



## **The Relationship between Age-friendly Cities and Community Development in a Thai Context**

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### **Abstract**

Thailand will reach the era of the elderly in 2021. As a result, the growth of the elderly group becomes critical in terms of capacity development in order to increase the community's level, generate revenue, and establish an economic structure. Therefore, this research investigates the causal relationship between the age-friendly cities and community development that promote the capacity of older people to continue to contribute to their communities. Employing a quantitative-methodology based on a sample of 260 people in Phra Nakhon Si Ayutthaya province, this study examines the relationship between two latent variables (and the observed factors that contribute to them): a city's "age-friendliness" cities and community development. The results show that age-friendliness has a significant effect on community development but that housing does not affect community development, likely because Thai people place more focus on health services for older people more than on residential concerns. The policy suggestion for Thailand government: 1) the government should implement a tax policy to provide relief to private bodies on an exceptional basis. This policy would encourage the private sector to enable older people to join activities or programs that offer unique services and that create a friendly city for older people; 2) the government should involve older people in the policy-making process by providing a platform for them to express their opinions about the public services available to older people in their communities; 3) the government should implement a health insurance policy for older people.

**Keywords:** Age-friendly City, Community Development, Older People

### **Introduction**

Current statistics from the United Nations (UN) show that there are 1 billion older people worldwide (United Nations, 2019b) and more than 0.6 billion in Asia (United Nations, 2019a). These numbers are increasing each year. These figures also indicate that over 50 percent of the total population of older people live in Asia. In Thailand specifically, statistics from the Department of Older Persons at the Ministry of Social Development and Human Security show that the number of older people in 2020 totalled 11,627,130 (Department of Older Persons, 2021). Population data from the Institute for Population and Social Research, Mahidol University, shows that the Thai population stands at 66 million people: older people currently comprise 16 percent of the population, which indicates that Thailand has become an ageing society. Therefore, the Thai government must put policies and guidelines in place to accommodate the management of older people in Thai society in the future. Thailand has formulated the second National Plan for Older Persons (2002–2021), which lays out the guidelines for addressing the concerns that affect the older population. Strategy 1 prepares the population for a high quality of life in old age. Strategy 2 aims to promote and develop the older population. Strategy 3 determines the social protection system for older people. Strategy 4 establishes the integrated national management for the development of older people and their personnel. Strategy 5 relates to the collection, development, and publication of information related to older people, including monitoring and evaluating the implementation of the National Elderly Plan. The state has accelerated the plan in line with these strategies to accommodate the increasing numbers of older



people each year. Yearly increases in numbers will also increase the state's administrative expenditure on older people and older people's services.

Meanwhile, older people often receive a lower income than the younger adult population or no income at all. Most older people do not work, and their income usually consists of state welfare or is provided by their children, who pay monthly. Therefore, many older people lack financial stability and independence. The cognitive issues experienced by older people are valuable that cannot be utilized for social benefits. Moreover, policy problems cannot cover rights, benefits, and facilities that older people will deserve. Consequently, there is an urgent need to solve the problems that affect older people in the community or this situation will have a profound effect on Thailand's future economy. The elderly in the province of Phra Nakhon Si Ayutthaya, some people do not have jobs or live alone with their family, enabling them to participate in recreational activity will make them feel less alone while also generating income. According to Kano, Rosenberg, & Dalton (2018, Abstract) examined in 2014–2015, a global pilot study of age-friendly city indicators was conducted by conducting studies in 15 communities through 12 countries. The physical background and social climate, as well as the quality of life and equality, are all factors that contribute to a community being elderly friendly. Both factors obviously have an impact on improving the elder's quality of life as result, reducing the elder's age gap.

This research presents concepts central to an age-friendly city and investigates the factors involved and their influence in improving older people's potential to contribute to community development.

