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Article

Ecology and new urban program: A case study of Penang state ownbrand of affordable housing program

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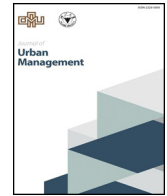
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Ecology and new urban program: A case study of Penang state own brand of affordable housing program



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ABSTRACT

Ecological factors have tremendous impacts on administrative machinery. It is understood that public administration at any level of government is in a causal relationship with its ecology. Investigating the ecology of public administration is a useful way to understand policy process and the values placed by public organizations/officials upon a program within their jurisdiction. Change is the major concern of ecological approach because it has important impacts on the balance of power, decision-making and resources allocation. Urbanization would accelerate the changes of ecological factors which in turn would alter the use of resources. All these would exert new demands upon existing government and its urban administration. In order to provide steady support to those changes, it requires an atmosphere in which political leadership, the integration of policies at various levels, and skilled public personnel to be established. Using the case of Penang state of Malaysia, this article investigates the interactions between Penang administrative machinery and its ecology which give impacts to its new affordable housing program. Focus group discussion and in-depth interviews were conducted to elicit primary data with key informants. Secondary data from literature survey was used to position the research within the context of Penang. Findings show that the creation of the new urban program was a response to the ecological changes of Penang. Results also indicate that the ecological changes have great impacts on public officials' behavior in administering the new program. The article ends with a discussion of implications of these findings for research and practice.

1. The ecology of public administration, urbanism and affordable housing

Public administration embedded in a system which involves complex relationships between human institutions, human behavior and its ecology.¹ In order to deliver its product/service to meet the public needs, the interdependence and interactions which exist between public administration and its environment need to be fully understood. This type of interaction and interdependent relationship is the emphasis of ecological theories. Basically, ecological theories describe interactions between organisms and their environment. Public administration as the main tool to achieve government's goals, effects and reacts with the ecology of its state. Otherwise stating, ecological approach to public administration emphasizes on the importance of administrative system which it interacts and operates in. The interactions between a public organization with different socio-political systems and stakeholders of its

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¹ Briefly, ecology refers to relationships and interactions of living organisms in its surrounding environment; while environment refers to the surroundings. However, both of the terms are interchangeable throughout this writing since our focus is on the interactions between public organisation and its surroundings.

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environment inevitably would affect its administrative behavior. Therefore, examining the social and political nature of the ecology of public administration is a useful way to understand policy process and the values placed by public organizations/officials upon the project within their jurisdiction.

The ecological approach of public administration was first introduced by Gaus in 1947. The approach has been actively applied by Riggs (1961, 1962 & 2006) in the wider and newer areas of developmental and comparative public administration. To Riggs, a truly scientific study of public administration must be empirical, nomothetic and ecological. “Empirical, nomothetic and ecological” are the three major trends Riggs (1962) identifies in the comparative study of public administration. The ecological approach—the proposed third trend—emphasizes on interactions between institutions and their environment or contextual factors. As Riggs puts it,

“In modern, transitional societies, there has been a tendency to establish formal political and administrative institutions, but they remain formalistic. That is to say, effective behavior is still determined, to a considerable extent, by traditional structures and pressures, the family, religion, and persisting socio-economic practices. Hence it is possible to understand politics and administration in these countries only ecologically, i.e. by relating these non-administrative factors to the administrative.” (Riggs, 1962, p. 14)

One of the common elements of ecological theories to public administration is the importance of understanding the inter-relationship between political, administrative, social and economic factors. Public officials’ behavior is likely to depend upon the institutional environment in which they are situated in. The interactions of organization with its environment offer explanation on the intertwined of people and/or matters in influencing each other which induce change. Gaus (1947) argues that it is important to merge public administration with the concept of ecology. By so doing, it would help to establish a much novel way of conducting things that is closely linked to the concept of change (Essays, UK, 2018). Change is the major concern of Gaus (1947) in his ecological approach. Change has important impacts on the balance of power, decision-making, resources allocation, and hence institutional and organizational transformation (Bourgon, 2007; Engelstand, 2017; Mahoney & Thelen, 2010). Forester (2019) argues that ecological change is the work of diverse stakeholders, and Steiner (2018) opines that the visualization of the consequences of change is important for (organizational) adaptation over time.

Classic public administration theories emphasize on the separation of politics and policies. The aims are to prevent political interference and avoid corruption/patronage in the implementation of public programs. However, the reality is more complex and the practice of this separation is always difficult. Some argue that political behavior is standard operating behavior in organizations and that public administration is preoccupied with the administrator’s relation to the politics. In view of this, many see organizations as political arenas, where different stakeholders contesting for different agendas in order to achieve their goals and values (Fu, 2012; Mintzberg, 1985; Pfeffer, 1981; Simon, 1967). This idea lends support to Gaus’ argument that people have to fully understand the raw material of politics, i.e. the nature and extent of the demands made upon the machinery of government and the environment in which organization moves in order to understand how public organizations function. Gaus (1947) proposed seven ecological factors that contribute to the “ebb and flow” (p. 9) of public organization functions.

The first factor is people. The changing population demographics of a place from time to time, the changes of the leadership and the distribution of the people of a governmental unit, all explain the origins of public policy and its administration. Many scholars see political support and leadership as powerful driver of policy changes and administrative reform (Capano, 2009; Schwann, 2018; Yang & Pandey, 2008). This idea is consistent with Gaus’ (1947) where he submits that the changes of people, couple with place and (physical and social) technology—the second to fourth ecological factors—would clarify many an issue that is usually expressed in sterile conflicts.

People and place are inextricably interwoven. The movement of people from rural areas to cities produces repercussion in the values of land and building. As for technology, new information and communication technologies (ICT) are transforming every sphere of our life including the aspect of public administration and politics. ICT literacy are said to be increasingly affect the administrative capacity of participating and intervening in the new public administration and democratic spheres (Bourgon, 2007; Eckardt, 2014; Kellner, 2009). ICT is also changing people’s social lifestyle and their social institutions. These include changes from labor-based to knowledge-based labor force, smaller-sized households trending, digital-based lifestyles, new relationships between individuals and groups. Singularly and collectively, they require new balances of forces, and create new forces to ripple through the social order and rearrange human relationships. Engelstand (2017) argues that the continuity of democracy and social institutions requires new modes of operation. This is because stability of a democracy and its administration is anchored in its interactions with technology, social and political institutions.

Urbanization would accelerate the changes of these ecological factors of people, place, physical and social technology. In turn, it would alter the use of resources. In order to provide steady support to those changes, it requires an atmosphere in which political leadership, the integration of national/state/local and corporate policies, and skilled public personnel to be established. All these would exert new demands upon existing government and its urban administration.

The fifth factor is wishes and ideas. According to Gaus (1947), the consciousness of one’s own wishes and ideas would influence his/her political decision. This ecological factor is highly tied to the socio-political context. For instance, if people are aware of a combination of legislative and administrative measures will safeguard their capacity and ability to own house from destruction, this idea will have a coercive effect upon their political action and hence would affect administration in public policy. Public administration is a vehicle for expressing the public’s wishes, ideas and values. It is understood that no electoral system simply reflects voter preferences (Horowitz, 2003). However, voters still hope that legislators they voted into office would be responsive to their values, wishes and ideas. These individuals’ personal values, wishes and ideas are important elements of public opinion which reflects citizens’ preferences on policy over another or vote for one candidate rather than another (Bourgon, 2007; Leeper & Slothuus, 2014).

