Introduction and Overview

“There are two ways of being happy: We must either diminish our wants or augment our means - either may do - the result is the same and it is for each man to decide for himself and to do that which happens to be easier.”

Benjamin Franklin

The international scientific and political debate is currently undergoing a paradigm shift in how to measure well-being. Better individual data availability, new communication tools and a time in which many developed, but also developing countries are looking beyond GDP have led to a situation where international efforts to broaden indicators of well-being enjoy strong momentum. There is consensus that GDP should still play an important role in assessing welfare, however it has been widely acknowledged that a mere increase of “goods and services produced in a geographic entity over the course of a year” is a concept that is often neither inclusive, nor sustainable, nor able to measure individuals’ satisfaction with their objective circumstances. For a long time, increasing well-being meant solely the maximization of one single dimension, that of GDP or household disposable income. This was justified by a high correlation of income with other dimensions of QoL such as housing and health, and its single monetary value had the appeal of simple accountability. However, exponential increases in computation power, advances in statistics and the availability of complex micro data has led to a shift towards more detailed empirical economics over the last decades. Thus, it has nowadays become possible to study utility with the use of more heuristic methods and in a multi-dimensional way. This has also led to major policy changes. The UNDP in 1990 was among the first to adopt a multi-dimensional welfare measure with the introduction of the Human Development Index which is a combined measure of purchasing power, education, and health. Further milestones were the Millennium Development Goals and multi-dimensional poverty indexes applied by the World Bank. However, all multi-dimensional indexes have in common the problem of somewhat arbitrary selection and weighting of sub-indexes. This implies that preferences worked out by expert committees are applied instead of actual individual preferences, presenting a major drawback of all objective measures of QoL. This has recently led to a high popularity of subjective measures of well-being since their growing inclusion into national household surveys within the last two decades. As advances in this field are fast in developed countries, questions on subjective well-being have not yet been introduced into most developing countries’ household surveys. The most widely used QoL measure in the class of subjective well-being measures is overall life satisfaction, which asks people directly for their
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overall satisfaction with their life at a specific point in time on a scale of e.g. [0-10]. Subjective measures can provide additional information and thus complement more traditional objective measurement tools. The availability of subjective measures has even led to the rise of a whole new field of economics, the so-called Happiness Economics, which has been rapidly increasing over the past decade.

At the same time, political momentum in favor of a paradigm shift currently appears to be extraordinary high: The Stiglitz Commission on the Measurement of Economic Performance and Social Progress, a group of experts including Nobel Prize winners, recently presented a landmark report re-evaluating the question of welfare measurement (Stiglitz, Sen and Fitoussi, 2009). The commission’s main advice is “to shift emphasis from measuring economic production to measuring people’s well-being” (Stiglitz et al. 2009, 12). This conclusion rests on the insight that the current discrepancy between what we want to measure and what we actually do measure might lead to serious policy failure and misallocation of scarce resources. Hence the commission’s three core suggestions are the following: (i) a revision of economic indicators, (ii) more broadly-based measurement of QoL (including subjective measures) and (iii) more attention paid to sustainability. The commission proposes eight dimensions of QoL to focus on: (i) material living standards (income, consumption, and wealth); (ii) health; (iii) education; (iv) personal activities, including work; (v) political voice and governance; (vi) social connections and relationships; (vii) environment (present and future conditions); and (viii) insecurity, of economic and physical nature. In order to further identify dimensions and sub-dimensions of QoL, it proposes the formation of national round-tables to discuss the issues democratically on the national level. On the basis of national discussions, internationally comparable indicators should then be established which in more supplemented versions should be able to take into account country-specific preferences. The question whether this should lead to a single indicator or a dashboard of indicators needs still further discussion. Several of these indicators or dashboards are currently proposed and discussed on national levels. Many OECD governments have recently pushed the topic forward and have set up different approaches to arrive at new QoL measures. These include both the use of top-down strategies in the form of expert commissions as well as bottom-up approaches in form of national-level surveys. Germany and France’s top economic advisory boards have recently published a report together on “Economic Performance, Quality of Life and Sustainability: A Comprehensive Set of Indicators” (Conseil d’Analyse Economique and Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, 2010). President of France Nicolas Sarkozy was the one who brought the Stiglitz Commission into being. The UK’s Prime Minister David
Cameron called for the introduction of a measure of "general well-being" (GWB) to complement GDP. Recently the UK’s Office of National Statistics has conducted an expensive large-scale project to survey British people’s understanding of well-being. Other governments active in the debate include the EU, Italy, Australia, Canada, Spain, the Netherlands, Mexico, Bhutan, China, India, and the US, the latter having the “pursuit of happiness” enshrined in their Declaration of Independence (Kroll, 2011). Among the countries engaged in the debate, there is consensus that subjective measures must now be juxtaposed to objective ones used in the past. Individual well-being measures should not longer be confined to external judgment of how people’s life circumstances develop but should be complemented by the extent to which people are happy with them. This is not only one of the key demands of the Stiglitz report but the combined credo of a growing scientific, political and civil movement. One major player in the debate has been the OECD with the organization of several conferences as well as the release of several publications on the topic. A milestone of OECD efforts was the recent launch of its Better Life Index in May 2011. The index facilitates country comparisons over eleven dimensions and is the first major policy index to include life satisfaction. Alongside the subjective well-being measure, other dimensions included are housing, income, jobs, community, education, environment, governance, health, safety, and work-life balance.