### **Hypothesis**

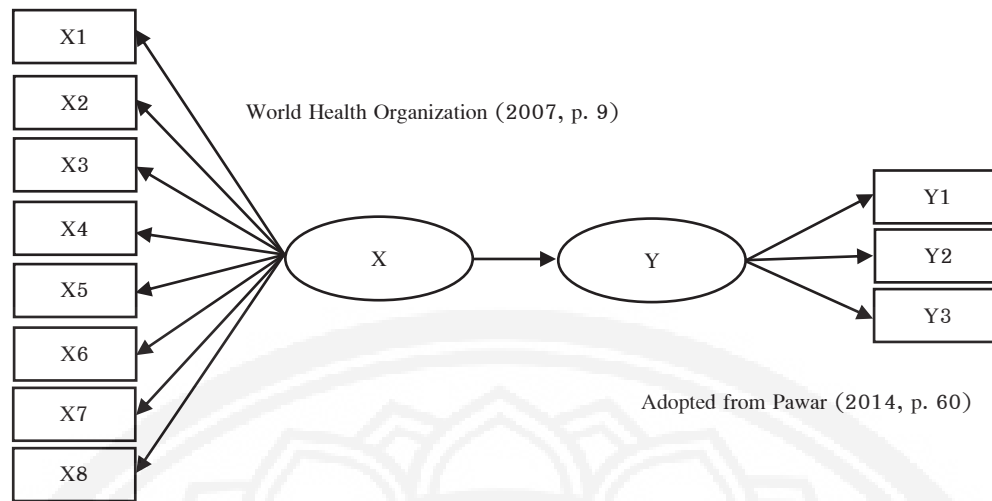
In a Thai context, how do age-friendly cities and community development factors interact?

### **Objective**

To confirm the relationship between age-friendly cities and community development in a Thai context.

### **Conceptual Framework**

This research is founded on the concept that age-friendly cities, characterised by specific government strategies, will result in an increased ability of the older population to contribute to community development (Figure 1, Table 1). The factors related to community development in this model were limited to three main observed variables: political, social, and economic development. Therefore, the researcher reviewed the literature that variables were diverse and close to each other so the synthesized was used to compile them for clarity. This research seeks to further investigate the merits of this concept in response to recent changes in Thailand's demographic structure. The model is shown in Figure 1.



**Figure 1** Hypothesized.

**Table 1** Symbols for Meaning on Figure 1

Symbols for Meaning in the Conceptual Framework			
X	=	A City's Age-friendliness	X7 = Communication and Information
X1	=	Outdoor Spaces and Buildings	X8 = Community and Health Services
X2	=	Transportation	Y = Community Development
X3	=	Housing	Y1 = Cultural Development
X4	=	Social Participation	Y2 = Political Development
X5	=	Respect and Social Inclusion	Y3 = Economic Development
X6	=	Civic Participation and Employment	

### The Literature Reviews

An “age-friendly city” is a concept associated with the desire to make older people’s lives and place in society more comfortable at a number of levels. The World Health Organization has defined the term “active ageing” as a process for enhancing the efficiency of health, participation, and safety to improve the quality of life for all age groups (World Health Organization, 2002, p. 12). The word “active” refers to the continued participation in society, economy, culture, spirituality, and civic affairs. Both individuals and groups can engaging in active aging activities. The term “health” is used in this study to refer to both a person’s physical and mental health. The framework for aiding older people to maintain good health requires improvements in a number of areas, including economics; community and health services; behaviour; personal circumstances; environmental factors; and the social sphere.

The World Health Organization (2007, p. 9) introduces the concept of an age-friendly city with eight key elements: 1) Outdoor Spaces and Buildings, meaning the living space of the elderly is clean. Open and convenient for the elderly; 2) Transportation means that the elderly travel must be comfortable and easily accessible. And punctuality, fair prices, and services that meet the needs of the elderly; 3) Housing means housing should be convenient for the elderly to use. Easily repairable and should be located in prime areas of the city, hospitals, parks; 4) Social Participation, refers to social activities that allow the elderly to participate in social activities; 5) Respect and Social Inclusion, meaning respect for the elderly, not mocking, showing politeness to the elderly; 6) Civic Participation and Employment, means giving the elderly the opportunity to work for society and also they



should receive reasonable compensation to reduce depression; 7) Communication and Information, means the information for the elderly should be clear and easy to understand; and 8) Community and Health Services means treatment facilities for the elderly, hospitals, medical service centers, temples or libraries should be close to the elderly. (corresponding to symbols X1–X8 in Figure 1 and Table 1).

In an age-friendly city involving these eight key elements, older people may have a positive effect on economic growth; in this context, older people remain a resource so an age-friendly city could create jobs appropriate for those in later life.

### **Example Models of Age-friendly Cities**

The researcher studied the World Health Organization's (n.d.) concept of an elderly-friendly city show that many countries have begun to initiate clearer systems that more sustainable with regards to an ageing population. In particular, Japan introduced the idea of building a city supporting older people in Shinagawa City, a ward in the south of Tokyo. Furthermore, Japan has adopted a concept of urbanization that accommodates older people and enhances the working potential of this age group, through a community health systems approach. This is based on the fundamental idea of self-care within the community, with government agencies that support and promote this system. The Preventive Long-term Care Projects help with improving fitness and brain function, as well as help with issues related to food. However, the age-friendly management system in the city also has other essential principles that aim to improve older people's welfare in a state policy context.

