HAPPINESS IN THAILAND: BASIC NEEDS AND WEALTH IN A CONTEXT OF RAPID CHANGE

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SUMMARY

Thailand has been a global economic success story, transforming from one of the poorest countries in Southeast Asia in the 1960s, to a modern and dynamic nation, and all within the lifetime of the current generation. However, growth has been accompanied by increases of economic inequality that are noticeable in rural communities, urban slums and different regions of the country. In this context of diversity and inequality, it seems particularly interesting to investigate people's wellbeing[1]. Particularly, how traditional measures of material or 'objective' wellbeing relate to people's appraisal of their situation or 'subjective wellbeing'.

This paper investigates the relationship between basic needs as defined by the Theory of Human needs (THN)(Doyal and Gough, 1991) and material wealth with happiness. It focuses on very diverse communities in terms of access to basic services and markets in the South and North-east of Thailand. It confronts the common assumption that at low economic levels, wealth or income matter for people happiness because they increase people's level of basic needs. The research claims that the fact that a broad definition of basic needs such as the THN embraces public, private and relational dimensions of wellbeing results in a sometimes weak relationship between wealth and basic needs. This implies that in settings with low level of basic needs satisfaction, wealth might increase happiness for personal or symbolic reasons; which are almost unrelated to the use of goods as basic needs satisfiers.

INTRODUCTION

Wellbeing is a broad concept embracing from feelings of joy to fulfilment or satisfaction of a given list of capabilities, functionings or needs. The multidimensionality of the term has been usually narrowed down to two apparently opposing approaches; namely the subjective and objective wellbeing perspectives (SWB and OWB hereafter). Scholars in both areas have pointed out the problems faced when trying to link objective measures and individual's perceptions (refer among others to Diener and Lucas 2000; Gasper, 2004); difficulties that have been extensively reported in happiness studies since the work of Easterlin (1974) on happiness and income and have not been resolved by incorporating a wider range of objective measures.

Although income or wealth have been the objective indicators most commonly used by economists, broader measures such as basic needs or capabilities are increasingly employed to assess societies' wellbeing; for example, the United Nations' *Human Development Index*. In the same line, normative theories of the 'good'[2] like the Theory of Human Need (hereafter THN) by Doyal and Gough (1991) offer richer accounts of wellbeing than approaches focused on income or wealth as they incorporate its

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[1] An approach pursued by the Thai government, most recently in the 2007 Human Development Report.
[2] See Clark (2002: 81-92) for a discussion on the several alternative conceptions of the good.

multidimensionality. The THN maintains that physical health and autonomy are universal characteristics from which individuals' wellbeing can be assessed and that those are achieved through the satisfaction of a set of eleven intermediate needs.

In the social science literature there are few attempts to test specific theories of basic needs and its relationship with SWB (refer to Diener et al. 1995; Lelkes 2005 and Guillen and Velazco 2006). Instead of investigating the linkages, social scientists usually assume that at the lower economic levels, basic needs satisfaction and income are both capturing the same aspects of OWB and can be taken interchangeably. This chapter studies whether this is the case in Thailand in a context of striking contrasts between the wealth of modern elite centres and the majority of rural communities (especially in the Northeast); struggles over issues of identity and particularly what constitute 'good' Thai values; and generational challenges where young people are exposed to modern and globalised aspirations, including growing consumerism, while their parents struggle to adjust. Following, previous research on the relationship between income, basic needs and happiness (refer to Diener et al. 1995; Hirata 2001; Frey and Stutzer 2002; Layard 2005 and Guillen Royo 2007 among others) our hypothesis is that wealth and basic needs capture different aspects of people's objective wellbeing and as such have separate effects on happiness.

The analysis is done at two levels: first we carry out a descriptive analysis of the relationship between the three basic indicators of wellbeing, namely material wealth, basic needs and happiness, highlighting how they differ among communities. Then a causal model is developed following the tradition of happiness studies in economics (Van Praag and Ferrer-i-Carbonell 2004, Frey and Stutzer 2002, Graham 2005, Rojas 2005a etc.). We use an Ordered Probit model to study the causal relationship between material wealth and basic needs levels with self-reported happiness.

The structure of the paper is as follows: first we present the background discussion between subjective and objective wellbeing as well as the debate over bridging the two approaches. Second, we introduce the structural characteristics of the Thai communities and the research instrument used to capture subjective and objective wellbeing. Third, we depict the level of basic needs and wealth of the communities and discuss the extent to which they are inter-related. Finally, the model used to analyse the effect of material wellbeing and basic needs levels on happiness is described and the results discussed.

OBJECTIVE AND SUBJECTIVE WELLBEING TRADITIONS

Wellbeing is an umbrella term that usually embraces two distinct approaches: the objective and the subjective. OWB theories often rely on indicators of specific attributes (wealth, morbidity, life expectancy, literacy rates, etc.) and subjective approaches draw from people's appraisals of their own situation, which includes how they think and feel. There are strong arguments to consider both approaches as objective circumstances are not by themselves determining people's wellbeing if the individual concerned does not recognised them as contributors or relevant factors. The complexity of the study of wellbeing is highlighted by Gough *et al.* (2006: 5) when they explain the

Wellbeing in developing countries[3] (WeD), ESRC research group's conception of the term:

> 'We argue here for a conception of wellbeing that takes account of the objective circumstances of the person and their subjective evaluation of these. But both the objective circumstances and perceptions of them are located in society and also in the frames of meaning with which we live. Thus wellbeing is also and necessarily both a relational and a dynamic concept. States of wellbeing/illbeing are continually produced in the interplay within the social, political, economic and cultural processes of human social being. It cannot be conceived just as an outcome, but must be understood also as a process'.

Thus, not only objective measures or perception are important but structures and processes of change should be accounted for. Within this framework, our study draws on three basic approaches. First, the Theory of Human Needs by Doyal and Gough (1991) that has been further developed in the context of WeD to analyse individuals' levels of basic needs in four developing countries. Second, the tradition of the 'economics of happiness' (Frey and Stutzer, 2002) that uses single-item general indicators of people's subjective wellbeing. Third, ethnographic, contextual and WeD Quality of Life work in Thailand to understand the context in which people's wellbeing is analyse and capture its processual characteristics.

The Theory of Human Need (THN) by Doyal and Gough (1991) identifies people's levels of OWB in a much wider sense than approaches based on the economic domain. The authors define a list of needs ranked from universal goals through basic needs to intermediate needs. As universal goals they identify avoidance of serious harm, social participation and critical participation. Physical health and critical autonomy are considered the basic needs. Intermediate needs are the characteristics that human needs satisfiers have to comply with (THN Ch.10) and are grouped into eleven categories: adequate nutritional food and water, adequate protective housing, non-hazardous work and physical environments, appropriate health care, security in childhood, significant primary relationships, physical and economic security, safe birth control and childbearing, and appropriate basic and cross-cultural education (Doyal and Gough, 1991: 202).

