

## คุณภาพชีวิตของคนไทย: การวิเคราะห์ระดับจังหวัด

### The Quality of Life of Thai People: Provincial Analysis

ศุภเจตน์ จันทร์สาสน์<sup>1</sup>

Supachet Chansarn<sup>1</sup>

#### บทคัดย่อ

งานวิจัยเรื่องนี้มีวัตถุประสงค์เพื่อศึกษาคุณภาพชีวิตของคนไทยในระดับจังหวัดในปี พ.ศ.2548 โดยได้ทำการสร้างดัชนีคุณภาพชีวิตเพื่อวัดคุณภาพชีวิตใน 5 ด้าน ได้แก่ ด้านมาตรฐานการครองชีพ ด้านสุขภาพ ด้านความรู้และการศึกษา ด้านที่อยู่อาศัยและสภาพแวดล้อม และด้านชีวิตครอบครัว ทั้งนี้ข้อมูลของ 75 จังหวัด ไม่รวมกรุงเทพมหานคร ในปี พ.ศ.2548 ได้มาจากแหล่งข้อมูลภาครัฐหลายแห่ง และได้อาศัยวิธีการคำนวณของดัชนีการพัฒนามนุษย์ของ UNDP และวิธีการคำนวณของดัชนีความอยู่ดีมีสุขของสำนักงานคณะกรรมการพัฒนาการเศรษฐกิจและสังคมแห่งชาติ จากการศึกษาพบว่า คนไทยมีคุณภาพชีวิตโดยรวมในระดับปานกลาง อย่างไรก็ตามเมื่อพิจารณาคุณภาพชีวิตตามดัชนีชีวิตแต่ละด้าน พบว่าคนไทยมีคุณภาพชีวิตในด้านมาตรฐานการครองชีพและด้านสุขภาพในระดับต่ำ แต่มีคุณภาพชีวิตในอีก 3 ด้านที่เหลือในระดับสูง นอกจากนี้ยังพบว่าประชาชนในภาคเหนือมีคุณภาพชีวิตโดยรวมต่ำที่สุดในประเทศ ในขณะที่ประชาชนในเขตปริมณฑลมีคุณภาพชีวิตโดยรวมสูงที่สุดในประเทศ สำหรับในระดับจังหวัด พบว่าประชาชนในจังหวัดแม่ฮ่องสอนมีคุณภาพชีวิตโดยรวมต่ำที่สุดในประเทศ ในขณะที่ประชาชนในจังหวัดมหาสารคามมีคุณภาพชีวิตโดยรวมสูงที่สุดในประเทศ

**คำสำคัญ :** คุณภาพชีวิต คนไทย ดัชนีคุณภาพชีวิต

#### ABSTRACT

This study examined the quality of life of Thai people in provincial level in 2005 by constructing the quality of life index under five dimensions which were (1) standard of living (2) health (3) knowledge and education (4) habitat and environment and (5) family life. Data of 75 provinces excluding Bangkok in 2005 were obtained from various official sources and the calculation methods were based on the UNDP's HDI and the NESDB's Well-Being Index. The findings revealed that Thai people had moderate overall quality of life in 2005. After considering quality of life under each dimension, we found that Thai people, in average, had low quality of life in standard of living and health; however they had high quality of life under the other three dimensions. Moreover, our findings indicated that people in northern region had the lowest quality of life in the country while people in vicinity region had the highest quality of life. In provincial level, people in Mae Hong Son had the lowest quality of life while people in Maha Sarakhm had the highest quality of life.

<sup>1</sup> คณะเศรษฐศาสตร์ มหาวิทยาลัยกรุงเทพ ถนนพระราม 4 คลองเตย กรุงเทพฯ 10110

School of Economics, Bangkok University, Rama 4 Rd., Klongtoey, Bangkok 10110

**Keywords** : Quality of Life, Thai People, Quality of Life Index

E-mail : supachet.c@bu.ac.th

## INTRODUCTION

There have been several efforts from researchers all over the world to develop the measurement of the quality of life. Among these efforts are Human Development Index (HDI) and Human Poverty Index (HPI) by the United Nations (UNDP, 2008a and 2008b) and Happy Planet Index (HPI) by New Economic Foundation (Mark et al., 2006). In Thailand, the Office of the National Economic and Social Development Board had developed the Well-Being Index to measure the quality of life of Thai people (NESDB, 2007). However, the Well-Being Index has some disadvantages since it measures the overall quality of life of Thai people only at national level. Note that Thailand is a developing country consisting of 76 provinces which are vastly different in social and economic development levels. The information about the quality of life of Thai people only at national level is not so much useful to the government for planning development policies since it is hard to prioritize development needs of the provinces.

