

Well-Being, Social Capital and Public Policy: What's New?

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Abstract

This paper summarizes recent empirical research on the determinants of subjective well-being, and sketches possible implications for public policy. Results from national and international samples suggest that measures of social capital, including especially the corollary measures of specific and general trust, have substantial effects on well-being beyond those flowing through economic channels, as measured by incomes and employment status. Additionally, the international samples of well-being data (supported by parallel analysis of suicide data) show the importance of several measures of the quality of government. More recently, use of well-being data to estimate the income-equivalent value of a variety of non-financial aspects of the workplace produces numbers so large as to suggest the existence of unexploited opportunities to improve both employee satisfaction and enterprise efficiency.

In short, recent well-being results suggest renewed policy emphasis, in both the public and private sectors, on the social and institutional contexts within which firms and governments operate. Beyond this potentially vast, but largely unstudied, set of process improvements, there is an additional range of policy issues. These relate to the collection of data and the construction of research and policy agendas.

Since subjective well-being measures are plausibly linked to the underlying utility experienced by individuals, and because such measures are very cheap to collect in the context of established surveys and pilot projects, there is a case to make for vastly increasing the quantity of well-being data available to aid future analysis. In particular, policy interventions should be routinely accompanied by prior and subsequent measures of well-being. On a more ambitious scale, large geo-coded surveys of social capital and

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well-being, ideally collected as ancillary data on existing surveys, offer the potential for developing community-level measures of social capital and well-being that can supplement the existing set of census-based community-level data.

1. Setting the Stage

Although I and many other economists are newcomers to the study of well-being, the field has had many illustrious contributors over the centuries. Thus I have been lucky enough to act as research assistant for both Aristotle (in *How's Life?* Helliwell 2003) and Durkheim (in the suicide paper, Helliwell 2004). Working in Aristotle's lab, it has been natural to concentrate on measures of life satisfaction rather than questions dealing with happiness, since he thought that a reflective rather than a momentary view was more likely to give a balanced assessment of what constituted the good life, and to support his view that the good life steered a middle course between the Stoics and the Epicureans. To a striking degree, modern data have tended to support the main hypotheses of Aristotle and Durkheim, both of whom attached great importance to the norms and support networks that have more recently been described as social capital (Putnam 2000, OECD 2001).

In more recent work on well-being and the workplace, we are taking our methodology from Adam Smith by estimating the value of workplace social capital in terms of compensating or equalizing differentials (Helliwell and Huang 2005). Smith (in the *Wealth of Nations*, book 1, chapter 10, part 1) and subsequent empirical researchers following his lead have tended to explain wage differences in terms of job characteristics. The key difficulty with explaining wages by job characteristics is that people of greater ability tend to find themselves jobs with both higher pay and better working conditions. This means that the compensating differentials tend to be under-estimated, to the extent that differences in abilities cannot be properly controlled for. Measures of life satisfaction can be used to circumvent this problem, since the effects of income and non-income characteristics of the workplace can be included as separate determinants of life satisfaction, and the ratios of coefficients used to calculate compensating differentials. Adam Smith paid less attention to social capital than either Aristotle or Durkheim. The

estimated compensating differentials for various measures of workplace trust and engagement are high enough to deserve his attention.

Before turning to specific results, it might be helpful to complete the stage-setting by dealing in advance with some of the doubts that social scientists, and perhaps especially economists, might have about the use of subjective evaluations of life satisfaction as proxy measures of utility. This paper gives priority to a particular range of measures of well-being, especially those asking individuals to rate their life satisfaction on a scale of 1 to 10. The answers to such questions are being used increasingly in applied studies designed to assess the effects of a variety of variables subject in various ways to public policy- e.g. the valuation of airport noise (van Praag and Baarsma 2005).

But are they the right questions? And can subjective answers to any such general questions be relied upon for either scientific or policy purposes? The use of such data in the ways I and others propose has been queried from several perspectives. First, there are those, among whom economists are often to be found, who are suspicious of subjective data of any kind, especially if there is any alternative possibility of inferring preferences from observed behaviour. The most effective answer to this type of scepticism is provided by the remarkable parallel between international results for life satisfaction and for suicide (Helliwell 2004), to be discussed later in the paper.

Second, among those who think that measures of subjective well-being are suitable objects of analysis, there are those who prefer to use samples or integrals of 'experienced utility' (Kahneman, Wakker and Sarin 1997) rather than reports of life satisfaction ('remembered utility') as the focus of attention. There is a wealth of experimental evidence (reviewed by Kahneman, Wakker and Riis 1997, Kahneman et al 2004 and by Kahneman and Riis, in press) that subjects generally evaluate the pleasure or pain of past experiences by some average based on the peak and final moments, and not on a sum or integral of their moment-by-moment reactions. This peak-plus-terminal rule appears to apply fairly broadly, whether the experience under review is a vacation or a colonoscopy. Studies show that it is this remembered utility rather than any more evenly weighted sum

of momentary experienced utilities that tends to govern subsequent decisions, be they about where to take holidays or whether to have another colonoscopy. Kahneman argues that primary research and policy attention should be given to experienced utility, with the apparent dominance of remembered utility as a driver of individual decisions to be treated as a mistake. I am rather more inclined to conclude that if remembered utility produces a consistent set of forward-looking decisions and backward-looking evaluations, then it should be given pride of place by both the analyst and the policy-maker. To focus on maximizing what the researcher takes to be the integral of individuals' experienced utility, if this is importantly at odds with what individuals remember, would seem bound to face voter rejection whenever exposed to the test of the ballot box. Why not give equal or greater priority to the ex post evaluations of those whose interests are being considered, thus taking full account of whatever mechanisms they have used when summarizing their experiences to guide their current decisions? Since evaluations of remembered utility underlie currently reported life satisfaction, and have been shown to be the basis for individual-level decisions, they have credible claims as primary objects of policy-oriented research, providing a basis for both calculating and evaluating the effects of policy changes.

A third line of objection relates to the possibly confounding role of personality differences. Optimists will tend to say that they are satisfied with their lives. They may well have rosy valuations of their health status. They may also be more likely to be married, have interesting jobs, and spend time with their neighbours, all of which have been found to be positively correlated with life satisfaction. Only a few surveys have questions that provide adequate personality data to assess the likely extent of this sort of bias. But some indicative results to be reported later suggest that many of the key relationships apply almost equally to sub-samples drawn from different personality types, and hence are not solely or even predominantly attributable to personality differences. However, it will always remain the case that most survey data will not permit personality-typing, so that researchers must remain alert to situations where their results may be traceable in part to common correlations with un-measured personality differences. The fact that some variables are more likely than others to be affected by

personality differences can be used to put some bounds on the likely effects of personality differences. For example, it is surely the case that several key aspects of personality, e.g. optimism and psychotocism, are likely to have large and similar effects on the answers to life satisfaction and self-rated health status questions. This means that life satisfaction equations including subjective health status as a presumed determinant of life satisfaction are likely to have upwardly biased coefficients on the health status variable. But if the other coefficients in the equation are largely unaffected by the inclusion of a subjective health variable, then that suggests the other variables are themselves much less likely to be correlated with the excluded personality variables.

Finally, there is the related question of whether measures of life satisfaction have comparable meanings in different regional or national cultures. Put another way, there may be national differences in average personality, or mood, that make international differences in subjective assessments 'reality free', in the sense that they do not measure underlying differences in some more fundamental measures of physical health or life satisfaction. Kahneman and his collaborators suspect this to be the case, arguing that international differences in average life satisfaction are simply too large (in relation to differences across individuals within the same nation) to be believed. In support of this line of reasoning, they find (Kahneman and Riis, in press) a very high cross-national correlation for measures of life satisfaction and subjectively rated health, just as one would expect to find if there were international differences in expressed optimism or mood. To support this interpretation, they find no correlation between cross-country measures of subjective health and life expectancy in their sample comprising the richer European countries. Hence, they argue, since subjective health is not related to life expectancy, and subjective health and life satisfaction are so highly correlated across countries, there are grounds for treating the international differences in both subjective health and life satisfaction as being 'reality free'. I am over-simplifying and probably overstating the case being made in Kahneman and Riis (in press) and Riis, Schwarz and Kahneman (2005), but the basic point should be clear, and it is important enough to need to be addressed.

