

Policy Paper

Sustainable City Planning Concepts and Practices in Emerging Economies: A Systematic Review

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Abstract

The purpose of this paper is to explore sustainable city planning concepts and practices in emerging economies. Using a systematic review, peer-reviewed articles in an academic database were systematically searched and reviewed. The process included selecting appropriate keywords to assist in screening relevant articles, allowing more comprehensive and integrated findings of the concepts and practices of sustainable city planning in emerging economies, assisted by the NVivo 12 qualitative software package and Microsoft Excel. This paper also developed a framework comprised of key elements to measure the sustainability of city planning. The findings showed that, by reviewing more than 30 peer-reviewed articles, it was understood that Western sustainable city planning concepts have been directly adopted into the policy agendas of emerging countries without significant changes. However, such concepts were interpreted into a number of different practices dealing with the local socio-cultural and political characteristics of the adopting countries. Lastly, during the systematic review, this paper offers a comprehensive evaluation of the overall mapping of literature in the framework of sustainable city planning in emerging countries, indicating a number of areas that have been explored by existing studies as well as certain areas that are still lacking and could be potentially explored by future studies.

Keywords: Sustainable City Planning, Emerging Economies, Systematic Review

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1. Introduction

Against the backdrop of global climate change and economic inequality issues, sustainable development is increasingly under scrutiny. The main concern with sustainable development is ensuring various development activities to achieve economic, social, and environmental improvement and balance (Borowy, 2014; Perkins, 2013; United Nations, 2019). 'Sustainable city planning' emerged as an implication of sustainable development in urban and environmental studies, which emphasizes the importance of infrastructure development and land-use management that promotes sustainability visions (Herberle & Opp, 2008; Scott, 2012). The sustainable city planning concept offers a number of pathways for urban stakeholders to manage their cities in a responsible manner, especially when facing the trade-offs between promoting human development and natural preservation, as well as boosting economic growth versus maintaining environmental capacity. The concept is usually interpreted into regulatory frameworks, policies, and programs, which can be used to organize both small-scale interventions (such as integrated water management or the preservation of animal habitats in mining areas in the United States) and large-scale interventions (such as the 'popular' green belt policy in Britain (Campbell, 2016; Cullingworth & Caves, 2014; Hall, 2014).

After initially becoming popular in the West, sustainable city planning has recently diffused into other parts of the world – emerging countries. The declaration of the Sustainable Development Agenda 2030 in the Urban Agenda – the Earth Summit in 1992, facilitated by the United Nations – contributed a significant role in transferring this concept (Hall, 2014; United Nations, 2019). At that time, sustainable city planning was endorsed to many governments through policy-sharing and discussion forums organized by international organizations such as the IUCN, UNEP, WWF, the World Bank, the FAO, and UNESCO, and thus became a global agenda. Not only tackling global issues, the agenda also offers planning strategies to deal with local issues in emerging countries, including deforestation, social conflict, poverty, street vendors, and informal sectors (Douglass, 2015; Freire, 2006; Moncada, 2013; Padawangi, 2014; Polakit & Boontharm, 2008; Rukmana, 2011; Sasaki & Sone, 2015). Nevertheless, the diffusion of sustainable city planning faced contextual challenges, including a larger extent of socio-cultural diversity, government and political dynamics, and economic poverty and inequality (Harsanto, Michaelides, & Drummond, 2018; Perkins, 2013; Robinson, 2002; Ward, 2012). Such challenges made the implementation of a sustainable agenda difficult to manage, in the same ways as in Western countries (Doucette & Park, 2018; Robinson, 2002; Scott, 2012).

The purpose of this paper is to explore sustainable city planning concepts and practices in emerging economies, applying the systematic review approach. In systematic review, peer-reviewed articles in an academic database are systematically searched and reviewed, allowing the concepts and practices of sustainable city planning in emerging countries discussed in such articles to be constructed into general understandings and a framework. The findings showed that, by reviewing more than 30 peer-reviewed articles, it was understood that Western sustainable city planning concepts have been directly adopted into the emerging countries' policy agenda without significant changes, but such concepts were interpreted into different practices, adapting local socio-cultural and political characteristics. This paper lastly offers a comprehensive evaluation of the overall mapping of literature in the framework of sustainable city planning in emerging countries, indicating a number of areas that have been explored by existing studies as well as certain areas that are still lacking and could be potentially undertaken by further studies. Findings from this paper, nevertheless, also provides interesting feedback for scholars and policymakers in emerging economies, including Indonesia, to improve certain aspects within their sustainable city agenda.