Consequently, this study aimed to examine the quality of life of Thai people in provincial level in the year 2005 by developing an appropriate quality of life index. Moreover, this study examined the quality of life of Thai people in 75 provinces excluding Bangkok, the capital and the largest city. The reason that Bangkok was not included in this study was the unavailability of the required data. However, this exclusion does not matter since it is well-known that Bangkok has long been the largest and most developed city in Thailand. The information acquired from this study will be beneficial for both private and government sectors in taking policies into action of upgrading the quality of life of provincial people. When national people have high quality of life, they are more likely to be the valuable human capital of the nation, leading to the sustainable development afterward.

## PROCESS

### 1. Construction of Quality of Life Index

The quality of life index in this study measured the quality of life of Thai provincial people in five dimensions, totally composed of 14 indicators. All 14 indicators were equally weighted. That is, all indicators were assumed to be equally important to the quality of life. Table 1 presents the dimensions and indicators of the quality of life of Thai provincial people. Data for the calculation of all 14 indicators mentioned above were the data of Thailand's 75 provinces in 2005 which were obtained from various official sources. The data for the 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> indicators were obtained from the National Statistical Office (NSO), the data for the 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 13<sup>th</sup> and 14<sup>th</sup> indicators were obtained from the minimum basic needs survey conducted by Rural Development Information Center and the data for the 3<sup>rd</sup> indicator were obtained from the Bureau of Policy and Strategy under the Ministry of Public Health.

## 2. Analytical Method

First of all, the quality of life index of each component under each dimension of the quality of life was calculated. There are three calculation methods as indicated below.

**Method 1:** It was the calculation method according to the Human Development Index (HDI). It was the proportion of the difference between the actual value and minimum value to the difference between the maximum value and minimum value of the indicator (UNDPa, 2008). The formula was indicated below.

$$(1) \quad \text{Index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

**Method 2:** It was the calculation method according to the NESDB's Well-Being Index. It compared the actual value with the target value. (NESDB, 2007). The formula was indicated below.

$$(2) \quad \text{Index} = \frac{\text{Actual value}}{\text{Target value}}$$

**Method 3:** It was also the calculation method according to the NESDB's Well-Being Index. Like Method 2, it also compared the actual value with the target value. Unlike the target value under Method 2 which was the high target value, the target value under Method 3 was the low target value (NESDB, 2007). The formula was indicated below.

$$(3) \quad \text{Index} = \frac{\text{Target value}}{\text{Actual value}}$$

Maximum values, minimum values, target values and calculation methods for the quality of life index under each component were also presented in Table 1. After the quality of life indices of all 14 components were calculated, the quality of life index of each dimension (totally 5 dimensions) was calculated then by calculating the simple average of the component indices according to the calculation method of HDI (UNDP, 2008a). After the dimension indices were calculated, the overall quality of life index could be determined by calculating the simple average of the five dimension indices. The overall quality of life index of a particular province had the value between 0 and 1.

After the quality of life indices of all 75 provinces were calculated, we would sort the provinces by the indices and group the provinces according to their development level which implied the quality of life of people in the provinces. The consideration criteria was based on UNDP (2008a) as the following.

- A particular province is considered to have low development level if the quality of life index is less than 0.50. People in such a province have low quality of life.
- A particular province is considered to have moderate development level if the quality of life index is not less than 0.50 but less than 0.80. People in such a province have moderate quality of life.
- A particular province is considered to have high development level if the quality of life index is not less than 0.80. People in such a province have high quality of life.