**Measuring QoL 1: Subjective Well-Being**

As opposed to objective measures like income, questions that ask people directly to rate their overall life satisfaction or happiness are subsumed under the concept of subjective well-being.

Most if not all people want to be happy in life, and this motivates most if not all of their actions. Thus, they make decisions facing individual constraints, bounded rationality, and incomplete information. Individuals are able to maximize expected happiness given the aforementioned restrictions, not actual happiness itself. Mean actual happiness outcomes can therefore differ significantly from expected happiness (Kahnemann, 2000; Clark et al., 2008). Research on subjective well-being can thus not only provide increased information for policy makers about the actual impact of public policies on the people, but also support individuals in lowering information costs in their pursuit of happiness.

Subjective measures provide two major advantages as compared to the traditional revealed preferences approach. First, utility measurement is here more immediate, since no assumptions on preferences need to be made. Second, subjective measures take into account that the effect of objective influences, such as material possessions or employment status, is often mediated by psychological
processes such as social comparison and hedonic adaptation. These standard concepts in the psychological academic literature have only recently been introduced into economic models of behavior, where they are known as interdependent preferences and habit formation (adaptive preferences) (Easterlin, 2003; Stutzer, 2004; Clark, Frijters, and Shields, 2008). Social comparison or interdependent preferences point out that the utility effect of one’s possession of a certain good depends partly on other’s possession of the same good. For example, the effect of an individual’s income increase on her personal happiness will thus depend on the average income growth of her peer group. Hedonic adaptation or habit formation does then argue that a constantly higher income level can lead to a change in aspirations. In the psychology literature, adaptation has been defined as “a reduction in the affective intensity of favorable and unfavorable circumstances” (Frederick and Loewenste 1999) while the so-defined concept of “hedonic treadmill” describes the reversion back to an individual’s baseline hedonic level following temporary highs and lows in happiness (Brickman and Campbell 1971). Similarly, anticipation is often found, which is the utility arising \textit{ex ante} in expectation of an event to occur. Most scholars thus conclude that more research is needed to distinguish life domains with transitory happiness effects from those with lasting effects. An individual experiencing an income increase would get used to the new income level and would need even higher income in the future to satisfy her increased needs. This might be due to social comparison on the one hand: A change in the peer group due to own upward social mobility would mean an increased average income of the new reference group translating into a diminished impact of own income. At the same time, comparisons with her own past would also lead to increased aspirations over time and thus to adaptation to the new income level.

Social comparison and hedonic adaptation also help to explain the Easterlin (1974) paradox, which finds that average happiness usually stays flat in economically fast growing countries. Indeed, there is a whole literature showing that status or relative income might be much more important than actual income for happiness (Luttmer, 2005; Clark, Frijters, and Shields, 2008; Di Tella, Haisken-De New, and MacCulloch, 2010).

However, hedonic adaptation and social comparison are found to differ a lot over various domains in life. While there seems to be stronger adaptation to income and changes in marital status, no or only partial adaptation is usually found to long-term unemployment, disability, or chronic disease (Clark et al., 2008; Oswald and Powdthavee, 2008).