Sustainable city planning

City planning discourses are increasingly attached to the idea of sustainability. The most referred scholar in urban and environmental planning studies, Sir Peter Hall, mentioned, "...the overwhelming theme of that decade [1990s] was the search for sustainability, and sustainable urban development became almost a mantra" (Hall, 2014, p.10). The modern conventional land-use planning that previously focused on guiding and controlling city development towards explosive economic growth, which was popular in the cities in the modern period of 1960s, had slowly shifted into the post-modern city planning that emphasized the formation of 'sustainable cities' – cities aimed at achieving steady long-term socio-economic and environmental balance (Allmendinger, 2001; Hall, 2014; Rydin, 2011). Many Western cities

that were hit by deindustrialization bounced back through ‘sustainable city planning’, exploring new economic source alternatives, which they consider as more ‘sustainable’ than manufacturing industries (Landry & Bianchini, 1995). Such resources focus toward human skills and knowledge related to culture, lifestyle, creativity, and technology (Allmendinger, 2002; Cullingworth & Caves, 2014; Landry, 2000; Taylor, 1998). After all of this shifting, the world economy then became subdivided into two categories: cities focused on massive industrialization, which are facing socio-economic inequality and environmental degradation, and cities focused on more sustainable, creative, and innovative services, which are enjoying a living harmony with socio-economic and environmental balance (Girard, 2006).

Sustainable city planning is a concept that was introduced by many scholars, which emphasizes the process of managing a city that ensures harmony with human life and nature (Alexander, 2006). The concept engages with the ‘sustainable’ and ‘city planning’ themes. The term ‘sustainable’ itself descriptively refers to the definition of the capacity of any given system or entity to survive, serve, and function in the long term (Borowy, 2014). Meanwhile, city planning is generally understood as a process of selecting and managing strategic actions to guide a city to achieve its preferred future (Hall & Tewdwr-Jones, 2011). City planning includes the activities of goal setting, negotiation, and facilitation, as well as monitoring and evaluation of selected development scenarios, which involve certain approaches, instruments, and techniques (Allmendinger, Prior, & Raemaekers, 2001). Sustainable city planning works if the city planning offers development strategies and actions that comply with the principles of freedom, solidarity, equity, and justice for both humans and nature (Girard, 2006). Its main indicator is the improvement of the quality of life – a city should serve better homes, workplaces, lifestyles, and governance, all of which promote well-being (Davoudi & Layard, 2001).

Sustainable city planning covers a number of basic city development strategies and programmes, which are mainly related to the environment, the economy, society, and governance. The environmental strategies rely on ensuring that development activities maintain the environmental capacity (Rydin, 2003). The strategies are usually related to green and open spaces, lakes, rivers, and sea and air conservation, as well as environmentally-friendly urban settlements (Borowy, 2014; Gumbira & Harsanto, 2019; Herberle & Opp, 2008). Amongst the current popular programmes applied in Western cities are greenbelts, forest conservation, green or sustainable houses and buildings, low-emission transports, electric cars, urban street plantations, and animal preservation (Campbell, 2016; Rydin, 2003). Economic strategies, on the other hand, concern on optimizing economic resource exploration to promote steady long-term economic growth and prosperity of the people (Allmendinger, 2001, 2016; Chapain & Comunian, 2010; Landry, 2006). Economic strategies are interpreted as exclusive economic zones, industrial estates and clusters, culture, arts, creative towns, high-tech and software industry incentives, business innovation incubators, integrated tourism management, and many others (Chapain & Comunian, 2010; Couch, Fraser, & Percy, 2003; Harsanto & Permana, 2019; Healey, 2007; Mallett & Cherniak, 2018).

Social strategies appear as the efforts to preserve and continue the wealth of culture and social activities of the people that can help community engagement, harmonious living, and capacity improvement (Gonzalez & Healey, 2005; Newman, Waldron, Dale, & Carriere, 2008; Rydin, 2016; Scott, 2008). Social strategies engage with programmes related to cultural preservation, heritage management, education innovation, social inclusion, and human capacity development (Innes & Booher, 2000; Rydin, 2016; Scott, 2008). Lastly, governance strategies are currently introduced as a new element that also contributes to overall sustainable city planning. These strategies emphasize the capacity of stakeholders to manage urban development in ways that are mutually agreed, allowing win-win solutions to emerge from the process of negotiation, strategy, and interest mediation, as well as knowledge sharing (Allmendinger, 2016; Healey, 2004; Innes & Booher, 2010; Woltjer, 2000). The strategies include programmes such as business improvement districts, regional and cross-boundary authorities, community enterprises, local partnerships, and many other institutional forms beyond the traditional government authorities who allow multi-stakeholders to participate equally (Allmendinger, 2016; Cars, Healey, Madanipour, & De Magalhaes, 2002; Healey, 2004; Hudalah, Winarso, & Woltjer, 2010; Miharja & Woltjer, 2010; Rydin, 2003). In summary, the overall illustration of the sustainable city framework is presented in Figure 1 below.

