Subjective well-being approach to the valuation of income inequality

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Abstract

The subjective well-being approach to valuation is applied to the valuation of income inequality. Results show that objective inequality is a *bad* in the industrialized economies but a *good* in the emerging economies**.** Too much objective inequality is a *bad* in both areas. Results also show that people in both areas consider income inequality as a *good*, thus suggesting that income disparities are viewed as incentives to work harder and take risks. Such findings on subjective inequality make sense if people have knowledge or even hope that opportunities for economic advancement are available despite the presence of objective inequality in their society. Ensuring that people get fair chances to opportunities is a reasonable first step if income inequality is yet not viewed as a problem. To draw out a demand for redistribution requires actions that are intended to transform the consciousness of the people.

JEL Codes: D63 (Equity, Justice, Inequality, & Other Normative Criteria); I31 (General Welfare)

Key Words: Subjective well-being; inequality; valuation

1. INTRODUCTION

Studies find that income inequality not only limits economic growth (Deininger and Squire 1998) but also undermines economic development (Easterly 2007). The gains from economic growth in fact tend to be smaller in societies where there is high income inequality (Cornia 2004). There are also findings that income inequality adversely impacts human development (UNDP 2010; see

also Wilkinson and Picket 2009) and environmental sustainability (Boyce 2007). Insecurity and social conflict are enhanced where income inequality is getting worse (Cramer 2003); in turn, the heightened insecurity and social conflict contribute to aggravate income inequality.

What if the issue is not limited to the objective income inequality? What if part of the inequality problematic is the perception of people about income inequality? That is, it may be the case that social processes and societal arrangements make people believe or even rationalize that income inequality is a natural or normal phenomenon. If so, there is no urgency to act on the problem. The view that a limited consciousness about fairness is the missing dimension to the inequality problematic differs from the usual explanations that are based on the variations in endowments, capacities, or preferences of people.

The conventional economics approach in analyzing income inequality does not include perception in the toolkit. But to deal with the inequality problematic described above requires concepts like "subjective well-being." Studies on subjective well-being uncover aspects about income inequality that the conventional economics approach could not find. In addition, they demonstrate a way to side-step problems associated with the procedures that use pseudo markets, hypothetical goods, or models of revealed choice-actions like buying and selling, especially in doing an examination of non-marketed goods, relationships, processes, institutions, etc. In the case of income inequality, studies confirm that the Gini coefficient of income distribution (henceforth "Gini coefficient) is negatively correlated with subjective well-being (Alesina et al. 2003; O'Connell 2004; Graham and Felton 2005) but perceptions on income inequality are negatively correlated with subjective well-being (Corneo and Gruner 2002; Senik 2005).[1] Better, if not deeper, explanations to the inequality problematic and, arguably, more rewarding suggestions for action can be had when the

[1] Some studies like Berg and Veenhoven (2010) do not find any correlation between income inequality and subjective well-being.

objective and subjective measures are put together in the analysis.

The paper has five parts. Following the introduction, Part 2 presents the concepts of subjective well-being. Part 3 discusses the subjective well-being approach to valuation and its application to income inequality. The results follow in Part 4. The last section concludes the paper.

2. CONCEPT OF SUBJECTIVE WELL-BEING

In this paper, "subjective well-being" is defined as how people consider the state of their being at a point in time. Queries about subjective well-being are oriented to the here-and-now in order to avoid or minimize perception inconsistencies.[2] Because subjective well-being is really personal knowledge, it reflects factual utility (Kahneman and Sugden 2005; Di Tella and MacCulloch 2006) rather than inferred utility.[3]

Subjective well-being is not what an external observer thinks about the state of being of another person. For that reason, it is not sensible to use the subjective well-being of one person to proxy for the state of being of another person. It also does make sense to focus the analysis on choice-actions like buying and selling and the available choices because these may not match up with the true and internal state of being (c.f., Iyengar and Lepper 2000; Schwartz et al. 2002; Iyengar et al. 2006). Denying or dismissing the reported state of being simply because it is a personal statement

[2] Studies find that people tend to view the past using their mindset in the present. As such, people misinterpret or misperceive or become inconsistent when they think about the past (c.f., Eich et al. 1985; Ross 1989; Levine and Safer 2002; Safer et al. 2001). Studies also find that people tend t overstate their positive forecasts and understate their negative forecasts of events or experiences (c.f., Gilbert et al. 1998; Schkade and Kahneman 1998; Wilson et al. 2000; Kahneman et al. 2006).

[3] Some surveys on the applications of subjective well-being in economics are: Di Tella and MacCulloch (2006), Kahneman and Krueger (2006), Dolan et al. (2008), and Frey and Stutzer (2010).

is therefore contrary to the subjective well-being framework. What is essential is that a person does an evaluation and then makes a statement to convey the nature of the state of being. But the self-report can still assume the form of quantitative quotations.

Subjective well-being is comprised of two components: affect and judgment.[4] Both components are known to be separable and independently measurable (Lucas et al. 1996; Diener and Emmons 1984). "Affect" is essentially emotion, which can be positive or negative feelings. The feelings are known to be separable and independently measurable as well (Watson et al. 1988). Often, the ratio of the reported positive affect to the reported negative affect is used as an indicator of the short-term well-being of a person (Larsen and Prizmic 2008).

"Judgment" refers to personal assessment of life in general. Because of its cognitive character, judgment-type reports indicate the long-term well-being of a person. Its most common indicator is "life satisfaction." In doing an evaluation, the person implicitly accounts for the discrepancies between the aspirations in various life domains and the actual achievements with respect to the aspirations (Campbell et al. 1976; Michalos 1985; Solberg et al. 2002). And so, life satisfaction is also called "net life satisfaction."

