealed a link between red-tapism and employees' motivation and work. When there is excessiveness of rules and regulations, employees are prevented from completing assigned tasks, ultimately resulting in decreased work commitment. This indicates that the integration of red tape into public organizations not only affects employees' behavior and attitudes but also impacts the overall performance of public sector organizations.

Originality/value – This paper provides recommendations for the Pakistani government. For example, conducting training and motivational workshops for public sector employees can help them stay engaged with their work. Government departments should also review the steps and procedures involved so as to eliminate unnecessary steps and reduce red-tapism.

Keywords Bureaucracy, Red tape, Accountability, Centralization, Organizational performance, Pakistan

Paper type Research paper

Introduction

The emergence of red tape and its integration into Pakistan's public sector has directly and indirectly disturbed the working systems of organizations in numerous provinces, resulting in low productivity and profitability. Bashir's (2011) analysis showed that the high integration of red-tapism into these organizations is the main reason for the government sector's weakness. Red-tapism has not only impacted organizations but also weakened the country's economy. Punjab, one of the four provinces of Pakistan, suffers from an excessiveness of rules and regulations. This stringency has gradually weakened the effectiveness of the province's public sector organizations.

Moynihan and Herd (2010) focused on the impact of red tape on organizations and how they perceive this concept. Red tape is a broad term that can be defined as procedures and rules imposed on public- and private-sector organizations that result in negative impact. Employees are the most valuable assets of organizations as their goals and objectives cannot be achieved without employees' input. Many organizations recognize their employees as the wheels of the vehicle; until or unless the wheels move, the vehicle cannot move. Neither can it begin the process of making or maximizing a profit (Moynihan and Herd, 2010).

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Red-tapism consists of the conditions, laws, rules, and procedures drafted and imposed by the government on the country's public and private organizations. Such policies are intended to reduce fraud, delay the time for task execution, and motivate employees to increase their work performance, thus improving organizational effectiveness and governmental performance (Subramanian and Kruthika, 2012). However, weak policies and rules in developing countries like Pakistan have failed to fulfil this purpose. Instead, organizations in these countries are impacted by delays induced by red tape because jobs are not completed on time. Programs fail to be executed by the date promised, increasing chances of corruption in public organizations. This leads to a belief among the public that government officials must be bribed into completing their work. Consequently, the worth of these public organizations is decreased by the delays caused by rampant red-tapism. Punjab, as the center of public organizations, is no exception (Wahab and Jawando, 2010).

Organizational productivity and red-tapism

Red-tapism influences organizational decision making. Such decisions fall into two main types: centralized and decentralized. Most public organizations, for example Pakistan International Airlines and the Pakistan Railway Authority, make centralized decisions partly because their employees have less experience, knowledge, and training as compared with those in the private sector. The performance of public sector employees deteriorates with time, rendering these organizations ineffective, and the mainly centralized decision-making process further reduces employee empowerment. Today, many high-level officials are considering privatizing these organizations because of their poor performance and dissatisfied customers (Subramanian and Kruthika, 2012).

Some research studies have emphasized employees' job satisfaction. High satisfaction reduces turnover rate, whereas low satisfaction leads to employees leaving in search of better jobs. Many components can influence job satisfaction, including working environment, salaries, organizational structure, teamwork, and red-tapism. When a new employee joins a government organization with a high integration of red tape, the employee can become exhausted. The job satisfaction may decrease to the extent that the employee will consider searching for another job. This is not conducive to the organization's success because it tends to lose good employees (Wahab and Jawando, 2010). Thus, the prevalence of red tape plays a negative role in public organizations by affecting the workforce.

One of the reasons of Pakistani economic downfall is due to the high use of red tape in public organizations, especially in Punjab Province. Red-tapism is the excessiveness of laws, procedures, and rules imposed by the government, which eventually delay organizations' work. It not only plays a negative role in the public sector but also has a profound impact on individuals' job satisfaction, organizational commitment, public service motivation, and work performance (Bashir, 2011).