One way of dealing with the issue is to see if the international differences in subjective health are predictive of some measures of behaviour that all would agree to be real, and another is to see if international differences in subjective health evaluations are perhaps correlated with relevant measures of objective health. The World Health Organization has published² corresponding estimates of life expectancy (LE) and of health-adjusted life expectancy (HALE), where the latter is the usual measure of life expectancy reduced by an estimate of the weighted effects of a number of causes of morbidity (MORBID). For the 54 countries where both HALE and subjective health measures are available, the subjective health measure is correlated significantly with HALE (+0.50), with MORBID (-.42) and with LE (+.47).

Another way of investing some reality in the cross-country differences in subjective measures would be to find them predictive of differences in behaviour. In this respect, it is useful to find that cross-country differences in subjective health, when added to the suicide equations of Helliwell (2004), add significantly (see Table 5) to the explained variance, with those populations reporting poorer average health having significantly higher suicide rates. Thus the subjective health data do appear to reflect reality, as shown by their ability to predict international differences in suicide behaviour.

The suicide data, which obviously reflect behaviour, and hence reality, can also be used to address Kahneman's fundamental concern that international differences in measured life satisfaction are in some sense too large to be believed. To illustrate the worry, Kahneman and Riis (in press) note that the World Values Survey measures of life satisfaction in the United States are higher than those in France by as much as the difference in life satisfaction between the employed and unemployed respondents in the United States. As shown in Helliwell (2004), the suicide data provide an independent way to judge whether the international variance of survey measures of life satisfaction is or is not too large to be believed. On the basis of a large Finnish survey (Koivumaa-Honkanen et al 2001) that established baseline measures of life satisfaction followed up

² LE and HALE: Year 2000 value, Core Health Indicators from the WHR, WHO Statistical Information System (WHOSIS), URL: <http://www3.who.int/whosis/core/>

by twenty years of subsequent assessments of morbidity and mortality, it was possible to estimate, based on data from within a single country, a distribution of suicide conditional on the distribution of life satisfaction. This can then be applied to estimate the national suicide rates that would be consistent with each country's distribution of answers to the life satisfaction question. This distribution predicts very well the mean and standard deviation of the actual international distribution of suicide rates. Since the international variability of measures of life satisfaction is therefore no greater than that implied by international differences in suicide rates, it seems reasonable to infer that both are equally well grounded in the same realities. At any rate, the international differences in life satisfaction do not, at least by this test, seem to be implausibly large.

This extended stage setting has been intended to show, by answering some plausible objections at the outset, that there is a good case to be made, beyond the recommendation of Aristotle (as quoted in Helliwell 2003, 332-3), for asking people to evaluate their lives, and for taking their answers seriously. Another more mundane reason for making use of rankings of life satisfaction is that there is a large body of such evidence already in hand, and the question is so simple to ask that it could in future be added at minimal cost to a wide variety of surveys commissioned for other purposes.

2. Results: Interpersonal Differences

2.1 Demographics: Age, Gender, Marriage and Divorce

Results in many countries are finding U-shaped patterns of well-being over the life cycle. To show that this is not a cohort effect in disguise, Figure 1 shows the effects of age estimated from almost thirty years of annual surveys in nine European countries. Aside from age, controls are included only for gender and marital status. The U-shape for age is highly significant with almost equal peaks at each end of the age distribution, and a low point about the age of 50 years. Since the shape of the distribution of age effects is largely unchanged from decade to decade, it cannot reflect differentially happy cohorts moving through the age distribution, as might have been suspected if the analysis were based on a single cross-section. The size of the age effect, from age 50 to either of the peaks, is about 0.25 points on the 4-point Eurobarometer life satisfaction scale, thus about

equivalent to 0.6 points on a 10 point scale. Research using a large recent cross-section of Canadian life satisfaction data suggests that perhaps one-third of the U-shape is removed if a separate variable is added based on the respondent's current estimate of stress related to work/life balance.

The Eurobarometer data can also speak to gender and marital effects. For the European sample as a whole, including both genders in the same equation reveals a negative male effect of 0.05 in the early 1970s, gradually falling to zero in the 1990s.

There are no corresponding trends in the marital status coefficients. For the roughly 500,000 observations of the whole European sample, relative to the unmarried base case, they are: living-as-married +.17, married +.14, separated -.30, divorced -.17, and widowed -0.10 all on the 4-point scale. Since some longitudinal studies have shown marriage effects rising to an early peak and then falling almost to baseline in the few subsequent years (Clark et al 2003), it has been suggested that marital status is subject to baseline or habituation effects, with only slight effects after habituation sets in. Under this interpretation, the large cross-sectional estimates might reflect personality differences, with genetically happy people being more likely to report high life satisfaction, and also more likely to attract and keep marriage partners. If there is a long-term advantage to marriage, independent of personality, it should presumably start to reappear among respondents with long-lasting marriages, once the effects of the crashing marriages are removed by the passage of time. Longitudinal data sets should eventually extend sufficiently far to assess this possibility. An earlier test of the hypothesis that the large marriage and divorce effects are predominantly due to personality effects is possible. Why not simply see by how much the marital status coefficients change if a variable is added to capture some key aspects of individual personality differences? The results in Appendix Table A1, from the 2003 Canadian General Social Survey (GSS), show that there are no changes in the marital status coefficients when a personality-based variable is added for each individual.

2.2 Income

Figure 2 is based on the individual level relative income effects, estimated separately for World Values Survey respondents in OECD and non-OECD countries (coefficients from Helliwell 2003). That paper used decile income variables within each country, with absolute national average per capita incomes entered as separate variables, with results to be described subsequently. Relative income effects appear among respondents in both groups of countries, but are larger, and show no evidence of diminishing returns, in the developing world. Within OECD countries, in contrast, there appears to be little income-induced increase in life satisfaction once one's family income rises above the median income. More recent Canadian data, from several different surveys, as shown in Figures 2a, 2b and 2c suggest that the non-linearity may in Canada appear at a slightly higher point in the income distribution. Figure 2c compares income coefficients from GSS equations using alternatively life satisfaction and financial satisfaction as dependent variables. The income effect is both larger and more linear if financial satisfaction is the dependent variable, as one might suppose. This difference should be borne in mind in comparing the results in this paper with those of Clark et al (2005, Fig 1), who find apparent log-linearity but use only financial satisfaction as their measure of well-being.

Table 1 shows the income class coefficients drawn from fully specified well-being equations based on three large recent Canadian surveys. Although, as might be expected, the implied coefficients differ slightly for the two end groups in the income distribution, all three surveys show remarkably similar, and quite linear, estimates of the SWB effect of moving between the several closed-end income classes. The estimates for all three surveys are in the range .031 to .042 points, on the 10-point life satisfaction scale, for each \$C 10,000 increase in family income³. The coefficients on the open-ended top income classes, which are necessarily excluded from the calculations reported above, reveal evidence of non-linearities most obviously in the case of the Ethnic Diversity Survey (EDS). The EDS, with its greater range of higher income classes, and much larger sample size, is of course where one would most expect to see echoes of the non-

³ The General Social Survey (GSS) results shown in Appendix Table A1 show that the estimates of the SWB effects of higher income are much reduced in equations that include a psychological index intended to measure the extent to which the respondents feel in charge of their circumstances. The higher estimate reported in the text are probably more realistic, as the mastery index is doubtless reflective in part of the actual economic and social circumstances in which the respondent is imbedded.

linearities apparent for OECD countries in Figure 2. The calculation reported below for compensating variations will be based on a representative value of \$250,000 annual income equivalent for a one-unit change in the ten-point life satisfaction index. This approximation is slightly smaller than what would be implied by a sample-weighted average of the estimates shown in Table 1.

2.3 The More We Get Together the Happier We'll Be

Aristotle and the campfire song both foreshadow the results in Appendix Table A1, showing the income-equivalent SWB effects of frequent contacts with family, friends and neighbours⁴. The early empirical literature on social capital made use chiefly of data for various types of memberships (e.g. Putnam 2000), because these were all that were broadly available. But recent purpose-built surveys have probed deeper, and developed various measures of the intensity of social linkages. A natural measure is the frequency of contact, in the Canadian ESC survey measured on a six-point scale. The effects of contacts with family, friends and neighbours are estimated in the same equation, so that the coefficients may be added. Those respondents who have frequent contacts with family, friends and neighbours have SWB almost a full point higher, on the 10-point SWB scale, than others with no such contacts.