Akita City has also introduced several new programs that encourage and motivate older people to go out and participate socially in their communities. For example, a "one-coin" bus service means that seniors can ride the bus at a reduced price. This city transport project was started in 2011 and initially targeted people over 70, before dropping the threshold to 65 years in 2017. Many shops also give discounts and free drinks to anyone showing their seniority certificate. In 2018, 88 NGOs were registered as "Age-friendly Partners", which contribute to making Akita an excellent place for growth for all ages through public-private partnerships. The government agencies are increasingly installing public benches, promoting the employment of older people, and placing automated external defibrillators in offices and nearby areas. Local financial institutions have established an age-friendly city study group: private organizations, universities, research institutes, and local government organizations come together to deal with issues such as population decline, declining birth rates, and the rapid ageing of Akita's population. A citizens group has created a "friendship club" for people aged between 20 and 80 years old to foster friendship between the generations, and thereby strengthen social networks across all ages within Akita City. Their activities encourage intergenerational exchanges, helping older people to be seen as valuable and knowledgeable individuals. The group has created a communal space open to the community residents to meet and participate in the city's activities.

It is clear that Akita is an inclusive city that encourages older people to live more comfortably and values older people's input and knowledge. Cooperation between the public and the private sector is a critical factor in mobilizing the age-friendly city process by encouraging older people to undertake appropriate employment, making Akita a city where society can live harmoniously.

## Methods and Materials

This study aims to determine the factors related to age-friendly cities and older people's potential to contribute to community development, by using Structural Equation Modelling (SEM) to determine the causal relationship between these latent variables and the relative contribution of their associated observed factors to this relationships.

**The Population and Sample Size:** The population of Phra Nakhon Si Ayutthaya city was 141,010 people (Ayutthaya Provincial Office, 2016, p. 13), due to the sampling size principles associated with the statistical analyses used in this study (confirmatory factor analysis and structural equation modelling), a minimum of 200 samples were required, with 10–20 samples per variable (Kline, 2016, p. 16). Thirteen possible variables were found (2 latent variables and 11 observed variables). Therefore, 130–260 (13 x 10 to 13 x 20) samples were needed so this research used samples size at 260. The sampling is convenient method with people in Phra Nakhon Si Ayutthaya province.

**Ethical Approval:** This research was approved on May 25, 2020, COA No. 026/2020, and RREC No. 003/63 by Naresuan University Regional Research Ethics Committee.

### Participant Criteria:

1. The participant must be 20–65 years old, that data from a study group of 20–65 year olds is used to create a conceptual for elder's prospective seniors.
2. The participant must reside in the Muang District, Phra Nakhon Si Ayutthaya district.
3. The participant must be able to read and write in Thai.

**Instrument Validity:** First, the literature discussing the concepts, theories, and principles related to community development and age-friendly cities in other countries was reviewed, as a framework for creating a questionnaire. Second, this questionnaire was submitted to three public administration experts to assess the accuracy score (Index of Item Objective Congruence: IOC) and adjustments were made according to the experts' recommendations. The results of the IOC assessment results have been made available. Third, to assess the questionnaire's reliability the questionnaire was submitted to the Human Research Ethics Committee for a trial endorsement. The questionnaire was trialled with 30 respondents who resembled the sample. The reliability of each variable's question was determined using Cronbach's alpha: the questionnaire had an acceptable level of reliability (results are presented in Table 2).

**Table 2** Reliability of the Questionnaire Using Cronbach's Alpha

Variables	Reliability Level	Interpretation
Age-friendliness of the City	0.87	High
Community Development in the City	0.82	High
<b>Total</b>	<b>0.90</b>	<b>High</b>

**Data Collection:** Questionnaires were distributed to a sample group of participants from across the sample districts. The questionnaire took approximately 15 minutes to complete. If the respondent was unable to read, the researcher read the questions to the participant and filled in the information provided. Next, the researcher read back the completed response to the participant to confirm that the information was accurate.

**Data Analysis:** Structural Equation Modelling (SEM) was used to analyse the results of the questionnaire and Confirmatory Factor Analysis (CFA) was used to confirm that the model followed the statistic principles (Brown,



2015, pp. 71–73; Finch & Bolin, 2017, pp. 184–185; Kline, 2016, pp. 246–278; Harrington, 2009, pp. 52–53). Table 3 shows the SEM criteria.