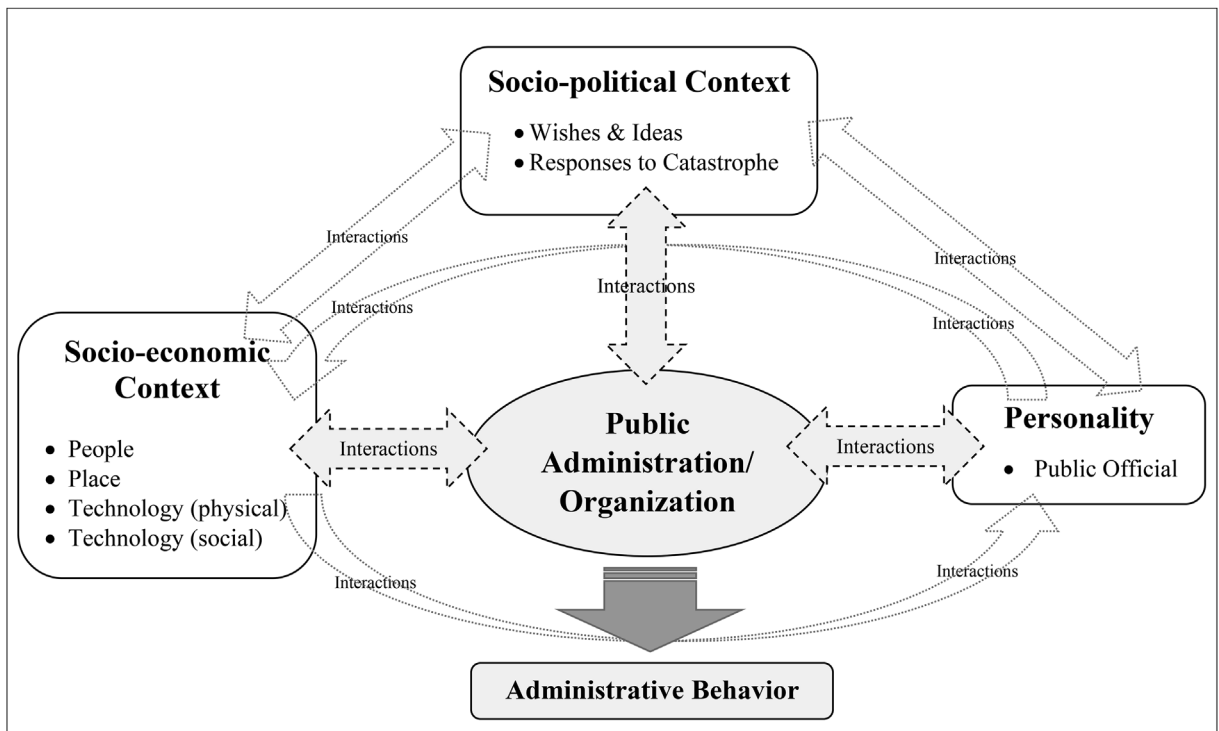


Fig. 1. Interactions of Public administration/organization and its ecology.

Otherwise stating, changes of wishes and ideas would modify the elements of public opinion that affect individuals' behaviors which in turn would alter their demand from the government.

Comprehensive of people's ideas and wishes would help in providing prompt and appropriate responses to catastrophe—the sixth ecological factor. When leadership and knowledge are prepared with long-time programs into which the immediate hurried relief action can be fitted (Gaus, 1947). According to Sutton and Tierney (2006), effective strategies to address catastrophe is a process that based on prior knowledge of capabilities and competencies of all entities designated as having tasks to perform when a disaster occurs. This requires collaboration and understanding on the wishes and needs of local communities, business, and households.

The last factor is personality (Gaus, 1947). Public personnel are the human tool of public administration. Public officials play critical role in decision-making and policy process. They are responsible to provide robust policy analysis, viable policy options and assessments of the impact of various policy alternatives. While performing these functions, non-elected public officials are expected to “speak truth to the power” and give “fearless advice” to their elected superiors (Bourgon, 2007, p. 11). Therefore, public agencies have to equip their organizations with committed personnel. Wise (2000) describes this type of committed individuals as whose motives are stronger than other to perform and act that contribute to the public good. Organizations with committed personnel would adapt faster to the ecology which positively link to their administrative behavior and performance.

Fig. 1 summarizes the ecological factors and their interactions with public administration/organization as above discussed. The dotted-line arrows in Fig. 1 indicate the continuously interactions between public administration/organization and its ecology. The ecological approach is a dual aspect of interacting influences process. Environment and individuals may mutually influence each other in their interactions which in turn would affect administrative behavior.

Many scholars have shown concerns on how environmental or ecological factors affect public administration, public policies, and/or urban management. For examples, Manning, Mukherjee, and Gokcekus (2000) set out an analytical framework to assess the impact of institutional change on public sector performance in 15 countries. Pandey and Wright (2006) investigate the impact of political environment on organizational goal and the role of public manager in the USA; Schoeman and van Rooyen (2006) examine challenges arise from the environment for the functioning of public administration in sub-Saharan Africa; Almeida Scatena and Da Luz (2017) scrutinize the socio-environmental impacts on the development of sustainable culture in the Brazilian public education; Steiner (2018) proposes the use of ecological knowledge to enhance city planning and urban design in Texas; Schwann (2018) inspects the interwoven of ecological wisdom between the natural and built environment in order to develop sustainable and adaptive communities in British Columbia, Canada; Malandrino, Sica and Supino (2019) survey the role of public administration in sustainable urban development of Italy. However, none of the above studies have used ecological approach to research the creation and administration of an urban program, such as affordable housing program. In short, studies on the impacts of ecology on the creation and administration of such urban program as affordable housing are few, if any.

Apart from that, insofar, previous studies on affordable housing in Malaysia are mostly focused on economics, supply-demand and market issues. For examples, Cheah, Almeida, Shukri, and Lim (2017) examine the increase of supply-demand imbalance in the

Malaysian property market; MacDonal (2011) investigates the housing supply and demand trends on house prices and affordability; Osmadi, Kamal, Hassan, and Fattah (2015) explore the elements of housing price in Malaysia; Suraya et al., 2015 inspect the issue of housing affordability in Malaysia from economic perspective. Studies on (affordable) housing outside Malaysia also do not investigate the impacts of ecology on administration of housing. For example, Patterson and Silveman (2011) examine the trends related to fair housing and housing discrimination complaints in New York; Hui, Yu, and Ho (2015) use a market-oriented perspective to investigate housing sustainability in Hong Kong; Mulliner and Maliene (2015) survey sustainable housing affordability from stakeholder's perceptions in the UK; Qian, Chan, and Khalid (2015) investigate transaction costs in the real estate development process of green building in Hong Kong. None has tried to understand affordable housing program from the perspective of the ecology of public administration. This study attempts to fill this research gap.

Studying urban projects (affordable housing) using ecological approach to public administration is important. Cities are political subsystems and most political life occurs in subsystems (Hawley and Lipsky, 1976). The creation and development of affordable housing program in subsystems (cities) not only involve public agencies but also many other stakeholders/individuals which embedded in a wider social system. Therefore, investigating activities and interaction of individuals at the subsystem is an essential effort to better understand the structure of urban power. This understanding would help to unpack the variety of patterns of (political) individuals' dominance in urban projects (housing matters) of the subsystem. Also, since the public service of modern government consumes large public resources, the development of public administration theory and practice should correspondent to the real-world changing environment. Thus, the synergy between public organization and its ecology is a critical requirement for good governance and responsive public administration.

Employing an ecological framework, this study investigates the interactions between Penang state agencies and their environment in the process of creating and administrating Penang state own brand of affordable housing program. The scope of the study is from 2008 until the Malaysian 14th general election which held on 9 May 2018, the day where for the first time Malaysia has witnessed a change of government at federal level since 1957.

2. Methods and research setting

2.1. Case study and sampling

The study utilized qualitative data collection tools. Secondary information was obtained from literature survey to locate the research within a particular social, cultural, and political context. Primary data/information was obtained through in-depth and email interviews, and focus group discussion (FGD).

The study uses Penang state own brand of affordable housing as a case study to unfold the impacts of ecology on the administration of its new urban program. A case study is a suitable design for intensive investigation of a single case for the purpose of comprehensive understanding of a particular issue and/or group of people. One of the advantages of case studies is their ability to accommodate causal relations that capture complex interactions effects and models path-dependent relationships (Bennett, 2007; Gerring, 2013; Hartley, 2004). Therefore, case study method used is deemed appropriate to examine (new) housing phenomenon and how bureaucratic housing management behavior unfolds in the context of Penang state.

Purposive sampling was employed to identify respondents based on their ability to purposefully provide an understanding of the study's research issue. Fifteen key informants have been identified. Thirteen out of them are senior non-elected public officials (bureaucrats), elected public officials, and housing developers. These respondents are a group of elite who are well informed and played important roles in the state affordable housing program hence may offer highly valuable insights in the matter. The other two respondents are affordable housing owners/buyers.