In the THN basic needs are considered universal[4] and satisfiers (the goods, services and institutional arrangements used to meet basic needs) depend on the culture and the society in which the individual is living. Although they recognize cultural variety in meeting needs, they stress that basic needs and universal and not subordinated to cultural contexts or personal views and tastes (Gough, 2005). Following the THN, an assessment of the wellbeing achieved by a society or an individual could be done

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[3] The Wellbeing in Developing countries (WeD), ESRC research group at the University of Bath (UK) has carried out research in Bangladesh, Ethiopia, Peru and Thailand from 2002 until 2007. The broad aim of WeD has been to develop a methodological framework for understanding the different dimensions of wellbeing in developing countries and in order to do that they have implemented several research instruments and approaches (see www.welldev.org.uk) from which this chapter has partially drawn.

[4] That basic needs are universal means that if they are not satisfied the individual will suffer from some kind of objective harm.

through indicators of objective need-satisfaction showing the level of satisfaction of the basic needs as well as the performance in terms of intermediate needs[5].

Contrary to objective approaches, SWB research defines wellbeing from people's own appraisals. Generally speaking, SWB can be defined as "people's multidimensional evaluation of their lives, including cognitive judgments of life satisfaction as well as affective evaluations of moods and emotions" (Eid and Diener, 2003:65). In order to capture SWB, researchers usually rely on self-reported questions about happiness or life satisfaction. Increasingly, there has been strong support in development studies for considering individuals' account of SWB as a necessary complement to assessments using objective indicators. It is accepted that people do not only base their behaviour on what is available to them but on what they feel about the different options or constraints that they are facing (Camfield and McGregor, 2005).

Studies on the relationship between subjective accounts of wellbeing and objective measures such as income, consumption or availability of housing, school or health facilities have not always produced the expected results (Gasper, 2005). This is especially the case with regards to the relationship between income or wealth and SWB[6] that has been widely studied since the work of Richard Easterlin's (1974) comparing happiness data and wealth for 23 countries. His striking results indicate that relative and not absolute income might be all that matters, and can be summarised as follows:

- Differences in happiness between poor and rich countries are small and do not show a consistent pattern.

- Despite the economic growth experienced by the US from 1945 to 1970 national average happiness remained constant suggesting that economic growth does not add to people's happiness.

- Within countries richer people are significantly happier than poorer ones.

All his early findings have been challenged by later studies and some have been successfully contested (Veenhoven, 1989; Hagerty and Veenhoven, 2003). For example, within countries, correlations between income and SWB have been found to be only moderately high at the lower economic levels and in the poorest countries (Veenhoven 1991; Diener et. al. 1999; Diener and Lucas 2000; Diener and Biswas-Diener 2002; Biswas-Diener and Diener 2006). This is especially interesting for our research since it is usually argued that income matters for the poor because it gives them the opportunity to satisfy their basic needs. As Argyle (1999: 358) posits 'money makes a great difference in people's quality of life when it is spent of food, housing and other necessities' whilst it does not make such a difference for rich people.

Two issues arise here. First, the assumption that at low levels of income, income is used to satisfy basic needs, which increases SWB. This implicitly associates basic needs with SWB. Second, income is then taken as an indicator of basic needs, which results in confusing the two terms. So far, there have not been many systematic attempts to

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[5] The indicators of need-satisfaction should ideally be related to the *minimum optimorum*, "the minimum quantity of intermediate need-satisfaction required to produce the optimum level of basic need satisfaction" (Doyal and Gough:162).

[6] Refer to Frey and Stutzer (2002), Hirata (2002) and Guillen Royo (2007) for a survey of the literature on income and SWB.

distinguish between basic needs and income or wealth. Diener et al. (1995) used indicators of basic health, safety and survival needs at the national level to study whether income would keep its significance once basic needs were considered. Their results pointed at the significance of the latter. Lelkes (2005) found similar results in a study of SWB determinants in Europe. She included broader measures of 'basic needs' such as labour market participation, education, housing or neighbourhood conditions and social relations. She found that bad health, unemployed and having no friends were negatively affecting people's wellbeing controlling for income. The latter was significantly contributing to happiness, especially for the richest.

Thus, a small body of evidence suggests that even in deprived settings, income or wealth might have implications beyond basic needs satisfaction. Early work on the WeD rural Thai communities by Guillen and Velazco (2006) found that disaggregated indicators of the THN intermediate needs were not significantly explaining happiness when wealth was accounted for. This paper uses an aggregated indicator of unmet needs in order to further explore the linkages between objective measures of wellbeing and SWB in Thailand. It is expected that by investigating the differential impact on happiness of wealth and basic needs, the characteristics of Thai's wellbeing will be better understood.

THE THAI CONTEXT AND THE RESOURCES AND NEEDS QUESTIONNARIE

Thailand's economic success manifests in its consistent growth; especially high during the 'boom years' of the mid 1980s to 1990s, when average growth in GDP was nine percent per annum (Warr, 2005). Economic growth, supported by planned developments in infrastructure and service provision, brought about rapid change, which was only slightly slowed by the economic crisis in 1997. This change encompassed not only the economy, but also social and political structures (for example, the focus on the rights of citizenship in the 1997 Constitution), and its impact has been wide-ranging. Increases in real average incomes reduced overall poverty incidence from 45 percent of the population in 1986, to 10 percent in 2002 (*ibid*.), and caused the growth of an increasingly influential middle class. It was accompanied by increased household access to electricity and piped water, decreasing infant mortality, and rising life expectancy.

These changes were undoubtedly beneficial, but they were achieved through an unbalanced growth strategy, which created 'uneven development' in different sectors and locations (Parnwell & Arghiros, 1996). Poverty reduction appears now to have plateaued, and there are persistent disparities in economic and welfare outcomes between different regions, rural and urban areas, and different population groups. This is especially remarkable in two of the most populated regions of Thailand; the Southern province of Songkhla and the Northeastern area of the country. Together they account for 48% of the Thai population and they show the great diversity of the country in terms of basic infrastructures, public services, natural resources, economic activities and ethnic and religious composition.

 The seven communities investigated in this research were selected by the Wellbeing in Developing countries (WeD) ESRC research group in order to 'give insights into poverty, inequality and quality of life in urban, peri-urban, and rural areas of Thailand' (WeD 2007: 1). Table 1 below shows the main characteristics of the seven communities highlighting its particularities as well as commonalities. Without aiming at

generalisation, the first three sites cover the continuum rural- peri-urban- urban in the South, whilst the other four represent it for the Northeast. The three Southern sites have both Buddhist and Muslims residents whilst the Northeastern counterparts are mainly populated by Buddhists. All villages are involved to a certain extent on agricultural activities, being rubber plantations popular in the south and rice and cassava in the Northeast. The two urban communities have a transient population living on railway land and show the greatest economic inequalities.

Four aspects illustrate the importance of location in the Thai context: household composition, access to government facilities, economic activity and wealth (*ibid.*).

As we move from the rural to the urban sites the number of households headed by women increases and the size of the household decreases. Social networks also weaken due to the nature of our urban samples; which are largely comprised of migrants. Moreover, access to government services such as education and health care also increases as we move towards the urban areas although the use of healthcare services does not. As expected, non-agricultural employment and income increase and labour migration decreases compared to the rural sites which have in turn, a greater access to natural resources and people own more land and livestock. Consumption and wealth are also greater in the urban communities, this is particularly noticeable in the quality of some houses and the type of means of transport used (motorbikes are replaced in some cases by Land cruisers) (*ibid.*).