Trust is sometimes seen as consequence, as well as a facilitator, of frequently used networks. Life satisfaction appears to be related to various sorts of trust and also to the networks that may spawn or support trust. This mutual causality is thus likely to be difficult to disentangle, and there is also the issue of unmeasured personality differences, which are likely to influence trust, frequency of contacts, and life satisfaction, all in the same direction. Outgoing optimists may also, partly on the basis of their personalities, have better jobs and higher incomes. One way of testing the likely importance of personality-caused coefficient bias in the life satisfaction equations, is to test how robust are the estimates to the inclusion of a variable designed to capture a standard measure of personality. The 2003 Canadian General Social Survey (GSS) provide a good candidate

⁴ For a broader range of results on the effects of social capital on well-being, using US, Canadian and global samples, see Helliwell and Putnam 2004).

measure, a ‘mastery scale’ based on answers to several questions designed to measure psychological coping resources (Pearlin and Schooler 1978, 20). It may run the risk of over-correcting for the effects of pure personality differences, since the answers document the extent to which respondents feel they are in command of their circumstances⁵. Their answers are bound to be affected not just by underlying personality traits, but also by the particular circumstances the respondents may be facing. The results (in Appendix Table A1) are striking, and should be reassuring to those researchers who do not have personality variables to include in their analysis. As expected, the mastery variable is highly significant ($t > 19$). The coefficient on subjective health drops slightly (from 0.54 to 0.49, but still maintaining a t -value > 40), something that should be expected, since it was otherwise the variable most likely to have been personality-driven.

As already noted, the effects of marital status are unchanged by the addition of the personality variable, thus casting doubt on the idea that marriage is the fiefdom of optimists. The coefficients on social capital variables, such as time spent with family, friends and neighbours, and the trust placed in neighbours and the police, are also unaffected. Interestingly, the negative effect of being a recent immigrant is removed when the mastery index is included. The significant gender effect (SWB lower for males by .13 points) is unaffected when personality is included, while the effects of income are reduced, as noted previously. The negative SWB effects of further education, *cet. par.*, are significantly greater when the mastery index is included, suggesting that education tends to increase respondents’ confidence in dealing with their circumstances.

2.4 Well-being and the Workplace

If we were able to report our results back to Adam Smith, would he be surprised by the estimates of compensating differentials for workplace characteristics shown in Tables 2 and 3? A related paper (Helliwell and Huang 2005) probes these estimates more

⁵ The mastery index is based on a principal component analysis of extent of agreement with the following statements: I have little control over the things that happen to me; There is really no way I can solve some of the problems I have; There is little I can do to change many of the important things in my life; I often feel helpless in dealing with the problems of life; Sometimes I feel that I’m being pushed around in life; What happens to me in the future depends mainly on me; I can do just about anything I really set my mind to do.

intensively, and presents some parallel results from the GSS, based on a larger sample but a smaller set of questions. The quality of workplace social capital, as measured by the extent to which respondents think that management can be trusted in their place of work, is of enormous importance: moving up from the bottom to the top of the ten-point scale provides the SWB equivalent an income increase of \$220,000, based on the ESC results in Table 3. The GSS asks a related question: To what extent do you trust your colleagues? We find that to move from no trust to full trust of colleagues, on a four-point scale, gives a compensating differential of \$130,000 annually, as shown in Table 2.

Table 3 provides three sets of estimates of the effects of job characteristics. First, there are the reduced-form estimates that are obtained when job characteristics are included directly in the SWB equation. These estimates provide the basis for estimates of compensating differentials. Then there is an SWB equation including an overall assessment of job satisfaction instead of the individual components, and finally an equation explaining job satisfaction using the same job characteristics. The right-hand column of Table 3 gives the SWB effects of job characteristics as mediated through overall job satisfaction. These are calculated from the coefficients in the job satisfaction equation multiplied by the job satisfaction coefficient in the relevant SWB equation. Interesting differences are revealed. To have a job involving a lot of decision-making, taken to be a measure of control, increases one's job satisfaction significantly. But this gain appears to be paid for at home, because there is no corresponding net increase in SWB. By contrast, the total SWB effects of having a job that requires skills, has variety, provides sufficient time, and is free of conflicting demands are even greater in total than when calculated via their effects on job satisfaction. In the middle ground, the very large reduced-form SWB effects of working where management can be trusted are found to be equally large when estimated as flowing through job satisfaction.

2.5 Contextual Effects

To estimate contextual effects in national samples, it is necessary to have large geo-coded samples that can then be linked to census data at an appropriate level of disaggregation. In pooled international samples, the contextual effects are provided by national-level

data, as described in the next section. In both cases there are problems posed by the relatively small number of communities or countries, and the relatively large number of candidate explanatory variables, some of which do not even capture the most relevant features of community life. If national surveys are sufficiently large, then it may even be possible to obtain some survey-based estimates of social capital and well-being at the community level. By combining the GSS and EDS samples for Canada (total 65,000 observations), it has been possible to develop survey-based measures of this sort for more than 2,000 census tracts or combinations thereof. Both the GSS and EDS collect information on each respondent's ethnicity, birthplace and immigration history, providing scope for more detailed analysis of how and when migrants and their new communities adapt to each other. This is especially relevant in the light of research showing that recent Canadian immigrants have had less labour market success than their predecessors, for given education levels. The EDS and other surveys enable new dimensions to be added to this analysis, including the ability to probe the determinants of successful communities, and to assess their role in improving well-being and economic outcomes for immigrants and the community at large.

Research is still underway, but preliminary results suggest that even with this large number of communities the explanatory power of contextual variables remains fairly slight, even though there are very substantial differences among neighbourhoods and towns in their SWB, social trust and trust in neighbours. Well-being maps of major Canadian urban regions tend to show that SWB increases with distance from the centre. By region, SWB is highest in Atlantic Canada. Although incomes are lower and unemployment is higher in Atlantic Canada, there is more social capital in homes, neighbourhoods and workplaces. Research thus far suggests that most of these differences are not the consequence of the measured contextual effects as much as the averages of the individual-level effects. There are many indirect contextual effects, however. For example, trust in neighbours is higher in neighbourhoods where mobility is lower, given one's own migration history (Soroka et al, in press).

3. Results: International Differences

The World Values Survey has been evaluating life satisfaction and measures of social capital for more than twenty years in a growing number of countries. By combining individual observations from surveys taken in many countries, we have the possibility of combining individual and national-level data in the explanation of differences in well-being (e.g. Helliwell 2003). Analysis of the importance of national-level variables is limited by the relatively small number of countries and survey waves. Time is gradually solving this problem: there were 86 national observations from 49 countries in the first well-being paper, 117 observations from 50 countries in the suicide paper, and 137 observations from 60 countries for the latest equations shown in Table 4. The results in Table 4, as in the suicide paper, are estimated entirely in terms of national averages, with variables found previously to be important at the individual level (divorce, belief in God and unemployment) being carried forward in combination with other variables with some combination of individual and contextual importance (membership densities and social trust) and the key national contextual variable, the quality of government as represented by indicators prepared at the World Bank by Kaufmann et al (2003).

3.1 Life Satisfaction and Suicide Data Tell Consistent Stories

Although using national-level removes the chance for separating individual-level from national-level effects, it was done in the first instance to facilitate exactly comparable modelling of life satisfaction and suicide data. The suicide and well-being data, if they tell consistent stories, offer complementary advantages. The suicide results are not open to many of the objections made about the use of subjective data as dependent variables, while the well-being data, when and if their validity is established, can be easily and widely collected so as to permit low-cost evaluations. By contrast, suicides are such extreme and rare events that they are not suitable for routine community-level evaluations.

Table 4 shows the comparable results for the encompassing equation for suicide and well-being fitted for the 117-observation sample used in Helliwell (2004) and for the new 137-observation sample. The two samples produce almost identical results. In both samples the coefficients in the well-being and suicide equations are fully consistent in

sign and closely comparable in magnitude. This is shown by Figure 3 which shows the standardized coefficients (betas) for the latest equations. As argued in Helliwell (2004), the coefficient differences appear where other studies suggest they might, with both religious beliefs and divorce having more impact on suicides than on SWB, and the reverse being the case for the quality of government. These differences, combined with international differences in these three variables, explain why Sweden can fit both equations almost exactly, while having top values for SWB and more average levels for suicides.