The concept of social comparison is also linked with the concept of identity which was recently introduced into economic models of behavior by Akerlof and Kranton (2000). Being long established in sociology, political science, and
psychology, it argues that a person's utility does not only depend on own actions, but also on one's identity, others' actions and societal prescriptions for one's chosen identity. Here, identity is a wide concept which can range from gender, race, education or employment status to political or sexual orientation, etc. The more own actions match society's expectations of a certain expected role behavior, the more an individual will be rewarded by others. This concept shows to be useful in many fields, e.g. it can help to explain differences in educational outcomes between children growing up in different neighborhoods of a specific city. It can also help to explain the maintenance of traditional gender roles, when societal expected behavior favors women to be the main responsible for housework and men the main breadwinner.

In happiness research it is crucial to control for individual unobserved heterogeneity such as personality traits. This requires the use of longitudinal data sets. The concept of subjective well-being will be used in two articles below analyzing employment and marital decisions in 21st century South Korea with detailed long-run panel data. The central variables for the analysis are overall life satisfaction, overall job satisfaction, and satisfaction with working hours. The life satisfaction question requires individuals to respond to the following question: “Overall, how satisfied or dissatisfied are you with your life?”. The exact wording of the job satisfaction question is “Overall, how satisfied or dissatisfied are you with your main job?”, while hours satisfaction is the answer given to the aspect “Working hours” following the question “How satisfied or dissatisfied are you with regard to your main job on the following aspects?”.

For each of these questions, the respondent is asked to give a score between 1 (“very satisfied”) and 5 (“very dissatisfied”).

Economists are sometimes skeptical about the validity and reliability of subjective measures of well-being. Do we really measure what we want to measure? And would it be possible to measure the same level of happiness in virtually the same situation again? A large body of psychology and sociology literature has examined this question in the past. Kahnemann and Krueger (2006) and Di Tella and MacCulloch (2006) provide an overview and an analysis of these issues in the Journal of Economic Perspectives. Concerning the validity of the measure, a number of studies have shown that self-reported well-being is highly correlated with ratings of friends or Duchenne smiles – i.e. smiles that cannot be faked. Significant correlation is also found with left frontal brain activity which is considered to be the center of pleasure and approval. Moreover, subjective well-being is found to be highly correlated with other psychological measures such as depression scales. Concerning the reliability, life satisfaction scores have been found to have a test-retest correlation of .77 (Lucas et al., 1996). Hence, the general consensus among researchers is that true utility can be measured suffi-
ciently well with the help of subjective measures, despite some noise in the data due to temporary mood.

Measuring QoL 2: The Conventional Income Measure of Well-Being

Since the beginning of economics there has been constant debate about how to measure well-being. For its practical use and broad availability, scholars have often resorted to the concept of money-metric utility. According to the classical approach, individuals are assumed to act completely rationally and under full information about their choice set and related utility outcomes. Preferences are assumed to be fixed. If these assumptions hold, then individuals reveal their preferences through purchasing decisions and relative prices will reflect relative preferences. In order to circumvent the specification of a parametric utility function, money-metric utility can be approximated by an individual’s income or expenditures. This standard approach is often being used in empirical economics to evaluate individual standards of living (Deaton, 1997). Although economists are aware of incomplete information and bounded rationality today, taking income as a welfare measure on the individual or household level is still the preferred choice in most analysis.

However, the money-metric approach comes with a number of caveats: (1) Income is only an objective input factor to well-being and thus is only partially related with utility outcomes. (2) Incomes can underlie certain measurement error, for example when the rich tend to underreport their incomes. (3) Income as a welfare measure does require imputation for self-produced services and goods consumed in the household. This particularly applies to developing economies and imputation is usually not a simple task. (4) Even if imputation is theoretically possible, often the absence of market prices for certain goods and services renders reasonable value estimates impossible. (5) As income is often measured on the household and not on the individual level, it cannot account for intra-household distribution of income. It is usually assumed that higher real income leads to higher quality of life since it allows for a higher consumption bundle which according to classical welfare theory will lie on a higher indifference curve (Boadway and Bruce 1984).

Despite its shortcomings, the income approach is still highly valuable, particularly in the analysis of developing countries. Financial entitlements are highly correlated with the fulfillment of basic human needs and are thus able to free people from poverty and deprivation. While some poor in developing countries are certainly satisfied with what they have, a general increase in output per capita that includes the whole population and takes into account limited resources
will definitely lead to higher QoL via higher levels of freedom, longer and healthier lives, and increased life choices.