Table 1. The WeD communities in Northeast and South Thailand

Site name	Region	Number HH	General information
Ban Thung Nam	South (rural)	250	Established over 50 years ago. 300 households. The proportion of Thai Muslims and Thai Buddhists being about 70:30. People engaged in various occupations including rubber production, rice production, animal raising, fruit production, hired labour in rubber plantation and employment in nearby factories. Moderately remote because poor quality roads particularly difficult to negotiate in the rainy season.
Ban Chai Khao	South (peri-urban)	250	Large rural community on the outskirts of Hat Yai city. 400 households. Much of its economic activity still dependent on rubber plantations and fruit orchards, although local factories are an important source of employment for younger people. Its ethnic composition features an equal proportion of Thai Buddhists and Thai Muslims. Access to all government facilities is very good for the community due to its peri-urban location.
Klai Talaad	South (urban)	150	Small urban community, a short walk across the road bridge from Hat Yai. Comprises a prosperous residential community (dating from the 1930s) and a more recent 'slum' alongside the fresh market, which has a disparate, transient, and predominantly poor population. Proportion of Muslims and Buddhists 30:70. Average monthly income is 27,921 THB, but this is skewed by higher incomes on the Western side as the majority of the population work as daily labourers or petty traders. Good access to government facilities, shops, and markets.
Ban Dong	North-east (rural)	198	Located in the middle of Phu Phan Mountain range (reserve forest area), 38km from Mukdaharn Provincial town. 196 households of the village have no property rights in land. Livelihood strategies depend on a mixture of cash cropping (cassava), cattle raising, exploitation of forest products, and migration. This village is a relatively remote community in modern Thailand.
Ban Tha	North-east (rural)	67	Surrounded by a rich variety of natural resources. Most households are rice farmers, but they also exploit other natural resources, as well as migrate to work in modern sectors of the economy. This village is moderately well connected to modern urban centres.
Ban Laow	North-east (peri-urban)	157	15 kilometres away from Khon Khaen town. 190 households Agricultural community but off-farm activities, such as working in factories and on construction sites. Good infrastructure and well-connected to the thriving economy of Khon Kaen town.
Nai Muang	North-east (urban)	150	Congested settlement alongside the railway tracks, which mixes simple one-storey houses, with dilapidated shacks. The community is poorly integrated, as the original inhabitants came from over seven different provinces, and was only officially recognised in 1991. Majority of the population work as daily labourers or petty traders and average monthly per capita income is 8,957 THB. Good access to government facilities, shops, and markets, although the narrow roads become rough during the rainy season.

Source: WeD RANQ data and http://www.welldev.org.uk/research/thailand.htm

The Resources and Needs questionnaire[7]
The analysis of the differential impact of wealth and basic needs on happiness in the Thai communities draws on the WeD Resources and Needs Questionnaire (hereafter RANQ). The instrument was designed to begin the exploration of the social and cultural constructions of wellbeing drawing from the THN among other theoretical approaches. The RANQ was applied in several rural and urban communities within Bangladesh, Ethiopia, Peru and Thailand offering data on basic needs, resources, and

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[7]Refer to http://www.welldev.org.uk/research/methods-toobox/ranq-toolbox.htm

SWB. In Thailand, RANQ collected information from 1,183 households in the seven communities described in table 1 during 2004.

RANQ gathered information on:

- household resources (human, material, natural, social and cultural),
- the level of needs satisfaction by household (income, health, education, food and housing),
- long-term shocks and fortunes, social resources, etc.
- happiness levels and satisfaction with life domains.

Most of the questions of the RANQ are at the household level, but the ones related to personal perceptions, for example, satisfaction with expenditure on food and global happiness, were only addressed to the head of the household.

This paper focuses on the relationship between objective and subjective measures of wellbeing in Thailand; particularly on the different impact of material wealth and basic needs on happiness. *Happiness* is investigated through a three-point scale question asking "Taking all things together, how would you say things are these days? Would you say you are: very happy, fairly happy, not too happy"[8].

Material wealth is approximated through the number of consumer assets owned by the household. RANQ enquires about the assets the household has access to through a predefined list of 51 items classified under transport, electrical consumer goods and other household assets. This is a simple measure of household wealth that has been used in other studies of happiness determinants (see Graham and Pettinato, 2000). More elaborated measures comprise, among others, indicators of quality of the housing and level of education some of which are included here under the intermediate needs deprivation index (INDI) and are constructed following techniques of data reduction such as factor analysis (Sahn and Stiffel 2000; Clarke 2004, 2006).

Basic needs are measured through the INDI, an aggregate indicator of unmet needs at the household level generated by McGregor and colleagues (2006). They computed an index of lack of access to intermediate needs following Desai and Shah's (1988) methodology and drawing on the THN's classification of intermediate needs. Thus, the deprivation index (INDI) is generated as follows.

$$Di = \sum_k I_{ik}$$

Where
$I_k = 1$ if a household is facing a lack of access to the k_{th} intermediate need
$I_k = 0$, otherwise

Household level indicators for 10 intermediate needs of the THN are drawn from RANQ. Those provide information about health services utilisation, nutrition, sanitation and drinking water, housing, education, primary relationships, economic and physical security and safe birth control. Thus, $0 \le Di \le 10$, where an index of 10

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[8] A discussion about the validity of the scales used in happiness studies can be found in Cummins (2003).

would indicate that a household lacks of access to all the 10 intermediate needs and an index of 0 that has access to all of them.

BASIC NEEDS AND WEALTH IN NORTH-EAST AND SOUTHERN THAILAND

Table 2 below shows the indicators of intermediate need satisfaction used to construct the INDI. They are presented by site and with regards to the universal basic need (physical health and autonomy) they contribute to. It illustrates how people are at risk of not having their needs satisfied, primarily their need for physical health. 66% do not make much use of the public health care, especially participants from the rural areas of the North-east. Moreover, 63% of the sample uses unsafe sources of drinking water which again affects strongly the population of the North-east together with the rural South. Food shortages are also threatening people's health in the North-east as it is common to experience scarcity of staple food[9], proteins or fruits and vegetables.

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[9] 24% households suffer from lack of staple food, 10% vegetable proteins, 9.6% animal proteins and 9.2% vegetables and fruits. Food shortages are especially common in Ban Dong where nearly 60% of the households reported experiencing food shortages during the year before the interview, possibly due to its relative remoteness and the poor quality of the agricultural land.