As already noted, Kahneman and colleagues have argued that international differences in SWB are suspiciously large and possibly reflective of differences in national mood rather than in objective well-being. The fact that the same equation fits national data for suicides and for well-being equally well and with comparable coefficients suggests that the SWB differences are substantive⁶. It is also worth assessing, to the extent possible, whether there are also some identifiable personality differences at the national level that might help to explain international differences in well-being and suicides. Eysenck and colleagues have done bilateral personality comparisons between Great Britain and many other countries, using the three-factor Eysenck personality questionnaire (Eysenck and Eysenck 1975). Steels and Ones (2002) have assembled these data into an internationally comparable data set, thus providing the means to test the effects of these personality variables for a subset of countries. We have done this for 73 observations covering 29 countries, with results shown in Table 4⁷. With only half the number of countries, the basic equations are somewhat weaker, but are consistent with the results from the larger sample. Of the three Eysenck factors, only the extraversion (e) index has significant effects, which it has in both equations. Those ranking high in extroversion are more likely to rank high in SWB and less likely to commit suicide. The psychoticism index enters the SWB equation significantly, but only when interacted with the measure of social

⁶ However, it is important to note that there is no significant correlation between suicide and SWB if the sample is restricted to the OECD countries, and the explanatory power of both equations is much reduced. Kahneman and colleagues have focused their attention on the OECD countries, while all of the equations reported in this paper make use of the much larger global samples, where the cross-sectional variance of almost all variables is much greater.

⁷ The t-values are based on robust standard errors are calculated on the (correct) assumption that errors are clustered by country.

trust. The coefficients imply that trust has a greater impact on SWB in those countries ranking higher on the psychotocism index.

Overall, adding the personality variables increases the explanatory power of both equations, especially that for suicide, without altering the pre-existing model structure. Thus it seems reasonable to conclude that international differences in measurable characteristics of personality do have some influence on both SWB and suicide rates. But this influence is above and beyond the explanatory power of the basic model, which appears to hold equally well whether or not account is taken of the available measures of international differences in personality.

Finally, Table 5 shows the effects of adding subjective health to both the suicide and SWB equations, supplemented by equations dividing the subjective health variable into three components: life expectancy at birth, a measure of morbidity (LE minus HALE, as noted previously), and a variable called HEARTY, whose observations are the residuals of an equation explaining subjective health by LE and MORBID. The importance of MORBIDITY in the suicide equation should be no surprise, as mental illnesses contribute to the measure, and several types of mental illness (schizophrenia and bi-polar disorder in particular) pose high suicide risks. As already noted, subjective health has a significant impact on the suicide rate, with the other equations showing that this effect is especially strong from the morbidity variable and the psychological and related conditions covered by HEARTY. In the well-being equation, life expectancy and the residual variable are the most important components, with morbidity being less important.

3.2 How Much Does Good Government Matter?

The quality of government, as measured by different averages of the six main Kaufman et al (2003) measures, has a strikingly large influence in explaining international differences in SWB. It is worth noting that these assessments are not done by the respondents to the surveys, and are hence not subject to the risk of excluded personality factors that might bias the results. In any event, as already seen in Table 4, including explicit measures of international personality differences does not lessen the estimated effects of

governmental quality. Table 6 shows some representative results and tests. Tests reveal that the six measures can be divided into two groups that have different effects, at least in some samples. One group of four variables (called GOVDO) relates to the honesty and efficiency of government, with the four dimensions relating to effectiveness, regulatory efficiency, rule of law and lack of corruption. The second group relates more to the operation of the democratic process, capturing aspects of voice and accountability. In the 117 observation sample, all of the explanatory power comes from the GOVDO components, with nothing added by the electoral process, as captured by the voice and accountability variables. That this result is due in part to the relatively large number of former Soviet Union and Eastern European countries with elected but ineffective governments is shown by the move to the 137-observation sample, where the average of all six measures once again dominates (as it did in the sample of 86 used in Helliwell 2003). All of the countries added in the move from 117 to 137 observations lie outside Europe.

Income per capita is included in all equations in Table 6 to reveal the extent to which inclusion of governmental quality variables diminishes or removes the effect of per capita incomes. As can be seen, per capita income differences have a significant effect when all governmental quality variables are excluded, or when only the two election-oriented variables are included. When governmental effectiveness is included, as captured either by GOVDO or GOVTOT, per-capita income loses any detectable effect in explaining international differences in SWB. Work is underway on a companion paper assessing the extent of support these results give to the view that international income differences gain their purchase on SWB only to the extent they enable and are embodied in high quality governmental and other social institutions.

4. Policy Implications

4.1 The Importance of Engagement

People apparently care a lot about the social context within which they work and play. Whatever their personality type, they value trust in their neighbourhoods, their workplaces, their public services and their public servants. Trustworthy environments

both support and are supported by frequency of (successful) contacts. If these results should prove as robust as they thus far seem to be, they would seem to have important implications for all types of policies and behaviour.

People directly value their engagement with others, including their involvement in the process making public decisions and delivering public services. This seems to suggest a high value to providing room for local initiative in the design and delivery of public services. For example, Frey and Stutzer (2000) found subjective well-being higher in Swiss cantons with more frequent consultations with their electors, and Chandler and Lalonde (1998) found that several measures of community-level self-government were associated with dramatically lower suicide rates among Aboriginal communities in British Columbia. There is also evidence that policies deliberately designed to foster engagement, for example the controlled welfare-to-work experiments in New Brunswick and British Columbia, produced changes in beliefs such as to support continuing engagement (Gottschalk 2005).

The sizes of the estimated compensating differentials for non-financial features of the workplace suggest that both private and public employers need to think again about the way they treat their employees and each other. As Richard Layard (2005) argues, the trend towards short-term commitments, and the increasing of linking monetary and other rewards to individual performance targets, especially short-term ones, may be having corrosive effects on trust and loyalties and creating unhappiness in the process. Once the importance of trust and engagement are digested, they might be expected to inform almost every policy decision about the form and delivery of public services. We might expect to see more provision of multi-use public spaces; more linkage among generations in the provision of care, education, and leisure; provision of better ways for community newcomers to give as well as get public services and social contacts; meshing of voluntary and professional workers in more effective ways; and changing the nature of the lessons and myths that inspire education. In particular, it is incumbent on economists especially, who have been responsible for propagating the myth of economic man, to at least consider the costs of policies that rely too much on its assumed truth.

4.2 Data and Research

Although much can be learned simply by taking on board the wealth of existing studies in many disciplines, well-being research will become part of policy-makers' regular assessments only if and as the data and research accumulate in quality and quantity. I have argued that a fairly small set of questions can provide useful assessments of the level and distribution of well-being, and of the types of social capital and institutions that support it. As these data come to be more widely available, and as time series accumulate, it should be possible to learn more about what types of institutions and initiatives are likely to be more successful, and in what circumstances. Although I have argued that remembered utility, of the type embodied in answers to life satisfaction questions, has not just an Aristotelian cachet but also explanatory power, I would agree with those who see the benefits of a much broader and richer set of assessments. The supporting psychological, neurological and experiential assessments that are already in progress could and should be used to enrich, change, and supplement the more easily and broadly available measures of well-being. The world is complex, and best understood with many measures, and seen through many lenses. Simple and widely collected measures of social capital and well-being have earned a place in the researcher's toolkit.

