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Health, Employment and the Quality of Life in Ireland[+]

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Abstract

The purpose of this paper is to investigate the determinants of the Quality of Life (QoL) in Ireland using a sample of 3,500 respondents to the Irish Health Service Executive's Survey of Consumers' Experience of the Health Services in Ireland (HSE Survey) carried out between November 2006 and March 2007. Using an ordered logit model, we show that the likelihood of being satisfied with one's QoL is enhanced by social class, income, employment and, above all, by health. The methodology's ability to identify persons who might be "at risk" from a low QoL allows one to speculate on the QoL in Ireland today, in the winter of its discontent, compared to that in 2006-2007 when it basked in the summer of the Celtic Tiger. In present circumstances, one would expect that joblessness would play a much more important role in determining QoL: prior to 2008, unemployment meant a short wait till a suitable job turned up; now it is more likely to involve a protracted search at home or emigration. Furthermore, since unemployment often leads to bad health outcomes, one can be reasonably certain that the QoL associated with a 14 percent unemployment rate will be considerably worse than those witnessed during the halcyon days of the economic boom. This raises the question of how this additional, recession-induced, demand for health services will be met at a time when public expenditure on health in Ireland is to be cut by €1.4 billion over the next four years.

[+] Thanks are due to the Editor and three anonymous referees for comments which have substantially improved the paper. We are also grateful to the Irish Social Science Data Archive for providing us with data from the Health Service Executive's Survey of Consumers' Experience of the Health Services in Ireland. However, needless to say, we alone are responsible any of this paper's deficiencies.

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Key words: Quality of Life, Health, Employment, Ordered Logit.

What is this life if, full of care,
We have no time to stop and stare?
W.H. Davies, Leisure

1. Introduction

There is increasing recognition among social scientists that being well-off plays only a part - and not necessarily the major part - in determining a person's *quality of life* (QoL). Among economists, Sen (2000) has argued that, in the tradition initiated by Aristotle, and continued by Adam Smith, poverty should properly be viewed in terms of "poor living" rather than simply "low income". From the former perspective, poverty is a multi-dimensional concept, embracing: low income; bad, or no, employment; illiteracy or, at best, low levels of education; poor health and access to healthcare, and most generally, difficulty in taking part in the life of the community (Sen, 2000).[1] A practical manifestation of these broader concerns is the United Nations' Human Development Index which measures a country's performance in terms of a composite of its income, educational, and health outcomes (Haq, 1995; UNDP, 1999; Fukuda-Parr, 2003).

The concept of social exclusion - with its origins in sociology - today commands a great deal of attention in policy circles: for example, the UK government's Social Exclusion Task Force - with a complement of about 30 staff - is a part of the Cabinet Office and provides the UK Government with strategic advice and policy analysis in its drive against social exclusion. Originating in the work of Lenoir (1974), the thrust of work on social exclusion is to establish a link between the processes which exclude persons belonging to certain groups from mainstream society - *inter alia* the

[1] Or, as Adam Smith put it, "an inability to appear in public without shame".

handicapped, the infirm, lone parents, minority groups - and their subsequent deprivation (DFID, 2005). In the USA, links are drawn between social exclusion and the social pathologies of persons belonging to the "underclass". For example, Wilson (1987, 1993) argued that the two factors driving the growth of an underclass among the USA's Black population were the concentration of poverty in the ghettoes and the social isolation of persons living in them.

In Ireland, concern with social exclusion has led to the *National Action Plan for Social Inclusion, 2007-2016* (The Stationery Office, 2007). Within an overall target of reducing the proportion of persons in Ireland experiencing consistent poverty to between 2 percent and 4 percent by 2012, this plan targets specifically vulnerable groups for support: children, the elderly, Travellers, immigrants. Specific concern with the health of the travelling community has led to the Irish government instituting a Traveller Health Study the purpose of which is to examine the health status of Travellers, to assess the impact of the health services currently being provided them and to identify the factors which influence their health status. Against this background of concern with the relation between social exclusion and poverty there is a fundamental distinction to be made between exclusion being *constitutively* a part of deprivation and being *instrumental* in causing deprivation. In the "constitutive" interpretation, exclusion from some (or all) aspects of social functioning in itself, and of itself, constitutes an important aspect of deprivation; in the "instrumental" interpretation, exclusion *per se* does not constitute deprivation but it is a cause of deprivation (Sen, 2000). [2]

[2] For example, with the social status attached to being an owner-occupier in Ireland, a lack of access to the mortgage market might involve enforced living in rented accommodation and thus a "feeling of shame";

The discipline of psychology has provided the concept subjective well being (SWB) defined as "a multidimensional evaluation of life including cognitive judgements of life satisfaction and affective evaluations of emotions and moods" (McGillivray and Clarke (2006, p.4). Some economists identify SWB as "happiness" but, in psychology, SWB is a broader concept than happiness. SWB comprises four elements: pleasant emotions; (ii) unpleasant emotions; (iii) life evaluation; and (iv) domain satisfaction (marriage, health, job etc.). From this viewpoint, SWB corresponds to "being happy" (Aristotle's *eudaimonia*) whereas happiness corresponds to the more hedonic "feeling happy" (Bruini and Porta, 2007, p. xviii). [3]

In establishing the meaning of QoL, Drobnič *et. al.* (2010) draw attention to the tension between the Scandinavian and the US approaches: the former, drawing upon the tradition of Swedish welfare research, emphasised *objective* living conditions (Erikson, 1993); the latter, drew on individuals' *subjective* evaluations to assess QoL, the focus in this approach being not so much individuals' *resources* but their *needs* (Campbell et. al., 1976; Deiner, 1984). However, as Drobnič *et. al.* (2010) observe, most researchers "acknowledge the existence of a subjective-objective duality in quality of life research and the consensus that both subjective and objective indicators complement each other and should be used jointly has become widely accepted" (p. 206).

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however, if the quality of owned and rented accommodation was not very different no further deprivation (in terms of low quality housing) would follow. Conversely, other types of exclusion may not be a constitutive part of deprivation but, nevertheless, might be instrumental in causing deprivation: a denial of credit might not be shameful *per se* but might lead to deprivation through an inability to pursue business opportunities. More generally, social exclusion might have both constitutive and instrumental importance for deprivation.

[3] See Eid and Larsen (2008) for a comprehensive collection of studies on subjective well being.