Table 1 Details on the Quality of Life Index

Dimensions	Indicators	Maximum Value	Minimum Value	Target Value	Method
1. Standard of Living	1. Average income (baht/month/person)	37,303	1,242	-	1
	2. Gini Coefficient	-	-	0.249	3
2. Health	3. Infant mortality rate (per 1,000 live births)	-	-	3.0	3
	4. Percentage of healthy people (%)	-	-	100.00	2
	5. Population-doctor ratio (per 1 doctor)	-	-	375.9	3
3. Knowledge and Education	6. Adult literacy rate (%)	-	-	100.00	2
	7. Percentage of children between 6 – 5 years old receiving 9 years of compulsory education (%)	-	-	100.00	2
	8. Percentage of enrollment at high school of children finishing compulsory education (%)	-	-	100.00	2
	9. Student-teacher ratio (per 1 teacher)	-	-	14.85	3
4. Habitat and Environment	10. Percentage of households owning their own housing (%)	-	-	100.00	2
	11. Percentage of households accessing to water supply (%)	-	-	100.00	2
	12. Percentage of households feeling safe and secure (%)	-	-	100.00	2
5. Family Life	13. Percentage of households reporting warm family (%)	-	-	100.00	2
	14. Percentage of households having saving (%)	-	-	100.00	2

**Remark:**

1. Maximum value is the minimum average income of developed country as measured by gross national income per capita (GNI per capita) (World Bank, 2006) which equals 11,116 US dollar per year or 447,641 Thai baht per year (the exchange rate in 2005 is 40.27 THB/USD (BOT, 2007), accounting for 37,303 Thai baht per month).
2. Minimum value is the poverty line of Thailand in 2005 (Thai baht/person/month) (NESDB, 2007).
3. The target Gini coefficient is Gini coefficient of Japan which is the lowest in Asia (UN, 2007).
4. The target infant mortality rate is the infant mortality rate of Japan which is the lowest in Asia (UN, 2007).
5. The target population-doctor ratio is the population-doctor ratio of the United State of America which is one the most advanced countries in public health in the world (U.S. Census Bureau, 2005).
6. The target student-teacher ratio is the student-teacher ratio of the United State of America which has the best education system in the world (U.S. Census Bureau, 2005 and U.S. National Center Education Statistics, 2005).

Note here that the target values presented in Table 1 were based on the figures in 2005, since the data of 75 provinces were in 2005. Moreover, many target values were based on the figures of the World Bank, Japan and the U.S.A., since this study had the primary goal to measure the quality of life of Thai people based on the figures of developed countries. That is, this study will imply the development level which Thailand needs to achieve so that the quality of life of Thai people will be as high as those of people in developed countries.

## EMPIRICAL RESULTS

### 1. The Quality of Life of Thai People at National Level

The quality of life index and the five dimension indices for selected provinces were presented in Table 2. Our findings revealed that in 2005 Thailand had moderate development level and Thai people had moderate quality of life with the average quality of life index of 0.7105. This figure was close to the NESDB's Well-Being Index of 0.764 in the same year (NESDB, 2007). Furthermore, every single province in Thailand had moderate development level in 2005. That is, Thai people, in average, had moderate quality of life.

**Table 2** Quality of Life of Thai Provincial People Categorized by Provinces: Top and Bottom 5 Provinces

Rank	Provinces	Standard of living	Health	Knowledge and Education	Habitat and Environment	Family Life	Quality of Life Index
1	Maha Sarakham	0.5135	0.5419	0.9301	0.9643	0.9625	0.7825
2	Sing Buri	0.3719	0.6219	0.9825	0.9197	0.9440	0.7680
3	Pathum Thani	0.5670	0.5369	0.8935	0.8383	0.9420	0.7556
4	Nakhon Pathom	0.5076	0.4979	0.9065	0.8800	0.9655	0.7515
5	Ayuthaya	0.5455	0.4406	0.8866	0.9220	0.9535	0.7496
71	Rayong	0.3952	0.4446	0.8884	0.6867	0.9090	0.6648
72	Chiang Rai	0.3144	0.4109	0.8669	0.8710	0.8525	0.6632
73	Narathiwat	0.4801	0.3836	0.8288	0.7417	0.8695	0.6607
74	Chiang Mai	0.3568	0.4061	0.8720	0.7590	0.8845	0.6557
75	Mae Hong Son	0.3412	0.4478	0.8039	0.8100	0.7690	0.6344
<b>Average</b>		<b>0.4095</b>	<b>0.4669</b>	<b>0.9052</b>	<b>0.8465</b>	<b>0.9241</b>	<b>0.7105</b>