Table 2. Indicators of the THN intermediate needs

THN Basic needs	Domain and indicator	South			North-East				TOTAL
		Rural	Peri-urban	Urban	Rural		Peri-urban	Urban	
		Ban Thung Nam	Ban Chai Khao	Klai Talaad	Ban Dong	Ban Tha	Ban Laow	Nai Muang	
Physical health	*Health Service Utilisation*								
	HH with children under the age of 20 that did not get a polio vaccination *or* HH with member that was ill and did not seek treatment (%)	66.46	61.96	59.46	72.31	70.45	70.64	64.18	66.44
	Nutrition								
	HH with shortage of staple food (%)	6.96	4.91	4.05	59.23	25	38.53	11.94	21.48
	Sanitation								
	HH with sharing/non sharing bucket toilet or no toilet at all (%)	9.49	3.68	-	18.46	2.27	-	2.99	6.44
	Drinking Water								
	HH with well/tube well, water storage jar, pond, spring, river, lake or other (%)	84.18	28.83	22.97	90.77	100	99.08	2.99	62.95
	Housing								
	HH with no electricity (%)	0.61	1.27	1.83	3.85	-	4.05	1.49	1.88
	HH with thatch, reed, bamboo or plastic sheet roof to main dwelling (%)	4.43	0.61	-	3.08	-	-	1.49	1.74
	Safe Birth Control								
	HH that did not receive contraceptives or condoms (%)	96.20	100	100	39.23	52.27	87.16	97.01	83.62
Autonomy	*Basic Education*								
	HH with children that did not attend primary school or all adult members have not completed primary education (%)	28.48	10.43	21.62	25.38	18.18	16.51	26.87	20.81
	Significant Primary Relationships								
	Households that have not spent time with any close relative in the last week	18.99	16.56	25.68	1.54	2.27	2.75	16.42	12.48
	Economic and Physical Security								
	HH facing any type of shock (%)	52.53	61.96	98.65	62.31	86.36	52.29	59.70	63.49
	SAMPLE SIZE	158	163	74	130	44	109	67	745

Indicators of autonomy of agency although portraying a relatively more positive picture show how the high exposure of households to economic shocks threatens stability and diminishes the possibilities of social participation. For example, flooding is a particular problem in Ban Tha and all the sites in the South (especially the urban site where over 90 percent of households were affected) and has changed patterns of settlement, land cultivation, and migration (for example, the significant proportion of people from Ban Tha who now work as taxi-drivers in Bangkok). Regarding education most people have primary schooling although there are still 21% of households that have either adult members that have not completed primary education, or children who are not attending an educational facility. Moreover, illiteracy is still a problem in rural Thailand, the rate being twice that of the population as a whole (8% compared to 4%). This is especially serious in Ban Dong where the illiteracy rate reaches 17%.

Despite the relatively high level of labour migration in the Northeast and commuting in the South (11% travel beyond nearby areas to work), family networks are very strong in rural communities with 88% of the households spending time with relatives during the week prior to the survey. The importance of family relations was clearly underlined in the results of the pilot study in Phase 1 of the WeD Quality of Life study since it was the most cited area by participants as being important for a good life. However, the urban areas of the sample are populated by migrants and show, as expected the highest percentage of households not spending time with close relatives. This points at a perilous trend as progressive migration to urban centres might accelerate the breakdown of meaningful supportive relationships leading to lower self-esteem and emotional strength, which are likely to result in lower autonomy.

In summary the Thai communities present several challenges regarding basic needs satisfaction as defined by the THN. Lack of utilisation of health services, insufficient food and clean water threaten people's physical health[10], especially in the North-east. Autonomy of agency shows a more positive picture although the lack of economic stability, the relatively low literacy levels in the villages and the potentially reduced quality of people's primary relationships in the urban sites underline current and potential risks.

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[10] Table 2 also shows that 84% of the participant households did not receive contraception. This indicator might be underestimating the use of cheap and easy to get methods such as condoms which are common in urban and peri-urban areas.

Table 3 below compares average wealth and intermediate needs deprivation by site. It shows how Thai communities are significantly different with regards to their level of basic needs and material wealth. Concerning wealth, the asset index shows that Ban Dong is the poorest community and that Ban Chai Khao in the South is significantly richer than all but Ban Tung Nam in the South and Ban Tha in the North-east, which present similar levels of asset ownership[11]. Regarding basic needs, a one-way ANOVA indicates that communities also differ (F= 13.392 and p<.001) and that people in Nai Muang and again Ban Chai Khao present a higher degree of basic needs satisfaction than people in Ban Thung Nam, Ban Laow and Ban Dong. This is probably related to good access to public services and infrastructures that in the peri-urban community of the South (Ban Chai Khao) are accompanied by economic progress and in the urban slum of the North-east (Nai Muang) by poverty, insecurity and precariousness. It is interesting to note though, than Ban Dong, the remote community of the North-east, material poverty goes together with a high level of intermediate needs deprivation.

Table 3: INDI and asset by site

			Assets (mean)	INDI (mean)	Total HH (number)
South	Rural	Ban Thung Nam	27.75	3.69	158
	Peri-urban	Ban Chai Khao	29.08	2.90	163
	Urban	Klai Talaad	24.93	3.36	74
North East	Rural	Ban Dong	20.44	3.76	130
		Ban Tha	28.18	3.57	44
	Peri-urban	Ban Laow	25.29	3.69	109
	Urban	Nai Muang	25.27	2.85	67
Total			25.93	3.41	745

In general, a high level of basic needs satisfaction is associated to higher material wealth. However, the INDI and the asset index are only lowly correlated (-.317 at p<.001) and in Klai Talaad and Ban Tha the association is not significant. This might imply the existence of structural constraints that allow material wealth without basic needs satisfaction in Ban Tha, and poverty in some parts of Klai Talad alongside impressive infrastructure as it happens in Nai Muang, the other urban community of the sample.

Finally, happiness and the objective measures of wellbeing are lowly correlated, clearly below than the .45 (p<.05) found by Biswas- Diener and Diener (2001) in their study of deprived people in Calcutta. Here happiness and material wealth show a correlation coefficient of .2 at the .001 level (Spearman correlation coefficient) and the needs deprivation index shows an even lower correlation coefficient (Spearman correlation coefficient of -.1 with p<.001). Among the communities, having a higher level of basic needs satisfied does not matter much for subjective wellbeing. People's happiness seem to increase as basic needs level rise only in Ban Tha (Spearman correlation coefficient -.168 p< .1) and Ban Laow (Spearman correlation coefficient -.341 p<.05) in the North east of Thailand. This is not the case with material wealth, again, in most

[11]A one-way ANOVA (F= 19.876 and p<.001) shows that there exist differences within the sites a post-hoc test (Scheffe) that Ban Dong (p<.001) and Ban Chai Khao (p<.05) are the respectively the poorer and the richer sites.

communities, being richer and happier go together. Klai Talaad, the urban slum in the South, presents the strongest relationship between material wealth and happiness (.385, p< .05) and Ban Chai Khao, relatively rich and with high rates of basic needs satisfaction, the weakest (.135, p< .1). In Ban Dong and Nai Muang in the North-east happiness seems not to vary with material possessions.

In general in a context where satisfaction of basic needs is relatively low, an aggregate indicator of basic needs deprivation does not show to be associated to happiness. The relationship is only clearly significant in Ban Laow, the peri-urban community of the North-east with good access to school and health facilities and lower exposure to shocks due to its lower dependence on agriculture. Furthermore material wealth, although, on the whole is positively associated to happiness, it is not in two of the poorest communities in the North-east. Thus, in the Thai communities, basic needs and wealth do not seem to imply the same in terms of subjective wellbeing. This is explored further in the next section.