Early studies find that objective conditions like inflation and unemployment have direct impacts (e.g., Clark and Oswald 1994; Di Tella et al 2001; Di Tella et al. 2003) as well as lasting effects on subjective well-being (Clark et al. 2008; see also Safer et al. 2001). Such hysteresis arises because, in addition to the direct pecuniary cost of losing a job, there are also large non-pecuniary

[4] Subjective well-being and happiness are often treated as synonymous concepts. But they are not the same. The former is a subset of the latter. That is, happiness is comprised of two concepts: subjective well-being and eudaimonia. Feeling good is a type of subjective well-being – in particular, positive affect. There is also life satisfaction. "Eudaimonia" is doing and living well as demonstrated in the way a person lives. The good feeling that one experiences in doing something well (i.e., a rewarding experience) is eudaimonia.

costs of being unemployed (Winkelmann and Winkelmann 1998). Early studies also find that self-assessments of life are distinct from political views (Andrews and Withey 1976). Indeed, people value democracy (Frey and Stutzer 2000; Dorn et al. 2006) and freedom (Inglehart et al. 2008). Recent studies, however, find that the subjective well-being can also be distinct from the personal views about society (Hooghe 2011). All these studies basically show that the impact of the objective conditions on subjective well-being and the subjective assessment of the objective conditions are separable constructs and independently measurable. The implication is that putting together the subjective and objective measures of well-being in an examination of social issues like income inequality does not produce spurious results.

It is natural that affect and judgment change over time. Between emotion and life satisfaction, however, the latter is less volatile. That is, outside extraordinary circumstances like the death of a loved one, the dissolution of marriage, and similar events, life satisfaction falls within a certain range through out the life cycle. There are processes that make a person satisfied with life. But, in general, such processes are the same all people. The argument is important because it suggests that empirical analyses that use, say, life satisfaction can worry less about excessive or even unmeasured volatility in subjective well-being.

One important issue in the debate on subjective well-being is whether or not people can make accurate measurements of their state of being. Put simply: is there correspondence between the self-assessment and the experienced utility? The contention in subjective well-being is that self-assessment is the relevant starting point given that no other individual is in the position to access or know that which is actually internal to a person. What a person declares as one's state of well-being should therefore be taken seriously. Despite concerns about the arbitrariness of self-reports or measurement errors and concerns about the interpersonal comparability of self-reports, people have commonalities in many aspects of their lives, as mentioned above. In this manner, it can be

maintained, that people are by and large alike in the way they evaluate their state of being given comparable desires to be happy, to live well, to enjoy life in general, and how best to go about doing so.[5] It is possible then to examine the collective patterns of the reported subjective well-beings of a large number of people to overcome any discrepancy between self-assessments and experienced utilities. As a result, the average turns out to be an accurate estimate of the subjective well-being of a group of people.

Another issue in the debate concerns the validity of subjective well-being reports. Do self-reports contain useful information at all? The point in using subjective well-being is not about finding the exact extent an event like *X* impacts life satisfaction. It is also not about how a factor like *Y* contributes to subjective well-being. There are just too many events and factors that constitute to an experience. What is needed, however, is that the person knows how to make an evaluation of, say, life in general using some unit of measure or procedure that is easily understandable; and, in turn, the person makes a report about the state of being. While a person may not know how the exact impact of *X* or *Y*, the person can and does respond appropriately when asked about subjective well-being. Despite concerns about measurement arbitrariness, people actually turn out to share comparable ways on the way they interpret their states of being; and, in the context of measurement, they in fact share similar ways in the manner by which they differentiate their life circumstances as the happiest, happier, happy, sad, sadder, or saddest states.

A lot of empirical studies support the conclusion that standard measures of subjective well-being

[5] The inter-personal comparison of utility is rejected in conventional economics analysis (c.f. Robbins 1932), albeit the early economic thinking like Bentham recognizes that people compare their utilities with others (c.f., Kahneman et al. 1997; Kahneman and Krueger 2006). In psychology, however, there remains the view that people normally compare their experiences and capacities to others (Miller and McFarland 1987; McFarland and Miller 1990; Brewer 1991; Barr and Kleck 1995). Subjective well-being analysis seeks to put back inter-personal comparison in its framework.

are reliable and robust and exhibit construct validity. Reliability tests using self-assessments obtained from one person at different points in the same interview (Andrews and Withey 1976; Ehrhardt et al. 2000) or from the same person but obtained in different periods (Schimmack and Oishi 2005; Krueger and Schkade 2008) give consistent and stable results. The message here is that people who state that they are happy at time t are generally also happy in time t+1, excluding of course the extraordinary or dramatic life events between the two periods.

The evidence for robustness is incontrovertible that subjective well-being is correlated with socio-economic variables and life circumstances. For example, unemployment is negatively correlated with subjective well-being (Clark and Oswald 1994; Clark et al. 2008). Age is typically positively correlated with subjective well-being; and, in some studies, it exhibits a quadratic correlation with subjective well-being (Blanchflower and Oswald 2008). On average, males have lower subjective well-beings than females, although some studies find a switch in the pattern over the life cycle (Easterlin 2010). Marriage raises subjective well-being (Diener et al. 2000; Frey and Stutzer 2006) but marriage dissolution decreases it (Marks and Lambert 1998). Income is positively (but only to a limited extent) correlated with subjective well-being. Interestingly, the across-time correlations between aggregate income and aggregate subjective well-being obtain no, if not limited, linkage (Easterlin 1974, 1995; Diener and Biswas-Diener 2002), although Stevenson and Wolfers (2008) challenge such findings. It needs to be pointed out that a low correlation between income and subjective well-being draws attention to the fact that intentional activities like exercise (Sheldon and Lyubomirsky 2006), engagement in desirable pursuits (Csikszentmihalyi 1991), and individual attitudes like positive thinking (Dunn et al. 2008) are relevant aspects to a person's state of being that are not directly reflected in an analysis of income.