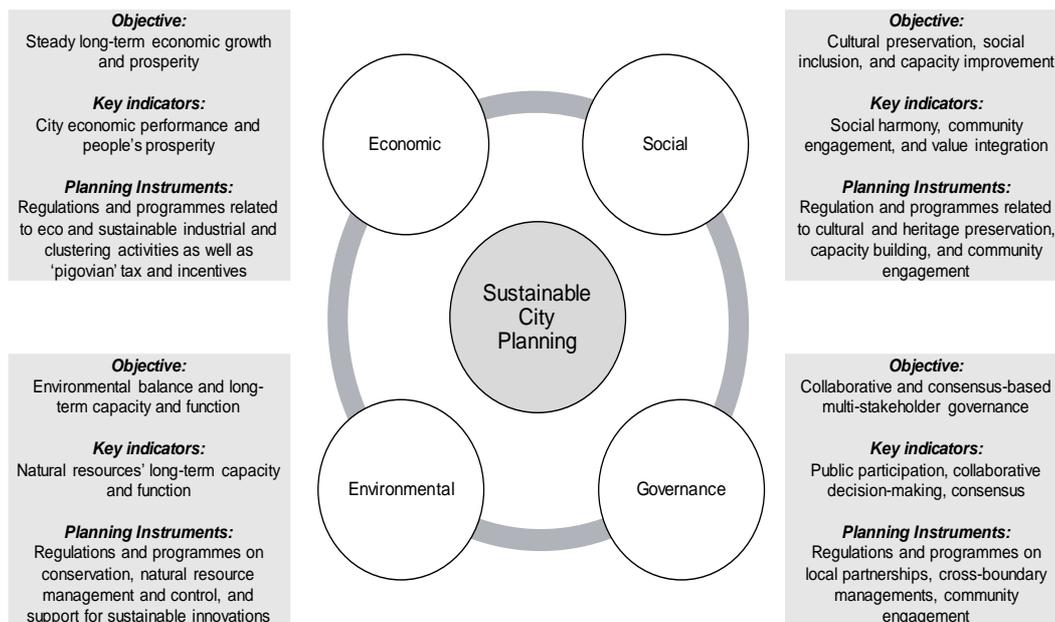


Figure 1. Sustainable City Planning
(Source: Authors from Rydin (2016); Hall and Tewdwr-Jones (2011); Healey (2004; Borowy (2014); and Landry (2000)

2. Methodology

To find and analyse sustainable city planning practices in emerging economies, systematic review method was utilised. Systematic review is a type of review based on structured and transparent steps, which allow the results to be replicable (Voorberg, Bekkers, & Tummers, 2015). The important steps for this type of review are determining eligibility criteria, making structured searches in specific databases, and carrying out a systematic analysis process (Tranfield, Denyer, & Smart, 2003).

The utilised eligibility criteria in this paper were study topic, type of publication, year of study, language, academic field, and context. The study topic is sustainable city planning, which is searched by a straightforward search string: "sustain* AND cit* AND plan*" in the article title. The type of publication was restricted to peer-reviewed articles, and other types of publications such as proceedings, essays, and popular articles were not included in the search. The study year is within the last 10 years, from 2011 to 2020, in order to obtain the latest insights of the last decade. To be eligible in the search, the language of publication was restricted to be English, as it is a common language in academic debates, and other languages were excluded in the search process. The academic fields were set after the search results were obtained, based on the dominant academic fields found by the search engine. Since the focus is on emerging economies, the articles to be analysed were only articles with the context of emerging economies. Emerging economies refer to the list of emerging markets and developing economies in the Global Economic Prospects publication (The World Bank Group, 2017).

A structured search was performed on the Scopus academic database, which is currently the largest academic database. In conducting the search, the initial stage was to apply the search string that had been created to the titles to get a rough picture of the results. Next, refinement was carried out by applying filters to publication type, study year, and language. Then, the most dominant academic field giving results was chosen to further limit the results. The process was carried out by utilising the refinement feature on Scopus. This was followed by manual filtering by reading the titles and abstracts of the articles to check their relevance and find out their contexts. Finally, only the articles that had been filtered were read in depth to obtain their insights.

The search was conducted in February 2020. Rough search results with a search string for the title produced 325 article results. After eligibility criteria as type of publication, year of study, and language were applied, 180 articles were obtained; it was discovered that the two dominant academic fields were 'social science' and 'environmental science', and thus the focus was on these two fields, leaving 102 articles. Metadata of these articles were downloaded, including the abstracts and keywords. Of the 102 articles, it was found that 69 articles were relevant for the focus topic of this paper. From the 69 articles,

these were filtered based on context and 33 articles were found to relate to emerging economies. Figure 2 illustrates this process.