HAPPINESS IN THAILAND: THE ROLE OF WEALTH AND BASIC NEEDS SATISFACTION

In this paper the causal relationships[12] between wealth and basic needs accounting for selected socio-demographic variables and happiness are analyzed through an ordered Probit model; which is designed to model the choice between discrete alternatives[13] and has been applied extensively in previous economic studies (Ferrer-i-Carbonell and Frijters, 2004). In general, it is assumed that there are N individuals ($i = 1....N$), with a vector x_{ki} containing observations on K independent variables that explain individuals' perception of happiness.

The empirical specification is formulated in terms of a latent response variable, y_i^*, which depends on individual perception and is defined by the following structural equation:

$$y_i^* = \sum_{k=1}^{K} \beta_{ki} x_{ki} + \varepsilon_i \qquad \varepsilon_i \sim NID(0,1) \qquad (1)$$

where:

i	: The surveyed individual
x_{ki}	: Independent variables that explain happiness
β_k	: Parameter that indicates the effect of x_k on y_i^*
ε_i	: A normally distributed independent error term for household i

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[12] Some caution is required when carrying out an empirical analysis of subjective wellbeing using regression analysis due to the small percentage of variation of SWB measures explained by socio-economic-demographic variables (Graham, 2005) and the issue of causation (Diener, 2002). Acknowledging the relevance of the previous debates, we follow the tradition of happiness in economics considering that socio-economic variables affect utility which is here approximated by happiness.

[13] In addition to the ordered probit model, a probit model of the selected regression was also estimated. The results were quite similar using both models.

Let y_i be a discrete random variable whose value ranges from 1 to 3. The happiness question's categories are "not too happy", "fairly happy" and "very happy". Therefore, the ordered probit model with 3 alternatives is defined as follows:

$$y_i = \begin{cases} 1 & if & y_i^* < d_1 \\ 2 & if & d_1 \le y_i^* < d_2 \\ 3 & if & d_2 \le y_i^* \end{cases}$$

Where $d_1 < d_2$.

The parameter d is called "threshold parameter" and the model is estimated using maximum likelihood method.Following the definition from equation (1), the empirical model uses the following exogenous variables[14].

a) Personal characteristics of the respondent such as age, gender, marital status and employment status.
b) Characteristics of the household such as the number of children, the dependency ratio and the presence of chronically ill in the household.
c) Basic needs levels estimated through the Intermediate Needs Deprivation Index (INDI).
d) Material wealth through an asset index.
e) Community of residence.

Thus, the empirical model is represented as:

Y* = F (Household head characteristics, Household characteristics, basic needs, material wealth, community)

where the dependent variable, Y*, is defined to take the values of 1, 2 or 3[15].

Discussion of findings: basic needs and wealth in Thailand
The results of the Ordered Probit model, including parameter estimates and corresponding z-statistics are given in Table 5. As the Likelihood ratio test shows, the dependent variables contribute significantly to explain variation in people's happiness. They explain circa 8-10% of its variation (see McFadden R^2 and Pseudo $R^{2)}$ which is common in studies of this type using discrete choice models (Verbeek, 2000).

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[14] It is important to note that we do not have measures of the personality traits (e.g. extroversion and neuroticism) that have been studied in psychological research (Schimack et al.,2002 in Camfield, 2004) and found to be very important determinants of life satisfaction scores. Thus wellbeing might be determined by personality traits which would explain why a model based mainly on objective socio-economic measures has a limited explanatory power.

[15] Table A.2. in the appendix contains the description and descriptive statistics of selected variables for the full sample of 745 households.

Table 4. Determinants of happiness in Thailand

Variables	Coefficient	z	P>|z|*
Household Head Characteristics			
Age	-0.011	-2.38	0.017
Marital	-0.042	-0.25	0.805
Salaried	0.203	1.76	0.078
Sex	0.074	0.53	0.597
Household Characteristics			
Ratio	0.269	1.01	0.311
Numkids	-0.033	-1.41	0.158
Dumychronic	-0.222	-2.18	0.029
Basic Needs			
INDI	-0.097	-2.11	0.035
Wealth			
Asset	0.031	4.23	0.000
Location			
Ban Thung Nam	0.551	2.79	0.005
Ban chai Khao	0.619	3.21	0.001
Klai Talaad	0.656	2.93	0.003
Ban Dong	0.366	1.75	0.080
Ban Tha	0.073	0.29	0.773
Ban Laow	0.479	2.37	0.018
Goodness of fit			
/cut1	-0.596		
/cut2	2.192		
Number of observations	745		
LR chi²(15)	86.38		
Prob > chi²	0.000		
McFadden R²	0.087		
Pseudo R²	0.102		
Log likelihood	-451.873		

* P>|z| is the significance of the coefficient

Household head characteristics[16]

With regards to household head characteristics, age and type of job are the only significant variables[17]. Self-reported happiness in rural Thailand is affected negatively and significantly by age, as has also been found in subsequent WeD research using the Positive and Negative Affect Scale (Woodcock et al., 2007) and in previous analysis of happiness determinants focussing on the Thai rural sites (Guillen and Velazco, 2006). This finding is not uncommon in happiness studies although the econometric method used and the type of the dependent variable (ordinal or cardinal) are said to explain

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[16] Table A.1 in the appendix goes over the main characteristics of the household heads participating in the survey by community of residence. 75% of the household heads were males and most of them were middle aged, between 40 and 59. By far the main activity of the households is related to agriculture (45%), rubber plantation being predominant in the South and rice farming in the Northeast. Most households are Buddhist (67%) although in the Southern sites Muslims account for 32% of the households in Klai Talaad, 46% in Ban Chai Khao and 75% in Ban Thung Nam.

[17] Age is significant at the .05 level and type of job at the .10.

some of the divergences (Ferrer-i-Carbonell and Frijters, 2004)[18]. In Thailand old age is rarely a time for relaxation as the absence of social security and scarcity of pensions mean that older people need to continue working to support themselves, often in physically demanding roles (older people are disproportionately represented in the agricultural workforce). In the Northeast particularly older people not only have to look after themselves (and often a sick or disabled partner), but also care for grandchildren that are left behind by migrant parents.

Having a salaried job has a positive impact on people's happiness compared to being self-employed or working from home. Contrary to what happens in wealthy countries like the US where being self-employed is related to having a professional and highly regarded job (for example, academic or web designer), in developing countries self-employment is usually negatively related to happiness as workers are paid little, often work in poor conditions, and cannot socialise or argue for better conditions with other workers (Graham and Pettinato, 2002; Camfield et al, 2007). This is the case for our Thai sample where jobs with a relative degree of authority, office jobs and non-traditional occupations are the ones regarded as providing a better quality of life (Jongudomkarn and Camfield, 2006).