**Measuring QoL 3: The Biological Standard of Living**

Being confronted with a lack of both subjective measures of QoL and household income data, which often is the case in the study of economic history, we can resort to anthropometric data to evaluate well-being. The method of the biological standard of living (BSoL) uses individual height data as a proxy for individual welfare during historical periods for which no household income or consumption data is available. The strong relationship between early childhood household economic conditions and heights has been frequently documented (Komlos 1993; Komlos and Baten 1998; Steckel 1995, 2009; Hoddinot et al. 2008; Deaton 2008). Final height outcomes are correlated with nutritional intake during the first three years of a person’s life, and here particularly during the first 12 months after birth. Of primary importance is the availability of proteins. To a lesser degree also vitamins A, D, as well as minerals play a role for final height outcomes (Silventoinen 2003). Nutritional conditions in turn highly depend on relative food prices and a household’s income situation. In the case of agricultural self-production, ownership of productive assets is crucial. Thus, welfare trends of a large enough sample of a particular population can be inferred from height data.

When working with height data it is important to deal appropriately with the issue of shrinking of old-age cohorts. While individuals usually reach their final height around the age of 20 to 30, shrinking usually starts from the age of 40 to 50 and then accelerates in later periods of life. Cline et al. (1989) as well as Chandler and Bock (1991) provide gender-specific formulas to adjust for shrinking. These formulas have been applied in the East Asian context by, among others, Pak et al. (2010) on Korean height data, and Morgan (2008) on Chinese height data. Both adjustment methods will be applied in the below article on Korean rural reforms.

**Employment and Gender**

One of the central issues studied in Economics is the effect of employment which is found to be an important determinant of QoL. Employment provides a means of both income generation and social participation. Moreover, own earnings are associated with higher levels of self-confidence and financial independence allowing for broader choice sets in life. From a developing country’s perspective, employment is most directly related to the fulfillment of basic needs such as nutrition, clothing and housing. Moving from the stage of a developing
towards a developed economy depends on the ability of a country to increase labor productivity over time, at early stages particularly in agriculture (World Bank, 2007).

In the literature on Happiness Economics it is found, in studies mainly focusing on developed countries, that working contributes to happiness even after controlling for income effects (Clark and Oswald, 1994; Winkelmann and Winkelmann, 1998). It is argued that this is the case because working can be a mechanism for social participation and engagement, which are known to be important factors of happiness. However, given expected roles and labor division between men and women present in most societies, the effects of employment may not be gender-neutral but create gender-specific effects. Relative earnings of husband and wife are usually found to be important determinants of bargaining power and decision making within the household (Haddad, Hoddinott and Aldermann, 1997). Akerlof and Kranton (2000) contribute to the debate in explaining how identities related to gender roles and social gender prescriptions might influence individual behavior. Since others actions and social prescriptions enter an individual’s utility function, we are not free of what others think and do. Thus, it can be often observed that female labor force participation in a particular society is strongly related to its prescribed gender ideals. This can lead to women preferring to stay at home even if that would not have been their preferred choice in the first place. Additional burden for women in the fields of housework and childcare present further constraints for female participation in the labor market. Part-time employment can be a potential solution here, however the availability of such options strongly depends on the willingness of employers or governmental regulation (Booth and van Ours, 2008; 2009). Particularly countries with very long working hours show low female labor force participation.

Contributions

This dissertation analyzes impacts of public policies as well as of individual behavior on well-being outcomes at different stages of economic development in Emerging Asia. While two papers are related with earlier stages of economic development and issues concerning agricultural productivity and rural income dynamics, the other two are located within a modern high-income economy with substantial levels of gender inequality. All four papers have in common that they analyze dynamic impacts of certain events, all of which are directly or indirectly related to employment decisions, on individual well-being. Therefore the before in detail discussed question of how to measure well-being or QoL becomes central in the analysis. According to different stages of economic development, dif-
different purposes of analysis, and differences in data availability in the below articles well-being will be measured in three ways.

**Essay 1** studies the impact of working hours reductions on family happiness in South Korea using various subjective well-being measures (*life satisfaction, overall job satisfaction, satisfaction with working hours*). The analysis puts particular attention on inertial gender dynamics responsible for on-going high levels of gender discrimination in the Korean labor market at the beginning of the 21st century. Findings indicate that hours of work reductions between 1998 and 2008 significantly increased family happiness. However, significant gender-specific effects are found. Well-being can be further improved through future hours reductions and the simultaneous creation of a more family-friendly working environment for women.