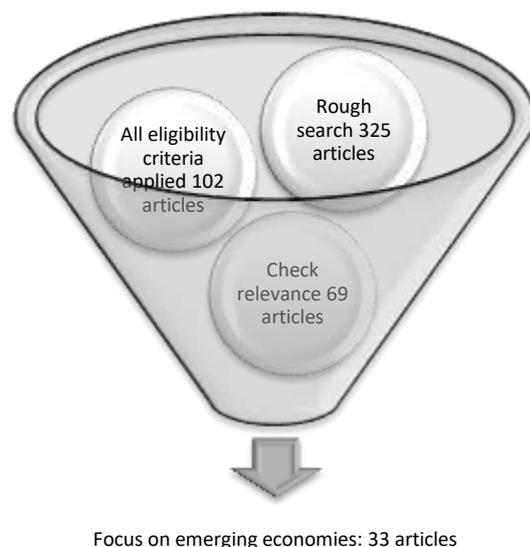


Figure 2. Systematic Search Process (Source: Authors)

The articles were then downloaded, read, and analysed to extract their insights. The analysis was performed qualitatively using thematic analysis as the framework technique, with the coding process guided by the established concepts in sustainable city planning as discussed in section 2. In addition to content, article attributes such as publication year, publication outlet, and context were also analysed to provide an overview of the distribution of studies on sustainable city planning in international journals. Data analysis utilised NVivo 12 qualitative software package and Microsoft Excel. The use of qualitative software as NVivo has an advantage mainly in the form of integration of all data in one place. Exploration and data display can also be performed at various points of the analysis process. Microsoft Excel was utilised because the metadata of the reviewed articles were in the comma-separated values (CSV) format. Such a format is easier to be processed using the Microsoft Excel spreadsheet program. The results of the analysis are presented in section 4.

3. Results & Discussion

3.1 Publication characteristics

It was found that scholarly articles on sustainable city planning with the context of emerging economies were published in many different journals. Journals that contained more than one article were Sustainability (Switzerland) (4 articles); WIT Transactions on Ecology and the Environment (3); Journal of Urban Planning and Development (2); Journal of Environmental Planning and Management (2); Futures (2); Habitat International (2); Land Use Policy (2); International Journal of Environmental Planning and Management (2); and Journal of Cleaner Production (2). Journals containing one article were Applied Energy; Archnet-IJAR; Area; Chinese Geographical Science; Energy, Sustainability and Society; Journal of Environmental Assessment Policy and Management; Journal of Planning History; Journal of Urban Management; Open House International; Urban Forestry and Urban Greening; and Urban Studies. The diversity of places of publication from different areas of journal science indicates that this area is gaining attention from interdisciplinary scholars.

For the year of publication, it was found that articles published in the last decade almost evenly existed for all years as shown in Figure 3, with 2013 as the year with the highest number of publications (6 articles), followed by 2011 and 2019 (5 each), 2017 and 2018 (4 each), and 2014 and 2016 (3 each). This indicates that sustainable city planning in emerging economies is studied consistently every year.

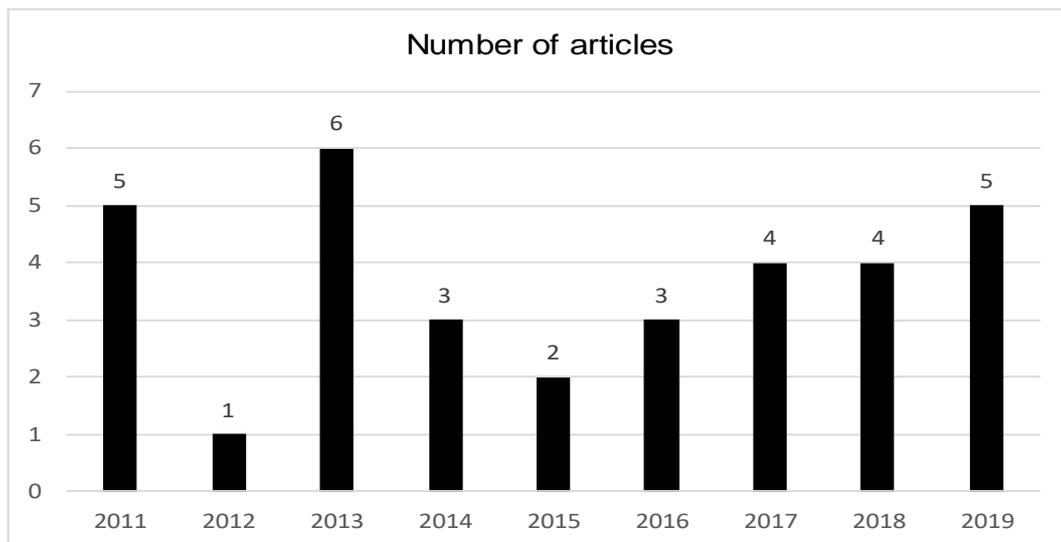


Figure 1. Publication years
(Source: Authors)

Contextually, sustainable city planning was studied in diverse contexts (Table 1). The most studied context was China (8 articles), followed by Brazil (3), Colombia (2), and Mexico (2). The contexts were mainly of Asia, Africa, and Latin America. Most articles examined one particular context (as Ozoike-Dennis, Spaling, Sinclair, & Walker, 2019; Rahman, 2016; Sampaio, Dias, & Balestieri, 2013), while other articles mixed several specific contexts or regions (as Ayambire, Amponsah, Peprah, & Takyi, 2019; El-Kholei, 2019).