With regards to validity, studies find that people with high subjective well-being tend to smile more (Ekman et al. 1990; Pavot et al. 1991); that they are also rated with high subjective well-

being by their spouses, relatives, or peers (Costa and McRae 1988; Sandvik et al. 1993); that they are more successful in many life domains (Lyubomirsky et al. 2005); that they have, on average, normal heart rates and blood pressures (Shedler et al. 1993); that they are less likely to get serious ailments like coronary heart disease (Sales and House, 1971) or afflicted by minor illnesses like the common colds (Cohen et al. 2003); that they live longer (Diener and Chan 2011). There are also studies that find a tight correspondence between subjective well-being and the location of intense brain activity, in particular the left prefrontal cortex for positive experiences and the right prefrontal cortex for negative experiences (Davidson 2003; Urry et al. 2004).

The analytical innovation presented in this paper is that the perception of an external condition is not independent of the background and the specific location of the person within a society. That is, social context influences aspirations and perceptions even as subjective well-being influences how the person engages with the same social context. If people are born into realities that are not of their choosing, it then follows that assessments of states of being and the appraisals of social realities are not independent of objective conditions. Indeed, Frey and Stutzer (2002), Inglehart et al. (2008), and Helliwell et al. (2010) find that the quality of domestic institutions and the level of economic development have tangible effects on subjective well-being. They also stress that where domestic institutions are functioning well and responding to the needs of people, social conditions are better and the well-being of people is tends to be higher than in other places where institutions are not functioning well or not working for the people. As such, the complementarities between the subjective and objective well-being lead to explanations that are not possible with the single-dimension approaches.

3. SUBJECTIVE WELL-BEING APPROACH TO INEQUALITY

"True" subjective well-being (SWB*) remains internal to the person. The subjective well-being

approach thus posits that the self-reported subjective well-being (SWB) is a positive monotonic transformation of SWB* like $SWB = h[U(\cdot)]$, where $U(\cdot)$ is SWB* and $SWB_2 > SWB_1$ iff $h_2(\cdot) > h_1(\cdot)$. The right-hand side of the function can be expressed as $h[U(\cdot)] \equiv h(\boldsymbol{Z}, Y, \boldsymbol{X})$, where Z is the variable of interest like income inequality, Y is income, and $\boldsymbol{X}$ is a set of individual socio-economic and demographic characteristics. Society-level indicators like economic growth rates, population growth rates, etc. can be included $h(\cdot)$. Also, the items in $h(\cdot)$ are assumed separable and additive. Rearranging the SWB equation obtains the expression $SWB - SWB^* = e$, where e is a residual term that is associated with measurement error. Therefore, SWB* ≡ SWB is possible following the law of large numbers and the classical assumption of homoscedasticity in e.

Applying total differentiation on the SWB function obtains $dSWB = h_{Zi}\, d\boldsymbol{Z}_i + h_Y\, dY + h_{Xi}\, d\boldsymbol{X}$. For simplicity, assume $dSWB$ and $d\boldsymbol{X}$ are zero. The expression $MV = -\frac{dY}{dZ_i} = \frac{h_{Zi}}{h_Y}$ is obtained after rearranging terms. MV stands for the monetary valuation of Z. If $h_Y > 0$ (i.e., marginal utility of income is positive), Z is identified as a *good* if $MV > 0$ (i.e., preferred condition); Z is a *bad* if $MV < 0$ (i.e., not preferred condition). Notice that the SWB approach does not need to ask people to examine Z in order to calculate the monetary valuation of Z. What is done instead is to take the correlation between subjective well-being and Z and that between subjective well-being and income to obtain a monetary valuation of Z. Notice, too, that carrying out the procedure does not require pseudo markets, hypothetical goods, or revealed choice-actions like buying and selling. Presumably, this approach is less likely to be contaminated by problems that are associated with implausible choices or focusing illusion.[6]

[6] From a political economy point-of-view, there are difficulties interpreting the results of the conventional valuation approaches if ordinary people are powerless to change or influence their life circumstances and/or engage with their environment when corporate dominance, political influence, and elite interests define the external setting. The same logic applies when people are considering implausible goods.

To implement the above model, however, what is followed is the economics assumption of inter-personally comparable ordinal rankings of subjective well-being.[7] If so, a structural equation may be specified to analyze income inequality as: $SWB(Z, Y, \boldsymbol{X}) = \alpha + \beta_1 \cdot Z_{obj} + \beta_2 \cdot Z_{subj} + \gamma_1 \cdot W_{obj} + \gamma_2 \cdot W_{subj} + \delta \cdot Y + \varphi \cdot \boldsymbol{X} + e$ and $SWB = k \leftrightarrow u_k \leq SWB^* \leq u_{k+1}$, where Z_{obj} is a measure of objective income inequality and W_{obj} is a measure of objective freedom; Z_{subj} is a measure of the subjective assessment of income inequality and W_{subj} is a measure of the subjective assessment of freedom; Y is income; $\boldsymbol{X}$ is a set of subjective and objective correlates of SWB; e is the residual term; and k is the number of discrete categories with u as the boundary or threshold values of the categories. The ordered probit procedure is used to estimate the equation.