In addition to purposive sampling, snowball sampling was used to collect data from affordable housing owners. Apart from the above elite groups, we would like to listen to stories from the side of affordable housing owners. During the study data collection timeframe, not even one project has been completed, hence, identifying this group of respondent was most challenging. Even though there are lists of confirmed affordable housing buyers, the lists are not release to the public. The two public officials who have agreed to provide us the information did not get back to us after multiple emails and calls. This was the major reason we resorted to snowball instead of purposive sampling for this group of respondent. We managed to identify seven potential respondents from our network. However, only two lower-middle-class earners agreed to participate in our study. From the subtle messages we received from the five upper-middle-class earners who declined our interview invitations, we speculated the main reason for their decline has something to do with the stigmatized image of affordable housing. Such housings have been typically stereotyped as meant specifically for low income earners.

Interviews/FGD were conducted in three phases. First phase was run from October to December 2016. Second phase took place from July to September 2017. The last phase was conducted from January to March 2018. Each session of interview/FGD lasted from 45 min to 90 min. With the consent of respondents, all interviews/FGD were audio recorded. All recordings were transcribed. Content analysis was used to capture relevant themes that emerged in this study.

We are aware that the study's sample were mainly from elite groups (public officials and housing developers). This sample which lacks of diversity is one of the limitations of the study. However, we justified our sample on two facts/constraints. First, Penang state own brand of affordable housing program was in its infancy stage. Second, there was not even one affordable housing project has been completed during the study timeframe. In other words, except those elite groups who have first-hand information, the new urban program might be too new for other stakeholders to knew much about it. Other stakeholders such as affordable housing project management committee, residents of affordable housings, local community (nearby affordable housing projects) and other

stakeholders probably could only offer more meaningful perspective after a few of the affordable housing projects under the program have been completed and occupied by people. This requires another research design.

2.2. Study area: Penang in context

The rate of urbanization of Malaysia has been on the rise. In fact, Malaysia was among the most urbanized countries of East Asia. Statistics show that the urban population in Malaysia has increased from 66% in 2004 to 71% in 2010 and further to 75.5% in 2017. At an average 4% annual growth rate, Malaysia's urban population growth was among the fastest in the region. Among the 13 states of Malaysia, with 90.8% of urbanization level, Penang is one of the most urbanized states in the country (Department of Statistics Malaysia, 2015; Statista, 2019; The World Bank, 2015). This culturally rich Penang is the second smallest Malaysian state by land mass. Ironically as the second smallest state, it is one of the most populated states in Malaysia. The changing population demographic of Penang is astounding and perplexing. With 1,490 persons per square kilometer, Penang ranked second, just behind the country's capital Kuala Lumpur, in terms of population density in 2010 (Department of Statistics Malaysia, 2015). High rate of urbanization, increasing population and rising property prices together with a state of political hostility between the then federal and state governments have worsened the matters of affordable housing in Penang. In order to address the issue, Penang state government has created its own brand of affordable housing program.

Malaysia consists of three-tier level of government namely federal, state and district where local authorities come under state government jurisdiction. Housing in Malaysia is a federal and also state matter. While policies and guidelines for housing provision are formulated at the federal level, land matters are fall within the jurisdiction of state government. According to the Malaysian Constitution, although the federal government is responsible to provide affordable housings, it is the responsibility of state government to identify suitable land/location for the federal affordable housing projects. It short, close cooperation between the federal and state governments are required in providing affordable housing to the low income people throughout the country. This “close cooperation” would be affected if the two levels of government are ruled by rivalry political party/alliance. Penang as a state ruled by the opposition (against the then Malaysian federal government) is a good example to illustrate the case.

Due to the process of urbanization, industrialization and the effect of globalization, ecological changes of Penang in recent years are stunning. Apart from that, Penang has experienced several times of changes of its ruling government—an important ecological factor which would affect administration and management of the state's projects—since Independence. First, Penang was ruled by Malaysia Chinese Association (MCA), a member party of Barisan Nasional (BN). BN is the ruling government at the federal level since 1957 until May 2018. MCA ruled Penang state from 1957 to 1969. Penang was headed by Gerakan in 1969, an opposition party in Malaysia then. Gerakan joined BN in 1973 hence the change of the political environment nature although it was still under Gerakan. The most recent change occurred in the 12th Malaysian General Election (GE12) in 2008 where the mandate of ruling Penang went into the hand of the then opposition coalition Pakatan Rakyat (PR, People's Alliance). Democratic Action Party (DAP), a party member of PR, secured all of its contested seats in the 2008 Penang state elections. Since then, Penang is led by the mainly DAP-ruled state government. The change of ruling power to the hand of the opposition certainly would have impacts on Penang state's governance, resources allocation, policymaking, and its administrative processes.

It is known that the government relies on its administrative machinery to achieve goals. The public administration at any level of government is in a causal relationship with its ecology. Penang state government and its administrative system is no exceptional. Therefore, the several changes of ruling power of Penang surely would determine to a great extent the structure and functioning of its public administration. Interaction with the changes (of its ecology) would enable Penang administrative system to adapt and build up its strength. This in turn is capable of modifying its environment to advantage. The creation of Penang own brand of affordable housing by Penang state government is a good example.

Affordable housing is a growing problem in the land-starved Penang state. Complaints over rising housing prices in Penang are common. With a 6.32 median multiple housing affordability, Penang homes are categorized under “severely unaffordable” in 2016 (Yeap, 2017). Due to land scarcity and the hostile political environment between the then federal and state governments, developing affordable housing has been a constant challenge to the state government. Since GE12, not even one federal affordable housing project has been developed in Penang state by the then federal government (Predeep, 2017). Knowing that affordable housing is a pressing issue in Penang, Penang state government has come out with its new urban program—Penang state own brand of affordable housing—without the (financial) aide from the then federal government. Penang was the first and only state in Malaysia to have established an Affordable Housing Fund to expand the stock of affordable housing in the state (Lim, 2017).

3. Results and discussion

3.1. Socio-economic context: The rapid changing of Penang

Penang consists of two separate areas, namely, Penang island in the Straits of Malacca and Seberang Perai on the mainland of Peninsular Malaysia. These two areas are linked by a ferry system and two bridges. George Town, the capital of Penang, was listed as a UNESCO World Heritage Site in 2008. The listing as a UNESCO Heritage site has brought Penang tourism and other developments to another peak, either as a renowned exotic holiday destination or as an investment location.

Penang has undergone rapid demographic changes since 1970. The state population was only 776,124 in 1970. It increased to 1.72 million in 2016. Penang's average annual population growth rates between 1991 and 2000, and 2001 to 2010 were 2.37% and 3.05% respectively. However, due to a decline in fertility rate, the increase in Penang's population growth rate was mainly the result

of positive net migration (Department of Statistics Malaysia, 2017b, 2015; National Higher Education Research Institute, 2010; Usman & Nik, 2013). Urbanization and industrialization are among the main factors that attract internal migration of adult population from other states to Penang.

Penang, popularly known as the “Pearl of the Orient” was once a vibrant port that attracted a diverse range of traders and travelers during colonial times in the late eighteenth century even though it was later displaced in the international trade with the rise of Singapore. Penang was a free port until the then Malaysian federal government suddenly revoked its free port status in 1969 (Goh, 2014). Subsequently, Penang's economy was reoriented towards hi-tech manufacturing following the decline of entrepôt trade after it lost its free port status. Economic growth in the tiny state has been driven by the dynamism of its manufacturing sector, especially in electronics. The establishment of a free trade zone in Bayan Lepas industrial park has been a base for big-name multinational companies such as Advanced Micro Devices, Agilent Technologies, Clarion, Fairchild Semiconductor, Renesas, Intel, Osram, and Robert Bosch. The industrial zone is a significant pillar of Penang's economy which led Penang to be known as the “Silicon Valley of the East” (investPenang, 2017; Kharas et al., 2010). In order to keep Penang's economy dynamic, apart from manufacturing, investment and innovation also have been made by the state government in “new emerging sector” as efforts to “diversify the economy” of Penang so that it is not “over relying on the electrical and electronic industry” (Personal communication, August 07, 2017).