After considering the quality of life of Thai people under each dimension, we found that, in average, Thai people in 2005 had low quality of life in standard of living and health. According to Table 3, people in no province had high quality of life in standard of living. Table 3 revealed that people in only 10 provinces in Thailand had moderate quality of life in standard of living whereas people in the rest 65 provinces had low quality of life under this dimension. The quality of life under health dimension was also poor. People in only 19 provinces had moderate quality of life and people in 56 provinces had low quality of life in health. Badly, there was no province having high development level under this dimension, implying that no one had high quality of life under health dimension.

**Table 3** Number of Provinces Categorized by Development Level

Development Level	Standard of living	Health	Knowledge and Education	Habitat and Environment	Family Life	Quality of Life Index
High	0	0	75	55	74	0
Moderate	10	19	0	20	1	75
Low	65	56	0	0	0	0

Nevertheless, we found that Thai people, in average, had high quality of life under the rest three dimensions which were knowledge and education, habitat and environment and family life. According to Table 3, every province had high development level in knowledge and education, implying that every one in Thailand had high quality of life under this dimension. Under habitat and environment dimension, people in 55 provinces had high quality of life, whereas people in 20 provinces had moderate quality of life. However, no one had low quality of life under this dimension. Furthermore, people in 74 provinces had high quality of life in family life. There was only one province in Thailand which had moderate development level in family life, indicating that people in such a province had moderate quality of life under this dimension. It was Mae Hong Son.

## 2. The Quality of Life of Thai People at Regional Level

After considering the quality of life of Thai people in regional level which was categorized into 5 regions, vicinity, central, northern, northeastern and southern, according to the National Statistical Office (2004), our findings revealed that people in vicinity region had the highest quality of life in Thailand (see Table 4). Surprisingly, people in northeastern region had the second highest quality of life despite the second lowest quality of life in standard of living as measured by income and income distribution. People in central region had the third highest quality of life, following by people in southern region. Finally, we found that people in northern region had the lowest quality of life in Thailand.

Table 4 Quality of Life of Thai Regional People

Region	Standard of living	Health	Knowledge and Education	Habitat and Environment	Family Life	Quality of Life Index
Vicinity	0.5347	0.4786	0.8874	0.8251	0.9378	0.7327
North East	0.3892	0.4613	0.9083	0.9052	0.9364	0.7201
Central	0.4352	0.4777	0.9106	0.8356	0.9307	0.7180
South	0.4493	0.4659	0.8928	0.7597	0.9204	0.6976
North	0.3442	0.4580	0.9082	0.8701	0.9026	0.6966

People in vicinity region, the only region of which people had moderate quality of life in standard of living, had the highest standard of living as measured by income and income distribution. On the contrary, people in the other regions had only low quality of life in standard of living. People in northern region had the lowest standard of living and those in northeastern region had the second lowest one. Furthermore, people in every region in Thailand had moderate quality of life in health. People in vicinity region had the highest quality of life in health in Thailand. On the contrary, people in northern region had the lowest quality of life in health.

People in every region in Thailand had high quality of life in knowledge and education. People in central region had the highest quality of life under this dimension, whereas those in vicinity region unexpectedly had the lowest one. Our finding also reveals that people in southern region had the lowest quality of life under habitat and environment dimension. It was the only region in Thailand of which people had moderate quality of life under this dimension while people in the other regions had high quality of life. Amazingly, people in northeastern had the highest quality of life in habitat and environment. Under family life dimension, people in every region in Thailand had high quality of life. People in northern region had the lowest quality of life in family life whereas those in vicinity region had the highest quality of life.

### 3. The Quality of Life of Thai People at Provincial Level

The findings revealed that people in Maha Sarakham had the highest quality of life in Thailand in 2005 (see Table 2). People in Sing Buri had the second highest quality of life in Thailand, following by Pathum Thani, Nakorn Pathom and Ayuthaya. Even though people in these provinces had the top 5 highest quality of life in Thailand, none had high quality of life in standard of living and health. People in Maha Sarakham, Pathum Thani, Nakorn Pathom and Ayuthaya had moderate quality of life in standard of living whereas those in Sing Buri had low quality of life under this dimension. Furthermore, people in

Maha Sarakham, Sing Buri and Pathum Thani had moderate quality of life in health while those in Nakorn Pathom and Ayuthaya had low quality of life under this dimension. Nevertheless, people in these five provinces had high quality of life under the other three dimensions which were knowledge and education, habitat and environment and family life.