Purpose of the research

The purpose of this research is to investigate the role of red tape in public sector organizations and on the economy of Punjab. This study aims to create a clear understanding of the extent of red-tapism in the province of Punjab. It also contributes towards identifying measures that could reduce red tape in the government and make the public sector more effective. Lastly, it evaluates the impact of red-tapism on job satisfaction, organizational commitment, public service motivation, and individual performance in the organizations of Punjab.

The research questions are as follows:

- To what extent has red-tapism been integrated into the province of Punjab?
- To what extent has red-tapism directly affected and weakened the public sector organizations of Punjab?

-
- To what extent has red-tapism affected job satisfaction, organizational commitment, public service motivation, and individual performance?

Literature review on red-tapism in organizations

Studies have investigated the impact of red-tapism on the economy and organizations' accomplishment of goals and tasks by examining different variables and their relationship with each other. This section presents several concepts discussed by researchers and economists on the impact of red tape on the public sectors of Punjab.

Pandey *et al.* (2007) presented an approach for increasing public organizations' efficiency. They also identified and offered a unified approach for the removal of bureaucratic red tape. The study utilized a questionnaire for data collection. The organizational effectiveness model was applied to public departments. Likewise, Moynihan and Pandey (2007) highlighted the impact of red tape on organizational performance. They argued that the integration of red tape into the bureaucratic system has profoundly affected organizations' performance.

Moon and Bretschneider (2002) focused on the identification, understanding, and development of the awareness of red tape. Several constraints were identified, and the key factor was the constraint of information technology in innovativeness. The initial results of the study suggested that red tape might lead to constraints on innovation in information technology. They found that the two main parameters — red tape and information technology innovativeness — are inter-related with each other. The study also discovered that top managers' risk-taking propensity (entrepreneurial leadership) and organizational capacity are positively associated with information technology innovativeness.

DeHart-Davis and Pandey (2005) focused on how the rule of dysfunction is linked with managers and higher level staff. Wahab and Jawando (2010) collected primary data for their research for the National Public Management Research Conference. Four main hypotheses were tested and verified. They also suggested several solutions for avoiding the issue of red tape to improve organizational and departmental performance. They stated that the centralized decision-making process should be avoided. The study also focused on job satisfaction, which can only be enhanced in public organizations through a decentralized architecture or structure. They further elaborated that a proper audit mechanism should be introduced in organizations so that the performance of lower level staff can be effectively monitored.

Feeney and Rainey's (2010) study of red tape in the public sector and non-profit organizations focused on institutional and political accountability. They argued that political accountability is central to improving organizations' performance. They also discussed a number of issues in the public sector resulting from the absence of institutional and political accountability. The authors felt that government bureaucracies are particularly subject to administrative constraints, such as red tape and personnel rules, that constrain pay, promotion, and dismissal and impact performance.

Chaudhuri and Mandal (2012) suggested that red tape plays a negative role for organizations by significantly affecting individual employee behavior. The researchers argued that behavior is not merely comprised of self-interested choices but also normative motives. If there is a high degree of red-tapism in a country, this will impact employees' affective motivation, which affects their overall behavior and leads to numerous problems.

Ismail and Rashid (2014) stated that further investigations of organizational influences should seek to assess the effects of organizational experiences and policies on the motivation of public service workers over time. Moynihan and Pandey (2007) demonstrated the impact of red tape on governmental and private organizations in the U.S. states of Georgia and Illinois.

Research methodology

This study utilizes data collected from primary sources through a questionnaire survey conducted in 2014. The respondents were 121 employees working in 35 different government

departments of Pakistan, mainly from the province of Punjab. They came from different levels of the hierarchy. Snowball, convenience, stratified, and area sampling were used to recruit the respondents. The focus was on the views and perceptions of the employees regarding red-tapism and how it affects work performance and organizational outcomes. The responses were analyzed with a focus on correlational and coefficient methods to investigate the impact on the dependent and independent variables.

The research hypotheses were formulated based on previous studies and the conceptual framework. The independent variable was red-tapism. There were seven dependent variables: centralization, performance and morale of public servants, job satisfaction, work engagement and commitment, organizations' performance, decision making, and welfare of the masses.