Innovation and rapid industrial development have transformed Penang into a much sought-after location of choice for investors. In 2009, Penang has been listed as one of the top ten dynamic industrial cluster locations in the world. It also topped Malaysia's manufacturing investment in 2010 and 2011, and remains as one of the top five investment recipient states that attracted foreign direct investments in manufacturing sector in 2015 and 2016. In terms of GDP per capital growth, Penang topped the list in 2014 to 2015. Compared to the country as a whole, Penang's unemployment rate is relatively low and the state's Gini coefficients have been reduced from 0.4119 in 2009 to 0.364 in 2014. Comparatively, these Gini coefficients were lower than the national average (Department of Statistics Malaysia, 2017b& n.d., 2017a; Lim, 2012b & 2016; MIDA, 2016; MITI, 2015; National Higher Education Research Institute, 2010; PSDC, 2015; United Nations, 2009). The changes of demographics together with rapid urbanization and industrialization processes also impact its labor force structure. Consistent with the push for a knowledge-led economy, the number of tertiary-educated workers in Penang increased from 24,300 in 1982 to 210,100 in 2011. In fact, since 1982, the growth of tertiary-educated workforce in Penang is significantly higher than the growth of the total workforce in Malaysia (Penang Institute, 2013). Realizing the importance of talents, apart from nurturing its local workforce, the government has also come out with various policies—one of them is to provide sufficient affordable housing—in order to attract talents from other states and/or countries (Personal communication, August 07, 2017). The availability and abundance of skilled and knowledgeable workforce supports the growth and development of Penang.

Today, Penang is one of the most economically dynamic states in the country and region. Due to its important position in economic growth, various infrastructures have been constructed in order to provide better accessibility between Penang and other parts of Malaysia and the entire world. Penang could be easily accessed through land using the North-South and East-West Expressways or National Railway; through air via the Bayan Lepas International Airport; or through port via the North Butterworth Container Terminal. According to a study on positioning Penang, location is one of Penang's greatest assets (Kharas et al., 2010). In the last few decades, the emerging economies of East Asia and China are adding strength to the global economy with two-thirds of global growth deriving from emerging economies. It is predicted that by 2025, most of the world's middle class would be in Asia (Kharas et al., 2010). With the growth of middle class, a large fraction of consumer purchases and sale of consumer durables will be in Asia. Arguably, locations deemed most successful in the future would be those that fit into regional networks of production that cater to new regional market segments. Penang is considered to be well positioned to leverage on this demand shift.

In sum, industrialization and urbanization have impacted the composition of Penang's ecology structurally and socially. The reshaping of Penang's socio-economics, demographics, together with its strategic location have located the state within an important position in the national spatial system and its ability to integrate into the global economy has transformed Penang from an entrepôt trade port to a hi-tech manufacturing hub. With intensified human capital development to suit the demands of the type of human resources required, the state is moving towards a more knowledge- and technological-based economy. It is clear that all the above changes and transformation emphasized on relationships and interactions that involved the ecological elements of people, place, physical and social technology, which together they created a new environment to public administration and hence would affect administrative behavior of the state agencies.

3.2. Socio-political context: The creation of Penang state own brand of affordable housing

In the 2008 general election (GE12), Malaysia experienced a political tsunami where for the first time the BN ruling government has been denied its two-third majority in the Parliament since 1969. BN also lost its ruling mandate in five states, including Penang. A range of scholars observed that the use of technology assisted the victory of the opposition in GE12. Technology in new media has been widely used by the opposition during the GE12 campaign to overcome a hostile mainstream media. As admitted by the then prime minister that his “biggest mistake” was to ignore cyber-campaigning on the Internet, and this was a “serious misjudgment” of the usefulness of ICT that resulted in the loss of BN in GE12 (“M'sia PM says ‘Big Mistake,’” 2008). Other factors that also have contributed to the political tsunami including the seeming inability of the then federal government to tackle crime, rising frustration over increasing living cost and growing perception of corruption. All these have made the public perceived that leaders of the then ruling party are “arrogance of power” and they “did not listen to the voice of the people” (ASLI, 2008, p. 5). The desire of the public to have good governance and a transparent government was so strong that it brought towards a massive mood swing by the opposition's

promise of change and reform and hence the political tsunami. This is consistent with Gaus' (1947) idea that people's desire (wishes and ideas) will have a coercive effect upon political action. It is also in line with Bourgon's (2007) argument that the growing frustration of citizens has led to declining trust and hence the declining support for ruling power that have been practiced in the past.

Votes in hands are the key tool of the public which they hope would assist the realization of their desire for change. The desire for accountability and good governance of Penangites has facilitated the change of the ruling mandate in Penang via GE12. With the new mandate, the mainly DAP-ruled Penang state government is fully aware of the raw material of politics—the nature and extent of the demands made upon the machinery of government (Gaus, 1947). Therefore, from the beginning, the government has pledged to implement good governance and run its administration with its Competency, Accountability and Transparency (CAT) policy. Speaking at a Transparency International Malaysia talk, the then Penang chief minister said that in order to reinvent the state administration, the government “does not have a choice other than to adopt CAT principles” (“CAT the Key to Reinventing Penang,” 2008). The heat of desire for change continued to the Malaysian 13th general election (GE13) in 2013.

Preconceived housing affordability is one of the major issues that needs to be addressed urgently in Penang, housing tops the lists of the state government's GE13 manifesto, and “Housing for All” was included in its 12-point roadmap for Penang in GE13 (Yeoh, 2013). Fully aware of Penangites' aspiration to have a house in the tiny state, the state government has placed a high emphasis on housing and vowed to achieve a democratization of housing in its political agenda. Therefore, it has put forward a carefully-planned affordable housing program which covered all the five districts of the state. This new urban program which ties the physical and socio-spatial issue (affordable housing in land-starved state) to its political ideology (democratization of housing) has consolidated the support of Penang voters in renewing the ruling power of the mainly DAP-ruled government in GE13.

Political context is significant ecology element that drives change in institutions (Mahoney & Thelen, 2010). The shift of Penangites' desire towards the change of power is also in line with Simon's (1967) idea that modern human relations doctrines—both the people and authority promising good things to each other—have some currency in administrative theory. It is clear that public authorities must be able to adapt to the dynamic and often disruptive changes in its ecology in order to strengthen its ability to reflect today's needs and to anticipate tomorrow's demands (Bourgon, 2007). The awareness towards the people's needs and demands which reflected in the way of the state government maneuvered the pressing physical spatial issue of affordable housing in the GE13 election campaign, has not only helped in enhancing its capacity in managing affordable housing but more importantly won the mainly DAP-ruled state government its political spatial—the second term mandate—in Penang.

In 1970s, when the then state government built up the Free Trade Zone in Bayan Lepas, affordable housing was built for assembly line workers and such schemes were located close to the industrial areas. However, the variables have changed significantly 40 years later following the pace of urbanization and industrialization, and also the change of leadership in the state government. Today, there is a growing young professional class and middle management who are hunting for affordable housing (Chua, 2011). Therefore, it comes as no surprise that providing affordable housing to Penangites is the state government's priority.

Addressing the deficiency related to affordable housing needs cooperation from both the state and federal governments. However, the state government claims that as an opposition state, Penang has been discriminated by the then federal government. For example, the then chief minister accused the BN-ruled federal government takes a punitive attitude towards states governed by political rivals (Lim, 2017). Similar statements have been made by other DAP members. One DAP member slammed the housing ministry for its “complete and disastrous failure” to provide adequate housing for low-income people in Penang (Predeep, 2017); another accused the then federal government “treating the state as an unwanted stepchild” (Zairil, 2015). Two of the elected public officials who participated in this study were also agreed with the above opinions where they do not think that the state government could depend on the then federal government on matters regard to affordable housing (Personal communication, August 07 & August 29, 2017). Therefore, to hold its promise to increase homeownership ratio within the state and knowing that it cannot get much out of the BN-ruled federal government, Penang state government has its official launch of the registration of affordable housing in 2013 and has set a MYR500 million Public and Affordable Housing Fund to build 20,000 units of affordable housing throughout the state (Lim, 2013a; Lim, 2013, b, 2017). In addition to the MYR500 million allocation, the state government also has been working closely together with private housing developers to increase the “[home] ownership of Penangites” to produce “sustainable living” for Penang people (Personal communication, August 07, 2017).

In short, Penang state government is ambitious in executing its affordable housing plans as an effort to achieve its housing democracy aspiration (Lim, 2013b). These wishes and ideas of elected representatives are clearly in line with the aspiration of Penangites to have a roof over their heads in a state where its homes are severely-unaffordable. As it is understood that in any political system the bureaucracy is an instrumental apparatus under the control of the political organization (Bourgon, 2007; Riggs, 1961), hence, the domination of the mainly DAP state executive councilors over public administration in setting and executing public housing project of the state is inevitable.