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Table 1: Estimated income effect on SWB, from three Canadian Surveys

Household income, in thousands	ESC wave1&2	EDS		GSS
ca\$25~34	0.202 [1.950]	0.057 [1.04]	ca\$20~39	0.175 [3.60]
ca\$35~59	0.251 [3.857]	0.162 [3.5]	ca\$40~59	0.318 [7.44]
ca\$60~89	0.353 [4.433]	0.256 [5.86]	ca\$60~99	0.33 [5.84]
ca\$90~119	0.52 [6.111]	0.343 [7.11]	ca\$100	0.405 [6.74]
ca\$>120	0.633 [6.548]	0.364 [6.48]		
Misinc	0.34 [4.139]	0.199 [4.01]	Misinc	0.278 [6.71]
# of Observations	7486	>42000		23062
Unit of Isatis per \$10k	0.042	0.038		0.031
Annual Income per unit Isatis	\$235,849	\$262,238		\$326,087
Per unit Lsatis(weighted)				\$280,000

Table 2. Annual Income Equivalents of Other Variables

	Canadian \$	Estimated Coefficients (weighted across surveys)
Married	90,000	0.359
Separated	-66,000	-0.262
Divorced	-73,000	-0.291
Unemployed	-199,000	-0.796
Serious illness	-320,000	-1.279
Contacting Relative frequently	69,000	0.276
Associate with friends frequently	76,000	0.305
Socialize with neighbors frequently	32,000	0.130
Per membership	19,000	0.077
Believe religion/god is important	86,000	0.344
Trust your neighbor	51,000	0.204
Having Confidence in Police	101,000	0.405
Trust your colleagues	128,000	0.511
Trust management	221,000	0.885
Stressed by Work	75,000	0.299
Job requires skills	99,000	0.396
Have enough time to do the job	54,000	0.217
Job is free of conflicting demands	63,000	0.253
Job has variety of tasks	144,000	0.576
Reported discrimination experience	-124,000	-0.497

Table 3. Comparing the direct and mediated effects of job characteristics on life satisfaction

	Estimated effects of job characteristics on life satisfaction	Effects on life satisfaction as mediated through Job Satisfaction	Estimated Effects of Job satisfaction on life satisfaction	Estimated Effects of job characteristics on job satisfaction
Job satisfaction			0.2 [8.430]	
Make own decisions in job	-0.018 [0.150]	0.060		0.299 [3.184]
Job requires skill	0.396 [2.211]	0.076		0.379 [2.852]
Have enough time	0.217 [2.280]	0.078		0.389 [3.715]
Free of conflicting demand	0.253 [2.263]	0.074		0.371 [4.514]
Job has variety of tasks	0.576 [4.700]	0.035		0.177 [1.329]
Trust the management	0.885 [5.119]	0.918		4.589 [44.802]

Table 4: Comparing well-being and suicide equations, with different samples, and adding personality factors

Sample	Comparing current sample with previous sample				Testing cross-country personality factors in a smaller sample					
	D.V.	117-obs Sample		137-obs Sample		73-obs Sample		Isatis	Isatis	Isatis
		suicide	Isatis	suicide	Isatis	suicide	suicide			
memntotc		-6.08 [2.45]	0.51 [2.80]	-5.01 [2.89]	0.3 [2.18]	-3.45 [2.42]	-3.61 [2.32]	0.17 [1.56]	0.01 [0.13]	0 [0.05]
trustnat		-16.47 [2.42]	1.83 [4.01]	-15.28 [2.33]	2.12 [4.33]	-9.75 [1.04]	-11.59 [1.35]	2.8 [4.20]	1.89 [2.96]	1.84 [3.37]
godn		-22.82 [5.35]	1.6 [5.01]	-21.79 [6.34]	1.82 [6.18]	-21.76 [5.31]	-9.37 [2.45]	2.24 [4.98]	2.53 [6.09]	2.06 [3.92]
divorce		4.29 [5.37]	-0.19 [4.01]	4.18 [5.96]	-0.17 [3.51]	5.35 [6.01]	5.72 [7.86]	-0.23 [4.72]	-0.22 [4.59]	-0.23 [5.05]
ur		0.11 [0.58]	-0.03 [3.23]	0.08 [0.47]	-0.03 [2.52]	0.09 [0.41]	0.06 [0.25]	-0.03 [2.25]	-0.03 [2.11]	-0.03 [2.08]
Govdo		-1.66 [1.71]	0.82 [10.31]	-1.56 [1.98]	0.81 [9.82]	-4.06 [3.59]	-2.81 [2.66]	0.71 [6.98]	0.75 [7.64]	0.7 [6.35]
Extroversion							-2.46 [3.70]			0.1 [1.71]
Trust*Psychoticism									0.28 [3.70]	0.32 [3.62]
Constant		23.73 [5.42]	5.5 [22.28]	22.97 [5.82]	5.31 [21.21]	18.99 [3.64]	58.57 [4.85]	5.2 [16.30]	5 [16.83]	3.34 [3.53]
Observations		117	117	137	137	73	73	73	73	73
R-squared		0.6	0.81	0.61	0.77	0.58	0.67	0.8	0.82	0.84

Table 5: Adding Life expectancy, morbidity years and hearty* into the equation

Sample D.V.	137-obs Sample					Isatis	Isatis	Isatis	Isatis	Isatis
	suicide	suicide	suicide	suicide	suicide					
memntotc	-2.2 [1.26]	-5.25 [3.24]	-3.23 [1.76]	-3.09 [1.73]	-4.69 [2.97]	0.03 [0.23]	0.31 [2.27]	0.1 [0.71]	0.1 [0.70]	0.3 [2.23]
trustnat	-10.13 [1.49]	-11.98 [1.89]	-4.55 [0.67]	-3.34 [0.50]	-9.61 [1.47]	0.47 [0.87]	1.89 [3.76]	0.5 [1.15]	0.49 [1.13]	1.85 [3.77]
godn	-18.52 [6.44]	-24.65 [7.53]	-21.27 [6.64]	-23.17 [7.19]	-25.92 [7.73]	1.2 [3.54]	2.02 [7.07]	1.34 [3.87]	1.35 [4.00]	2.04 [7.28]
divorce	3.55 [5.19]	3.36 [5.66]	3.1 [5.11]	3.02 [4.84]	3.26 [5.16]	-0.11 [2.02]	-0.11 [2.07]	-0.08 [1.55]	-0.08 [1.54]	-0.11 [2.04]
ur	0.05 [0.25]	0.07 [0.46]	0.12 [0.76]	0.13 [0.81]	0.09 [0.59]	-0.04 [3.40]	-0.03 [2.61]	-0.04 [3.57]	-0.04 [3.59]	-0.03 [2.69]
govdo	0.98 [0.98]	1.86 [1.47]	3.05 [2.07]	1.95 [1.38]	0.71 [0.56]	0.62 [5.35]	0.57 [4.32]	0.49 [4.37]	0.49 [4.29]	0.59 [4.14]
Self-reported health	-8.66 [2.59]					1.18 [5.05]				
Healthy Life Expectancy		-0.79 [3.16]	-1 [3.82]				0.06 [2.28]	0.07 [3.78]		
Total Life Expectancy				-0.53 [1.90]	-0.28 [1.01]				0.07 [2.86]	0.05 [1.49]
Morbidity Years				2.14 [3.52]	2.03 [3.51]				-0.08 [2.30]	-0.07 [2.17]
Hearty*			-7.07 [2.10]	-5.95 [1.90]				1.04 [4.64]	1.03 [4.75]	
Constant	50.69 [4.56]	73.91 [4.51]	82.02 [4.88]	37.37 [1.61]	24.9 [1.09]	1.95 [2.51]	1.76 [1.17]	1.72 [1.46]	2.03 [1.15]	2.55 [1.10]
Observations	103	137	132	132	137	103	137	132	132	137
R-squared	0.64	0.65	0.67	0.69	0.67	0.8	0.78	0.82	0.82	0.78

* hearty is the part of self-reported health status that can not be explained by life