A consequence of this subjective-objective consensus is the burgeoning literature, in the past 25 years or so, on QoL and SWB almost all of which has a common methodological basis of being grounded in data which are then analysed employing a variety of statistical and econometric methods (Frey and Stutzer, 2002). The present study belongs to this genre of research. The instrument for conducting this particular enquiry is data from the Irish Health Service Executive's Survey of Consumers' Experience of the Health Services in Ireland (hereafter, HSE Survey) carried out between November 2006 and March 2007. This survey was based on a nationally representative sample of 3,517 Irish adults who were asked, in the course of face-to-face interviews of approximately 25 minutes duration, a range of questions about their levels of satisfaction with their experience of using different types of health services in Ireland, their own state of health, and their economic and social circumstances.[4] Most importantly from the perspective of this paper, every respondent was asked to state his/her quality of life (hereafter, QoL) in terms of *one* of the following categories: 'very poor', 'poor', 'neither poor nor good', 'good', and 'very good'. Using these data, this study conducted an econometric investigation into the relative strength of factors (*inter alia* social status, marital status, economic status, income status, and health status) which contributed to a high – and, by corollary, to a low - QoL in Ireland.[5]

[4] Details of this Survey are from the Health Service Executive's publication, Insight 07 available at http://www.hse.ie/eng/services/Publications/Your_Service,_Your_Say_Consumer_Affairs/Reports/Insight_07.pdf, 2007.

[5] The alternative to "subjective" well-being is to measure the QoL in terms of objective measures. The Economist Intelligence Unit (EIU) produced a QoL index for 111 countries based on nine measures including material well-being, gender equality, job security, health, political stability and security, political freedom, climate and geography, family life, and community life (*The Guardian*, November 19th, 2004).

Consistent with other studies, subjective well-being in this study is measured by simply asking people about their QoL. The annual *General Social Surveys* in the United States have for years asked people about their levels of happiness; the *Eurobarometer* Survey Series has since 1973 provided responses from residents of a number of European countries to a biannual question on life satisfaction[6]. Not only do people have little difficulty in answering these questions, [7] these subjective responses do reflect the respondents' substantive feelings of well being (Diener, 1984; Pavot, 1991; Watson and Clark, 1991)[8]. Dolan *et. al.* (2008), in reviewing the factors that influence well-being, pointed to the negative association between feelings of well-being and factors such as poor health, unemployment, and social factors including marital separation and lack of social contacts. Clinch *et. al.* (2006) remarked that "factors such as health and family circumstances tend to show a more marked influence on quality of life than standard economic measures".

There is also strong evidence that responses between people in different countries, and from different cultures, are comparable (Cantril, 1965, Campbell, 1981, Saxena *et. al.* (2001).[9] Lastly, these ideas, relating to the importance of the QoL, have permeated the policy arena: in 2008, President Sarkozy of France asked two Nobel prize-winning economists, Joseph Stiglitz and Amartya Sen, to devise broader measures of national

[6] "On the whole, are you very satisfied, fairly satisfied, not very satisfied, not at all satisfied, with the life you lead?"

[7] In the United States, the rate of non-response was less than one percent in fourteen surveys between 1972 and 1987 (Easterlin, 2001).

[8] For example, people who report high happiness scores tend to smile and laugh more and tend to be rated by others as happier (Oswald, 1997).

[9] Saxena *et. al.* (2001) was a World Health Organisation (WHO) Quality of Life pilot field study. The locations of the fieldwork included Bangkok (Thailand), Bath (UK), Barcelona (Spain), Beer Shiva (Israel), Harare (Zimbabwe), Madras (India), Melbourne (Australia), New Delhi (India), Panama City (Panama), Paris (France), Seattle (US), St Petersburg (Russia), Tilburg (Netherlands), Tokyo (Japan), and Zagreb (Croatia).

contentedness than GDP and in November 2010, Prime Minister David Cameron of the UK announced that the British government would start collecting data on well-being. The belief underpinning these initiatives is that national indicators are needed to inform governments of the wellbeing of their citizens and social and economic policies needed to be evaluated with respect to their impact on subjective wellbeing (Deiner and Seligman, 2004). Indeed, it is the purpose of this paper to conduct such an enquiry for Ireland.

2. The data

The HSE Survey asked its respondents about the quality of their lives: "How good or poor would you rate your quality of life: very poor? poor? neither poor nor good? good? very good?". Notwithstanding differences between Surveys in the precise phrasing of their questions, and the categories employed by them, direct questions, of the sort set out above, provide the principal way by which subjective well-being is measured (Easterlin, 2001)[10]. For example, the United States' General Social Survey asks: Taken all together, would you say that you are: very happy, pretty happy, or not too happy?" (National Opinion Research Centre, 1999).

Of the 3,498 respondents who answered the HSE Survey's QoL question, 35 percent judged the quality of their life as "very good", 49 percent as "good", 9 percent as "neither good nor bad", 5 percent as "poor" and 1 percent as "very poor" . If one assigned a score of 10 to the "very good" outcome, 8 to the "good" outcome, 6 to the "neither good nor bad" outcome, 4 to the "poor" outcome, and 2 to the "very poor" outcome, then the average score over the 3,498 respondents was 8.25 implying that the quality of life in Ireland was 83 percent of its maximum value.

[10] For a discussion of differences in the phrasing and the classification of such questions see Veenhoven (1993).

Borooah (2006), using data from 1999-2000 Values Survey Integrated Data file (hereafter Values Survey), calculated happiness scores for a range of countries.[11] The "happiness score" of 8.45 (out of a maximum of 10) for Ireland on the Values Survey is very close the "quality of life" score of 8.25 from the HSE Survey and serves, therefore, to buttress our prior belief that "happiness" and QoL are virtually synonymous. On the Values Survey calculations, the average level of happiness (quality of life) in Ireland was comparable to that in Australia (8.42), the Netherlands (8.51), Denmark (8.49), Sweden (8.22), and the USA (8.33) and higher than that in Germany (7.43), Greece (7.29), Italy (7.38), Portugal (7.49), and Spain (7.65).