Table 1: Context of Studies

Context	Article numbers	City(-ies)
Arab Region	1	Not specified
Bangladesh	1	Khulna City
Brazil	3	Guaratinguetá; Curitiba; Florianopolis
Chile	1	Not specified
China	8	Jiaozhou, Cixi, and Fangchenggang; Weihai and Qingdao; Ghuangzhou; Lijiang City; Xiamen; Dongying
Colombia	2	Riohacha; Medellin
Ecuador	1	Quito
Egypt	1	Siwa
Indonesia	1	Bekasi
India	1	Kalaburgi
Iran	1	Mohmoodabad
Kenya	1	Not specified
Mexico	2	Mexico City; not specified
Nigeria	1	Not specified
Sub-Saharan Africa	1	Not specified
Thailand	1	Not specified
Turkey	1	Pompeipolis
UAE	1	Abu Dhabi
Not specified	4	Not specified

Source: Authors

To obtain an overview of the words that were widely mentioned among the articles, NVivo was utilised to explore the word counts as well as their weighted percentages from the abstracts and titles. The word cloud is shown in Figure 3. The words 'city', 'plan', and 'sustainable' as the main key words in the search string certainly appeared as the most-used words in the title and abstracts, each with counts of 159, 135, and 131 with weighted percentages of 3.33%, 2.83%, and 2.74%.

environment (El-Kholei, 2019). It is believed that policymakers in the region focus on ensuring the process of sustainable city planning to be in accordance with existing cultural and historical values (El-Kholei, 2019). Similarly yet differently in articulating strategies, in Latin American cities, the definition of success and failure of sustainable city planning in ensuring economic, social, and environmental development harmony persists in the actual process of promoting sustainable city planning, such as public participation and equality of skills and knowledge among urban stakeholders (Acosta & Parga, 2012; Musse et al., 2018). Meanwhile, in Chinese cities and the UAE, similar outcomes have to be achieved through continuously encouraged technology and innovation developments (Crot, 2013; Fu & Zhang, 2017; Xiao, Li, & Wang, 2011). There is, for instance, the usage of high-tech productions, software, and information technology to support various economic and social activities of the people (Fu & Zhang, 2017). In the UAE, this has even been focused on particular cases, which are dedicated as their best practices, as shown in the case of the city of Al-Masdar (Crot, 2013). More than 30 articles were reviewed and a number of similarities in terms of the outcomes of sustainable city planning in the emerging world were highlighted, as presented in Table 2.

Table 2: Concepts and Outcomes of the Sustainable City Planning in the Emerging World (Several Cases)

Context	Focus Cities	Sustainability Outcomes	Key Approach
Arab Region	Not specified	The economic growth of a community, achieving social equity and protecting the environment.	Culture, religion, and social aspect integration
Bangladesh	Khulna City	Equality in knowledge and skill in urban stakeholders to promote sustainable city planning	Collaborative plan making process
Brazil	Guaratinguetá; Curitiba; Florianopolis	Sustainable economic development, environmental preservation, and historic preservation	Strong Master Plan
China	Jiaozhou; Weihai and Qingdao; Ghuangzhou; Lijiang City; Xiamen; etc.	Economic growth, social equality, and economic prosperity, focused on the inclusion of technology and innovation	Innovative city model (green, eco, and smart city)
Egypt	Siwa	Environmental preservation, economic development, and cultural and social harmony	Eco-tourism, green development approaches
Indonesia	Bekasi	Environmental balance and steady economic productivity	Eco-city, land-use management
Mexico	Mexico City; not specified	Sustainable economic growth, social improvement, and environmental maintenance	Public participation and engagement in development processes
UAE	Abu Dhabi	Economic growth that ensures people improvement and environmental resource support	Prototype of flagship development as a best practice

Source: Authors

The diffusion of sustainable city planning faced contextual challenges in the emerging world. Despite certain similarities with the Western world, the concepts have to be implemented amidst socio-cultural diversity, government and political dynamics, and economic poverty and inequality, which exist at wider deviations than the cases in the Western world (Perkins, 2013; Robinson, 2002; Ward, 2012). Such challenges cause the implementation of sustainable city planning to be difficult to manage in the same ways as in Western countries, and may also potentially lead to different outcomes (Doucette & Park, 2018; Robinson, 2002; Scott, 2012). In terms of socio-cultural diversity, many cities in the emerging world were unable to convert the concepts they learned from the Western world into effective practices due to limitations caused by social values and patterns, even the ‘rules of the game’, in the form of norms, religions, and cultural preferences (El-Kholei, 2019; Madero & Morris, 2016). In the majority of Middle Eastern countries as well Bangladesh and Mexico, for instance, sustainable city planning faced difficulties in the implementation stage, especially when community involvement is necessary, because planning should compromise various historical and cultural values in the community, which cause scientific rationality and technologies to be negotiated by the existing local ‘rules of the game’ (Acosta & Parga, 2012; Rahman, 2016). These include gender inequality that limits involvement of people in being active in support activities encouraged by the plan as well as retained beliefs and norms of people that make them less flexible to cooperate with governments in several aspects, such as revitalization of historical and religious buildings (Acosta & Parga, 2012; Rahman, 2016). These situations have overall led to sustainable city planning in the emerging world to be strongly influenced by and prioritizing more on the