3.3. Public personnel: Bureaucratic commitment and the public interest

To ensure the state affordable housing program is implemented in the way consistent with the political ideology of the state ruling government, bureaucratic power and loyalty need to be consolidated. The loyalty to the government of the day is clearly shown by all public-official respondents of this study. As high as 71% of this study's public-official informants openly agreed that they are representing their agencies and answerable to the elected (state) government. Most of the informants perceived that following the wishes and ideas of the state government was an important element in performing their duties. As admitted by a head of a state agency in an in-depth interview, he was “answerable to the state government” hence will “always take orders” from the state “Chief Minister only” (Personal communication, October 28, 2016).

Due to the rivalry relationship between the then federal and state governments, informants are very cautious in interacting with those from the opposition parties (here refers to BN alliance partners). One planner said, “We cannot meet the opposition without approval, it is not right.” He thought that the oppositions always have their own agenda and “if the agenda is to make things not happen, they will create story” (Personal communication, November 14, 2016). The terminology “story” somewhat might connotes those from the opposition will purposely mess thing up due to their own agenda. The opinion of the oppositions will bring difficulty or mess things up was echoed by a project manager (Personal communication, November 30, 2016). This type of behavior is hardly surprising as all the informants were bureaucrats from public agencies under the state government. As Riggs (2006) points out, bureaucrat's salary is one of the important elements in the process of consolidation of bureaucratic power. As an architect said, “I am not answerable to the federal government. I don't get money [salary] from them, right? So I don't have to listen to them. I am only taking the queue from the state government.” (Personal communication, October 28, 2016) His view was supported by another architect saying that “We are doing what the state asks us to do” (Personal communication, November 30, 2016). Commitment from bureaucrats is required for realization of the state government's desire to take the lead in developing the state affordable housing. Clearly, the source of bureaucrat's income contributes to this commitment.

However, bureaucratic commitment is not drawn from salary alone. It is also something concerning bureaucrats' personality. Students of public administration believed that individuals with strong desire to serve the public are more inclined to public sector careers where these careers in nature provide more opportunity to best fulfil their value in serving the overall public interest. As Perry (1996, p. 5) argues, “many practitioners and scholars of public administration have long claimed that public service is a special calling.” It is said that an individual's public service motivation is significant to one's job choice, job performance and also would influence organizational effectiveness (Perry, 1996; Perry & Wise, 1990; Wise, 2000). In short, the value of serving the public would guide bureaucrat's behavior. As Riggs (1961) contends, “the bureaucrat is often guided by his opinion of the ‘public interest’, whether that be a just assessment of how administration will affect general welfare, or merely a rationalization for his purely personal convenience or prejudice” (p. 21). Whether it is a *special calling* in Perry's opinion or merely bureaucrats' own *opinion of the public interest* as Riggs terms it, admittedly, this motive to serve the public contributes to the commitment of the study's respondents' behavior in managing affordable housing in Penang. For instance, 86% of the non-elected public-official respondents clearly indicate that they will advocate the interests of the public in performing duties. An administrator thinks that safeguarding the public interest is actually the prime duty of a public official (Personal communication, December 21, 2016). He is definitely not alone. The general manager and deputy general manager of a state agency, an engineer, an architect, a planner, and a project manager from the other two state agencies, all agreed that they were doing something that best served the interest of the *rakyat* (literally means people/citizen) (Personal communication, October 28, November 17, December 02, & December 21, 2016).

The commitment of providing decent affordable homes to Penangites is further boosted as most non-elected public-official respondents not only have good relationship but also shared their elected superiors' aspiration in managing affordable housing. “We have good relationships with all the YBs,” as a planner claimed (Personal communication, November 14, 2016). YB, *Yang Berhormat*, is a Malay term, literally means the honorable. It is a salutation commonly used when addressing Member of Parliament (MP) or State Executive Council (EXCO) in Malaysia. His view is supported by an architect and an administrator where both of them see the EXCOs of the state were “open” to discussion and willing to seek alternatives and solutions when the needs arise (Personal communication, October 28 & December 21, 2016). An administrator considers his department was “lucky” being under the EXCO in charge of housing because the EXCO “himself is a member of the highest decision-making in Penang” hence all conflicts and difficulties “will be streamlined” at higher level meetings (Personal communication, December 21, 2016). In such way, trust and interdependent relationships are built among non-elected and elected public officials and they complement each other in the process of decision-making and execution of affordable housing projects. The above behavior of bureaucrats is echoing the contention of where bureaucrats are also politics creatures as earlier discussed. Seizing up current political ecology in Penang state, this type of response of bureaucrats is hardly surprised.

Of course, developing affordable homes is far from merely providing a shelter. It is also concerning the issues of safety and the principles of place-making and livability, among others. To enhance sustainability and to avoid catastrophe, sufficient institutional resources, leadership, and special knowledge are required in preparing guidelines and long-time programs (Gaus, 1947; Sutton & Tierney, 2006). These required close cooperation between bureaucrats and elected officials. An administrator said his department works closely with the housing EXCO in producing housing policy, guidelines, rules and regulations not only in line with the country's housing acts but also responsive to housing developers and the public. He proudly claimed that when attending meeting with housing officials from other states at the federal level, he found that Penang complies most of the housing rules and regulations set by the federal government. In fact, according to him, Penang “has the strictest” housing guidelines even though the state has been criticized on issues concerning “hilly and reclamation sites” (Personal communication, December 21, 2016). In an in-depth interview, this view was repeated by an architect where he claimed that the state government was practicing transparent open tender. Accordingly, when his department calls for request for proposal for developers to submit their proposals, they “dictate a lot of terms” and “specifications” so that it would be “not much of room for them [developers] to manipulate” (Personal communication, October 28, 2016). The terms sometime were “too stringent,” to use the architect's terms, or “so stern,” to borrow the terms of the administrator, until at a time there were no applicants and they have no choice but to discuss with their EXCOs to relax some of the terms in order to induce applicants (Personal communication, October 28 & December 21, 2016). These kind of interactions is aptly described by Riggs (1961), where “the ‘politicians’ are not fully effective in framing policy, and the ‘administrators’ are scarcely the mere ‘neutral,’ instruments of policy execution” (p. 50). The aforementioned situation displays how the interactions between Penang state agencies with their ecology in influencing administrative behavior while administrating the program.

3.4. Sustainability, diversity and livability

Creating its own brand of affordable housing was the promise. However, the more difficult next step is to materialize the promise. Developing and ensuring sustainability of its own brand of affordable housing is no easy task. Penang state government's MYR500 million allocation to the new urban program is hardly enough especially in the condition where no resources and aid will be provided by the then federal government. In order to ensure the sustainability of its new program, there are two ways to develop affordable housing in Penang, namely through the state's own development or partnership with the private sector. The state government has set forth a requirement where all housing developers have to comply with: at least 30% out of the total units of a housing project have to be low-cost housing. Incentives (higher density and lower development charges) were also granted to developers which build 100% affordable housing (Personal communication, July 19, August 03, August 17, & September 05, 2017; Lim, 2017). By so doing, up to an extent, it encourages the building and the sustainability of its affordable housing program.

The social dimension is one of the foundations of sustainability. Harmonious social relationship within a housing system is definitely relevant to housing sustainability (Chiu, 2004). It is said that a mix opportunity housing opportunities that available to a demographically diverse population with a variety of affordable price points would help to create a sustainable community (Bach et al., 2007). Therefore, in its efforts to promote social inclusion, Penang state government builds five types of affordable housing which cater for people with different levels of income earning. The first two types are Type A and Type B affordable housing which priced at MYR42,000 (USD10,015)² and MYR72,500 (USD17,288) are cater for those with monthly household income not more than MYR2,500 (USD596) and MYR3,500 (USD835) respectively. There are three types of Type C affordable housing which priced at MYR150,000 (USD35,768), MYR200,000 (USD47,690) and MYR300,000 (USD71,535) are meant for those monthly household income not more than MYR6,000 (USD1,431), MYR8,000 (USD1,908) and MYR10,000 (USD2,385) separately (Personal communication, November 30 & December 21, 2016; Penang State Government, 2016). This effort of providing affordable housing with diverse pricings is consistent with the notion of creating a diverse, balanced, and sustainable community with a variety of housing opportunities within a housing system.