Table 5 Top and Bottom Provinces for Each Dimension

Rank	Standard of living	Health	Knowledge and Education	Habitat and Environment	Family Life
1	Samut Prakan (0.5710)	Sing Buri (0.6219)	Nonthaburi (0.9825)	Maha Sarakham (0.9643)	Phuket (0.9870)
75	Payao (0.3090)	Narathiwat (0.3836)	Surat Thani (0.8039)	Phuket (0.6820)	Mae Hong Son (0.7690)

**Remark:** The figure in the parentheses is the quality of life index

Our findings also revealed that Mae Hong Son was the least developed province in Thailand in 2005, causing people in this province to have the lowest quality of life in Thailand. After considering the quality of life of people in Mae Hong Son province under each dimension, we found that people in this province had very low quality of life in standard of living and health. Moreover, Mae Hong Son was the only province in Thailand of which people were considered to have just moderate quality of life in family life, (people in the other provinces had high quality of life). However, people in this province had high quality of life in knowledge and education and habitat and environment.

People in Chiang Mai had the second lowest quality of life, following by Narathiwat, Chiang Rai and Rayong. We found that people in these four provinces had low quality of life in standard of living and health. However, they all had high quality of life in knowledge and education and family life. Under habitat and environment dimension, our findings revealed that only people in Chiang Rai were considered to have high quality of life while those in Chiang Mai, Narathiwat and Rayong had just moderate quality of life under this dimension.

After considering the quality of life of Thai provincial people under each dimension (see Table 5), we found that people in Samut Prakan had the highest quality of life in standard of living while people in Payao had the lowest quality of life in standard of living. People in Sing Buri had the highest quality of life in health while people in Narathiwat had the lowest quality of life in health. People in Nonthaburi had the highest quality of life in knowledge and education while people in Surat Thani had the lowest quality of life in knowledge and education. Maha Sarakham had the highest quality of life

under habitat and environment dimension while people in Phuket had the lowest quality of life in habitat and environment. Finally, people in Mae Hong Son had the lowest quality of life in family life while people in Phuket had the highest.

## CONCLUSION

This study may shed more light on which dimension of the quality of life needs the most improvement, which province needs development the most or which region needs development the most. Hopefully, it may be useful to the government in designing social and economic development policies. However, note that this study is not up-to-date since it examines the quality of life of Thai people only in 2005 due to the limitation on data. Therefore, it is not likely that it can correctly reflect the quality of life of Thai people at this moment in 2009, causing the limitation to exploit the study result. Nevertheless, change in the quality of life as well as each component of the quality of life is a matter for long run. Thus the result from this study is considered to be fairly reliable. Moreover, this study has led a fundamental for the government to develop better quality of life index to measure the quality of life of Thai people in national, regional and provincial level in the future.

## REFERENCES

- Marks, N., S. Abdallah, A. Simms, and S. Thomson. 2006. **The Happy Planet Index: An Index of Human Well-Being and Environmental Impact**. London: New Economics Foundation.
- NESDB (Office of the National Economic and Social Development Board). 2004. **Full Report: Sustainable Development Indicators Developing Project**. Bangkok: National Economic and Social Development Board.
- NESDB (Office of the National Economic and Social Development Board). 2007. **Framework, Principle and Measurement of Well-Being of Thai People**. Bangkok: National Economic and Social Development Board.
- Rural Development Information Center. 2006. **Minimum Basic Needs**. Rural Development Information Center, Bangkok [online; cited April 2008.] Available from URL: <http://202.8.85.199/bmn>.
- UNDP (United Nations Development Programme). 2008a. **Human Development Index**. Human Development Report 2007/2008. New York: United Nations.
- UNDP (United Nations Development Programme). 2008b. **Human Poverty Index**. Human Development Report 2007/2008. New York: United Nations.