acculturation of innovation and technology with culture, religion, and other social values, rather than the real outcomes of the sustainability and innovation processes.

In terms of government and political dynamics, unlike in the Western world, many cities in the emerging world, still believe in top-down approaches to manage outcomes (Crot, 2013; Fu & Zhang, 2017; Salem & El-Shimy, 2012). Governments play a leading role in decision-making, key investment, regulation, and stakeholder reorganization (Crot, 2013). They apply various techniques taught by Western countries through policy sharing and technical assistance projects (Crot, 2013; Madero & Morris, 2016; Xiao et al., 2011). This process can be seen from the introduction of techniques such as urban design and building measurement and control, innovations in food supply and demand as well as grocery chains, eco-transport system development, renewable energy development, and green and open space conservations, all of which were learned directly from international development projects involving Western technical experts (Crot, 2013; Madero & Morris, 2016; Xiao et al., 2011). The majority of Chinese cities and the UAE, for instance, apply a clear top-down approach to organize sustainable city planning. Local practices of sustainable city planning, from urban planning law and policies, decision-making, monitoring and evaluation activities, up to the promotion of certain urban development prototypes and programmes, are tightly guided by national government directions echoed to other stakeholders at local levels (Crot, 2013; Xue, Huang, Guan, & Lin, 2014).

Meanwhile, in other parts of the world, as economic disparity and poverty are becoming more acute, many countries carry out their sustainable city plans amidst the high gaps of knowledge, skill, and economic capacity of their people. This situation creates uncertainty in the implementation of sustainable city planning. In many cases, the existing human resources beyond the governments were unable to follow government ideas and, hence, were not supportive enough of the sustainability programmes and plans. In Latin American cities, the rapid and uncontrolled urbanization causes sustainable city planning to be difficult to manage (Rojas, Munizagab, Rojasc, Martínezd, & Pinoe, 2019). Rapid urbanization encourages water scarcity, land exploitation, flooding, decreased green areas, and health issues in urban areas; these issues push the government to pick a side, whether to work and focus on maintaining sustainability in the long term or to quickly undertake short-term actions to solve such issues, sometimes without fully engaging with the principles of a long-term sustainable plan (Rojas et al., 2019). The governments also need to work hard to build more capable communities from scratch, as many people are lacking experience, knowledge, and skills. These altogether lead to the overall process of engaging communities for sustainable city planning to require extra time and proper backward stages, in comparison to Western experiences (Madero & Morris, 2016). The governments should also provide basic foundations, including initial programmes to ensure urban stakeholder knowledge and equal improvements of skills prior to involvement in the process (Madero & Morris, 2016).

3.3 State of the Art

Academic works appear as the key element to determine the shape of sustainable city planning concepts and practices in the emerging world. The systematic review conducted by this paper now leads to a comprehensive evaluation of the overall mapping of literature in the framework of sustainable city planning in emerging countries, indicating a number of areas that have been explored by existing studies and certain areas that are still lacking and could be potentially undertaken in further studies. After review of more than 30 articles, several highlighted practices of sustainable city planning and their core research interests within the framework of sustainable city planning are shown in Table 3.

Table 3: The Practice of Sustainable City Planning in the Emerging World (Several Cases)

Context	Sectors	Key Discourse
Arab Region	Social, Economic, Environment, and Governance	From the implementation of <i>sharia</i> and other cultural related rules and policies to promote sustainable city planning to the promotion of project actions such as thematic developments such as green development, eco-tourism, building revitalization following the Green House principles, and community capacity and knowledge improvement
Bangladesh	Social	Focus on how to ensure the community to have adequate knowledge and skills and to be able to work with other stakeholders to promote sustainable city planning
Brazil	Economic and environment	Sustainable economic and environmental development can be achieved through the improvement in urban transport system, public spaces, and