The interactions of bureaucrats who are managing the Penang state affordable housing are not only confined to those who are directly related to affordable housing like their immediate superiors (elected representatives), housing developers, Penangites who are demanding a roof over their head, but also with talents who have choices about where to live. Talent availability is a significant component to realize Penang's aspiration in enhancing its international and intelligent city status (Nova Mulia, 2015). In the globalization era where talents have many options as to where to live and work, the links between economic performance of a location, living environment and quality of life have strengthened. Many leading professors and talents prefer a relaxed, cosmopolitan and balanced lifestyle. Hence, the applicability of the livability concept for Penang is a significant condition and also a challenge for Penang to portray itself as the location of choice for global talents. One good index of the desirability of Penang as a location of choice is the index of housing affordability (Kharas et al., 2010). As such, Penang state government cannot afford to ignore the affordability and quality housing availability in the state which is closely related to the concept of livability of a city—an important ecological condition in attracting talents. Therefore, new technology and good housing policy are modelled. For example, in order to deliver quality housing units, the state government has appointed Surbana International Consultants as its consultant for the affordable homes project undertaken by Penang Development Corporation (PDC) in Bandar Cassia, Batu Kawan—the biggest affordable housing project in Penang. Surbana is a premium international building consultant and township developer wholly owned by Temasek Holding with an outstanding record in the development of Singapore and had provided integrated full suite consultancy service for Singaporean public housing (Lim, 2012a).

Conciliating the problems of escalating housing demands and shortages of land on Penang island would require careful planning. Therefore, the creation of Batu Kawan, the third satellite township of George Town, in Seberang Perai is to ease congestion on Penang island. As an informant puts it, “to lessen pressure on the old areas” of the island (Personal communication, December 21, 2016). Accordingly, the Bandar Cassia affordable housing project named as Hijau E-Komuniti is a project based on the concept of affordable quality lifestyle housing that promotes sustainable community living to foster good family values and neighborliness (Lim, 2012a). Hijau E-Komuniti is build based on the green design for Green Building Index where at least “20% of the site is reserved for open space” (Personal communication, November 14 & November 30, 2016), where this is less likely a consideration in earlier period public housing projects. As the head of a state agency admitted, “We need to actually make some changes. We are studying [affordable housing] like in Singapore, [and] in other places. We can see how it works quite efficiently. So, we have to make those changes [happen], otherwise we don't change” (Personal communication, October 28, 2016). This aspiration of the state government in getting new technology and learning from good models in order to produce sustainable affordable housing was echoed by a planner who has been working under the former and current state governments. He said that the concept of sustainability has long been an element in developing Penang, however, “the current chief minister was really stressed on the issue of sustainability” compared to the previous state government (Personal communication, November 14, 2016).

Obviously, in order to provide a conducive and livable condition, the state government, together with its state agencies, is keen on putting efforts in responding to the ever changing ecology in developing its own brand of affordable housing that is in harmony with nature and in tune with technology and changing social needs.

² All calculations in the article were based on the currency exchange rate of 1.00 Malaysian Ringgit equal to 0.24 US Dollar as of 20 December 2019.

4. Concluding remarks and implications

Planning affordable housing and other commercial development projects often involves political conflicts between local/state government and a dominant central government. The conflicts would be intensified if the state and central governments are ruled by rival political parties as shown by the study. In a land-starved island state like Penang, affordable housing becomes a pressing issue for any political party which intends to rule it. Brightly responding to the changing ecology of the Penang state, the mainly DAP-ruled state government made affordable housing topped its political agenda. This move not only sending out the message that they care about the livability of people in Penang but also showing its resiliency in helping Penang people with its own brand of affordable housing under various constraints including being discriminated by the then federal government, as claimed by the state government.

Administrative behavior lies in its setting. In order to manage a new urban program that situated in a very complex situation, public organizations/officials have to be “responsive to fluid, contested, unique setting” (Forester, 2019, p. 12). As evidenced by the case of Penang in this study, the socio-political environment was a force that drove the state government to create its own brand of affordable housing. The environment of the state affects the way in which housing administration is conducted, and administrative action in turn affects the society in which it plays its part. This situation is aptly described by Stillman (2010), where “a conscious awareness of ecological factors permits administrators to respond more wisely to the demands and challenges of the external environment of their organization thus, in the hands of the practitioner, ecology can become a diagnostic tool; it can help in visualizing the major elements in the administrative processes and provide a yardstick for measuring their impact on organization” (p. 79). The consciousness of Penang state government towards the complexity and changes of its ecology has won it the second term of mandate and altered its administrative behavior in managing its affordable housing program.

Developing affordable housing is not an overnight job. Hence, it is still too early to judge if the state has failed or succeeded in having their own brand of affordable housing since the state own brand of affordable housing program is still considered at its infancy. However, as Forester (2019) argues, wisdom grows through interactions. Clearly the state government is keen on maintaining its political spatial and power in Penang state. Viewing from its awareness and sensitivity to the changes of its ecology, there are early signs to show good governance in the state own brand of affordable housing program.

Generally, the study supports the contention that developments taking place in public administration practice are consequences of modifications of the environment of governmental organization where public organization functioning in its environment have to adapt their organizational administration and management to suit the anticipated realities of the environment (Bourgon, 2007; Forester, 2019; Gaus, 1947; Simon, 1967; Steiner, 2018). The interactions of public organizations and its ecology creates some impact upon society, administrators, policymaking and its administration. The study's finding is also in line with other studies where the predictability of professional public administrators in supporting the elected leadership brings advantages in the functioning of the state government's (affordable housing) system and that managerial practice and normative commitment to public organizations are significantly related to political support from elected officials (Yang & Pandey, 2008). The study demonstrates that the awareness of ecological factors permits public administrators respond more appropriately to the challenges arises from the external environment of their organizations.

Some conceptual and policy implications could be noted. Firstly, it enhances our understanding on how the interactions with ecology impacts administrative behavior. As discussed in Section 1, studies on urban management have omitted the importance of public administration ecology in affecting decision-making on urban projects. This study enriches literature reviews on urban studies by adding a new lens to study urban programs. This public administration ecological lens could be utilized to analyze ecological factors which would affect the creation and administration of urban projects and also to analyze the impacts of those projects to its ecology. Future studies probably could replicate this study to research similar issues in other cities in order to shed more light on affordable housing issues in different urban settings.

Second, the study demonstrates the significance of ecological factors in impacting administrative behavior and policy process (in affordable housing program). It is known that both elected and non-elected public officials have significant power in decision-making, resources allocation, and enforce police actions. The study showed that the Penang administrative machinery has been engaging and responding to the changes of its environment by creating its own brand of affordable housing. This move not only helps to increase the opportunity in materializing Penang state government's vision of housing democracy, but more importantly has helped made its ambition to continue rule in Penang a reality. When the global population becomes increasingly urban, public managers and political leaders of cities need to have a better understanding on urban ecology and its administration. This understanding is essential to the making of correct and responsive decision and hence appropriate resources allocation. As demonstrated by this study, incorporated environmental challenges into its decision-making on (new) urban program is a useful way to respond to the real needs of its city dwellers. Practitioners, public managers and political leaders from other cities probably could learn from the case of Penang by identifying new and emerging challenges from their environment to provide more meaningful and practical political commitment (and urban policy) that responsive to the changes of their ecology. Otherwise stating, understanding the complex structure and connections of each element in the ecology enable public administrators play crucial role in enhancing the capacity of managing (new) urban projects. This might help turning public administration into a vital instrument in managing ecosystems for sustainable urban development.

Third, cities are the centers for distribution of socio-economic benefits. However, cities have experienced political problems attending to satisfy the basic social needs of city dwellers such as providing adequate affordables housings and equality of housing opportunities. Therefore, it is interesting to investigate the relationship of (urban) political processes in its ecology and the impact of these processes on the distribution of benefits to urbanites. Comprehension of the political ecology of urban and the structure of urban power would help an administrative system to adapt and seize up opportunity from its ecology to build up strength and

capacities. This would enable it to reinvigorate its (political) commitments and in turn modifies its ecology to its advantage as showed by the case of Penang state government (and its administrative machinery). In short, using public administration as an important instrument, public officials can be active in the wider ecological approach to induce and create change in strategic management and planning of public agencies.

Lastly, public administration purports to serve the public. Political and social reality has changed enough to make obsolete some of the traditional practices of public administration. Given the dynamic ecology of public administration, the need is to capture the various dimensions and complexities of its environment in order to build up administrative capacity and quality public administration. Adjusting the practice of public administration corresponding to its ecology is very importance because the ever-changing real world problems would define and shift demands from the public it served. Ecology in public administration became a vital instrument for comprehending, directing, and modulating the forceful change in the public administration. Therefore, wisely reacting according to the changing environment is not only a useful way for public administrators to strengthen public administration in administrating and managing urban projects, but also an important means for any political party or authority that desired to maintain power and gain political spatial (mandate) from the public (voters).