The formulation of hypotheses is one of the most significant parts of a study. Other steps include the design of collection methods, tools, and techniques for gathering the raw data. Both primary and secondary sources were used for the study. The primary sources consisted of respondents' answers to the questionnaire regarding the impact of red-tapism on Pakistan's governmental sector and the employees working there. The number of government staff who completed the questionnaire were considered as the respondents. The author also analyzed secondary sources, including journals, newspapers, and official public relations websites.

After determining the sample size, the process of data collection took place. The data were gathered through a questionnaire survey. Afterwards, the data were carefully analyzed and evaluated through several methods and procedures, including correlation analysis, regression analysis, and the Chi-squared test. The last phase of the study included the presentation and discussion of the results.

Conceptual framework

The conceptual framework shown in Figure 1 was used to identify the dependent and independent variables and their relationship with each other. The research hypotheses and

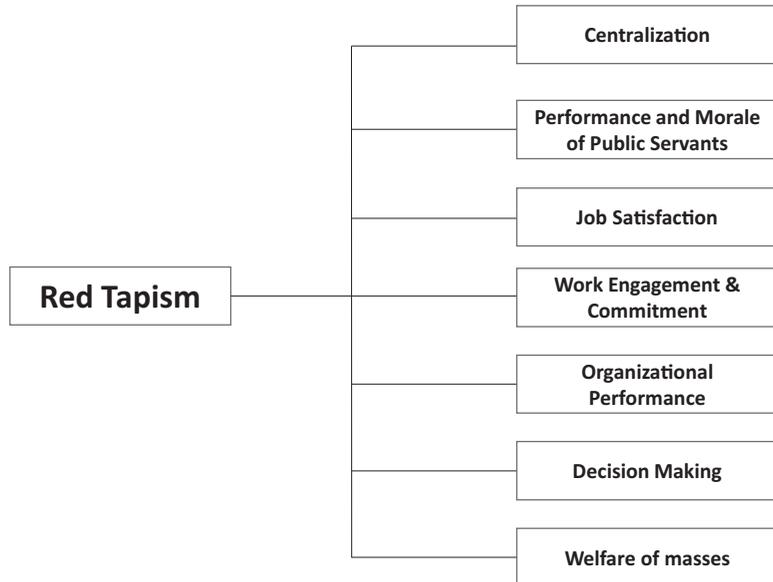


Figure 1.
Conceptual framework

Source: By author (2019)

testable statements are presented in Table 1 to help define the correlations between these variables.

Hypotheses

To understand the current status of red-tapism, employees were asked about their perception of delayed work due to unnecessary rules and regulations. The following hypotheses of employees' perception of red-tapism were tested.

H1. Red-tapism is a necessary consequence of the bureaucratic process.

Red-tapism is one of the main aspects of the bureaucratic process. Developing countries seek to emulate the bureaucratic process, which cannot be imposed without the integration of red tape. Thus, red-tapism is one of the initial steps in a country's development of bureaucracy.

H2. Red-tapism negatively affects employees' commitment, loyalty, performance, and job satisfaction.

Red tape negatively impacts employee performance. When work tasks are delayed due to an excessiveness of unnecessary rules and regulations, it results in employee burnout, which eventually decreases their commitment to work. Employees'