Needless to say, the mean QoL score could be different for different social and economic groups. As Table 1 shows, the mean QoL score for social groups A (upper middle class: higher managerial, administrative, or professional) and B (middle class: intermediate managerial, administrative, or professional) was higher than for the C1 (lower middle class: supervisory or clerical and junior managerial, administrative or professional) and C2 (skilled manual) class and considerably higher than for the D (working class: semi and unskilled manual workers) and E (lower working class: casual workers, welfare dependent persons).

The QoL also varied by marital status with divorced, separated, and widowed respondents (hereafter, simply "divorced") reporting lower scores compared to married and single (never married) persons[12]; by education and income, with respondents' QoL rising with their level of education and their income level; by economic status, with

[11] These data are described in Ingelhart *et al* (2004). Each respondent was asked about his/her "state of happiness" and these replies were graded by Borooah (2006) on a 10-point scale: very happy (10 points); quite happy (7.5 points); not very happy (5 points); not at all happy (2.5 points).

[12] Amato (2000) noted that divorce can benefit some individuals; however it can have a temporary negative impact on the well-being of others, while others may never recover from the effects of divorce.

employed respondents reporting the highest QoL scores and those unable to work through permanent sickness or disability the lowest. Interestingly, however, there was very little difference between the mean QoL scores of men and women.

3. The Determinants of the Quality of Life

We estimated an ordered logit model in which, for each person, the dependent variable took one (and only one) of the following values: 3, if his/her QoL was "very good" or "good"; 2, if it was "neither good nor bad"; and 1 if it was "poor or very poor". A critical assumption of the ordered logit model is that of *parallel slopes*. In essence this means that if there is a variable which affects the likelihood of a person being in one of the ordered categories (for example, income on QoL) then it is assumed that the coefficients linking that variable to the different outcomes *will be the same across outcomes* (the effect of a given level of income on the likelihood of a person having a "very good or good" QoL is *the same* as its effect on the likelihood of him/her having a "neither good nor bad" or a "poor or very poor" QoL). If this assumption is not valid, so that the slope coefficients associated with the different outcomes are different across outcomes (the effect of a given level of income on the likelihood of a person having a "very good or good" QoL is *different* from its effect on the likelihood of him/her having a "neither good nor bad" or a "poor or very poor" QoL) the method of ordered logit - notwithstanding its advantage of parsimony - is not appropriate and the model should be estimated using the method of *multinomial logit* (Borooah, 2001).

The validity of the parallel slopes assumption can be tested by comparing the log-likelihood *(LL)* of the ordered logit model (LL_{OL}) with that of an *identically specified* multinomial logit model (LL_{ML}): this done by computing $2(LL_{ML} - LL_{OL})$ and using

$\chi^2(J \times [K-1])$ to evaluate the statistic where *J* is the number of categories and *K* is the number of variables. It needs pointing out that the test is not strictly a likelihood ratio *(LR)* test since the ordered logit model is not nested within the multinomial logit model. The test is only "suggestive" in that a very large χ^2 value would be a matter of concern (STATA, 2007, p. 490).

The results from the ordered logit model can be presented in two different ways: using odds ratios and using marginal probabilities. The odds ratios express the likelihood of an outcome relative to the likelihood of the next lowest outcome: (i) the ratio of the likelihood of a "very good or good" QoL to that of a "neither good nor bad" QoL; and (ii) the ratio of the likelihood of a "neither good nor bad" QoL to that of a "poor or very poor QoL". The odds ratios are the exponential of the ordered logit coefficient estimates associated with the different variables and, because of the parallel slopes assumption, discussed above, they are invariant with respect to the QoL outcomes.[13]

The *marginal probabilities* refer to the *change* in the probabilities of the different outcomes ("3", "2", and "1") in response to a unit change in the value of one of the QoL determining" factors, *the values of the other variables remaining unchanged*. All the variables used are discrete variables and, therefore, the marginal probabilities refer to changes in the probabilities consequent upon a move from the reference category for that variable to the category in question.[14] The *base probabilities* to which these changes

[13] The validity of the parallel slopes assumption was tested by estimating specification 4 - the most general specification - using multinomial and ordered logit methods. Since LL_{ML}=836 and LL_{OL}=805, $\chi^2(3\times18)=2(LL_{ML} - LL_{OL})=64$ with the 5 percent critical limit for $\chi^2(54)=72.15$: consequently, the difference in log-likelihoods between the two models was not "too large".

[14] For continuous variables, the marginal probabilities refer to changes in the probabilities consequent upon a unit change in the value of the variable, *the values of the other variables remaining unchanged.*

relate are the probabilities of the three different outcomes when all the variables are assigned their sample mean values.[15]

Although the odds ratios do not vary between the outcomes, the marginal probabilities do. This is because in computing the marginal probabilities *two* separate pieces of information are used: the coefficient estimates (which are invariant with respect to the outcomes) *and* the cut-off estimates (which are different between the outcomes); the odds ratios use only the first set of information. The marginal probabilities associated with changes in the different determining variables are shown in Table 2 for *four* specifications of the QoL model: for reasons of economy, only the marginal probabilities for the two extreme outcomes (QoL: poor or very poor and QoL: good or very good) are shown. The equivalent odds ratios are shown in Table 3.

Each successive specification, through the addition of new variables to the determining variables, adds further insight into the operation, strength, and significance of the QoL determining factors. The first specification shows, for example, that the likelihood of a poor QoL (outcome 1) was by 2.8 percentage points *lower* and that of a good QoL (outcome 3) 7.0 points *higher* for A and B, compared to D and E (the reference category in Social Class group), respondents. In terms of odds ratios, social classes A and B were 2.17 times were more likely - and social classes C1 and C2 were 2.1 times more likely - to have a "very good or good" QoL compared to a neither "good nor bad" QoL (or to have a neither "good nor bad" QoL compared to a "very poor or poor" QoL).

In terms of education, compared to those with low education levels, respondents with high levels of education were *less* likely, by 1.8 points, to have a poor QoL and

[15] Though the base probabilities could be computed for any configuration of variable values.

more likely, by 4.5 points, to have a good QoL (odds-ratios, respectively, 1.54 and 1.15). Respondents who were divorced, separated, or widowed were, compared to respondents who were single, *more* likely, by 1.6 points, to have a poor QoL and *less* likely, by 3.8 points, to have a good QoL (odds-ratio of 0.73). Compared to those who rented their homes, owner-occupiers were *less* likely, by 1.9 points, to have a poor QoL and *more* likely, by 4.6 points, to have a good QoL (odds-ratio of 1.48). Lastly, compared to those over 50 years of age, younger persons were *more* likely to have a good QoL and *less* likely to have a poor QoL (odds-ratio of 1.48).