Using the ordered probit procedure is in line with the idea that, all other things the same, people share commonalities in the manner they interpret their subjective well-being. Given that SWB* is a latent variable, the estimated coefficients merely indicate the general direction of relationship between the right-hand side indicators and SWB. Still, the ratio of the coefficients on, say, Z_{obj} and y leads to the monetary valuation of Z_{obj} as explained earlier. But there are methodological issues that need to be flagged at this point. First, it is not feasible to correct for time invariant unobservable variables by using, say, the first differencing approach when SWB is latent and ordinal. Similarly, it is not possible to correct for (possible) endogeneity to deal with the causality issue between right- and left-hand side variables. Introducing individual fixed effects to account for any unobservable individual heterogeneity like personality traits might produce inconsistent results as explained by Maddala (1982). Introducing aggregate fixed effects like country dummies may remove any bias between the individual-level indicators and SWB – possibly caused by the

[7] There is a methodological difference between economics and psychology. The assumptions in economics lead to inter-personally comparable ordinal values, while those in psychology lead to inter-personally comparable cardinal values. Ferrer-i-Carbonell and Frijters (2004) suggest a procedure to deal with the methodological difference.

introduction of aggregate-level objective indicators like objective income inequality – but it still does not address the limitations of latent and ordinal values. But, at least, the country dummies are account for the idiosyncrasies within the country groupings. With the assumption of separable and additive variables, *e* becomes a catch-all item. Just the same, the size of *e* is not expected to undermine or reverse the direction of relationship between the right- and left-hand side variables. Therefore, caution is needed when interpreting the results. The indicators used in the regressions are described next.

Data Coverage: The countries covered in this paper are those surveyed by the World Values Survey 2005.[8] Thirty-two economies are identified based on the data completeness criterion (see Appendix for the list of countries). For the regression analysis, however, the economies are divided into two groups. The first group is for the industrialized economies (14), while the second group is for the emerging economies (18). Regression analysis is done on separate pooled datasets in order to remove any effects due to the dissimilarity in the quality of domestic institutions and other factors that are associated with the different levels of economic development.

***Subjective Well-Being*:** Life satisfaction is used to proxy SWB. It is obtained as the responses to the question: "*All things considered, how satisfied are you with your life as a whole these days?*"[9] The person locates life satisfaction using a 10-point scale, with 1 as 'completely dissatisfied' and 10 as 'completely satisfied.' Raw data are from the World Values Survey 2005.[10]

[8] World Values Survey datasets are downloadable from http://www.worldvaluessurvey.org/. The label "World Values Survey 2005" refers to the latest data file.

[9] Recent studies that use life satisfaction as proxy for SWB are: Di Tella et al. (2001; 2003), van Praag and Baarsma (2005), Welsch (2007), Carroll et al. (2009), Frey et al. (2009), Luechinger (2009), and Ferreira and Moro (2010). See also Frey et al. (2010) for a survey.

[10] The specific item in the World Values Survey 2005 is V22.

***Objective Inequality*:** The Gini coefficient is used to proxy for objective inequality.[11] Raw data are from the World Development Indicators.[12]

***Subjective Inequality (Outcomes)*:** People choose between the following statements: ‘‘*‘Income should be made more equal’ [or] ‘We need larger income differences*’ (emphasis mine)”[13] A 10-point scale is used to measure the subjective assessment of income inequality. In this case, 1 means ‘completely [agreeing] with the [first] statement’ and 10 means ‘completely [agreeing] with the [second] statement.’ What is done for the regression analysis is to collapse the values 1 to 4 to proxy for an affirmative assessment on the first statement (and zero otherwise). The same step is done for values 5 to 6 to proxy for neutral position (and zero otherwise). The values 7 to 10 are likewise collapsed to proxy for an affirmative assessment on the second statement (and zero otherwise). Two dummy variables are thus introduced in the regression analysis with the neutral position as the reference point. Raw data are from the World Values Survey 2005.

***Subjective Inequality (Opportunities)*:** There are other indicators for subjective inequality called “subjective opportunities.” People responded to the following paired statements: “‘*[1] In the long-run, hard work usually brings a better life’ [or] ‘Hard work doesn’t generally bring success – it’s more a matter of luck and connections*’” and “‘*[2] People can only get rich at the expense of others’ [or] ‘Wealth can grow so there’s enough for everyone* (emphasis mine)’”[14] The same 10-point scale is used to collect the information, with 1 to mean ‘completely [agreeing] with the [first] statement’ and 10 to mean ‘completely [agreeing] with the [second] statement.’ Like

[11] An alternative measure to the Gini coefficient is the income gap between the top income class and the other income classes. No attempt was done to test the income gap measure because World Values Survey 2005 does not collect information on individual incomes.

[12] World Development Indicators data are downloadable from: http://data.worldbank.org/data-catalog

[13] The specific item in the World Values Survey 2005 is V116.

[14] The specific items in the World Values Survey 2005 are V120 and V121.

"subjective inequality (outcome)" above, the value-responses are compressed to obtain two dummy variables with the neutral position as reference point for the regression analysis. Raw data are from the World Values Survey 2005.

Objective Freedom: Indicators that represent "political and civil liberties" are used to proxy for objective freedom. 'Partly free' and 'free' states take the value of 1, respectively (and zero otherwise, respectively), with the 'not free' state as the reference point for the regression analysis. Raw data are from the Freedom House database.[15]

Subjective Freedom: People responded to the question: "*Some people feel they have completely free choice and control over their lives, while other people feel that what they do have no real effect on what happens to them. Please use [the] scale where 1 means "no choice at all" and 10 means "a great deal of choice" to indicate how much freedom of choice and control you feel you have over the way your life turns out* (emphasis mine)."[16] Two consecutive values are compressed to obtain subjective freedom quintiles (see also subject income quintiles below). Then the 'second freedom quintile' until the 'fifth freedom quintiles' take the value of 1 and zero otherwise, respectively; thus, the 'lowest freedom quintile' is the reference state for the regression analysis. Raw data are from the World Values Survey 2005.

Income: The World Values Surveys do not collect information on individual incomes. Following the extant literature, the gross domestic product (GDP) per capita is used to proxy for income.[17] In this paper, the 5-year average of GDP per capita is used in the regression analysis. This setup is

[15] Industrial economies do not have an objective freedom data because they are all rated 'free'. Freedom House data are downloadable from http://www.freedomhouse.org/

[16] The specific item in the World Values Survey 2005 is V46.