Table 6: Explaining suicide and SWB with governance indicators

	Panel A: Suicide as Dependect Variable					Panel B: SWB as Dependect Variable				
	Not Controlling income	Controlling Income, and compare components of governance indicators				Not Controlling income	Controlling Income, and compare components of governance indicators			
memntotc	-5.13 [2.94]	-4.6 [2.77]	-4.14 [2.40]	-4.68 [2.82]	-3.6 [2.02]	0.35 [2.41]	0.3 [2.00]	0.36 [2.13]	0.26 [1.76]	0.29 [1.99]
trustnat	-16.21 [2.44]	-16.42 [2.48]	-17.56 [2.71]	-15.55 [2.37]	-13.51 [2.08]	2.24 [4.59]	2.26 [4.67]	2.74 [5.53]	2.15 [4.43]	2.21 [4.54]
godn	-21.86 [6.31]	-22.18 [6.64]	-22.15 [6.81]	-22.08 [6.59]	-21.22 [6.79]	1.87 [6.15]	1.9 [6.19]	2 [5.92]	1.86 [6.27]	1.88 [6.23]
divorce	4.2 [5.93]	4.34 [5.96]	4.41 [6.22]	4.29 [5.86]	4.19 [5.92]	-0.18 [3.55]	-0.19 [3.51]	-0.21 [3.67]	-0.18 [3.49]	-0.19 [3.57]
ur	0.08 [0.49]	0.04 [0.22]	0 [0.00]	0.05 [0.29]	-0.01 [0.03]	-0.03 [2.65]	-0.03 [2.31]	-0.03 [2.31]	-0.03 [2.14]	-0.03 [2.35]
incnat		-5.15 [1.42]	-8.31 [2.27]	-3.73 [1.08]	-5.05 [1.45]		0.4 [1.12]	0.83 [2.29]	0.44 [1.22]	0.4 [1.12]
govtot	-1.47 [1.71]	-0.14 [0.10]				0.89 [9.50]	0.78 [6.07]			
govdm			1.51 [0.87]		5.81 [1.95]			0.74 [4.58]		0.17 [0.64]
govdo				-0.69 [0.54]	-4.5 [1.93]				0.7 [5.95]	0.59 [2.76]
Constant	23.18 [5.90]	24.69 [6.12]	25.29 [6.56]	24.18 [5.98]	22.69 [5.84]	5.22 [20.60]	5.1 [19.02]	4.79 [16.59]	5.17 [18.93]	5.13 [17.25]
Observations	137	137	137	137	137	137	137	137	137	137
R-squared	0.61	0.61	0.62	0.61	0.63	0.77	0.77	0.74	0.77	0.77

Note:

Govtot is the average of the six governance indicator

voice Voice and Accountability
 politic Political Stability
 effect Government Effectiveness
 regulate Regulatory Quality
 law Rule of Law
 corrupt Control of Corruption

Govdm is the average of the

voice Voice and Accountability
 politic Political Stability

Govdo is the average of

effect Government Effectiveness
 regulate Regulatory Quality
 law Rule of Law
 corrupt Control of Corruption