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References

- Almeida, R., Scatena, L. M., & Da Luz, M. S. (2017). Environmental perception and public policies –dichotomy and challenges to the development of a sustainability culture. *Ambiente & Sociedade São Paulo*, *XX(1)*, 43–64.
- ASLI (2008, March 13). *An analysis of Malaysia's 12th General Election*. Asian Strategy & Leadership Institute <http://www.asli.com.my/DOCUMENTS/An%20Analysis%20of%20Malaysia.pdf>, Accessed date: 7 May 2018.
- Bach, A., Gupta, P. K., Haughey, R., Kelly, G., Pawlukiewicz, M., & Pitchford, M. (2007). *Ten principles for developing affordable housing*. Washington, D.C.: ULI-the Urban Land Institute.
- Bannett, A. (2007). Case study methods: Design, use, and comparative advantages. In D. F. Sprinz, & Y. Wolinsky-Nahmias (Eds.). *Models, numbers, and cases: Methods for studying international relations* (pp. 19–55). U.S.: The University of Michigan Press.
- Bourgon, J. (2007). Responsive, responsible and respected government: Towards a new public administration theory. *International Review of Administrative Sciences*, *73(1)*, 7–26. <https://doi.org/10.1177/0020852307075686>.
- Capano, G. (2009). Political change and Policy change: Some notes on the role of leadership as a theoretical and empirical problem. *Paper presented at the XXI IPSA World Congress of Political Science, 12–16 September 2009* http://paperroom.ipsa.org/papers/paper_323.pdf, Accessed date: 7 May 2018.
- CAT the key to reinventing Penang (2008, September 15). *theSundaily*. <http://www.thesundaily.my/node/163131>, Accessed date: 7 March 2018.
- Cheah, S. L., Almeida, S., Shukri, M., & Lim, L. S. (2017). Imbalances in the property market. *BNM: Quarterly Bulletin*, 26–32.
- Chiu, R. L. H. (2004). Socio-cultural sustainability of housing: A conceptual exploration. *Housing, Theory and Society*, *21(2)*, 65–76.
- Chua, R. (2011, August). *Addressing the housing issue*. penangMONTHLY http://penangmonthly.com/article.aspx?pageid=8049&name=addressing_the_housing_issue, Accessed date: 10 February 2018.
- Department of Statistics Malaysia (2015). *Population distribution and basic demographic characteristics report 2010*. https://www.dosm.gov.my/v1/index.php?r=column/cthem&menu_id=10pheU43NWJwRWVVSZklWdzQ4TlhUUT09&bul_id=MDMxdHZjWTK1SjFzTzNkRXYzcVZjdz09, Accessed date: 28 January 2018.
- Department of Statistics Malaysia (2017a). *Pulau Pinang*. https://www.dosm.gov.my/v1/index.php?r=column/cone&menu_id=SEFobmo1N212cXc5TFLVTVxWUFXZz09#, Accessed date: 7 May 2018.
- Department of Statistics Malaysia (2017b). *Table 6 – Gini Coefficient by ethnic groups, strata and state, Malaysia, 1970-2014*. <http://www.epu.gov.my/en/content/table-6-gini-coefficient-ethnic-group-strata-and-state-malaysia-1970-2014>, Accessed date: 7 May 2018.
- Department of Statistics Malaysia Table 2.6.2: Gross domestic product by state at constant prices (2010 = 100), 2010–2015, Malaysia. <http://www.epu.gov.my/sites/default/files/2.6.2.pdf>, Accessed date: 7 May 2018.
- Eckardt, M. (2014). The impact of ICT on policies, politics, and politics – an evolutionary economics approach to information and communication technologies (ICT). *Andrássy working paper series No. 32*. Budapest: Andrásy Universität Budapest.
- Engelstand, F. (2017). *Social institution in modern democracy*. [http://www.sv.uio.no/iss/forskning/aktuelt/arrangementer/arbeids-og-organisasjonsliv/modern-democracy-and-social-institutions2-\(2\)-\(002\).pdf](http://www.sv.uio.no/iss/forskning/aktuelt/arrangementer/arbeids-og-organisasjonsliv/modern-democracy-and-social-institutions2-(2)-(002).pdf), Accessed date: 5 April 2018.
- Essays, U. K. (2018, November). *Ecology of public administration*. <https://www.ukessays.com/essays/politics/the-public-administration.php>, Accessed date: 3 October 2019.
- Forester, J. (2019). Ecological wisdom through deliberative improvisation: Theory and practice in challenging cases. *Journal of Urban Management*, *8*, 12–19. <https://doi.org/10.1016/j.jum.2018.04.003>.
- Fu, K. J. (2012). *The interaction of politics and management in public leadership: Measuring public political skill and assessing its effects*. Ph.D dissertation College of Social Science and Public Policy, the Florida State University.
- Gaus, J. M. (1947). *Reflection on public administration*. Alabama: University of Alabama Press.
- Gerring, J. (2013). The case study: What it is and what it does. In R. E. Goodin (Ed.). *The Oxford handbook of political science* (pp. 1–40). U.S.: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199604456.013.0051>.
- Goh, D. P. S. (2014). Between history and heritage: Post-colonialism, globalisation, and the remaking of Malacca, Penang, and Singapore. *TRaNS: Trans -Regional and -National Studies of Southeast Asia*, *2*, 79–101. <https://doi.org/10.1017/trn.2013.17>.
- Hartley, J. (2004). Case study research. In C. Cassell, & G. Symon (Eds.). *Essential guide to qualitative methods in organizational research* (pp. 323–333). London: Sage.
- Hawley, W. D., & Lipsky, M. (1976). *Theoretical perspective on urban politics*. New Jersey: Prentice-Hall, Inc.
- Horowitz, D. L. (2003). Electoral systems: A primer for decision-makers. *Journal of Democracy*, *14(4)*, 115–127.
- Hui, E., Yu, K. H., & Ho, V. (2015). Housing sustainability in Hong Kong: A market-based perspective. *Pacific Rim Property Research Journal*, *12(2)*, 146–161. <https://doi.org/10.1080/14445921.2006.11104203>.
- investPenang (2017). Official Website. <http://www.investpenang.gov.my/index.php>, Accessed date: 7 May 2018.
- Kellner, D. (2009). Techno-politics, new technologies, and the new public spheres. <https://pages.gseis.ucla.edu/faculty/kellner/essays/technopoliticsnewtechnologies.pdf>, Accessed date: 8 May 2018.
- Kharas, H., Zeufack, A., & Majeed, H. (2010). *Cities, people and the economy a study on positioning Penang*. Kuala Lumpur: Khazanah Nasional Berhad & the World Bank.
- Leeper, T. J., & Slothuus, R. (2014). Political parties, motivated reasoning, and public opinion formation. *Advances in Political Psychology*, *35(1)*, 129–156. <https://doi.org/10.1111/pops.12164>.
- Lim, G. E. (2012a). Signing MOU with Surbana International Consultants. <https://www.penang.gov.my/en/dmedia/1269-signing-mou-with-surbana-international->

