



Perception of Urban Residents towards Urban Development Impacts in Udon Thani City, Thailand

การรับรู้ของผู้อาศัยในชุมชนเมืองที่มีต่อผลกระทบ จากการพัฒนาเขตเมืองของเมืองอุดรธานี ประเทศไทย

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Abstract

This paper examines perception of urban residents towards urban development impacts in Udon Thani city, Thailand. Quantitative methodological approach was implemented in the study, and unit of analysis is individual level. Population of the study was urban residents who have lived in Udon Thani city, and sample of the study was 384 urban residents, calculated by the *Krejcie and Morgan Table*. Sample was selected by quota sampling method. Interview schedule was applied to the study as research instrument. Descriptive statistics i.e. frequency, percentage, mean, and standard derivation were used to analyze data, and data collection period was during October to December 2017. Research findings indicated that the overall perception of urban residents towards urban development impacts was at a medium level (53.2 percent). Considering by each dimensions, urban residents perceived urban development impact on

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population (43.0 percent), physical development (56.0 percent), economic (68.0 percent), socio-cultural (44.3 percent), and environment (53.8 percent) respectively. However, it appeared that resident's perception towards urban development impacts on civil participation was at a low level (47.5 percent). The study recommended higher level of civil participation in urban development in order to create the sustainability of city development.

Keywords: perceptions, urban residents, urban development, impacts, Udon Thani.

บทคัดย่อ

บทความนี้มีวัตถุประสงค์เพื่อศึกษาระดับการรับรู้ของผู้อาศัยอยู่ในชุมชนเมืองที่มีต่อผลกระทบจากการพัฒนาเขตเมืองของจังหวัดอุดรธานี ประเทศไทย ใช้ระเบียบวิธีวิจัยเชิงปริมาณในการศึกษาและหน่วยการวิเคราะห์ได้แก่ ประชาชนที่อาศัยอยู่ในชุมชนในเขตเทศบาลกรุงอุดรธานี กำหนดกลุ่มตัวอย่าง ได้แก่ ประชาชนที่อาศัยอยู่ในชุมชนในเขตเทศบาลกรุงอุดรธานี กำหนด ขนาดกลุ่มตัวอย่าง ด้วยวิธีการที่ยืดตารางของเครช์และมอร์แกนซึ่งได้ขนาดกลุ่มตัวอย่าง ทั้งสิ้น 384 ราย การสุ่มตัวอย่างได้รับการสุ่มแบบโควตา เครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูล ได้แก่ แบบสัมภาษณ์ ในขณะที่การวิเคราะห์ข้อมูลใช้สถิติเชิงพรรณนา ได้แก่ ค่าความถี่ ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน ระยะเวลาในการเก็บรวบรวมข้อมูลตั้งแต่เดือนตุลาคม 2560 ถึงเดือนธันวาคม 2560 ผลการศึกษาพบว่าการรับรู้ของผู้อาศัยอยู่ในชุมชนเมืองที่มีต่อผลกระทบจากการพัฒนาเขตเมืองของจังหวัดอุดรธานีในภาพรวมอยู่ในระดับปานกลาง คิดเป็นร้อยละ 53.2 เมื่อวิเคราะห์รายด้าน พบว่า การรับรู้ของผู้อาศัยอยู่ในชุมชนเมืองที่มีต่อผลกระทบจากการพัฒนาเขตเมืองทางด้านประชากร ด้านการพัฒนาเชิงกายภาพ ด้านเศรษฐกิจ ด้านสังคมวัฒนธรรม และด้านสิ่งแวดล้อม อยู่ในระดับปานกลาง คิดเป็นร้อยละ 43.0 56.0 68.0 44.3 และ 53.8 ตามลำดับ อย่างไรก็ตาม กลับพบว่าผู้อาศัยในชุมชนเขตเมืองรับรู้ถึงผลกระทบจากการพัฒนาเขตเมืองในมิติการมีส่วนร่วมของภาคประชาสังคมในระดับต่ำ โดยคิดเป็นร้อยละ 47.5 ข้อเสนอแนะจากการ

ศึกษาครั้งนี้จึงให้ความสำคัญกับการเพิ่มการมีส่วนร่วมของภาคประชาชนในการพัฒนาเมืองอุดรธานีให้เกิดความยั่งยืนในการพัฒนา