Context	Sectors	Key Discourse
		city management as well as promotion
Chile	Environment	The needs of compromising the rapid urbanization process with attempts to ensure preservation of biodiversity and the provision of ecosystem, which focus on disaster management, natural resource management, and environmental policy
China	Social, Economic, Environment, and Governance	Intention to promote various innovative approaches for urban development that promote sustainability, which include large-scale efforts: green development, smart city, cultural city, eco-friendly city, and small-scale efforts: renewable energy, community development, clean and green industries, social engagement through internet-based interactions, water management, and government’s rules and policies for sustainable planning
Colombia	Environment and governance	Development of measures, methods, and approaches to monitor and evaluate the impacts of urban development on environment, applying more collaborative and participatory approaches
Ecuador	Environment and social	Ensuring environmental carrying capacity from the perspective of food and livestock management and the community’s activeness to support the process
Egypt	Environment, social, and economic	Applying eco-tourism development to promote economic growth that ensures people improvement and environmental resource support
Indonesia	Environment	The promotion of eco-city as a model of sustainable city planning that focused on various policies to manage land use, building, and infrastructure development
India	Environment	The introduction of Urban Green Space as a potential development approach to promote sustainable development in urban areas
Iran	Environment, social, and economic	Studying the current situations of public awareness and practices related to sustainable development. This include various scenario to enhance citizen partnerships, social integrations, and community-government partnerships in preserving environment, helping each other’s economy, and preserving local culture
Kenya	Social and governance	Cultural Heritage as a driver for sustainable growth. It focuses on various strategies to ensure community engagement and multi-stakeholder cooperation in managing heritage areas to be the core of sustainable development in the city
Mexico	Social and governance	The implementation of green masterplan that is organized through public participation and collaborative actions between the community and government
Nigeria	Environment	Focus on how to promote city plans that are able to cope with urbanization issues
UAE	Environment and economic	The implementation of flagship urban project, in a form of eco-city, as a best practice for sustainable city planning

Source: Authors

The majority of cases in the emerging world has put a strong emphasis on sustainable city planning discourses from the perspective of the environment. At least, considering the three largest regions, Middle East, Latin America, and East Asia, this statement is confirmed. In the Middle Eastern cases, much of the research concerned discussions of monitoring and evaluating sustainable city planning from the environmental viewpoint, including emissions, disposal of solid waste, drinking water availability, sewage treatment systems, and so on (Crot, 2013). In the Latin American cases, the majority of the research focused on discussions to develop certain systems or methods that can be applied to promote sustainable city planning that engages with environmental indicators, which include the Strategic Alignment Model (SAM) for a sustainable environment and the City Region Food System (CRFS) for the environmental carrying capacity (Diaz, 2011; Dubbeling et al., 2017). In the Chinese cases, the studies are increasingly engaged with conceptual discussions and planning approaches that value sustainable environments, including green city, eco-city, and smart city (Fu & Zhang, 2017).

Social aspects become the second-most discussed perspective, whilst governance aspects increasingly emerge as ‘an attractive topic’ to discuss within sustainable city planning. Social aspects become important because of their direct connection to the environment. Current general assumptions regard social aspects, which pertain to people and their culture, religion, norms, lifestyles, and interactions, as the most important element to produce direct impacts on the environment after the environment itself (Acosta & Parga, 2012; Madero & Morris, 2016). Managing and creating a strong, engaged, and independent society becomes crucial to ensure sustainable cities, because this would reduce the government burden to promote sustainability ideas and actions (Acosta & Parga, 2012). Looking at the case studies in Latin America, for instance, the development of more independent and active communities makes it easier for the government to tackle sustainability issues through public

participation programmes to solve flooding, drinking water scarcity, and poor waste management at local levels (Madero & Morris, 2016). Meanwhile, governance aspects became attractive because they are also considered important, especially in the current state of promoting sustainable cities, which involve multi-government resources and skills. Governance determines public management of cities, which affects the use of natural resources and the functioning of the market forces, both of which in turn affect society (El-Kholei, 2019). In the majority of cases, it was indicated that governance – or strong collaborations between governments and other actors in managing resources – play a strategic role to ensure that sustainable cities may be achieved in the long term (Ozoike-Dennis et al., 2019; Staukis, 2014).

Nevertheless, existing assumptions that consider economic activities as the greatest aspect against sustainability have perhaps made this aspect less attractive for research about development in the emerging world. It has been generally understood that economic growth in emerging countries is still deeply engaged with ideas of maximizing resources for economic profits and outputs, which involve mass production, large employment, and product-oriented processes. This situation is slightly different to Western countries that begin to apply more efficient but high value-added activities (Allmendinger, 2002; Cullingworth & Caves, 2014; Landry, 2000; Taylor, 1998). In the majority of research cases, the economic aspects are also still positioned to support environmental balance without clear encouragement to produce significant performance improvements upon themselves. For instance, in China, the Internet, transport, infrastructure and many others were labelled as ‘smart technology’ to ensure that economic activities retain environmental carrying capacity, but without significant explanations as to whether the benefits of using such ‘smart technologies’ would also ensure economic advantages in the long-run (Liu, Wang, & Tzeng, 2018; Wu, Wang, & Mao, 2018). In the UAE and Bangladesh, the intent to promote innovative infrastructure was not specified with sufficient explanations, as to how the innovations would help the economy to perform better, in addition to the expectation to retain environmental balance (Crot, 2013; Rahman, 2016).