**Table 3** Structural Equation Modelling Criteria

Criteria	Standard Index
Chi-square Index ( $X^2$ )	> 0.05
Chi-square Index / Degree of Freedom ( $X^2/df$ )	< 2.00
Standardized Root Mean Square Residual Index (SRMSR)	< 0.05
Index the Root Mean Square Error of Approximation (RMSEA)	< 0.05
Tucker-Lewis Index (TLI)	> 0.95
Comparative Fit Index (CFI)	> 0.95

## Results

The hypothesis has been tested. The study's findings were as follows: The elderly-friendly city has a major effect on the urban development. Table 4 details the gender, age, and income of the respondents. Of the 260 respondents, 56.2% were male and 43.8% were female. The majority of respondents, 42.3% were under 39 years old, 15.8% were 40–50, 23.8% were 51–60, 12.3% were 61–65, and 5.8% were over 66 years old. An analysis of the income showed just over 70% received under 15,000 baht per month, with 26.5% receiving no income at all.

**Table 4** The Personal Information of the Respondents (N = 260)

Data	Number	Percent
<b>Gender</b>		
Male	146	56.20
Female	114	43.80
<b>Age</b>		
Less than 39 years	110	42.30
40 – 50 years	41	15.80
51 – 60 years	62	23.80
61 – 65 years	32	12.30
More than 66 years	15	5.80
<b>Income</b>		
Less than 10,000 baht	45	17.30
10,001 – 15,000 baht	69	26.50
15,001 – 20,000 baht	65	25.00
More than 20,000 baht	12	4.60
No income	69	26.50
<b>Total</b>	<b>260</b>	<b>100.00</b>



**Table 5** The Correlation of Viable Test

Variables	X1	X2	X3	X4	X5	X6	X7	X8	Y1	Y2	Y3
<b>X1</b>	-										
<b>X2</b>	.501**	-									
<b>X3</b>	.323**	.493**	-								
<b>X4</b>	.323**	.493**	1.000**	-							
<b>X5</b>	.412**	.414**	.329**	.329**	-						
<b>X6</b>	.215**	.344**	.436**	.436**	.283**	-					
<b>X7</b>	.312**	.422**	.557**	.557**	.415**	.607**	-				
<b>X8</b>	.378**	.502**	.610**	.610**	.357**	.453**	.655**	-			
<b>Y1</b>	.466**	.501**	.473**	.473**	.494**	.379**	.581**	.614**	-		
<b>Y2</b>	.265**	.421**	.558**	.558**	.236**	.481**	.545**	.670**	.600**	-	
<b>Y3</b>	.263**	.371**	.490**	.490**	.276**	.475**	.564**	.604**	.515**	.733**	-

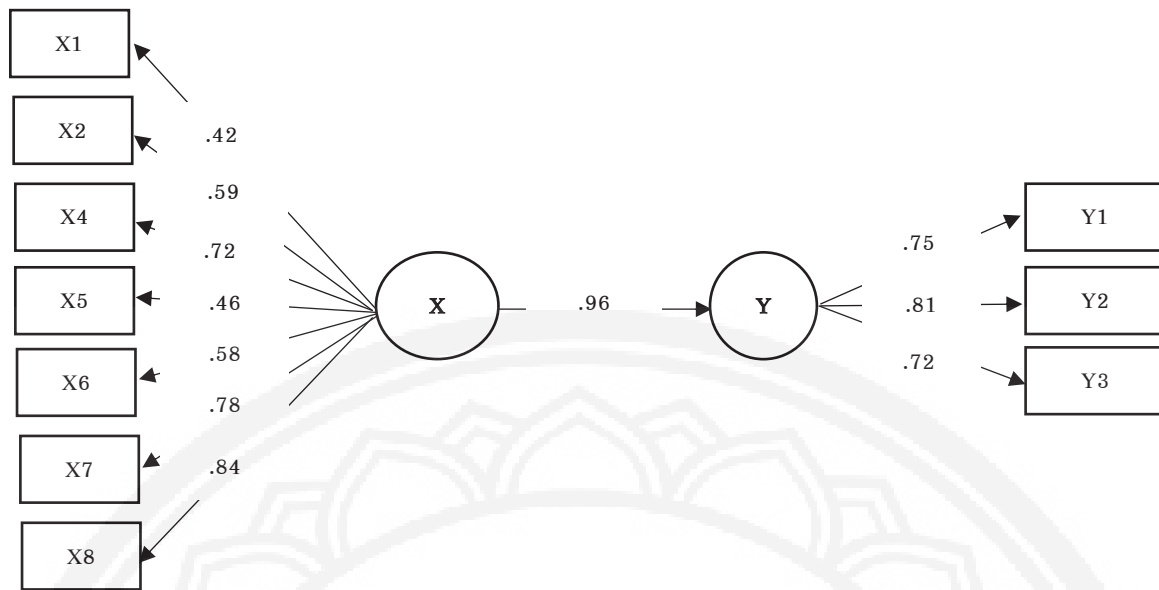
\*\*Correlation is significant at the 0.01 level

Table 5 shows that the results of the correlation test range from 0.215–1.000: all factors were significantly correlated to at acceptable levels, with the exception of housing (X3) and social participation (X4) which were correlated exactly.