The second specification added the economic status variables, employed[16] and unemployed[17], with the inactive – homemakers, the retired, students, and those unable to work – as the reference category. The addition of economic status variables shows that, compared to being inactive, being employed deducted 2.6 points from the likelihood of a poor QoL and added 6.3 points to the likelihood of a good QoL (odds-ratios, respectively, 1.75 and 0.81). The obverse of this result was that the marginal probability of a high education level was no longer significantly different from zero. This suggests that education *per se* did not enhance respondents' QoL; its positive effect on the QoL was as a means of securing employment: however, after respondents had used their education to obtain a job, it played no further role in enhancing their QoL.

The third specification added the income variables – high income (950 euros or more per week) and medium income (320-950 euros per week) with low income (less than 320 euros per week) as the reference category. This showed a strong and significant association between income level and QoL: compared to those on low income, high

[16] Including the self employed.
[17] Including those seeking jobs for the first time.

income persons were more likely, by 5.3 points, to have a good QoL and less likely, by 2.1 points, to have a poor QoL (odds-ratios for high and medium incomes, respectively, 1.73 and 1.79). Under this specification, the marginal probabilities of poor and good QoL associated with divorced persons was no longer significantly different from zero suggesting that the roots of the low QoL of divorced persons lay in their low income rather than with their marital status *per se*.

Newman *et. al.* (2008) through the use of panel analysis of 1,998 individuals traced during the Irish boom period of 1994-2001 analysed the link between income and an individual's subjective satisfaction with their financial situation. This study found that any excess of both household income from reference group income, and individual income from household income, raised the level of financial satisfaction. It was also found that the most important effect related to household income; however, consistent with the results from Clinch *et. al.* (2006), the size of this effect diminished with increases in the level of income.

The final specification added three new sets of variables. The first related to respondents' satisfaction with their health: "very satisfied or satisfied", "fairly satisfied", with the residual category being "dissatisfied". The second and third related to whether the respondent was a smoker and whether he/she had private health insurance. The most obvious result from specification 4 was the strong and significant effect that satisfaction with health had on QoL: compared to being dissatisfied with one's health, being very satisfied added 65.6 points to the likelihood of a good QoL and subtracted 30.2 points from the likelihood of a poor QoL (odds-ratios for "very satisfied" and "fairly satisfied", respectively, 48.31 and 4.02). In a lower key, the likelihood of a good QoL, *even after*

controlling for levels of health satisfaction, was higher for non-smokers than for smokers and higher for those with private medical insurance compared to those without.

The above analysis suggests that people's QoL was largely determined by four factors - age, employment, income, and health - and of these, health was the most important. These results deserve further discussion in two respects.

First, Drobnič *et. al.* (2010) observed that being in paid employment is consistently regarded as one of the most important determinants of a high QoL in Europe: "work not only provides people with adequate money, but it also provides individuals with a clear time structure, a sense of identity, social status and integration, and opportunities for personal development" (p. 206). However, it appears from Drobnič *et. al.* (2010) analysis of QoL in nine European countries, that it is not employment *per se* but the quality of working conditions (security of employment, autonomy, career prospects) that impact on QoL. The data at our disposal simply record the fact of employment and offer no information on working conditions; to that extent, this study's analysis of the link between employment and QoL is deficient.

Second, although health emerges as the primary determinant of QoL, one knows from the work of Wilkinson (1997) and Marmot (2004) that there is a close relationship between social standing and income on the one hand and health outcomes on the other with social and material inequality being reflected in health inequality. At the heart of this relationship are likely to be "factors affecting how hierarchical the hierarchy is, the depths of material insecurity, the social exclusion that societies tolerate, and the direct and indirect psychosocial effects of social stratification" (Wilkinson, 1997). So, although in this study, occupational class, income, and health outcomes are treated as independent

variables the closeness of the relationship between social and economic hierarchy, on the one hand, and health inequality, on the other, should be borne in mind.

4. The Determinants of Satisfaction with Health

Given the important - indeed, dominant - role that satisfaction with health status played in influencing the QoL of persons it is only pertinent to enquire about the determinants of satisfaction with one's state of health. The publication of the Black report (Black *et al.*, 1980) spawned a number of studies (*inter alia* Wilkinson, 1997; Marmot, 2004) which examined the social factors underlying health outcomes. The fundamental finding from these studies, particularly with respect to mortality and life expectancy, was the existence of "a social gradient" in mortality: "… wherever you stand on the social ladder, your chances of an earlier death are higher than it is for your betters" (Epstein, 1998). The social gradient in mortality was observed for most of the major causes of death: for example, Marmot (2000) shows that, for every one of twelve diseases, the ratio of deaths (from the disease) to numbers in a Civil Service grade rose steadily as one moved down the hierarchy.

Since, in the end, it is the individual who falls ill, it is tempting for epidemiologists to focus on the risks inherent in individual behaviour: for example, smoking, diet, and exercise. However, the most important implication of a social gradient to health outcomes is that people's susceptibility to disease depends on more than just their individual behaviour: crucially, it depends on the social environment within which people lead their lives (Marmot, 2000 and 2004). Consequently, the focus on inter-personal differences in risk might be usefully complemented by examining differences in

risk between different social environments and that, indeed, is the purpose of this part of the paper.

Table 4 shows the marginal probabilities associated with an ordered logit model in which the values of the dependent variable relate to different levels of satisfaction with health: the dependent variable takes the value 1 if the person is dissatisfied with his/her health; the value 2, if he/she is fairly satisfied; and the value 3 if he/she is very satisfied. For ease of reference, only the marginal probabilities for the "dissatisfied" and "very satisfied" outcomes are shown in Table 3.

The first noteworthy feature of the results is that, compared to men, women were significantly *more* likely (by 3.6 points) to be "very satisfied" - and significantly *less* likely (by 1.6 points) to be "dissatisfied" - with their health. The second is that compared to the other social classes - AB, C1 and C2, D and E - farmers were significantly *more* likely (by 4.9 points) to be "very satisfied" - and significantly *less* likely (by 2.1 points) to be "dissatisfied" - with their health. Consequently, the *only* evidence of a social gradient to health outcomes in Ireland appeared to be a bias towards farmers in terms of health satisfaction. The third feature is the role of age in influencing health satisfaction - compared to those who were 50 years or older, respondents in the 15-29 and 30-50 age brackets were *more* likely to be very satisfied with their health by, respectively, 11.7 and 7.9 points and *less* likely to be dissatisfied with their health by, respectively, 5.1 and 3.5 points.