Fig 1: Happiness by age group in Europe, by decade on a 4-point scale

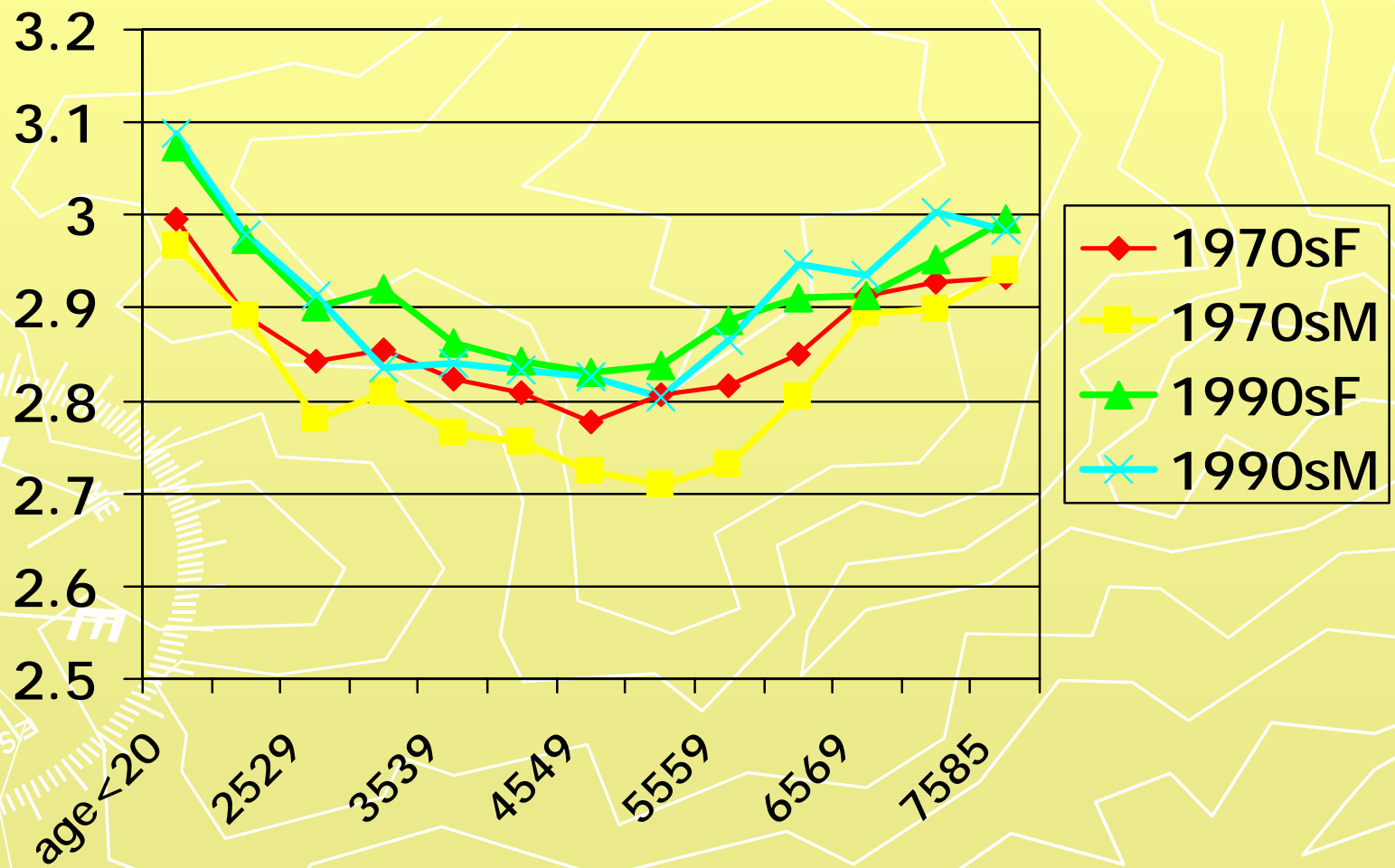


Figure 2: Relative Income and Well-being, from WVS

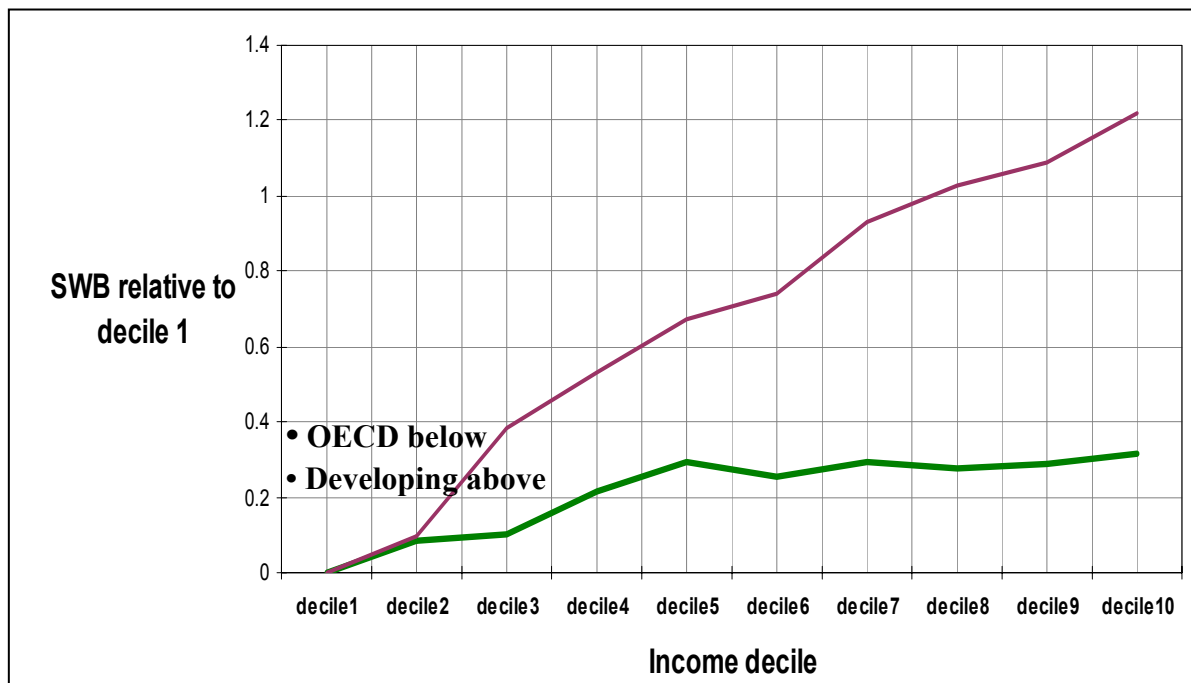
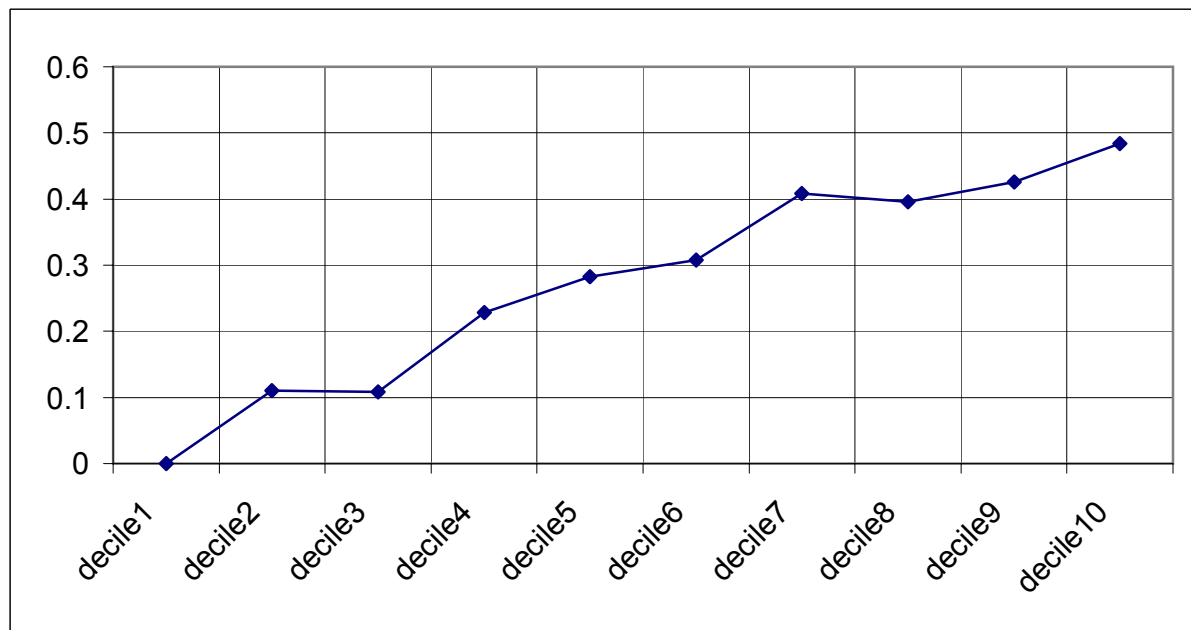


Figure 2-a: Relative Income and Well-being, from Canadian EDS



Income Cut-offs for figure 2-a

decile1	decile2	decile3	decile4	decile5
<=\$13200	13.2~25K	25~35K	35~45K	45~55K
decile6	decile7	decile8	decile9	decile10
55~70K	70~80K	80~100K	100~140K	140K up

Figure 2-b: Household Income and Well-being, from Canadian EDS

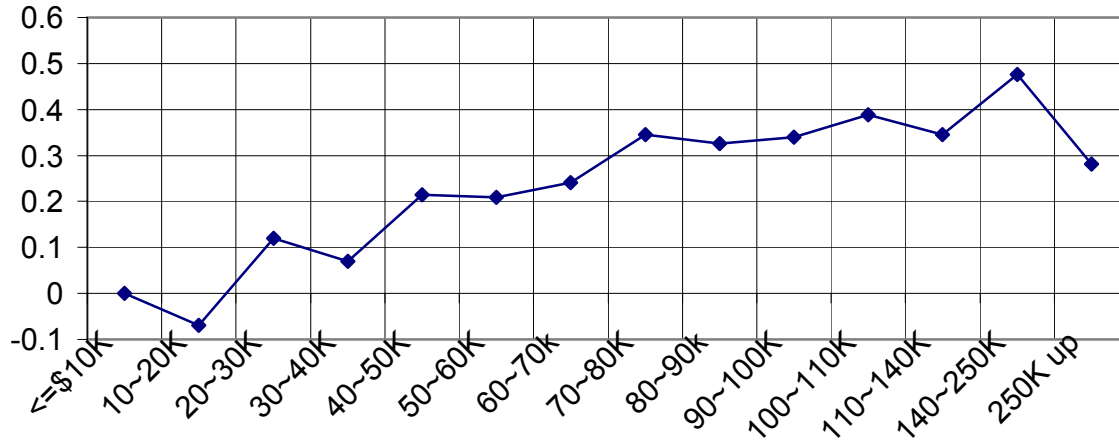


Figure 2-C: Household Income, financial satisfaction and well-being, from Canadian GSS

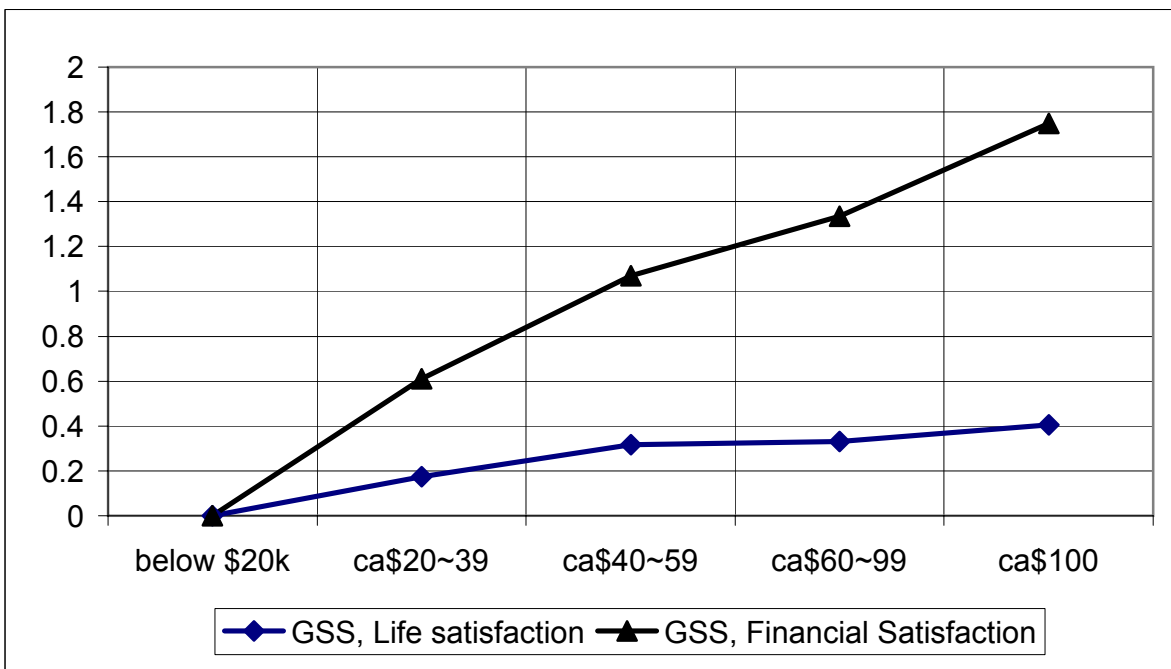
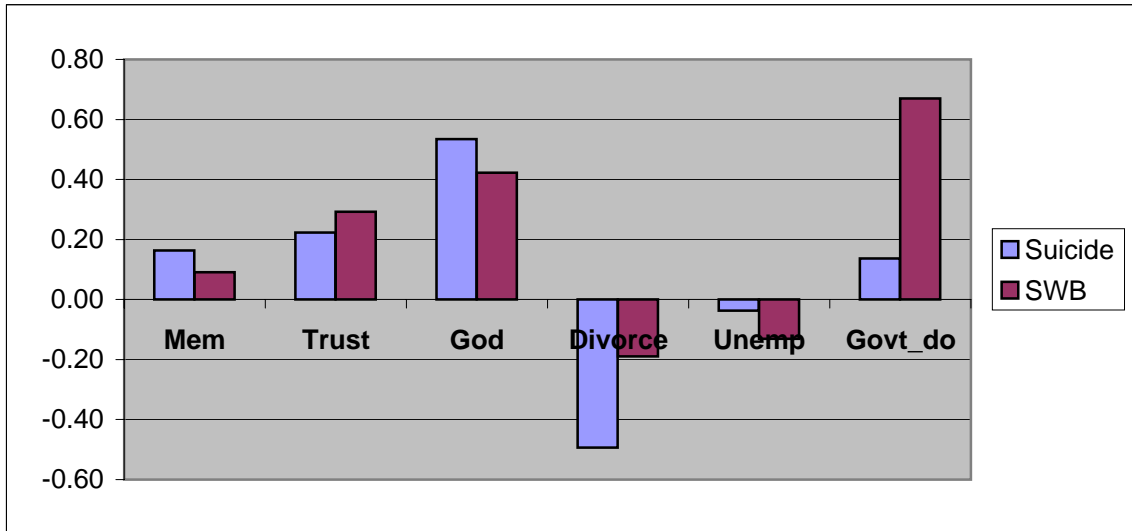