There is not a significant impact of marital status and gender on happiness. Unlike other studies in developing countries (Knight et al. 2004; Rojas, 2004; Graham, 2005) where being married is a source of material and psychological wellbeing, it is not the case in the Thai communities, which could be due to sample bias since 85% of participants are married. However, it could also be related to the quality of these relationships as some respondents to earlier WeD research reported spousal drunkenness and financial irresponsibility [Jongudomkarn and Camfield, 2005]. With regards to gender Frey and Stutzer (2002: 54) report that women seem to be happier that men although differences are not substantial. This is not the case in our Thai communities probably due to gender discrimination, especially with regards to access to education and job opportunities[19].

Household characteristics
In the seven Thai communities having more or less children or dependants[20] does not significantly affect SWB whilst living in a household with a chronically ill person does. The former were included in the analysis because it was expected that 'young' households with large numbers of non-working children would be less prosperous as their presence might also affect the female partner's ability to work, especially where family networks of childcare support are less accessible (for example, due to migration).

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[18] Many happiness studies find that the relationship between age and happiness has a U shape implying that there is a turning point at which happiness starts to increase with age (Frey and Stutzer 2002: 54). Although this was also the case in the previous study by Guillen and Velazco (*Ibid.*) focussing or the rural communities, it has not been found when the urban population has been added to the sample.

[19] Sample bias could also be present here as only 25% household heads are women.

[20] Contrary to what would be expected, number of children and dependency ratio are not significantly correlated. The diversity of the communities (from remote rural to urban slums) implies that households have a very different internal composition. Thus, having more children does not immediately entail a higher dependency ratio since children might be over 16, not living in the household or the household might include three or even four generations of the same family.

In early WeD QoL work, health was found to be the second area that most influenced people's quality of life in the communities behind family relationships. Serious illnesses or chronic diseases in the family were reported as an important source of distress (*ibid.*). Following those results, this research finds that having a chronically ill person in the house has a negative effect on the household head's happiness. Half of the sample reported having someone suffering from chronic illnesses such as (from the most frequent to the least): joint and muscle pain, diabetes, hypertension, allergies and heart disease. In a third of cases the chronically ill was the household head, which may have had a more severe impact on material wellbeing. While the first category of chronic illness reflects a lifetime of agricultural and other manual labour, the remainder indicate Thailand's growing prosperity and the rapid changes in diet, smoking, and drinking that have resulted from this (reflected in growing obesity rates among adults, and children in Bangkok). These have begun to be addressed by the Universal Healthcare Scheme introduced in 2002; however, its effects will not be reflected in our survey (2004), which also indicates that at time people were still loathe to use formal healthcare services.

Furthermore, table 4 shows how the location of the household matters for happiness[21]. Compared to living in Nai Muang, the congested slum of Khon Khaen, living in all the southern communities, Ban Dong and Ban Lao in the North-East has a positive contribution to people's happiness. This occurs controlling for income and level of basic needs and it might be representing other structural variables inherent in Nai Muang such as the poor quality of the drainage which results in floods and the lack of social integration of the community. It might also be capturing the negative effect of living in a poor marginal neighbourhood of Khon Khaen, which provides a depressingly wealthy reference group to those living in poor quality accommodation, exposed to floods, noise, violence and drunkenness.

Basic needs indicators
Previous work by Guillen and Velazco (2006) focussing on SWB in the Thai rural communities found that single indicators of basic needs satisfaction were not significant in explaining variations of happiness levels. Unlike that study, this has used an index (the INDI) that represents the basic needs deprivation level of the household in terms of ten of the THN intermediate needs. Although using an index attenuates the importance of specific requirements for physical health and autonomy, it stresses their equal importance since deprivation in any of the intermediate needs is directly represented by a higher value of the index.

As table 4 shows, having a lower level of basic needs satisfaction (a high value of the index) has a negative effect on happiness. Taking into account the community and the wealth of the participants, basic needs matter for Thai people's wellbeing. This finding highlights the relevance of accounting for basic needs levels when analysing people's wellbeing in developing countries. Broad indicators of socio-economic level usually

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[21] Table A.3. in the appendix shows the results in percentages by site. Most household heads declare themselves to be fairly happy (76%) whilst only a minority state that they feel very happy (5%) and nearly 19% of the household heads describe themselves as feeling not too happy. Again, differences between regions stand out, North-eastern households being on average unhappier and more dissatisfied. The unhappiest households are in Ban Dong with 33% of the household heads declaring to be 'not too happy'.

disregard family relationships and/or access to economic security, among other intermediate needs, and focus on the more material measures such as asset ownership, education levels or sanitation facilities (Diener et al. 1995; Sahn and Stifel, 2003; Clark, 2006; Rojas 2006).

As this research shows, in the context of a developing country where there is unequal access to markets, social security, infrastructures and services and migration affects people's primary relationships, a high level of intermediate need satisfaction as defined by the THN plays an important role for happiness. This was already pointed at by early research on quality of life that included, among others, (from the most important to the least) family relationships, health, job, housing and food and education among the factors that contributed the most to people's quality of life (Jongudomkarn and Camfield, 2006) . The THN basic and intermediate needs seem to be meaningful not only for western theorists but for people in our very diverse and unequal Thai communities.

Material wealth
As expected, household material wealth approximated here by an indicator based on the ownership of up to 51 predefined assets, is positively affecting people's happiness. This is coherent with most studies in developing countries that find significant relationships between indicators of the economic level of the household or individual and SWB (Biswas-Diener and Diener 2001; Graham and Pettinato 2002; Guillen and Velazco 2006). It also supports the general claims regarding the higher relative importance of wealth for the deprived; as marginal increases imply higher basic needs satisfaction.

However, in this study material wealth is significantly contributing to happiness controlling for the level of basic needs of the household. This implies that having more possessions is intrinsically valued by people beyond their use as basic needs satisfiers. A popular Thai saying is that 'money is king' and this relates to the psychological security it offers (no need to 'think too much' or worry about fulfilling responsibilities to family or paying for healthcare), and the opportunities for social participation – making merit at the temple, hosting 'papa' or 'kathin' for community members, entering local politics, and even travelling for pleasure ('bpai tiaow'). 'Convenience goods' such as fridges, motorcycles, and mobile phones have become increasingly desirable for the young, and also enable people to bypass inadequate local services (for example, the paucity of landlines).

The raise of materialist values in an increasingly unequal society might deplete poor Thai's happiness in the near future. This is bound to happen as the life styles of the reference groups become more sophisticated and urbanised and poor people are left behind. Recent studies in Latin-American countries and Nepal (Graham and Felton, 2006; Guillen Royo, 2007; Fafchamp and Shilpi, 2003) point at the detrimental effect on happiness of 'upward' social comparison, which is unexpectedly stronger among the poor. Further research is needed to quantify this effect, but it serves to illustrate that, even for poor people, wealth has a different meaning to the one associated to basic needs satisfaction and should be used with caution as a measure of objective wellbeing.

CONCLUDING REMARKS

This Chapter has analysed how in the Thai context of recent economic growth and unequal development, objective wellbeing indicators such as wealth and basic needs have a significant and distinct impact on happiness. It has drawn on the THN to approximate basic needs through a single indicator (INDI) unlike the previous, limited research that used disaggregated measures. Wealth has been estimated through an asset index collecting the number of assets own by the household.