To summarize all the reviewed articles, it is understood that sustainable city planning discussions originally began only from efforts to simply ensure urban developments to efforts to manage environmental carrying capacity amidst massive economic activities. Nevertheless, their recent discussions expand the discourse to a wider context to include socio-economic quality improvements as well as urban management beyond traditional government approaches, which are called governance processes. The early discussions were encouraged by the pioneering countries, such as China and Brazil, which introduced city planning models (for example eco-city, smart city, sustainable transport), whereby the majority of their action plans and programs focused on suggesting heavy manufacturing industries as well as many other rapid urban activities to conduct innovations that minimize pollution, deforestation, natural resource over-exploration, and ecosystem destruction. Meanwhile, in the last few years, pioneering countries as well as other countries also became participative in contributing sustainable city planning practicality through land use management (Handayanto, Tripathi, Kim, & Guha, 2017), heritage management (Ozoike-Dennis et al., 2019), public participation, and multi-stakeholder cooperation in cities (Madero & Morris, 2016). Figure 3 illustrates the chronological development of sustainable city planning concepts (only based on the reviewed articles).



Figure 3. Sustainable City Planning Conceptual Development Based on the Reviewed Articles (Source: Authors)

4. Conclusion

Given that the purpose of this paper is to explore sustainable city planning concepts and practices in emerging economies, this final portion of the paper is dedicated to propose the overall understanding that the sustainable city planning concept in emerging countries is similar to the Western concept. Sustainable city planning is illustrated as the concept of ensuring the balance between economic as well as social improvement and environmental preservation in the long term. Its framework engages with the idea of promoting sustainable cities using economic, social, environmental, and governance strategies. However, a slightly different phenomenon can be seen from its conceptual development in the emerging world, in which the majority of countries focus on certain 'jargon' to echo their sustainable city planning efforts, including 'smart city', 'green city', and 'eco-city'.

Whilst the concepts of Western sustainable development have been directly adopted, the actual practices show a number of differences. Such differences were indicated by existing scholars discussing the theoretical gap of planning between the West and East or the North and South (See Perkins, 2013; Robinson, 2002; Ward, 2012). There are socio-cultural and political dynamics, as well as other basic issues such as poverty, rapid urbanization, and lack of capacity, which contributed to the differences. For instance, rather than private sector-led or collaborative approaches, many governments in the emerging world applied top-down approaches to promote sustainable city planning, by which they dominate funding and investment, ideas, decision-making, and techniques, as well as regulation. In addition, many socio-cultural values – including culture, religion, and historical norms – penetrate sustainable city planning practices and cause compromises on innovations and technology and a lack of objectivity. Meanwhile, acute urbanization problems only make the attempts to implement sustainable city planning more difficult because the key stakeholders face two problems: basic issues that might need relaxation of certain environmental values, and commitments to promote sustainability in the long term. The key stakeholders also need to deal with a large population of actors who have fewer resources and knowledge. Therefore, the study findings could be of interest not only to academics, but also to policymakers. In the context of Indonesia, for example, the Sustainable Development Goals (SDGs), as mandated by the SGD forum of Indonesia and Government of Indonesia Presidential Regulation Number 59/2017, the four elements of sustainable city planning have already been covered. Nevertheless, the current regulations that focus more on government-led institutional and financial frameworks can take into account the findings of this study, by which the potential of public participation or community engagement can be considerably articulated.

Reflecting on the overall research process, a number of strengths and limitations are highlighted. The strength of this study is the use of systematic review via a structured search and analysis of literature, and in this way, the process becomes transparent and reproducible. The study was also conducted in the specific context of emerging economies in order to make the analysis more focused and the contributions clearer. The limitation of this study is that no criteria have been used in assessing the quality of articles and journals. In this study, all articles that met the inclusion or exclusion criteria as indexed on Scopus were analysed. Future studies can apply certain assessments, for example based on journal impact factors (Clarivate Analytics, 2018). The qualitative approaches used in this study can also become limitations on the results of the analysis. Although the credibility of qualitative analysis was maintained by directly linking the analysis with the literature through matrices such as Table 2 and Table 3, caution needs to be given that these results may not apply to the context of certain emerging economies that are not discussed in the literature included in this study.

Finally, having developed a 'state of the art' plan for sustainable city research, it is recognized that certain aspects within this topic may require further study. These are highlighted in section 4.3 and recognize that the current state of sustainable city planning research lacks discussions on economic sustainability, which fully emphasize the concepts, indicators, outcomes, and strategies of promoting economic sustainability through innovation and technology. Further studies are encouraged to evaluate the impacts of environmentally-friendly industries towards long-term economic profits and growth.

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