Dependent variables	Description
Centralization	Most of the public organizations in Pakistan have integrated centralized decision making for years. In centralization, authority and top management have control over all of the decisions made. In this research, centralization is one of the primary dependent variables. This study attempts to investigate the role of centralization within red-tapism.
Performance and morale of public servants	Performance is one of the main elements that cannot be ignored in an organization. Organizations are always in search of employees who can add value to the organizations through effective performance. The element of public servants' morale should also be considered. This research examines how the relationship between public servants' performance and morale is influenced by the high integration of red-tapism.
Job satisfaction	Job satisfaction is the main component that influences whether employees stay with an organization, and it directly and indirectly impacts their job performance. In this research, the relationship between job satisfaction and red tape is investigated.
Work engagement and commitment	Employees' work engagement and commitment is intertwined with the effective accomplishment of organizational goals. When work engagement and loyalty are high, employees' performance will be positively enhanced. This research investigates the impact of the high integration of red-tapism in public organizations on work engagement and commitment.
Organizations' performance	Organizational performance is directly linked to the successful accomplishment of organizational goals and objectives. This research attempts to determine the impact of red-tapism on the performance of government organizations.
Decision making	The impact of red-tapism profoundly influences decision making. Those organizations that have more rules and regulations may take longer to make difficult decisions compared to organizations that have fewer rules and regulations.
Welfare of the masses	This research investigates the influence of red-tapism on the wellbeing of the masses.

Source: By author (2019)

Table 1.
Dependent variables of the study

commitment to their work is interlinked with loyalty, reliability, performance, and job satisfaction. Thus, if the amount of red tape decreases, employee commitment and its related factors will eventually increase.

H3. *Interference of the political sector increases red-tapism in government departments.*

As a developing country, Pakistan’s political situation is continuously changing due to external and internal pressures. The political instability of the country has resulted in governmental officials making all administrative decisions, which directly impacts organizations’ procedures and policies. This political interference in the administrative area has severely affected organizations, especially governmental organizations, by hindering the administrative machinery.

Data analysis

The data were analyzed using the SPSS software. Correlation and regression analyses and the Chi-squared test were used for the data analysis. Bar charts and tables were created to increase the validation and verification of the data. A correlation table was created to determine whether the hypotheses should be accepted or rejected. Multiple regression models, including ANOVA and standardized coefficients, were also used.

The reliability of the questionnaire is presented in Table 2. The Cronbach’s alpha had a value of .591, which is excellent, and the number of items was 79.

Results

Hypotheses

Regarding H1, the study revealed that there was ambiguity and a lack of consensus among bureaucrats and government officials regarding whether red-tapism is necessary for bureaucracy. An equal number of people agreed, disagreed, and were neutral regarding this question. Based on these results, the author concludes that red-tapism does exist in bureaucracy but is not necessarily a consequence of bureaucracy.

Regarding H2, the data analysis showed that 54 employees agreed, 8 were neutral, and 17 disagreed with the statement that red-tapism negatively affects employee commitment, loyalty, performance, and job satisfaction. Therefore, this hypothesis was accepted. Employees agreed that the high integration of red-tapism in public organizations decreases employee commitment to work, which influences organizations’ goals and profits.

Regarding H3, the study revealed that more than 80% of the respondents felt that the interference of the political sector harmed government departments’ operations and decision making. Political interference has profoundly increased the amount of red tape in the bureaucratic environment of Pakistan, severely affecting governmental organizations.

Correlation and dependence

The first hypothesis about centralization has a correlation coefficient of .385, significance level of .000, and sample size of 121. All these values support this hypothesis. The second hypothesis about the performance and morale of public servants has a correlation coefficient