**Essay 2** analyzes anticipation and adaptation to several life and labor market events in Korea using life satisfaction as the main well-being measure. The intertemporal effect of the following events on individual happiness is studied: marriage, divorce, widowhood, unemployment, first job entry, and reduction of the working week from six to five days. While the findings indicate full adaptation after some events, and more so for women, after other events no or only partial habituation can be seen. Yet, there are striking gender-specific differences particularly in the impact of events related to marital status change. Compared to women, husbands remain on a higher happiness level throughout marriage. Men suffer more from divorce and widowhood than women. We show that an important determinant of the intra-marriage happiness gap between husband and wife is their earnings difference providing evidence for both intra-marriage bargaining and Akerlof and Kranton's (2000) gender identity hypothesis. The studied labor market events point to a gender-segregated labor market.

**Essay 3** analyzes South Korea's agriculture-based economy at the beginning of its rapid development. Korea is often taken as an example of best practice for development, as it moved within 50 years from a per-capita income level equal to the then Sub-Saharan African average to a highly industrialized, high-income innovating economy. The essay thus analyzes one of the crucial starting points of its Growth Miracle, the move towards asset equality via large-scale land reforms. It studies productivity and welfare effects of rural reforms in 1950 and 1963, the former being a pure redistribution of land to its tillers and the latter Green-Revolution-type technology and infrastructural reforms. In the absence of sufficient micro-level income data for this historic period, individual well-being can be proxied by contemporaneous anthropometric data projected onto individuals' birth year, thus making use of the concept of the Biological Standard of Living (BSoL). Main results indicate that both land redistribution and intensifi-
cation reforms had important impacts on agricultural productivity and individual well-being. However, the findings make clear that a mere land redistribution without complementary productivity enhancing reforms would have only limited success.

**Essay 4** also studies issues of rural development while focusing on Indonesia’s rural economy at the start of the 21st century. For the analysis, the conventional measure of per-capita household income is applied to analyze the welfare dynamics related to cash-crop choice and employment decisions of rural households living at the rainforest margin. We find that local innovations related to the adoption and intensification of new cash crop varieties, more specifically the shift from coffee to cocoa production, can explain a substantial part of the observed post-crisis income growth. Moreover, increased engagement in the non-farm sector is seen to be highly beneficial for rural households. However, initially poor households were largely excluded from the developments in the non-farm sector.

**Policy Implications**

The findings of my dissertation are manifold and diverse, as are its individual essays. Results can hold important lessons for other developing and emerging economies.

In the process of development, and particularly in rural economies, overcoming asset inequality has the potential to lead to both equity and efficiency gains if land redistributions are well designed. Moreover, land reforms will have larger impacts if combined from the first with productivity-enhancing reforms that focus on improving farmers’ access to inputs, credits, and technological know-how. Well-informed farmers will also be able to make more rational decisions concerning crop choice which might lead to further agricultural productivity increases. Governments should also be inclined to support rural non-farm employment which can lead to further labor productivity gains in the rural economy. Here it should be noted that in the absence of properly working credit markets, entry barriers exist particularly for poor households to engage in non-farm employment. This opens scope for government intervention.

Findings from the two studies on welfare and gender issues related to the Korean labor market at the beginning of the 21st century suggest the following: First, adaptation and the impact of life and labor market events might differ significantly by sex, particularly in societies with high levels of gender inequality. Second, extreme long working hours are detrimental to QoL. As for Korea, further working hours reductions have the potential to both increase family happiness and female labor force participation. Third, much more needs to be done if
gender equity is to be ensured in Korea. As traditional gender roles and a highly male-dominated labor market continue to be major obstacles to the pursuit of gender equity in happiness, reforms in this area should be continued and require critical evaluation. A family-friendly working environment should be the main target. Equality of chances at the work place, including equal pay and equal promotion chances, a rethinking of gender identities, as well as flexible job and childcare solutions including part-time jobs in high-skilled employment all need to be considered. As Akerlof and Kranton (2000) point out, individuals and firms tend to underinvest in unilateral action to change gender identities, since they would be facing the costs alone while being unable to internalize potential benefits of such action; thus further government action is required to escape from a potential prisoner’s dilemma.