[17] The form of income is not an issue since the resulting valuations would be comparable when converted into the same dimension. See the debate between Easterlin (1974) and Stevenson and Wolfers (2008).

done to deal with (potential) income endogeneity even though it is a rudimentary approach. Raw data are from the World Development Indicators.

Demographics and Socio-economic Profile: The standard indicators are used in the regression analysis like age, gender, marital status, educational attainment, job status, and income class. The age variable is reported in terms of years.[18] The square of age is also included in the regression analysis in order to capture the purported quadratic relationship between age and subjective well-being. For the gender of the person, the reference status is female.[19] Thus, "male" takes the value of 1 (and zero otherwise). For the marital status of the person, "married" is the reference status for the regression analysis.[20] The states "ex-married" (i.e., either divorced or separated), "widowed," and "single," respectively, take the value of 1 (and zero otherwise). The reference state for the educational attainment of the person is the combined attainment of "no formal education" and "incomplete primary education."[21] People with "completed primary", "completed secondary", and "completed tertiary" education, respectively, take the value of 1 (and zero otherwise). For job status, the reference state is "employed" (i.e., full-time, part-time, or self-employed).[22] Thus, respectively, people who are "unemployed" or "retired" and people who are "not in the labor force" take the value of 1 (and zero otherwise). Lastly, income class means the self-reported income status of a person.[23] In this case, two deciles are compressed to obtain subjective income quintiles with the lowest subjective income quintile as reference state for the regression analysis. Thus, respectively, the "second subjective income quintile" up to the "fifth subjective income

[18] The specific item in the World Values Survey 2005 is V237.

[19] The specific item in the World Values Survey 2005 is V235.

[20] The specific item in the World Values Survey 2005 is V55.

[21] The specific item in the World Values Survey 2005 is V238. A person who reports "some university-level education, without degree" is counted as "completed secondary" education, and a person who reports "incomplete secondary school" is counted as "completed primary" education.

[22] The specific item in the World Values Survey 2005 is V241.

[23] The specific item in the World Values Survey 2005 is V253.

quintile" takes the value of 1 (and zero otherwise). Raw data are from the World Values Survey 2005.

3. EMPIRICAL FINDINGS

Table 1 is the summary of regressions, and Table 2 presents the monetary valuations of objective inequality, subjective inequality, and subjective opportunities. This section has two sub-parts: the first deals with the findings on the socio-economic and demographic profile, and the second deals with the findings on inequality and opportunity.

3.1 Socio-Economic and Demographic Profile

Results on the standard correlates of subjective well-being for the industrialized and emerging economies are in line with the extant literature. They are presented in Panel 1 of Table 1. First, age exhibits a positive quadratic relationship with SWB. Both the industrialized and emerging economies turn out to have similar turning points in terms of age at 50 years for the industrialized economies and 48 years for the emerging economies. That is, all things the same, subjective well-being of people in the emerging economies falls earlier than those in the industrialized economies. The two year difference may be small but it reflects how much people in the emerging economies are relatively more burdened with work and, at the same time, what they gain from working is not as large as what people in the industrialized economies experience.

The U-shaped relationship between age and SWB reflects the trend in subjective well-being over the life cycle of people. There are more aspirations, responsibilities, and so on, as a person grows older. Disappointments come along the way, especially when aspirations and achievements do not match. In fact, people experience more dissatisfaction with life as the gaps between aspirations

and achievements increase. Interestingly, the so-called "mid-life crisis" falls with one standard deviation around the turning points. Perspectives change, of course, as a person grows older. In time, people accept the way their lives turn out and experience fewer discontents. People in their 50s or 60s could then experience levels of subjective well-being that are comparable to people in their 20s or 30s.

[Insert Table 1, Panel 1]

Gender obtains the anticipated result. In both the industrialized and emerging economies, males show relatively lower subjective well-being than females. Perhaps gender socialization is driving this pattern. That is, the greater expectations on males to work or pursue a living, take on the role of family provider, succeed in life, and so on, push them to strive harder and so, on average, face more stress in life. All things the same, gender socialization results in more frustrations in men relative to women.

Third, results on marital status are in line with the extant literature. The dissolution of marriage with divorce or death is negatively correlated with SWB. The pattern holds in both groups, albeit the impact of marriage dissolution is greater in the industrialized economies. There are similar results on being single. Marriage dissolution or being single is economically costly if marriage has the economies of scale effect in terms of family provisioning and security. That is, marriage dissolution or being single can adversely impact subjective well-being given that income is positively correlated with SWB (see below).

Fourth, getting more education is good for subjective well-being. The completion of secondary and tertiary levels of education impacts SWB more in the industrialized economies. This result is in line with the expectation that higher levels of education are important in sustaining economic

progress at the advanced level. In the emerging economies, the completion of primary and tertiary levels of education is more important. This result reflects the fact that primary education at lower levels of economic development provides the foundation for economic progress, while tertiary level of education creates the pool of human capital to support the transition from lower to higher economic status.

Fifth, unemployment is negatively correlated with SWB. Moreover, unemployment shows greater impact in the industrialized economies than in the emerging economies. So it is more costly be jobless in industrialized economies because of higher standards of living. There are greater social expectations, too. Being "not in the labor force" does not improve subjective well-being much, perhaps because there is less expectation on, say, the youth and adolescents to work for a living. The same findings apply to the emerging economies. Not surprisingly, being "retired" is positively correlated with SWB in the industrialized economies but negatively correlated with SWB in the emerging economies. That is, people are less worried about retirement when they live in societies where the pension and healthcare systems are operating well and also addressing their needs. But retirement is a bane in the emerging economies because it does not only mean losing a livelihood – thus the reduction in income – but also mean assuming additional financial burdens that come with old age like healthcare and medicines because there is limited, if any, pension and healthcare system to address their needs.