Education and marital status were significantly correlated with satisfaction with health: compared to respondents with low and medium levels of education, those with high education were *more* likely (by 4.7 points) to be very satisfied - and *less* likely (by

2.1 points) - to be dissatisfied with their health; similarly, compared to respondents who were single (never married), those who were divorced, widowed, or separated were *more* likely (by 3.4 points) to be dissatisfied - and *less* likely (by 7.2 points) to be very satisfied - with their health.

The links between education and health have been investigated by Ross and Wu (1995). They offer three explanations for the well observed link between education and health. First, compared to the poorly educated, well educated persons are less likely to be unemployed and more likely to work in full-time, rewarding jobs. Second, compared to the poorly educated, the well educated have greater control over their lives and have higher levels of social support. Lastly, the well educated are less likely to smoke and more likely to drink moderately and to exercise regularly. Consequently, good education improves health directly and also indirectly through work conditions, socio-psychological resources, and lifestyle.

The link between marriage and health has most recently between analysed by Gallacher and Gallacher (2011). They conclude that "exclusive and supportive relationships [like marriage] confer substantial mental and physical health benefits that grow over time". In terms of physical health, men benefit more than women from being in a relationship but, women in a relationship benefit more in terms of mental health.[18] The failure of relationships can harm health - being single is associated with better health than being in a bad relationship - but, as Gallacher and Gallacher (2011) point out, that is an argument for avoiding bad relationships rather than avoiding relationships *per se*.

[18] The physical benefit to men may accrue from lifestyle improvements while the mental benefit to women may stem from the security and protection of being in a relationship.

Being employed and earning between 320-950 euros per week were both good for health satisfaction: compared to respondents who were either inactive or unemployed, those who were employed were *more* likely (by 8.6 points) to be very satisfied - and *less* likely (by3.9 points) to be dissatisfied - with their health; similarly, compared to respondents who earned less than 320 euros per week, those earning between 320 and 950 euros per week were *more* likely (by 4.7 points) to be very satisfied - and *less* likely (by 2.1 points) to be dissatisfied - with their health

Lastly, while being a smoker had a significantly negative effect on a person's QoL (see Table 2), it did not appear to adversely affect the likelihood of being either dissatisfied or very satisfied with one's health. On the hand, compared to those without health insurance, respondents with health insurance were significantly more likely to be very satisfied (by 5.2 points) - and significantly less likely to be dissatisfied (by 2.4 points) - with their health.

The links between low income and poor health is well established (see the discussion of Wilkinson's (1997) paper earlier) but there is one that is relevant to the discussion in the preceding paragraph. This is the link between low income and smoking. Marsh and McKay (1994) reported that those living on low income in Britain are most likely to take up smoking; least able to give up smoking; least able to afford smoking; most likely to suffer material hardship and most likely to suffer increased hardship because of their expenditure on tobacco. Explanations for the increased smoking for those on lower incomes include: modelling by parents; social environment; economic insecurity; isolation and stress of care-giving; poorer psychological and physical health; the lack of optimism and self esteem (Richardson, 2001).

Not only is smoking prevalence higher among men and women in lower socio-economic groups, they also have lower cessation rates. Since 1973 rates of cessation in the UK have more than doubled in the most advantaged groups, from 25 percent to over 50 percent. In the least well off groups, there has been a very limited increase in cessation rates from 8-9 percent cessation in 1973 to 10-13 percent in 1996 (Acheson, 1998). On the latest available figures for Ireland, in April 2010 only 15 percent of persons in social classes AB (and a similar proportion of farmers) were cigarette smokers compared to nearly 30 percent of social class DE persons.[19]

The link between health insurance and satisfaction with health status has its roots in Ireland's two-tier health system: one, covering, 32 percent of the population, supplying free health care (hospital care, GP visits) based on medical cards issued to those receiving welfare payments or those on low incomes; the other based on health insurance payments to a state sponsored health insurance scheme, the Voluntary Health Insurance, or to private insurers. There is general consensus that the insured get a significantly better service than the medical card holders: for example, the latter must wait for a long time for procedures while the former can "jump the queue" (Harvey, 2007; Kenny, 2008).

5. Subjective versus Objective Health Status

The previous sections were concerned with subjective wellbeing, firstly in the context of the QoL and, secondly, in the context of satisfaction with health. In situations where objective measures of well-being exist, it is only natural to enquire about the overlap between subjective and objective wellbeing. It is possible to do so in the case of health since, in addition to asking respondents about their degree of satisfaction with

[19] Office of Tobacco Control, Ireland: Current Trends in Cigarette Smoking, http://www.otc.ie/research.asp.

health (a subjective assessment), the HSE Survey also asked them whether their "daily activity or work [was] limited by a long-term illness, health problem, or disability"? Long term illness represents an objective assessment of health status since, as Dale and Marsh (1993) observe, such illness correlates well with the use of health services such as GP consultations and the use of in-patient and out-patient visits to hospitals.

Table 5 shows that 30 percent of the 411 respondents to the HSE Survey who answered the "long-term illness" question (above) in the affirmative were very satisfied or satisfied with their health and less than half (45 percent) of such respondents were dissatisfied or very dissatisfied with their health. A possible reason why nearly a third of those with a long-term illness expressed a high degree of satisfaction with their health is that such illnesses (or disabilities) limited their responsibilities in areas (most notably, work) that many, if not most, people find onerous: in judging satisfaction, therefore, they might have balanced the disutility attached to such illnesses with the utility from not having to work and concluded that the gain outweighed the pain.