คำสำคัญ: การรับรู้, ผู้อาศัยในเขตเมือง, การพัฒนาเขตเมือง, ผลกระทบ, จังหวัดอุดรธานี

1. Introduction

Urbanization is a complex circumstance that causes by socioeconomic changes. It is a shift in the economic structure from the traditional economy, which relies on agricultural production, to industrial production that focuses on industrial development (Friedmann, 1986). The changes has caused migration of labor from rural area to urban area, and a huge number of investment in urban area. Industrial development in urban area has become a pull factor that convinces rural workers to enter the manufacturing sector in urban areas (Thongyou et al, 2014; Gordon, 1950). Moreover, poverty circumstance, climate change, and consumerism are push factors that force rural people moving to urban areas. This phenomenon has led to the rapid urbanization. Although, the movement of people from different rural places to urban areas and industrial development has resulted in developments on economics, numbers of problems have taken place such as problems on infrastructure development in urban area, social problems, and environmental problems (Kuvinpanth, 2002)

Urbanization has been introduced to Thailand since the country launched the 7th Economic and Social Development Plan (1992-1996) which focusing on development of cities in regional areas over Thailand in order to distribute development projects to regions and reduced population density in Bangkok (Office of the *National Economic and Social Development Board*, 1992). The plan is an attempt to boost Thailand to become a regional hub of trade and industrialization, and it has resulted in dramatic changes

in the Thai economy and society (Thavinpipatkul, 2008; Glassman and Sneddon, 2003) such as an establishment of Special Economic Zones in border provinces over Thailand (Office of the *National Economic and Social Development Board*, 2018). In addition, urban development in Thailand also concern population issues especially in terms of population density and employment of local population such as a project of establishing eco industrial town which aims to contribute trade and investment opportunities, employment opportunities, and sustainability on environment and economic to local areas (Industrial Estate Authority of Thailand, 2018). According to the 2016 Thai Migration Statistics (National Statistics Office, 2016), number of migrants from northeastern region is 890,000. It is 32.9% of total migrants in the whole country (National Statistics Office, 2016). Migrants from northeastern region mostly move to major cities such as Bangkok and Cholburi, where are full of employment. Those major cities has been facing with a rapid increase of population and the over urbanization, which the economic structure and infrastructure of the city cannot support the rapid growth of population.

Urbanization circumstance provides impacts to the city in various aspects. In positive way, expansion of the city contributes development on trade and investment, economic growth in the city, and physical development, for instance, infrastructure development such as electricity, roads, and public transportation. These developments contribute a good quality of life to urban residents and suburban residents. However, the negative impacts have presented. For instance, an increase of urban density, environmental problems, traffic problems, food insecurity, waste management, and the climate change which is becoming a major issue at global level (Wheeler, 2009). The negative impact to urban areas is a major concern that local government observes closely. To solve the problems, the government

has launched a development policy which focuses on regional development. The policy has been implemented in major cities in each region of Thailand especially in Udon Thani city.

Udon Thani, where is a major city of northeastern region, has been promoted as a hub city of the northeastern region, since the city has located in a center of Indochina region and it has a quality transportation network which connects to other major cities (Phuttharak, 2015). The city currently is growing rapidly due to the advantage of city's location that has made it as the hubs of regional administration, transportation, and finance which represents as the 3rd highest economic growth city in northeastern region, and geographical location that is the center of the Greater Mekong Sub Region Service Complex (GMS). These advantages have boosted Udon Thani city rapidly with various development projects. For instance, the establishment of industrial area, an increasing number of residences in urban area, the expansion of the airport, etc. However, the result of the city development has push Udon Thani city to cope with inevitably impacts especially on the living conditions of residents in urban communities. Urban residents have to deal with various aspect of problems in urban area such as land use change (Promphakping, 2017), resource degradation and pollution (Phuttharak, 2015), high density of population in urban area (Promphakping, 2012), or socio-cultural issues. This article examines perceptions of urban residents towards urban development impacts in Udon Thani city. The study implication could be used as a development guideline for sustainable urban development by focusing on public participation in urban development policy.