Figure 3: SWB and Suicide Results compared
 (standardized coefficients, times -1 for suicide)



Standardized Coefficients

	Suicide	SWB
Mem	0.16	0.09
Trust	0.22	0.29
God	0.53	0.42
Divorce	-0.49	-0.19
Unemp	-0.04	-0.13
Govt_do	0.14	0.67

Appendix Table A1. Side-by-Side comparison of the regressions from the three Canadian surveys

Sample	EDS	Sample	GSS	Sample	GSS	Sample	ESC1&2
Dependent	Isatis	Dependent	Isatis	Dependent	Isatis	Dependent	Isatis
Obs.	41228	Obs.	23062	Obs.	23062	Obs.	7486
R2	0.084	R2	0.209	R2	0.241	R2	0.156
Serious illness	-1.279 [7.4]	health status	0.544 [41.93]	health status	0.491 [40.07]	health status	0.337 [18.442]
Looking for jobs	-1.118 [9.16]	unemployed	-0.205 [2.46]	unemployed	-0.186 [2.20]	unemployed	-0.839 [7.343]
male	-0.106 [4.31]	male	-0.137 [6.18]	male	-0.133 [6.00]	male	-0.181 [4.360]
age2534	-0.215 [4.12]	age2534	-0.293 [6.68]	age2534	-0.279 [6.64]	age2534	-0.301 [3.543]
age3544	-0.378 [6.41]	age3544	-0.523 [12.74]	age3544	-0.478 [11.74]	age3544	-0.343 [3.629]
age4554	-0.385 [7.01]	age4554	-0.576 [13.18]	age4554	-0.488 [11.28]	age4554	-0.315 [3.622]
age5564	-0.138 [2.32]	age5564	-0.395 [7.66]	age5564	-0.287 [6.36]	age5564	0.036 [0.378]
age65up	0.028 [0.42]	age65up	-0.241 [4.44]	age65up	-0.096 [1.88]	age65up	0.416 [3.711]
married	0.388 [8.68]	married	0.285 [9.41]	married	0.291 [10.47]	married	0.425 [5.551]
as-married	0.337 [6.84]	as-married	0.26 [6.27]	as-married	0.246 [5.96]	as-married	0.432 [4.844]
divorced	-0.219 [3.33]	divorced	-0.428 [5.62]	divorced	-0.436 [6.08]	divorced	-0.269 [2.908]
separated	-0.286 [2.69]	separated	-0.225 [5.2]	separated	-0.245 [5.74]	separated	-0.248 [2.239]
widowed	-0.125 [1.59]	widowed	-0.201 [3.4]	widowed	-0.201 [3.47]	widowed	0.042 [0.322]
zedu1 (high school)	-0.03 [0.8]	zedu1	-0.057 [1.45]	zedu1	-0.085 [2.1]	zedu1	-0.019 [0.330]
zedu2 (in between)	-0.145 [2.83]	zedu2	-0.141 [4.61]	zedu2	-0.218 [6.91]	zedu2	-0.111 [1.619]
zedu3 (univ degree)	-0.092 [2.40]	zedu3	-0.183 [3.67]	zedu3	-0.3 [6.25]	zedu3	-0.106 [1.675]
ca\$25~34K	0.057 [1.04]	ca\$2039ca	0.175 [3.60]	ca\$2039ca	0.135 [2.95]	ca\$25~34K	0.202 [1.950]
ca\$35~59K	0.162 [3.5]	ca\$4059ca	0.318 [7.44]	ca\$4059ca	0.245 [5.9]	ca\$35~59K	0.251 [3.857]
ca\$60~89K	0.256 [5.86]	ca\$6099ca	0.33 [5.84]	ca\$6099ca	0.23 [4.24]	ca\$60~89K	0.353 [4.433]
ca\$90~119K	0.343 [7.11]	ca\$100ca	0.405 [6.74]	ca\$100ca	0.256 [4.17]	ca\$90~119K	0.52 [6.111]
ca\$>120K	0.364 [6.48]					ca\$>120K	0.633 [6.548]
income not reported	0.199 [4.01]	income not reported	0.278 [6.71]	income not reported	0.23 [5.4]	income not reported	0.34 [4.139]
relatives	0.294	relatives	0.242	relatives	0.235	relatives	0.283

	[5.99]		[6.64]		[6.81]		[3.753]
		friends	0.244	friends	0.212	friends	0.494
			[4.49]		[4.01]		[5.621]
		neighbor	0.131	neighbor	0.129	neighbor	0.125
			[3.35]		[3.58]		[1.504]
membership	0.088	membership	0.079	membership	0.013	membership	0.014
	[5.85]	activeness	[2.86]	activeness	[0.47]	activeness	[1.437]
trust-general	0.254	trust-	0.03	trust-	-0.041	trust-	0.24
	[10.02]	general	[1.26]	general	[1.64]	general	[3.983]
		trust-	0.155	trust-	0.137	trust-	0.355
		neighbor	[9.42]	neighbor	[8.16]	neighbor*	[5.857]
		confidence	0.469	confidence	0.411	trust in	0.206
		in police	[12.02]	in police	[10.08]	police**	[2.565]
Importance	0.52	Importance	0.099	Importance	0.104	Importance	0.133
of religion	[7.91]	of religion	[2.65]	of religion	[2.90]	of religion	[1.619]
Attend service	-0.056	Attend service	0.051	Attend service	0.073	Attend service	0.138
frequently	[1.03]	frequently	[1.37]	frequently	[1.90]	frequently	[1.518]
Visible minority	-0.212	Aboriginal	0.175	Aboriginal	0.163	Constant	5.206
-CA born	[3.26]		[2.71]		[2.47]		[30.678]
Visible minority	-0.243	Chinese	-0.164	Chinese	-0.107		
-foreign born	[4.27]		[3.24]		[1.81]		
		South Asian	-0.212	South Asian	-0.138		
			[2.76]		[2.01]		
		other non-	0.012	other non-	0.034		
		major ethnic Gr.	[0.37]	major ethn.	[0.98]		
immigrant	-0.156	Immigrant	-0.147	Immigrant	-0.021		
-white	[2.02]		[2.77]		[0.36]		
Years since	0.056	Years since	0	Years since	-0.002		
immigration, 10s	[3.14]	immigration, 10s	[0.23]	immigration, 10	[1.01]		
				mastery	2.253		
					[19.13]		
				msatery	1.191		
				-missing	[10.21]		
Non-tracted	0.11	Non-tracted	0.074	Non-tracted	0.09		
area	[3.06]	area	[2.95]	area	[3.42]		
Imported	0.072						
Life satisfaction	[2.82]						
Constant	6.94	Constant	5.416	Constant	4.022		
	[33.52]		[57.07]		[34.05]		

*Perceived chance that a wallet containing money would be returned if found by people living nearby

**Perceived chance that a wallet containing money would be returned if found by police officer