Reliability Statistics

Table 2.
Reliability scale

Cronbach’s Alpha	N of Items
.591	79

Correlations

	Centralization	Performance and morale of public servants	Work engagement and commitment	Organization performance	Decision making	Job satisfaction	Red-tapism
Centralization	Pearson Correlation Significance Squared Sum Covariance N	1.000 P < .001 440.562 3.671 121 .278**	.278** P < .001 170.629 1.422 121 1.000	.237** P < .001 147.665 1.231 121 .628**	.176 P < .001 52.017 0.433 121 .172	.236** P < .001 90.882 0.757 121 .631**	.385** P < .001 263.102 2.193 121 .416**
Performance and morale of public servants	Pearson Correlation Significance Squared Sum Covariance N	.000 853.379 7.111 1.422 121 .628**	.000 545.138 4.543 121 1.000	.000 338.718 2.823 121 .854**	.000 70.760 0.590 121 .045	.000 338.718 2.823 121 .854**	.000 396.605 3.305 121 .412**
Work engagement and commitment	Pearson Correlation Significance Squared Sum Covariance N	.000 147.665 1.231 121 .236**	.000 545.138 4.543 121 .631**	.000 883.302 7.361 121 .854**	.000 18.614 0.155 121 .134	.000 466.153 3.885 121 1.000**	.000 399.233 3.327 121 .429**
Organization performance	Pearson Correlation Significance Squared Sum Covariance N	.000 90.882 0.757 121 .176	.000 338.718 2.823 121 .172	.000 466.153 3.885 121 .045	.000 34.624 0.289 121 1.000	.000 337.612 2.813 121 .134	.000 256.764 2.140 121 .320**
Decision making	Pearson Correlation Significance Squared Sum Covariance N	.000 52.017 0.433 121	.000 70.760 0.590 121	.000 18.614 0.155 121	.000 197.471 1.646 121	.000 34.624 0.289 121	.000 146.405 1.220 121

Table 3. Correlation and dependence

of .416, significance of .000, and sample size of 121. The third hypothesis about work engagement and commitment has a correlation coefficient of .412 and significance level of .000. The fourth hypothesis about organizations' performance has a correlation coefficient of .429 and significance level of .000. The fifth hypothesis about decision making has a correlation coefficient of .320 and significance level of .000. The sixth hypothesis about job

Model	Variables Entered/Removed		Method
	Variables Entered	Variables Removed	
1	Job satisfaction, decision making, centralization, performance and morale of public servants, work engagement and commitment	-	Enter

a. Tolerance level = .000 limits reached
b. Dependent variable: red-tapism

Table 4.
Regression analysis

Model	R	Model Summary R Squared	Adjusted R Squared	Std. Error of Estimate
1	.582	.339	.310	2.47137

a. Predictors (constant): job satisfaction, decision making, centralization, performance and morale of public servants, work engagement and commitment

Table 5.
Summary of the model

Model		ANOVA			F	Sig.
		Sum of Squares	df	Means Square		
1	Regression	360.325	5	72.065	11.799	.000 α
	Residual	720.381	115	6.108		
	Total	1062.706	120			

a. Predictors (constant): job satisfaction, decision making, centralization, performance and morale of public servants, work engagement and commitment
b. Dependent variable: red-tapism

Table 6.
ANOVA

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.317	1.016		2.281	.000
	Centralization	0.374	0.124	-.241	3.007	.000
	Performance and morale of public servants	0.150	0.114	-.134	1.313	.000
	Work engagement and commitment	0.169	0.166	.154	1.014	.000
	Decision making	0.534	0.183	.230	2.921	.000
	Job satisfaction	0.222	0.269	.125	0.826	.000

a. Dependent variable: red-tapism

Table 7.
Coefficients

satisfaction has a correlation coefficient of .429 and significance level of .000. The results support all these values.

In the model summary table (Table 5), the value of $R = .582$, $R^2 = .339$, and adjusted $R^2 = .310$. All these figures are in favor of the hypotheses of the research.

The ANOVA table (Table 6) is divided into two main aspects, regression and residual, and the value of the sum of squares = 360.325, degree of freedom = 5, mean square = 72.065, and frequency = 11.799 with a significance level = .000. The value of frequency F shows the variance in the conceptual framework model.

The coefficients table (Table 7) is divided into two main aspects, unstandardized and standardized coefficients. The independent variable is red-tapism, and dependent variables are centralization, performance and morale of public servants, work engagement and commitment, decision making, and job satisfaction. The beta value for the performance and morale of civil servants (-.134) indicates that this dependent variable is the best predictor of the model. The second-best predictor is centralization (-.241).

Discussion and conclusion

The variables were used to test all three hypotheses and answer the research questions posed in this study. The discussion below offers suggestions for specific areas of improvement in the bureaucratic system of Punjab.

One limitation that the author faced was that some bureaucrats were reluctant to provide proper support or assistance due to certain administrative restrictions. Hence, the responses do not reflect the opinions of the entire population. Further, the author could not reach a specific conclusion as to the impact of each factor on the role of bureaucracy in Pakistan. This research can thus only conclude that a relationship exists, but the extent of the involvement of red tape is unclear.