The descriptive analysis has shown that in the Southern and North-eastern communities of Thailand basic needs and wealth are weakly associated, indicating partly that in most communities being richer implies a higher level of basic needs satisfaction. However, the low level of correlation and the fact that in two of the communities wealth and the INDI are not associated shows that using them interchangeably might hide issues such as: availability of public services and lack of job opportunities, or economic progress without social security or insurances against external shocks.

Moreover, the study of happiness determinants in Thailand clarifies the effect of basic needs levels and wealth on happiness accounting for selected socio-demographic variables. In the Thai communities of the South and the North-east, being old, self-employed and having a chronically ill person in the household have a negative impact on happiness. Furthermore, all the communities seem to offer positive conditions for increased happiness but Ban Tha and Nai Muang, a rural village and an urban slum of the North-east.

Basic needs are important for happiness controlling for the location and wealth levels of the household. Wealth is also significantly explaining happiness taking into account the level of basic needs and the socio-demographic variables included in the model. This supports our claim that two traditional measures of wellbeing that have usually been taken interchangeably for the lowest levels of income and in poor countries should be studied separately. Their impact should be assessed regarding their meaning for the population concerned. In Thailand basic needs collect the aspects that people consider that influence the most their quality of life, and wealth implies psychological security and opportunities for social participation. All these aspects are important for happiness but have different policy implications. Further research is needed to refine the indicators used and deepen our understanding of the meaning of basic needs and wealth in the Thai context.

REFERENCES

Ahuvia, C. A. and Wong, N. Y. (2002) 'Personality and values based materialism: their relationship and origins', *Journal of Consumer Psychology*, 12(4), 389-402.

Biswas-Diener, R. and Diener, E. (2001) 'Making the best of a bad situation: satisfaction in the slums of Calcutta', *Social Indicators Research,* 55, 329-352.

Booysen, F., van der Berg, S., Burger, R., von Maltitz, M., and du Rand, G. (2005) 'Using an asset index to assess trends in poverty in seven Sub-Saharan African countries'. Paper presented at the International conference: *The many dimensions of poverty*, Brasilia, Brazil -29-31 August 2005

Camfield, L. (2004) 'Subjective measures of wellbeing for developing countries' in Wolfgang G. e. al. *Challenges for the Quality of Life in Contemporary Societies*, Kluwer Academic Publishers.

Camfield, L, Choudhury, K, and Devine, J. (2007). 'Well-being, Happiness and Why Relationships Matter: Evidence from Bangladesh'. WeD working paper 14 and Journal *of Happiness Studies* (in press).

Clark, D. A. (2002) *Visions of Development,* Cheltenham: Edward Elgar.

Clarke, R. (2004) 'Measuring household wealth in Thailand using data from RANQ', WeD internal document.

Clarke, R. (2006)   'Measuring household wealth across seven Thai communities', Bath: WeD Working Paper, forthcoming.

Cummins, R. (2003) 'Normative life satisfaction, measurement issues and a homeostatic model', *Social Indicators Research*, 64,225-256.

Diener, E., Diener, M. and Diener C. (1995) ' Factors predicting the subjective well-being of nations', *Journal of Personality and Social Psychology* 69, 851-864.

Diener, E. and Lucas, R.E. (2000) 'Explaining differences in societal levels of happiness: relative standards, need fulfillment, culture, and evaluation theory', *Journal of Happiness Studies*, 1, 41-78.

Diener, E. and Biswas-Diener, R. (2002) 'Will Money Increase Subjective Wellbeing?', *Social Indicators Research*, 57, 119-169.

Doyal, L. and Gough, I. (1991) *A Theory of Human Need* , Basingstoke: Macmillan.

Easterlin, R. (1974) 'Does economic growth improve the human lot? Some empirical evidence' in David P.A. and Melvin W.R., *Nations and Households in Economic Growth*, Palo Alto: Stanford University Press.

Easterlin, R. (1995) 'Will raising the incomes of all increase the happiness of all?', *Journal of Economic behavior & Organization*, vol. 27, pp. 35-47.

Easterlin, R. (2004) 'Life Cycle happiness and its sources' ISQOLS draft: October 26.

Eid, M. and Diener, E. (2004) 'Global judgments of subjective wellbeing: situational variability and long-term stability', *Social Indicators Research*, 65, 245-277.

Elster, J. (1983) *Sour grapes: Studies in the subversion of rationality* Cambridge: Cambridge University Press.

Fafchamp, M. and Shilpi, F. (2004) 'Subjective Wellbeing, Isolation, and Rivalry'.

Ferrer-i-Carbonell, A. and Frijters, P. (2004) 'How important is methodology for the estimates of the determinants of happiness?' The Economic Journal, 114, 641-659

Frey, B. S. and Slutzer, A. (2002) 'What can economist learn from happiness research?', *Journal of Economic Literature*, XL, 402-435.

Frey, B. S. and Stutzer, A. (2002) *Happiness and Economics,* Princeton: Princeton University Press.

Gasper, D. (2004) *Subjective and objective wellbeing in relation to economic inputs: puzzles and responses*, Bath*:* WeD Working paper 09.

Gasper, D (2005) Human wellbeing: puzzles and paradoxes. WeD internal document

Gough, I. (2000), *Global Capital, Human Needs and Social Policies,* Basingstoke: Palgrave.

Gough, I. (2005), 'Human wellbeing and social structures', *Global Social Policy*, 4 (3), 289-311.

Gough, I., McGregor, A. and Camfield, L. (2006) *Wellbeing in developing countries: conceptual foundations of the WeD programme,* Bath*:* WeD Working paper 19.

Graham, C. and Pettinato, S. (2002), *Happiness and Hardship*, Washington: Brookings Institution Press.

Graham, C (2005), 'Some Insights on Development from the Economics of Happiness', *World Bank Research Observer*, 20, 201-231

Graham, C. & Felton, A. 2006, "Inequality and happiness: Insights from Latin America", *Journal of Economic Inequality*, vol. 4, no. 1, pp. 107-122.

Janakarajan, S. and Seabright, P. (1999) 'Subjective and objective indicators of welfare change over time' in *Ill-fare in India*, Sage, Delhi.

Jongudomkarn, D. and Camfield L. (2005) *Exploring the quality of life of people in North Eastern and Southern Thailand*. Social Indicators Research, 78, p.489-530.

Kahneman,D. Diener,E. and Schwarz,N. (1999), *Wellbeing:The Foundations of Hedonic Psychology*, New York : Russel Sage Foundation.

Layard, R. (2005) Happiness. *Lessons from a New Science,* London: Penguin Books

Lelkes, O. 2005, 'Knowing what is good for you: Empirical analysis of personal preferences and the 'objective good'', *CASE paper no. 94,* London School of Economics, March 2006.

Møller, V. (2007) 'Researching quality of life in a developing country: lessons from the South African case' in Gough, I. and McGregor, A. *Wellbeing in Developing Countries. New Approaches and Research Strategies,* Cambridge: Cambridge University Press, forthcoming.

Nussbaum, M. C. (2000) 'Adaptive preferences and women's options' in Nussbaum, M. C., *Women and Human development: the capabilities approach*, Cambridge: Cambridge University Press, 111-166.