The next results are on subjective income status, which reveal positive correlations with SWB for both the industrialized and emerging economies. Higher perceived income status leads to higher subjective well-being regardless of the economic standing of societies because it implies that the people are enjoying more choices and actualizing their choices. In the industrialized economies, though, the contribution of higher income status to subjective well-being is not large as expected because the standard of living there is already high. In the emerging economies, in contrast, the

impact of higher income status is much more pronounced because of the large disparities in actual incomes. But, on the whole, results still demonstrate diminishing returns to higher income status.[24]

The last section of Panel 1 presents the findings on objective and subjective freedom. Results show that more objective freedom is positively correlated with SWB. That is, people experience greater subjective well-being in free societies. The finding is in line with the view that democratic societies provide the backdrop for welfare and social advancements. Moreover, higher perceived freedom is positively correlated with SWB in both the industrialized and emerging economies.[25] What this finding points out is that people need to know that they can make choices on their own regardless of the outcomes of their choices.[26] That is, social freedom and personal independence enhance subjective well-being.

3.2 Objective Inequality, Subjective Outcomes, and Subjective Opportunities

Panel 2 of Table 1 shows income is positively correlated with SWB. The size of the coefficient on income is small as expected. But results also indicate that the coefficient on income is larger in the emerging economies than in the industrialized economies. This finding is in line with the view that higher levels of income entail diminishing impacts on subjective well-being.

[24] If income standing is linked to social class and associated disposition towards social issues, etc., then it takes into account the variations in class behavior linked to income.

[25] There is a negative correlation between low subjective freedom and SWB (subjective freedom quintile 2) in the industrialized economies, where objective freedom is high. This result is not found (or at least not statistically significant) for the same quintile in the emerging economies, where objective freedom is low. Perhaps, the large array of choices available to people in the industrialized economies becomes a negative freedom to people who end up feeling restrained or who cannot act on their options because their incomes cannot make them convert choices to actions. So people end up blaming themselves because they cannot shape their own lives or control outcomes.

[26] If subjective freedom is associated with social power and awareness to shape life, etc., then it takes into account class behavior linked to choices.

[Insert Table 1, Panel 2]

[Insert Table 2 As Well]

The next result concerns objective inequality. The coefficient on the Gini coefficient is negative only in the industrialized economies, albeit the result is not statistically significant. This finding indicates that income inequality is not acceptable to people where income equality is the norm in society. But the more important interpretation of the finding is the following: income inequality is not a cause of concern to people or, at least, it does not bother them. There is, however, the unexpected positive coefficient on the Gini coefficient in the emerging economies. The monetary valuation is about $390 (14% of average income) per person. That is, objective inequality is not a problem to people in the emerging economies. This finding suggests that income inequality is an acceptable scheme and, perhaps, treated as a standard arrangement, too, where income equality is not the norm in society. The processes of coping and rationalization help people attend less to the adverse circumstances, thereby people experience less negative impact from income inequality.

Meanwhile, the interaction between the Gini coefficient and a dummy representing high levels of income inequality reveals that too much objective inequality is unpleasant to people.[27] That is, there is a threshold to income inequality that people can tolerate. Beyond the threshold, a tradeoff between objective inequality and subjective well-being begins to manifest. This finding indicates an inconsistent behavior of people: income inequality per se is alright but too much inequality is not alright. What this finding points out is that people basically do not tolerate disproportionate advantages or privileges that go only to a few people. In the emerging economies, perhaps, higher objective inequality undermines the incentives for ingenuity and to strive harder (see below) with an estimated cost on subjective well-being of $76 to $80 (2.8% to 3% of average income) per

[27] The high Gini industrialized economy in the sample is: United States (0.41).

person. Moreover, the large departures from relative equality in the industrialized economies are upsetting people with an estimated cost on subjective well-being of $450 to $550 (1.6% to 2% of average income) per person. In short, too much inequality is a *bad* because, in the case of the emerging economies, there are few people coming out far ahead of the rest or, in the case of the industrialized economies, there are many people left behind.

Juxtaposing with the above findings are the results on subjective inequality. Results indicate that income inequality is perceived as a normal state of affairs in any society. Furthermore, income differences are acceptable to people. This finding, in fact, holds in both groups of economies with monetary valuations of subjective inequality of 30% to 40% of average incomes, large enough to be disregarded in the analysis. As such, income redistribution to achieve income equalization can be not helpful to society, at least based on the way people view the situation at the moment. What might be helpful in such circumstances is to level the context in which people operate so that each person enjoys the same chances to opportunities in order to move up on the economic ladder (see below). That is, income inequality is easily tolerated by people if it is the outcome of an impartial environment where people operate on the same rules or if the outcome arises from processes that are perceived to be fair but not so if the outcome comes out of actions that people see to be unfair or biased.

The lower half of Panel 2 (of Table 1) presents the results on subjective opportunities. Recall that there are two indicators for the regression analysis, and each indicator contains paired scenarios. The indicator 'working hard matters' obtains a positive correlation with SWB in both the industrialized and emerging economies. The indicator 'luck and connections' show a negative correlation with SWB but it is statistically significant only in the industrialized economies. The same pattern is found for the indicator 'people can only get rich at the expense of others.' Lastly, there is a positive correlation between the indicator 'wealth can grow for everyone' and SWB in

both groups.

There are interesting interpretations to the findings. First, results indicate that people are generally optimistic – better lives are possible if people strive hard enough. Another interpretation is that equal chances to opportunities are the routes to better life circumstances. People just need to redirect their attention toward something better and to make every effort toward achieving that envisioned life. Despite the presence of objective inequality in society, what matters more is that people can actually do something to improve their lives. It is even better if doing something about their life circumstances does not constrain the opportunities of others to do the same. That is, the economic pie can be enlarged for everyone to enjoy.