2. Literature Reviews

2.1 Urban Development

Concept of urban development has widely implemented in developing countries over the world. The concept contains multi dimensions of development that relate to urbanization (UNHABITAT, 2012; Hopkins, 2001). Urban development appears in various forms, such as infrastructure construction, population growth, and more, and it contributes impacts to places where are considered as urban areas. For instance, migration of rural people to urban areas, or land use changes (Prompakping et al, 2015; Jone, 2002; Childe, 1950). Patterns of urban development are able to identify into three patterns which are 1) Concentric Zone Model (Burgess, 1924); which most of urban activities are presented at the center of urban area such as the Central Business District (CBD). 2) Sector Model (Hoyt, 1964); which each sector of the city composes of activities and population in all sectors that was invariably unnecessary to be concentric zone model, and 3) The multiple node model (Harries and Ullman, 1945); which the center of urban extension did not need to have single center. In other words, large cities were extended not only around the central business district, but also around many areas in the cities.

Regarding impacts of urban development, McGee and Robinson (1995) investigated characteristics and differences of urbanization of countries in Southeast Asia. They suggested that city extension has been growing rapidly, and it has been becoming a problem for the city especially in urban area. The problem affected not only to a major city, but it also to a small city. Several studies revealed impacts of urban development in both positive and negative perspectives (Thongyou, et al, 2014; Prompakping et al, 2013; Rimmer and Dick, 2009; Dijk, 2006). Impacts of urban development have

identified in various dimensions. Mendiola et al (2015) suggested population density is an important factor related to urbanization impact especially on environmental perspective. Moreover urban development has directly effect to the physical changes such as land use change (Prompakphing, 2013) and decreases of farm areas that is consequent to unstable income of households in sub-urban areas (Satterthwaite et al, 2010). Moreover, urban development also has been considered in terms of sociocultural aspect and participation of local community (Duxbury et al, 2016). Culture is essential to shape individual and collective identities of people in urban areas, through culture activity. Culture is used to improve people's quality of life and well-being and enhances life opportunities and options. As conceptual reviews above, this study identified variables which deducted from urban development concept including 1) urban resident factors; sex, age, marital status, family members, education, and health condition (Prompakphing, 2013), and 2) urban development factor; population (Mendiola et al, 2015), physical development (Prompakphing, 2013), civil participation (Phuttharak and Dhiravishit, 2015), economics (Satterthwaite et al, 2010), socio-cultural (Duxbury et al, 2016), and environment (Mendiola et al, 2015).

2.2 Conceptualizing research framework

The study is to explore perception of urban communities on the impact of urban development in Udon Thani city. The study has conducted through a framework of urban development which consisted of 2 main factors including 1) characteristics of urban resident factors; sex, age, marital status, family members, education, and health condition, and 2) urban development factor; population, physical development, civil participation, economics, socio-cultural, and environment. Conceptual framework has presented as below.

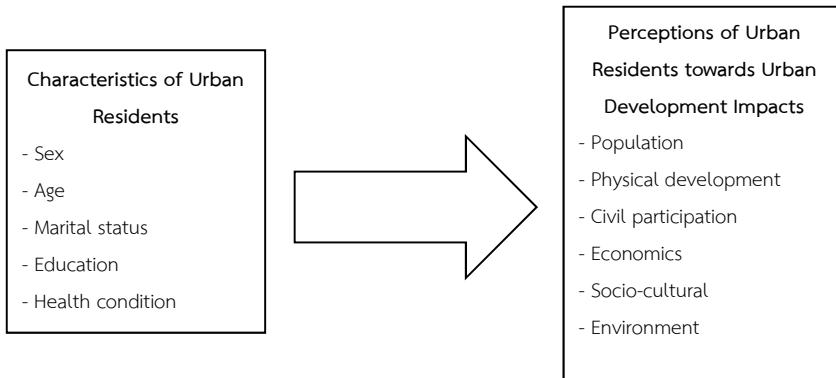


Figure 1 Conceptual Framework

3. Methodology

This paper employed quantitative methodological approach in the study. Population of study was 133,048 residents who have lived in Udon Thani Municipality, and sample size of the study was 384 urban residents. This sample size was calculated by the *Krejcie and Morgan Table* (1970). Sample was selected by quota sampling method. Interview schedule, as a research instrument, was used to collect data. Interview schedule was constructed based on related urban concepts and theories and actual phenomenon, and it comprised of three sets of question including 1) characteristics of respondent, 2) urban development impacts, and 3) perceptions towards urban development impacts. Data analysis applied descriptive statistics to the study such as frequency, mean, and standard derivation, and data collection period was during October to December 2017.