Rojas, M. (2005a), 'The complexity of wellbeing. A life-satisfaction conception and a domains-of-life approach', in Gough, I. and McGregor, A. *Wellbeing in Developing Countries. New Approaches and Research Strategies,* Cambridge: Cambridge University Press, forthcoming.

Rojas, M. **(**2005b), 'Heterogeneity in the relationship between income and happiness: a conceptual-referent-theory explanation', *Journal of Economic Psychology*, forthcoming.

Rojas, M. 2006, "Wellbeing and the Complexity of Poverty: A Subjective Wellbeing Approach," in *Understanding Human Wellbeing* M. McGillivray & M. Clarke ,eds., United Nations University Press, New York, Ch. 8.

Ryan, R. M. and Deci, E. L. (2001), 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Wellbeing', *American psychologist*, 55(1), 68-78.

Ryan, R. M. and Sapp, A. R. (2005), 'Basic psychological needs: a self-determination theory perspective on the promotion of wellness across development and cultures' in Gough, I. and McGregor, A. *Wellbeing in Developing Countries. New Approaches and Research Strategies,* Cambridge: Cambridge University Press, forthcoming.

Sahn D. and Stifel, D. (2003) 'Exploring alternative measures of welfare in the absence of expenditure data', *Review of Income and Wealth*, 49, 4, 463-489.

Sen, A. (1999) *Development as freedom,* Oxford: Oxford University Press.

Tsakloglou, P. and Papadopoulos, F. (2002), 'Agrretate level and determining factors of social exclusion in twelve European countries', *Journal of European Social Policy*, 12(3), 211-225.

Van Praag, B. and Ferrer-i-Carbonell, A. (2004), *Happiness Quantified: A satisfaction Calculus Approach,* Oxford: Oxford University Press.

Veenhoven, R. (1992), *Happiness in Nations*, Erasmus University.

Verbeek, M. (2000). *A Guide to Modern Econometrics*. New York: John Wiley and Sons.

Woodcock, A, Camfield, L, McGregor, A, Martin, F. (2007) 'Validation of the WeDQoL-Goals-Thailand measure: culture-specific individualised quality of life', paper submitted to *Quality of Life Research*.

Wellbeing in Developing Countries (WeD) (2007), 'The Thai communities and their context'. Internal document.

APPENDIX

Table A.1. Socio-demographic characteristics: Households in Thailand

	South			North East				Total
	Rural	Peri-urban	Urban	Rural		Peri-urban	Urban	
	Ban Thung Nam	Ban Chai Khao	Klai Talaad	Ban Dong	Ban Tha	Ban Laow	Nai Muang	
Family size (average)	4.81	4.48	4.25	4.51	5.63	4.59	3.89	4.55
Head of Household								
Gender (%)								
Male	77.6%	79.6%	69.3%	87.2%	70.1%	68.4%	61.3%	75.4%
Female	22.4%	20.4%	30.7%	12.8%	29.9%	31.6%	38.7%	24.6%
Total number	250	250	150	196	67	158	111	1182
Age Groups (%)								
20-39	25.2%	29.6%	22.7%	32.3%	20.9%	22.2%	22.5%	26.1%
40-59	45.2%	47.6%	45.3%	44.6%	47.8%	51.9%	52.3%	47.3%
60+	29.6%	22.8%	32.0%	23.1%	31.3%	25.9%	25.2%	26.6%
Total number	250	250	150	195	67	158	111	1181
Religion (%)								
Buddhist	25.2%	54.4%	68.0%	98.5%	97.0%	99.4%	99.1%	70.0%
Islam	74.8%	45.6%	32.0%	0.0%	0.0%	0.0%	0.0%	29.5%
Other	0.0%	0.0%		1.5%	1.5%	0.6%	0.9%	0.5%
Total number	250	250	150	196	67	158	111	1182
Main Economic Activity (%)								
Farmer	50.0%	44.4%	2.0%	75.5%	58.2%	18.4%	2.7%	38.7%
Agricultural Labourer	18.0%	1.6%	1.3%	5.1%	1.5%	5.7%	0.0%	6.0%
Transport worker	1.6%	11.2%	10.0%	0.5%	3.0%	5.1%	2.7%	5.2%
Businessman	2.0%	3.2%	16.0%	0.0%	0.0%	1.3%	15.3%	4.7%
Other	28.4%	39.6%	70.7%	18.9%	37.3%	69.6%	79.3%	45.3%
Total number	250	250	150	196	67	158	111	1182

Source: RANQ-Thailand (2004), WeD Research Group, University of Bath, UK.

Table A.2.: Descriptives of the variables included in the regression analysis

Variable	Description	Obs.	Mean	Std. Dev.	Min.	Max.
	ENDOGENOUS					
Happy	Perceived happiness. Values from 1 to 3	745	1.853	0.467	1	3
	EXOGENOUS					
	Household Head Characteristics					
Age	Age of head of household in years	745	48.160	13.880	21	87
Marital	Marital status dummy. 1 if head of household is married	745	0.852	0.355	0	1
Salaried	Employment status dummy. 1 if head of household is salaried	745	0.358	0.480	0	1
Sex	Gender dummy. 1 if head of household is male	745	0.752	0.431	0	1
	Household Characteristics					
Dependency ratio	Number of household members younger 14 years and over 65 years divided by the number of household members	745	0.365	0.188	0	1
Numkids	Number of children	745	3.440	2.379	0	15
Dumychronic	Dummy variable. 1 if household members suffer from chronic ill health	745	0.556	0.497	0	1
	Basic Needs					
INDI	Intermediate needs deprivation index	745	3.417	1.182	1	7
	Wealth variable					
Asset	Number of assets owned by the household	745	25.915	7.913	6	51
	Location dummy					
Ban Thung Nam	1if household is located in Ban Thung Nam	745	0.211	0.408	0	1
Ban Chai Khao	1if household is located in Ban Chai Khao	745	0.218	0.413	0	1
Klai Talaad	1if household is located in Klai Talaad	745	0.098	0.298	0	1
Ban Dong	1if household is located in Ban Dong	745	0.178	0.383	0	1
Ban Tha	1if household is located in Ban Tha	745	0.062	0.240	0	1
Ban Laow	1if household is located in Ban Laow	745	0.145	0.352	0	1
Nai Muang	1if household is located in Nai Muang	745	0.089	0.285	0	1

Table A.3.: Happiness by site (%)

			Very happy	Fairly happy	Not too happy	N/A	Total	Total (number)
South	Rural	Ban Thung Nam	5.2	78.8	16.0	0.0	100	250
	Peri-urban	Ban Chai Khao	5.2	87.6	6.4	0.8	100	250
	Urban	Klai Talaad	4.7	86.7	8.7	0.0	100	150
North East	Rural	Ban Dong	4.1	62.6	33.3	0.0	100	195
		Ban Tha	3.0	68.7	26.9	1.5	100	67
	Peri-urban	Ban Laow	6.3	71.5	22.2	0.0	100	158
	Urban	Nai Muang	3.6	67.0	29.5	0.0	100	112
Total			4.8	76.3	18.6	0.3	100	1182