This hypothesis is not without its supporters in policy circles. Under the slogan 'Get Britain Working' the Conservative Party in the UK has declared war on the sick-note culture with a plan to slash £25 a week from the benefits of the "work-shy". The 2.6 million currently claiming Incapacity Benefit in the UK would have their health assessed and those deemed fit to work would see their benefits cut and these plans would form the centre piece of radical reforms of the welfare system designed to get Britain working again. [20]

[20] The Daily Mail, 5 October 2009 http://www.dailymail.co.uk/news/article-1218133/Benefits-slashed-work-shy-Tories-declare-war-5m-worked-Labour.html

In order to test if this hypothesis might be true for Ireland, we estimated the QoL equation for only those respondents who were *of* (as opposed to *in*) the labour force: the employed, the unemployed, and those unable to work due to permanent sickness or disability. The results from estimating this restricted QoL equation, shown in Table 6, are different in one important respect from those of the earlier QoL estimates (Table 2, specification 4). Earlier, when the labour market status distinction was between the employed, the unemployed, and the *inactive* (where the latter included homemakers, students, and the retired) the likelihood of a poor QoL (and of a high QoL) was not significantly different between these three categories of respondents.

When, however, the estimation sample was restricted to respondents who were employed, unemployed, or *unable to work* (the latter being a subset of the inactive), then, compared to those unable to work, likelihood of having a poor QoL was *significantly lower*[21] - and the likelihood of having a good QoL was *significantly higher*[22] - for the employed and the unemployed (Table 6). This suggests that even after controlling for other factors, including levels of satisfaction with one's health, the very fact that people were unable to work because of a long-term limiting illness or disability significantly lowered their QoL. Consequently, the data does not support the hypothesis that people who cannot work are as content with their QoL as those who are employed - or, indeed, as those who can work, but are unable to find it.

6. Conclusions

Ralph Dahrendorf famously remarked that "sociology was critical awareness of the state of society". This paper tried to provide, using a quantitative assessment of

[21] By, respectively, 2.3 and 0.8 points.
[22] By, respectively, 10.5 and 3.8 points.

survey data collected between November 2006 and March 2007, an awareness of Irish society as it related to the quality of people's lives. Although, the average value of the QoL in Ireland in 2007, at 8.3 out of a maximum of 10, was very high (see Table 1), there was considerable inequality in the distribution of QoL scores between the respondents. At one extreme, taking the salient features of Table 6, respondents who were of social class D or E, with low income, unable to work through illness or disability, dissatisfied with their health, without health insurance had a QoL score of 3.7; at the other extreme, respondents who were of social class AB, with high income, employed, very satisfied with their health, with health insurance had a QoL score of 8.9.

The methodology's ability to identify persons who might be "at risk" from a low QoL - analogous to persons being "at risk" from poverty - allows one to speculate on the QoL in Ireland today, in the winter of its discontent, compared to that in 2006-2007 when it basked in the summer of the Celtic Tiger. Most ominously, there has been a collapse in employment paralleled by a rise in the unemployment rate from 4 percent, when the survey was carried out, to 14 percent in 2011. In these changed circumstances, one would expect that joblessness would play a much more important role in determining QoL: prior to 2008, unemployment meant a short wait till a suitable job turned up; now it is more likely to involve a protracted (and, often, futile) search at home or emigrating for a job abroad.

Attached to the risk of losing one's job is the risk of losing one's home. Foote *et. al.* (2009) identified two factors in the USA which affected mortgage default: a fall in house prices and unemployment. Add to this the fact that in Ireland, by the peak of the housing bubble in 2006 - with the average first-time mortgage being eight times, and the

average new home costing 10 times, average earnings - borrowers were already highly stretched (Kelly, 2009). Since then, according to Kelly (2010), banks have been relying house prices and social stigma to stem the tide of defaults but both barriers have started to crumble alarmingly. First, according to the Permanent TSB/ESRI house price index, in Q3 2010, the average price of houses, at €198,689, was 36 percent down on the peak price of €310,381 reached in Q4 2006.[23] Second, although people were going to extraordinary lengths to meet mortgage repayments, both out of fear of losing their homes and to avoid the stigma of admitting that they were insolvent, a growing number of home owners who are faced with a choice between their obligations to their banks and to their families are choosing the latter (Kelly, 2010).

Another impact of falling house prices is on marital separation: the numbers of people who were seeking a legal separation through the courts in 2010 was 19 percent less than in 2008, and lower than any year since 2002. On one interpretation, negative equity prevents unhappy spouses from dissolving their marriage because they can't afford a second home. If one adds to this the legal fees of €40,000 for a legal separation, then a number of spouses who, a few years ago, would have terminated their marriages are today trapped in unhappy relationships which they cannot afford to leave.[24] The analysis of this paper, which predicted a positive association between marriage and health status, was based upon the assumption of a voluntary togetherness; in present times, this can no longer be assumed.

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[23] Global Property Guide, 21 December 2010 http://www.globalpropertyguide.com/Europe/Ireland/Price-History.

[24] Closure Conflict Solutions for Ireland, "Irish Legal Separation Figures", 28 July 2010, http://closure.ie/blog/?tag=marriage. On another interpretation, this fall in numbers seeking separation represented an adversity-induced return to traditional values.

The overarching theme of this paper has been, however, the effect of satisfaction with health status on QoL and, in turn, the constellation of factors which contribute towards determining the level of this satisfaction. The survey showed that in 2006-07 82.3 percent of respondents were "very satisfied or satisfied" with their health. The interesting question is whether these high levels of satisfaction would continue in the current recession. There is a large literature, surveyed by Mathers and Schofield (1998), on the links between unemployment. They concluded that while the relationship between the two is complex - unemployment can be both the cause and the consequence of ill-health - longitudinal studies with a range of designs "provide reasonably good evidence that unemployment itself is detrimental to health and has an impact on health outcomes - increasing mortality rates, causing physical and mental ill-health and greater use of medical services" (p.178).[25] One can, therefore, be reasonably certain that the health outcomes (and, therefore, the QoL) associated with a 14 percent unemployment rate will be considerably worse than those witnessed during the halcyon days of the economic boom.