It is interesting that the indicators 'luck and connections' and 'getting rich is a zero sum game' both show negative correlations with SWB in the industrialized economies. The large monetary valuations from 27% to 34% of average income reveal the considerable weight that people put on these sentiments, albeit perceived as *bads*. People do not want to see that others are getting ahead just because they are lucky and enjoy connections. Put in another way, social exceptionalism is not based on serendipity, linkages, or unjustified advantages. Fair play and self-determination are crucial if people want to move up on the economic ladder, especially in societies characterized by relative equality. Moreover, people in the industrialized economies reject situations where people are scheming or conspiring to take advantage of the circumstances of others just to move ahead in society. Manipulation or insensitive actions cause disappointments and adversely affect subjective well-being especially because industrialized economies guarantee that benefits can be reaped from working harder and taking risk. Still, the net valuations of these sentiments are large enough to suggest that, on the whole, people in the industrialized society reject actions that are injurious in one way or another to others (Note 3 of Table 2). These findings are saying that an even playing field remains a fundamental setup even if societies reach higher levels of economic standing.

4. CONCLUSION

Research that focused on objective inequality suggests that income inequality is a bane to welfare because it undermines the foundations for economic growth and development. This paper does not challenge such view. In fact, income redistribution is an important step toward raising welfare of everyone. What this paper points out, however, is that people do not see objective inequality as a problem that needs to be addressed. People may even accept objective inequality as normal.

The findings on objective inequality indicate that income inequality is not harmful to subjective well-being. Objective inequality is acceptable to people when they see that there are possibilities to rise above their current social standing. And income inequality is not a problem as long as the income differences nudge people toward self improvement. Nonetheless, too much objective inequality becomes harmful because it implies that some people are left out or unable to rise above their current social standing even with the existing opportunities. Arguably, too much objective equality is harmful because it implies that society undervalues the achievements that are possible with talent, innovation, and ingenuity.

But perfect equality should not be the goal.[28] What the findings on objective inequality suggest is that pushing for objective equality for its own sake can backfire because doing so means treating people unfairly or unevenly in the end. Pushing for objective equality for its own sake can also be counterproductive because doing so creates disincentives against striving for something better. So going for perfect equality can push society into a worse position where people experience lowered

[28] Results on the interaction between the Gini coefficient and a dummy representing very low levels of income inequality reveal that too little objective inequality is negatively correlated with SWB. The low Gini industrialized economies in the sample are: Finland (0.27), Germany (0.28), Japan (0.24), Netherlands (0.30), Norway (0.25), Sweden (0.25).

subjective well-beings.

Should people ignore objective inequality? From the findings in this paper, the answer is: No. Yet the findings in this paper also suggest that it might be more constructive to first deal with the way objective inequality is perceived by people rather than pursuing redistribution at the outset. Thus, what is more helpful to pursue is to make people recognize that objective inequality is harmful for society in the long-term because it not only undermines the very foundations that allow for higher trajectories of economic growth and development but also, within the larger societal context, it is a contradiction to the basic principles of justice and democracy that hold the fabric of society together. If people are born into realities that are not their own choosing, then correcting objective inequalities is a responsibility that cannot be rescinded. Nevertheless, the guiding principle is not to impose objective equality but rather to use strategies that lead people to demand for income redistribution.

The findings on subjective inequality indicate that subjective well-being can still increase as long as there are prospects to overcome life circumstances. Put another way, a positive assessment of the opportunities helps mitigate the decline in subjective well-being brought about by objective inequality.

But the converse is applicable, too. People feel bad when a few enjoy more luck and connections than most people. People also feel bad if they cannot do something about their life circumstances despite the available opportunities. People feel bad if there no is respect for fair play and rewards are not guaranteed to anyone who takes up the challenge to do every effort possible to move up on the economic ladder. There are two guiding principle given these findings. Firsts, action is direction not to impose income redistribution but rather to create a setting wherein opportunities for advancement are not only fair and open to everyone. Second, the setting must be such that the

ability of some to take up the opportunities does not compromise the ability of others to improve their life circumstances as well.

Therefore, if objective inequality is not viewed as a problem, then ensuring that each person gets fair chances to opportunities within their society is the initial course to pursue. Or, in cases where people have given up on objective equality, it is important that there are at least opportunities to allow people, on their own, to go as far as possible to advance their life circumstances. Even so, perceptions still need to shift away from apathy and toward realization that objective inequality is fundamentally unfair. That is, people need to be concerned about objective inequality if society is to move toward something that is just and humane. The more important point is that people need to first reject the continuation of objective inequalities before there is a demand to change the way society is organized and resources are distributed. Perhaps it is only at that point that redistributive measures are not going to be injurious to subjective well-being.

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APPENDIX

List of Countries from World Values Survey 2005

Industrialized Economies	Emerging Economies
Australia	Brazil
Canada	Chile
Finland	Egypt
France	Ethiopia
Germany	Ghana
Italy	India
Japan	Indonesia
Netherlands	Malaysia
Norway	Mali
Spain	Mexico
Sweden	Morocco
Switzerland	Peru
United Kingdom	Poland
United States	Romania
	Russian Federation
	South Africa
	Thailand
	Turkey