4. Results

Results of the study are divided into two parts including 1) characteristics of respondent, and 2) perceptions of urban residents towards urban development impacts in Udon Thani city.

4.1 Characteristics of urban resident

According to table 1, the results showed that most respondents were female (56.8 percent), while 43.3 percent were male. Most respondents aged between 28 and 48 years old (39.0 percent). Most of them got married (61.0 percent), while 28.5 percent of them had single status. Regarding education, most respondents graduated primary school (44.8 percent) and vocational degree (21.0 percent). In addition, most respondents had other diseases that were not in list (36.9 percent), allergies (20.7 percent), and muscle and bone diseases (18.8 percent) respectively (table 1).

Table 1 characteristics of urban resident

Variables	Frequency (n=384)
1. Sex	
Male	43.3
Female	56.8
Total	100.0
2. Age	
11 – 27	17.8
28 – 48	39.0
49 – 66	29.8
Over 66	13.5

Variables	Frequency (n=384)
Total	100.0
3. Marital Status	
Single	28.5
Married	61.0
Separated/ Divorced/ Widow	10.5
Total	100.0
4. Education	
Primary School	44.8
Secondary School	19.3
Vocational Degree	21.0
Higher Education	15.0
Total	100.0
5. Health Condition	
Allergy	20.7
Cancer	4.7
Muscle and Bone Disease	18.8
Digestion Disease	5.2
Obey	4.3
Stress	4.7
Other	36.9
Non-disease	4.7
Total	100.0

4.2 Perceptions of Urban Residents towards Urban Development Impacts in Udon Thani City, Thailand

Findings on the analysis of perceptions of urban residents towards urban development Impacts in Udon Thani city were presented as following details. Overall, perceptions of urban residents towards urban development Impacts in Udon Thani city was at a medium level (53.2 percent). Considering by aspect, found that perceptions of urban residents towards urban development Impacts on population, physical development, economics, socio-cultural, and environment were at a medium level (43.0, 56.0, 68.0, 44.3, and 53.8 percent respectively), except civil participation which presented as a low level (47.5 percent). The findings reflected that lack of civil participation in urban development of Udon Thani city might obstruct its sustainability of urban development. Many urban development projects were operated by governmental sector and private sector. The urban people was only the receiver, who awaited for development projects, but they could not have chance to participate in development plans (table 2)

Table 2 level of perceptions of urban residents towards urban development Impacts in Udon Thani city, Thailand

Level of Perceptions	Percentage
1. Urban Development Impacts Overall	
Low (score : 4-10)	30.0
Medium (score : 4-10)	53.2
High (score : 4-10)	16.8
Total	100.0 (384)
Mean = 11.0 S.D. = 4.3 Max = 20 Min = 4	
1.1 Population Aspect	
Low (score : 4-10)	41.3
Medium (score : 11-15)	43.0
High (score : 16-20)	15.8
Total	100.0 (384)
Mean = 11.0 S.D. = 4.3 Max = 20 Min = 4	
1.2 Physical Development Aspect	
Low (score : 8-18)	23.5
Medium (score : 19-29)	56.0
High (score : 30-39)	20.5
Total	100.0 (384)
Mean = 23.1 S.D. = 6.6 Max = 39 Min = 8	
1.3 Civil Participation Aspect	
Low (score : 4-9)	47.5
Medium (score : 10-15)	47.3
High (score : 16-19)	5.3

Level of Perceptions	Percentage
Total	100.0 (384)
Mean = 10 S.D. = 3.6 Max = 19 Min = 4	
1.4 Economic Aspect	
Low (score : 7-15)	14.5
Medium (score : 16-23)	68.0
High (score : 24-30)	17.5
Total	100.0 (384)
Mean = 19.7 S.D. = 4.1 Max = 30 Min = 7	
1.5 Socio-cultural Aspect	
Low (score : 8-18)	30.0
Medium (score : 19-29)	44.3
High (score : 30-40)	25.8
Total	100.0 (384)
Mean = 23.1 S.D. = 8.0 Max = 40 Min = 8	
1.6 Environmental Aspect	
Low (score : 5-11)	28.8
Medium (score : 12-18)	53.8
High (score : 19-25)	17.5
Total	100.0 (384)
Mean = 14.2 S.D. = 4.6 Max = 25 Min = 5	