This raises the question of how this additional, recession-induced, demand for health services will be met. The November 2010 Irish budget heralded a cut of €1.4 billion over the next four years; and next year's reduction of €746m is to be achieved through reduced spending on demand-led schemes like the medical card scheme and drugs payment scheme, the cost of drugs and medical equipment.[26] These cuts come at a time when Ireland's public healthcare system was ranked 11th out of 31 European

[25] In addition, there is the effect of unemployment on the health of other family members: the British Office of Population Censuses found a 20 percent excess mortality among wives of unemplyed men.
[26] RTÉ News, 24 November 2010, http://www.rte.ie/news/2010/1124/economy_health.html

countries on the Euro Health Consumer Index. The Health Consumer Powerhouse which compiled the ranking said that: "first and foremost, the Irish should cut the waiting times, particularly for specialist appointments; further work on consumer empowerment by introducing a patient rights law would be next. But Ireland should also make the most of the new possibilities that e-Health offers in order to increase safety and efficiency".[27]

The puzzling feature of Ireland's low ranking is that, in terms of health expenditure as a proportion of GDP, Ireland's 8.7 percent is higher than the EU average of 8.3 percent; yet several countries with a lower share of health expenditure in GDP (Estonia, 6.1 percent; Hungary, 7.3 percent; Finland, 8.4 percent; Luxembourg, Norway, 8.5 percent) were ranked higher and, compared to Ireland's 8.7 percent, the top ranked country, the Netherlands spent 9.1 percent of GDP on health.[28] Yet, because Ireland, with a median age of 34.5 years, has one of the youngest populations among the EU countries and, since good health and youth are correlated, a high share of health expenditure should place it near the top of the EU ranking.

This raises questions about the efficiency and inequality in the Irish health system. Ireland never fully embraced either the compulsory social insurance system of continental Europe or the tax-funded National Health Service of the UK. Instead, in a compromise between the State and the Church, a two-tier system has evolved, partly state-funded (for the needy) and partly insurance-funded (for the affluent), the general perception being that the insured receive a better deal. The major implication of this is

[27] Health Consumer Power House, "Irish healthcare system witnesses improvement in European health consumer ranking", 15 December 2008, http://www.healthpowerhouse.com/files/2008-EHCI/pr/Ireland%20EHCI%202008.pdf. The Netherlands led the ranking with a score of 839 points (out of a maximum of 1,000), followed by Denmark, Austria, Luxemburg and Sweden; Ireland scored 671 points.

[28] OECD (2010) and Björnberg and Uhlir (2008).

that the Irish healthcare system has *inequality in provision* built into its institutional structure and this, in conjunction with the other pre-provision inequalities that exist (class, income, employment status), only serves to exacerbate health inequality. The Adelaide Hospital Society has detailed the flaws in this two-tier system[29] the most important of which is that it undermines social solidarity: citizens of the Republic receive care and treatment partly on the basis of their need but, also, partly on the basis of their ability to pay.

In our view, the lack of social solidarity reinforces the "clientelism" of Irish politics: voters obtain state benefits through a politician's interventions and, in return, become his/her clients. Chubb (1963) described politicians as primarily brokers mediating between his local area and the State. It would appear that not much has changed in the nature of Irish politics in the past 45 years. The Irish National Electoral Study offers a great deal of evidence to confirm the importance of the personal vote in Ireland (Marsh *et. al*, 2008). [30] In this context, constituents' inability to access the health care they need means that health-related benefits - a medical card here, a hospital appointment or bed there - lies in the gift of politicians. Unfortunately, given this power of patronage, politicians may have little incentive to push for reform because that might undermine the foundation of their electoral appeal.

[29] See The Adelaide Hospital Society, Universal Health Care Insurance: the way forward for Irish healthcare, April 2010, http://www.adelaide.ie/cms/cms/uploads/files/Policy%20Paper.pdf

[30] 62 percent of respondents said that the candidate, rather than his/her party, was the most important factor in deciding how to cast their first-preference vote; 46 percent said that their first preference vote would follow their chosen candidate even if he/she stood for a different party; and, in providing reasons for casting their first preference votes, a large proportion of voters claimed they voted on personal grounds or on grounds that the candidate represented the area and its constituents well, with only a minority voting for reasons of party and agreement with policies.

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Table 1: Mean Quality of Life Scores by Group

	Mean Quality of Life Score (Max: 10)	Number of Respondents
Social Class A B	8.69	433
Social Class: C1 C2	8.40	1,935
Social Class D E	7.56	887
Farmers	8.19	261
Married (including cohabiting couples)	8.25	2,080
Divorced (including separated, widowed)	7.38	451
Single (never married)	8.52	967
High Education (Complete or partial third level)	8.73	1,027
Medium Education (Complete or partial secondary level)	8.13	1,976
Low Education (Primary or no schooling)	7.30	452
Employed (including self-employed)	8.52	1,888
Unemployed (including seeking work for the first time)	7.52	121
Homemaker	7.96	628
Retired	7.49	519
Student	9.18	234
Unable to work through permanent sickness/disability	5.68	68
High Income (950 euros or more per week)	8.76	350
Medium Income (320-950 euros per week)	8.38	1,329
Low Income (320 euros or less per week	7.34	701
Women	8.14	1,817
Men	8.28	1,700
Health: very satisfied	8.63	2,900
Health: fairly satisfied	6.8	342
Health: dissatisfied	5.44	275
Smoker	8.28	2,488
Non-Smoker	8.06	987
Health Insurance	8.37	2,645
No Health Insurance	7.69	831
All respondents (excluding “non-responses”)	8.25	3,498

Table 2: Marginal Probabilities from Ordered Logit Model of Quality of Life in Ireland