- consultants-, Accessed date: 7 May 2018.
- Lim, G. E. (2012b). Penang investment for 2011. Press Statement by Penang Chief Minister Lim Guan Eng in Komtar, George Town. <https://www.penang.gov.my/kenyataan-akhbar/1333-penang-investment-for-2011>, Accessed date: 7 May 2018.
- Lim, G. E. (2016). Speech by Penang Chief Minister Lim Guan Eng at Penang in the World Conference 2016 at Penang Institute. <https://www.penang.gov.my/en/dmedia/359526-the-penang-in-world-conference-2016>, Accessed date: 7 May 2018.
- Lim, G. E. (2013b). *Penang state government new housing rule*. George Town: Press Statement at KOMTAR. <https://www.penang.gov.my/kenyataan-akhbar/2774-penang-state-government-new-housing-rule> Accessed 30 May 2019.
- Lim, G. E. (2013a). *The official launch of the registration of affordable housing. Official Speech by Penang Chief Minister*. , Accessed date: 30 May 2019.
- Lim, G. E. (2017). *Speech by chief minister at the official launching of housing in Malaysia: Issues, challenged and the way forward forum*. Penang Institute <https://www.penang.gov.my/en/dmedia/359818-the-official-launching-of-housing-in-malaysia-issues-challenged-and-the-way-forward-forum> Accessed 30 May 2019.
- Misia PM says 'big mistake' to ignore cyber-campaign. News Clip <http://heresthenews.blogspot.my/2008/03/m-pm-says-mistake-to-ignore-cyber.html>, Accessed date: 10 February 2018.
- MacDonald, S. (2011). *Supply and demand in the Penang housing market: Assessing affordability*. Penang: Penang Institute.
- Mahoney, J., & Thelen, K. (2010). A theory of gradual institutional change. In J. Mahoney, & K. Thelen (Eds.). *Explaining institutional change: Ambiguity, agency, and power* (pp. 1–37). Cambridge: Cambridge University Press.
- Manning, N., Mukherjee, R., & Gokcekus (2000). Public officials and their institutional environment: An analytical model for assessing the impact of institutional change on public sector performance. *World Bank Policy Research Paper No. 2427* <http://www1.worldbank.org/publicsector/civilservice/wps2427.pdf>, Accessed date: 3 April 2018.
- MIDA (Malaysian Investment Development Authority) (2016). RM88.4 billion worth of investments approved in 1H2016. <http://www.mida.gov.my/home/3265/news/rm88.4-billion-worth-of-investments-approved-in-1h2016/>, Accessed date: 11 January 2018.
- Mintzberg, H. (1985). The organizations as political arena. *Journal of Management Studies*, 22(2), 133–154.
- MITI (Ministry of International Trade and Industry) (2015). Media statement: Investment performance from January - September 2015. <http://www.miti.gov.my/index.php/pages/view/3015>, Accessed date: 3 March 2018.
- Mulliner, E., & Maliene, V. (2015). An analysis of professional perceptions of criteria contributing to sustainable housing affordability. *Sustainability*, 7, 248–270. <https://doi.org/10.3390/su7010248>.
- National Higher Education Research Institute (2010). The state of Penang, Malaysia: Self-evaluation report. *OECD reviews of higher education in regional and city development* <http://www.oecd.org/edu/imhe/regionaldevelopment> Accessed 2 May 2018.
- Nova Mulia (2015, May 15). *Why invest in Penang? Bloomberg interviews CM Lim Guan Eng. Bloomberg* <http://fildan.info/video/view/RyNNe1fYeo/Why-invest-in-Penang-Bloomberg-interviews-CM-Lim-Guan-Eng-Bloomberg.html>, Accessed date: 20 January 2018.
- Osmadi, A., Kamal, E. M., Hassan, H., & Fattah, H. A. (2015). Exploring the elements of housing price in Malaysia. *Asian Social Science*, 11(24), 26–38.
- Pandey, S. K., & Wright, B. E. (2006). Connecting the dots in public management: Political environment, organizational goal ambiguity, and the public manager's role ambiguity. *JPART*, 16, 511–532.
- Patterson, K. L., & Silvevan, R. M. (2011). How local public administrators, nonprofit providers, and elected officials perceive impediments to fair housing in the suburbs: An analysis of Erie county, New York. *Housing Policy Debate*, 21(1), 165–188.
- Penang Institute (2013, November). Statistics. *penangMONTHLY*. <http://penangmonthly.com/article.aspx?pageid=7317&name=statistics>, Accessed date: 7 May 2018.
- Penang State Government (2016). *PN1: Permohonan untuk satu unit Rumah Mampu Milik*. Penang: Penang State Government.
- Perry, J. L. (1996). Measuring public service motivation: An assessment of construct reliability and validity. *Journal of Public Administration Research and Theory*, 6(1), 5–22.
- Perry, J. L., & Wise, L. R. (1990). The motivational bases of public service. *Public Administration Review*, 50, 367–373.
- Pfeffer, J. (1981). *Power in organizations*. Boston: Pitman.
- Predeep, N. (2017). *Lack of affordable homes is BN's failure, Penang tells critics*. FMT <http://www.freemalaysiatoday.com/category/nation/2017/05/18/lack-of-affordable-homes-is-bns-failure-penang-tells-critics/> May 18 Accessed 1 April 2018.
- PSDC (2015). Penang continuously records lower unemployment rate. <http://www.psd.org.my/news-events/latest-news/penang-continuously-records-lower-unemployment-rate/>, Accessed date: 11 March 2018.
- Qian, Q. K., Chan, E. H. W., & Khalid, A. G. (2015). Challenges in delivering green building projects: Unearthing the transaction costs (TCs). *Sustainability*, 7, 3615–3636. <https://doi.org/10.3390/su704361>.
- Riggs, F. W. (1961). *The ecology of public administration*. Bombay: Asia Publishing House.
- Riggs, F. W. (1962). Trends in the comparative study of public administration. *International Review of Administrative Sciences*, 28(1), 9–15. <https://doi.org/10.1177/002085236202800102>.
- Riggs, F. W. (2006). The prismatic model: Conceptualizing transitional societies. *Comparative public administration: The essential readings* (pp. 17–60). . *emeraldinsight*, 9 March 2015 <http://www.emeraldinsight.com/doi/pdfplus/10.1016/S0732-1317%2806%2915002-2> Accessed 15 April 2018 .
- Schoeman, R. E., & van Rooyen, E. J. (2006). The environment in which public administration functions in Sub-Saharan Africa. *Journal of Public Administration, Conference proceedings*, 279–294.
- Schwann, A. (2018). Ecological wisdom: Reclaiming the cultural landscape of the Okanagan valley. *Journal of Urban Management*, 7, 172–180. <https://doi.org/10.1016/j.jum.2018.05.004>.
- Simon, H. A. (1967). The changing theory and changing practice of public administration. In Ithiel de Sola Pool (Ed.). *Contemporary political science: Toward empirical theory* (pp. 86–119). New York: McGraw-Hill.
- Statista (2019). Malaysia: Urbanization from 2007 to 2017. The Statistics Portal. <https://www.statista.com/statistics/455880/urbanization-in-malaysia/>, Accessed date: 22 February 2019.
- Steiner, F. (2018). The ecological wisdom of plan-making. *Journal of Urban Management*, 7, 124–130. <https://doi.org/10.1016/j.jum.2018.04.004>.
- Stillman, R. J., II (2010). *Public administration: Concepts and cases* (9th ed.). MA, USA: Wadsworth.
- Suraya, I., Intan, N. J., & Puteri, M. M. M. (2015). *Making housing affordable*. Kuala Lumpur: Khazanah Research Institute.
- Sutton, J., & Tierney, K. (2006). Disaster preparedness: Concepts, guidance, and research. *Report prepared for the Fritz Institute assessing disaster preparedness conference Sebastopol, California, november 3rd & 4th, 2006*.
- The World Bank (2015, January 26). Malaysia among most urbanized countries in East Asia. <http://www.worldbank.org/en/news/feature/2015/01/26/malaysia-among-most-urbanized-countries-in-east-asia>, Accessed date: 22 February 2019.
- United Nations (2009). *Breaking in and moving up: New Industrial challenges for the bottom billion and the middle-income countries. Industrial Development Report 2009*. United Nations Industrial Development Organization.
- Usman, Y., & Nik, N. F. M. N. (2013). The process and effects of demographic transition in Penang, Malaysia. *Kajian Malaysia*, 31(3), 37–64.
- Wise, L. R. (2000). The public service culture. In J. S. Richara (Ed.). *Public administration: Concepts and cases* (pp. 342–353). Boston: Houghton Mifflin.
- Yang, K., & Pandey, S. K. (2008). How do perceived political environment and administrative reform affect employee commitment? *Journal of Public Administration Research and Theory*, 19(2), 335–360. <https://doi.org/10.1093/jopart/mun002>.
- Yeap, C. (2017, October 16). House prices now at 'severely unaffordable' levels. Housing Watch. <https://www.google.com/search?q=escalating+house+price+in+Penang&ie=utf-8&oe=utf-8&client=firefox-b>, Accessed date: 7 May 2018.
- Yeoh, T. (2013, May). *An election by manifesto. penangMONTHLY*. Penang. Penang Institute http://penangmonthly.com/article.aspx?pageid=6692&name=an_election_by_manifesto Accessed 7 May 2018.
- Zairil, K. J. (2015, July). Penang: Malaysia's stepchild or prodigal child? *penangMONTHLY*. http://penangmonthly.com/article.aspx?pageid=2433&name=penang-malaysias_stepchild_or_prodigal_child?, Accessed date: 7 May 2018.