Based on the above statistical analysis, it can be concluded that the high integration of red tape has weakened the performance of public sector organizations in Punjab and the overall economy of the country. The analysis revealed that the use of red tape is high in Punjab. Red tape plays a negative role in organizational performance by directly and indirectly affecting employee behavior. It was also observed that the government is trying to privatize governmental organizations to reduce the amount of red tape. Red tape has increased drastically in public sector organizations in the last few decades, but unfortunately, no measures have been taken to reduce or eliminate it.

The rationale behind the existence of red tape in organizations is to enact legal control, but this has not worked according to plan. Some employees in public departments have indulged in fraudulent and corrupt practices, and as a result, bribery has occurred. People who bribe government officials are given higher priority to get their issues resolved. The findings indicate that red tape has a negative impact on the overall organizational performance. It may also cause employees to search for other jobs and leave the organization.

The results showed that employees' job satisfaction decreases when there is intense red-tapism integrated into organizations. The main reason for this is that employees are prevented from completing their job duties due to delays caused by red tape. This can be frustrating for employees and makes them feel disappointed with and disengaged from their work. This not only creates a hassle for the public by preventing them from receiving services but also for employees, who may feel that the whole process of their work is meaningless.

Employee motivation is critical for organizations to accomplish their goals and objectives, thus influencing organizational productivity. Employee motivation is the primary tool for organizations' success, but in the case of the public sector of Pakistan, the level of employee motivation is very low. This motivation level can be enhanced when employees feel engaged with their work and are able to complete their work on time, which in turn helps the

organization to accomplish its goals. In public sector organizations of Pakistan, the aspect of red tape delays the execution of jobs/tasks, resulting in decreased employee motivation. This is harmful for organizations, as employees then lose interest in the job.

Employees' level of motivation is directly linked with their work commitment. The results of this study revealed that public servants have low motivation levels as a result of poor work commitment. In simple terms, when motivation decreases, the work commitment also gradually decreases. The main reason for low motivation is employees' work being delayed due to an excessiveness of rules and regulations. When employees have poor work commitment, they will not take the initiative to improve their work or to achieve the desired level of commitment.

The research results indicate that the integration of red tape not only impacts employees' behavior and attitudes but also organizations' performance. The analysis revealed that government organizations have not been able to accomplish their target goals and aims due to the aspect of red tape, which overall results in weakening the economy.

Recommendations

The government of Punjab should take measures to remove or at least reduce the negative impact of red tape so that government organizations can add value to the economy. The following recommendations are proposed:

1. Organizational processes should be reviewed, and the steps and procedures required to perform a task should be recorded as standard operating procedures, which are convenient for employees to carry out their tasks and recognize the output of their efforts.
2. Motivational seminars and workshops should be arranged at various levels to develop understanding and coordination among different ministries. Organizational leaders and employees should stay motivated and focused on delivering honest and dedicated services to the organization and the public.
3. Government departments should organize more exchange programs for their employees to develop and promote inter-agency understanding and create national integration of more effective process re-engineering required for to reduce the negative impacts of red tape.
4. A committee at the provincial level should review and track ongoing projects/tasks and measure organizational output every quarter. Projects that are stuck at any level within an organization can be revisited, which will improve organizational performance.
5. Training of public servants should be conducted yearly to address their motivational, operational, or work environment-related issues.
6. Coaching and training programs for employees working in public organizations should be conducted to keep them involved in overall organizational output and to make them understand how their motivation level affects the economy. This will hopefully result in positive employee behaviors.
7. Most importantly, because planning is weak in provincial public organizations, projects and schemes can get stuck unfinished. This should be addressed so that all the issues are removed during the initial planning stage.

To sum up, red tape cannot be eliminated immediately from traditional public organizations in Pakistan. However, many steps can be taken to reduce it from the system and to address

the negative consequences of red tape on employees. This can help improve the overall performance of public sector organizations.

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