Considering percentage of average score of perceptions on urban development impact by aspect, it was found that urban residents perceived on economic aspect the most (68.0 percent) because living in urban area caused them spending more consumption expenses and cost of living has

been increasing rapidly. Regarding physical development aspect (56.0 percent), urban resident focused on traffic congestion in Udon Thani urban area and waste management. This concern was similar to resident's perception on environmental aspect (53.8 percent) in which the residents concern waste management and water pollution in community. Urban resident's perception on civil perception (47.5 percent) appeared at low level because they thought they should have more participation in urban development as same as government sector and private sector. While resident's perceptions on socio-cultural aspect (44.3) and population aspect (43.0 percent) were less concern but also important as well due to higher population in urban area (figure 1)

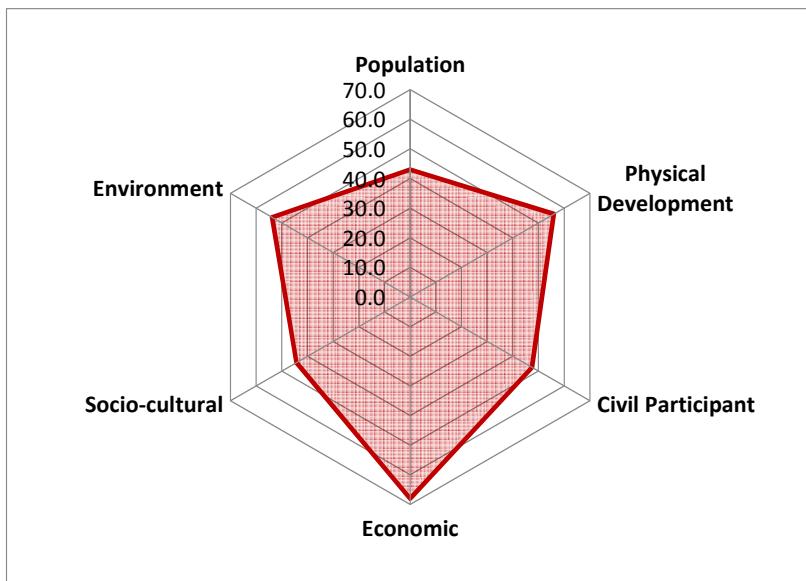


Figure 1 percentage of average score of perceptions on urban development impact by aspect

5. Discussion and Conclusion

Implication of this study is one of essential parts in constructing the sustainable urban development guideline especially for the rapid growth city. The results indicate medium level of urban resident's perception towards urban development impacts. The findings reflect awareness of urban people in urban impacts, which is a key condition for sustainable urban development. It is confirmed by Naipinitth (2013) and Enserink (2007) who suggested the importance of citizens in engaging in urban planning and policymaking, since they are direct stakeholders who get impacts from urban development in both positive and negative ways.

However, at the same time, the findings presented low level of urban resident's perception especially in the issue of participation in urban planning and urban management. It was found that city development plans are often designed by government sector and private sector. People have no chance to get involved. Moreover, urban development stakeholders are facing with the lack of collaboration and low budget allocation issue which obstructs the development. These are factors that slow down the collaboration between government sector, private sector, and civil sector. This findings supports Church and Reid (1996) who reflected effect from a lack of coordination in urban development that caused the community lose opportunity to develop themselves. Therefore, this study recommends increasing civil participation in urban development especially in civil sector to create sustainable urban development. In addition, the study reveals physical development that causes of various development problems such as traffic congestion, ineffective wastewater management system, and land use change issue. These unpleasant problems affect the quality of life of urban residents as same as Prompakping (2013) who found that rapid urban

development without a proper plan would cause negative effects to urban stakeholders such as traffic congestion or flooding in urban area, and it would suffer urban resident especially in mental perspective.

Lastly, although the study finds a medium level of urban resident's perception on development impacts, it is clear that urban residents still need more participation on urban development. Perceiving the impact of urban development is a "voice" of city stakeholders whose attempt to deal with urbanization which invades to their life rapidly (Saeng-arun, 2012; Harvey, 2006). Once urban residents are aware of urban development impacts in both positive and negative ways, they would be able to adjust themselves to deal with urban development effectively. In addition, further research should focus on adaption guideline of urban communities towards urban development. It would be useful for urban stakeholders to understand the impact of urban development and adaptive mechanism in order to deal with urban development sustainability.

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