Table 1: ***Regression Results, Panel 1*** *[To Be Inserted in the Text]*

	Industrialized Economies		Emerging Economies	
	Model 1	Model 2	Model 1	Model 2
Age	-0.0283	-0.0294	-0.0190	-0.0191
	-8.8931	-9.2254	-7.6615	-7.7148
Age-square	0.0002	0.0002	0.0001	0.0002
	8.2964	8.5813	7.2994	7.3520
Male	-0.0706	-0.0603	-0.0391	-0.0382
	-4.3616	-3.7277	-3.007	-2.9409
Ex-married	-0.4065	-0.4061	-0.2105	-0.2105
	-14.228	-14.234	-6.3651	-6.3623
Widowed	-0.2733	-0.2691	-0.1052	-0.1044
	-7.0215	-6.9316	-3.5331	-3.5073
Single	-0.3258	-0.3317	-0.1246	-0.1248
	-13.816	-13.948	-7.0559	-7.0633
Primary education	0.1081	0.0989	0.1203	0.1200
	2.6172	2.4025	6.3977	6.3840
Secondary education	0.1709	0.1624	0.0946	0.0959
	4.1404	3.9451	5.0011	5.0656
Tertiary education	0.1859	0.1768	0.1382	0.1401
	4.2597	4.0568	5.8068	5.8887
Unemployed	-0.3072	-0.3086	-0.0852	-0.0871
	-8.0245	-8.0590	-3.8297	-3.9141
Retired	*0.0316*	*0.0301*	-0.1315	-0.1328
	0.9933	*0.9475*	-4.3806	-4.4246
Not in the labor force	*0.0255*	*0.0276*	0.0696	0.0868
	1.0553	*1.1384*	5.2791	5.2625
Subj. income, quintile 2	*-0.0201*	*-0.0196*	0.0769	0.0764
	-0.8962	*-0.8737*	4.2030	4.1733
Subj. income, quintile 3	0.1108	0.1145	0.2763	0.2749
	4.7441	4.9023	15.034	14.959
Subj. income, quintile 4	0.1953	0.1974	0.4793	0.4766
	7.3994	7.4788	23.126	22.991
Subj. income, quintile 5	0.2331	0.2408	0.5434	0.5419
	7.5480	7.8073	16.833	16.789
Obj. freedom, Part Free			0.1517	0.1479
			4.6345	4.5217
Obj. freedom, Full Free			0.3648	0.3668
			13.420	13.507
Subj. freedom quintile 2	-0.1832	-0.1782	*-0.0487*	*-0.0479*
	-2.8759	-2.8008	*-1.4906*	*-1.4680*
Subj. freedom quintile 3	0.1965	0.1991	0.2144	0.2140
	3.4365	3.4896	7.2372	7.2234
Subj. freedom quintile 4	0.5525	0.5574	0.4651	0.4635
	9.7338	9.8436	15.492	15.427
Subj. freedom quintile 5	0.9111	0.9145	0.7914	0.7915
	15.329	15.417	24.619	24.628

Table 1: ***Regressions Results, Panel 2*** *[To Be Inserted in the Text]*

	Industrialized Economies		Emerging Economies	
	Model 1	Model 2	Model 1	Model 2
GDP per capita	1.03E-5	8.74E-6	8.12E-5	8.15E-5
	6.6005	5.6622	12.509	12.560
Gini coefficient	*-0.0019*	*0.0003*	0.0319	0.0319
	-0.4692	*0.0849*	18.413	18.483
Gini * high income inequality	-0.0047	-0.0049	-0.0063	-0.0065
	-5.8466	-6.0715	-7.9185	-8.1118
Subj. inequality: income to be equalized	*0.0007*	*0.0030*	*-0.0167*	*-0.0122*
	0.0383	*0.1511*	*-0.9497*	*-0.6991*
Subj. inequality: income differences o.k.	0.0972	0.0915	0.0961	0.0940
	5.0008	4.7194	6.3512	6.2020
Subj. opportunity: hard work matters	0.0421		0.0284	
	2.1970		1.8864	
Subj. opportunity: luck & connection	-0.0788		*-0.0065*	
	-3.5006		*-0.3657*	
Subj. opportunity: getting rich, zero sum		-0.0836		*-0.0235*
		-3.6912		*-1.3777*
Subj. opportunity: getting rich, pos. sum		0.0461		0.0227
		2.5881		1.6174
Fixed effects	Yes	Yes	Yes	Yes
Pseudo-R^2	0.05	0.05	0.06	0.06

Notes:

1. The 5-year average of GDP per capita (in levels) is used in the regression.

2. Numbers below the estimated coefficients are the z-statistics. The estimated coefficients are statistically significant if the z-statistics are greater than or equal to 1.50.

Table 2: ***Monetary Valuation Results, in US dollars*** *[To Be Inserted in the Text]*

	Industrialized Economies		Emerging Economies	
	Valuation 1	Valuation 2	Valuation 1	Valuation 2
Gini coefficient			$ 393 (14.5%)	$ 391 (14.4%)
Gini * high income inequality	-$ 456 (-1.61%)	$ 561 (1.98%)	$ 76 (2.81%)	$ 80 (2.95%)
Subj. inequality: income to be equalized				
Subj. inequality: income differences o.k.	$9,437 (33.3%)	$10,469 (37.0%)	$1,183 (43.7%)	$1,153 (42.6%)
Subj. opportunity: hard work matters	$4,087 (14.4%)		$ 350 (12.9%)	
Subj. opportunity: luck & connection	-$7,660 (27.0%)			
Subj. opportunity: getting rich, zero sum		-$ 9,565 (33.8%)		
Subj. opportunity: getting rich, pos. sum		-$ 5,276 (18.7%)		$ 279 (10.3%)

Notes:

1. Monetary valuation is: $MV = -\frac{dY}{dZ_i} = \frac{h_{Zi}}{h_Y}$. The indicated figures are only for the statistically significant results.

2. Numbers in parentheses are shares in GDP per capita. For the emerging economies the group average masks the large variations in average incomes. If the average of high income emerging economies and the average of low income emerging economies are used instead, the percentages can range between half to six times the reported figures in the table. The percentages are still large relative to GDP per capita.

3. For the industrialized economies, the net valuation on the first subjective opportunity indicator is -$3,573 (12.5% of average income); that on the second subjective opportunity indicator is -$4,289 (15.1% of average income). These amounts are comparable to each other.