**Table 6** The Skewness and Kurtosis Test

Variables	$\bar{X}$	S.D.	SKEW	KUR
X1	4.29	0.51	-0.43	0.02
X2	4.20	0.49	-0.01	-0.77
X3	4.18	0.56	-0.77	1.65
X4	4.18	0.56	-0.77	1.65
X5	4.26	0.54	-0.28	-0.67
X6	4.00	0.60	-0.58	0.65
X7	4.12	0.56	-0.20	-0.27
X8	4.13	0.56	-0.26	-0.44
Y1	4.13	0.53	-0.33	0.36
Y2	4.09	0.67	-0.83	1.53
Y3	4.16	0.64	-0.81	1.08

Table 6 shows the results of the skewness and kurtosis tests, which revealed that all factors were normally distributed: skewness was below 3 (range: -0.01 to -0.83) and kurtosis was below 10 (range: 0.77 to 1.67) for all factors.



Chi-square = 37.18, Chi-square/df = 1.51, df = 25, *p-value* = 0.05, RMSEA = 0.04, CFI = 0.99, TLI = 0.98, SRMR = 0.02

**Figure 2** A Model of the Causal Relationships between a City's Age-friendliness and Community Development.

Figure 2 displays a model of an age-friendly city's causal relationship with community development, which shows that a city's age-friendliness has a strong influence on community development (coef. = 0.96). The results showed that the housing factor (X3) need not be included and it was removed from the final model in order to pass standard SEM criteria.

### Discussion and Conclusion

The result of this study reveal that the age-friendliness of a city strong affects its community development. Those related to social and community cohesion or health services had a particularly large effect. This can be partly explained by the fact that the respondents from the Ayutthaya city community have a significant interest in health. However, a range of factors have been found by previous studies to be essential for elevating a city to an age-friendly city that adequately supports older people. Indeed, this research confirms there are seven factors that contribute significantly to a city's age-friendliness: outdoor spaces and buildings, transportation, social participation, respect and social inclusion, civic participation and employment, communication and information, and community and health services. This finding supports that of van Hoof, Dikken, Buttigieg, van den Hoven, Kroon, & Marston (2020, p. 435), who studied age-friendly cities in the Netherlands and also found that age-friendly cities have a high level of impact on community's development and identified five important factors: information and communication, housing, transportation, public services, community and health services, and outdoor recreation areas. The findings are also consistent with Flores, Caballer, & Alarcón (2019, p. 1), who evaluated the effects of an age-friendly city on life satisfaction. They found that older people in age-friendly cities were more satisfied with their lives and concluded that an age-friendly city design would contribute to the satisfaction of older people living there, and more importantly, reduce their levels of loneliness and isolation. An age-friendly city can also implement to formulate policy for local development to satisfy older people. According to the World Health Organization (2007, p. 9), the elderly friendly city concept proposed eight characteristics of a senior-friendly city. The findings indicate that housing has little importance for the elderly in





the local Ayutthaya area. In the other hand, they mostly focused on health-care services. The research discovered that the elderly prioritize the political development variable because they want to express their group's opinions in order to reflect on government agencies. According to Wongseng & Jadesadalug (2016, pp. 1408-1409), older people can develop communities that require them to participate in social activities in order to express their opinions in community development. It can be concluded that the factors of urban development for the elderly from this study focus on politics to generate greater participation than in any other dimension.

Finally, this research confirms that the age-friendliness of a city strongly impacts the community development in Thailand. However, housing was not found to be a contributing factor, likely because the Thai people in our sample placed greater importance on health services for older people more than on residence.

### **Suggestions**

#### **Policy Recommendations**

1. The government should implement a tax policy to provide relief to private bodies on an exceptional basis. This policy would encourage the private sector to enable older people to join activities or programs that offer unique services and that create a friendly city for older people.
2. The government should involve older people in the policy-making process by providing a platform for them to express their opinions about the public services available to older people in their communities.
3. The government should implement a health insurance policy for older people.

#### **Recommendations for Future Research**

This research investigated only seven initial factors related to age-friendliness and constitutes only a single case study, with a sample population from Mueang Phra Nakhon Si Ayutthaya District. This means that the finding that housing is not an essential factor for older people in Phra Nakhon Si Ayutthaya may not be representative of all of Thailand. Future research should be conducted at a national level, which would ensure that the findings are more generalizable.

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