	Specification 1: 3,389 cases				**Specification 2: 3,336 cases**				**Specification 3: 2,280 cases**				**Specification 4: 2,225 cases**			
	Very Poor or Poor		Very Good or Good		Very Poor or Poor		Very Good or Good		Very Poor or Poor		Very Good or Good		Very Poor or Poor		Very Good or Good	
	M prob	z value	M prob	z value	M prob	z value	M prob	z value	M prob	z value	M prob	z value	M prob	z value	M prob	z value
Female	0.002	0.52	-0.006	-0.52	-0.002	-0.50	0.006	0.50	-0.009	-1.48	0.021	1.48	0.000	-0.06	0.001	0.06
Social Class																
A B	-0.028	-4.76	0.070	4.77	-0.024	-4.01	0.061	3.99	-0.020	-2.31	0.051	2.28	-0.009	-2.31	0.041	2.32
C1 C2	-0.036	-5.80	0.086	6.16	-0.028	-4.66	0.068	4.86	-0.023	-3.16	0.057	3.25	-0.009	-2.45	0.038	2.54
Farmers	-0.026	-4.73	0.066	4.72	-0.021	-3.39	0.052	3.35	-0.019	-2.40	0.049	2.35	-0.007	-1.58	0.030	1.56
Age																
15-29	-0.046	-8.61	0.115	9.50	-0.043	-8.06	0.109	8.78	-0.038	-5.92	0.098	6.25	-0.009	-2.43	0.039	2.46
30-50	-0.036	-7.23	0.089	7.75	-0.031	-5.97	0.077	6.25	-0.026	-4.07	0.066	4.18	-0.007	-2.15	0.031	2.19
Education																
High	-0.018	-2.49	0.045	2.49	-0.012	-1.57	0.030	1.56	-0.004	-0.40	0.010	0.39	0.003	0.63	-0.015	-0.64
Medium	-0.006	-1.02	0.016	1.02	-0.003	-0.45	0.007	0.46	0.005	0.73	-0.013	-0.73	0.000	-0.02	0.000	0.02
Marital Status																
Married	-0.013	-1.87	0.031	1.89	-0.014	-1.98	0.033	2.00	-0.012	-1.46	0.029	1.48	-0.003	-0.78	0.013	0.79
Divorced	0.016	1.62	-0.038	-1.66	0.013	1.39	-0.031	-1.42	0.013	1.22	-0.032	-1.24	0.000	0.05	-0.001	-0.05
Housing																
Owner Occupier	-0.019	-3.24	0.046	3.31	-0.018	-2.99	0.043	3.06	-0.021	-2.91	0.051	2.99	-0.005	-1.55	0.023	1.57
Employment																
Employed					-0.026	-4.38	0.063	4.53	-0.031	-4.00	0.076	4.18	-0.004	-1.31	0.020	1.32
Unemployed					0.011	0.86	-0.025	-0.87	-0.001	-0.06	0.002	0.06	-0.001	-0.23	0.005	0.23
Income																
High									-0.021	-2.34	0.053	2.32	-0.011	-3.10	0.052	3.15
Medium									-0.027	-3.51	0.067	3.64	-0.009	-2.40	0.040	2.48
Health Status																
Very Satisfied													-0.302	-9.45	0.656	19.90
Fairly Satisfied													-0.016	-6.76	0.074	8.37
Smoker													0.005	1.64	-0.023	-1.67
Health Insurance													-0.006	-1.79	0.029	1.84
Base Probabilities	***0.048***		***0.872***		***0.047***		***0.875***		***0.047***		***0.871***		***0.019***		***0.901***	

Notes to Table 2

The reference categories for the determining variables were as follows:

1. Social Class: D E
2. Age: 50 years and above
3. Marital status: Single (never married)
4. Owner-Occupier: Living in Rented Accommodation
5. Education: Low (Primary or none)
6. Employment: Inactive (Homemaker, retired, student, unable to work)
7. Income: Low (320 euros per week or less)
8. Health Status: Dissatisfied
9. Smoker: non-smoker
10. Health Insurance: no health insurance

The base probabilities, shown in the last line of Table 2, refer to the probabilities of the different outcomes *when all the variables assume their mean values*. The marginal probabilities are the additions to, or the subtractions from, these base probabilities for a unit change in the value of the relevant variable.

Table 3: Odds Ratios from Ordered Logit Model of Quality of Life in Ireland

	Specification 1		Specification 2		Specification 3		Specification 4	
	Odds Ratios	Z Value	Odds Ratios	Z Value	Odds Ratios	Z Value	Odds Ratios	Z Value
Female	0.95	-0.52	1.06	0.5	1.21	1.49	1.01	0.06
Social Class								
A B	2.17	3.79	1.97	3.26	1.70	1.94	1.81	1.93
C1 C2	2.10	6.37	1.83	5.01	1.65	3.31	1.58	2.59
Farmers	2.11	3.65	1.78	2.75	1.68	1.96	1.53	1.34
Age								
15-29	3.74	7.21	3.53	6.76	2.99	4.94	1.72	2.18
30-50	2.40	6.99	2.14	5.72	1.88	3.90	1.49	2.09
Education								
High	1.54	2.34	1.33	1.5	1.09	0.39	0.84	-0.66
Medium	1.15	1.03	1.06	0.46	0.89	-0.72	1.00	0.02
Marital Status								
Married	1.32	1.93	1.35	2.05	1.29	1.50	1.18	0.80
Divorced	0.73	-1.81	0.77	-1.52	0.77	-1.33	0.99	-0.05
Housing								
Owner Occupier	1.48	3.43	1.45	3.16	1.55	3.10	1.31	1.62
Employment								
Employed			1.75	4.62	1.93	4.26	1.28	1.34
Unemployed			0.81	-0.94	1.02	0.06	1.07	0.22
Income								
High					1.73	1.99	2.21	2.51
Medium					1.79	3.77	1.61	2.57
Health Status								
Very Satisfied							48.31	19.94
Fairly Satisfied							4.02	6.98
Smoker							0.77	-1.75
Health Insurance							1.39	1.96
Number of Cases	3,389		3,336		2,280		2,225	

Table 4: Marginal Probabilities from Ordered Logit Model of Satisfaction with Health Status

	Dissatisfied with Health		Very Satisfied with Health			
	Marginal probability	Z value	Marginal probability	Z value	Odds Ratios	Z value
Female	-0.016	-2.34	0.036	2.36	1.34	2.37
Social Class						
A B	0.002	0.14	-0.004	-0.14	0.97	-0.14
C1 C2	-0.009	-1.14	0.021	1.14	1.19	1.15
Farmers	-0.021	-2.05	0.049	2.01	1.59	1.71
Age						
15-29	-0.051	-6.61	0.117	6.95	3.31	5.36
30-50	-0.035	-4.66	0.079	4.78	1.99	4.46
Education						
High	-0.021	-1.90	0.047	1.89		
Medium	0.004	0.48	-0.009	-0.48	1.49	1.77
Marital Status					0.93	-0.48
Married	0.006	0.65	-0.014	-0.65		
Divorced	0.034	2.18	-0.072	-2.28	0.89	-0.65
Housing					0.60	-2.57
Owner Occupier	-0.010	-1.19	0.022	1.19		
Employment					1.19	1.21
Employed	-0.039	-4.24	0.086	4.42		
Unemployed	0.004	0.25	-0.009	-0.25	1.97	4.5
Income					0.93	-0.26
High	0.004	0.26	-0.008	-0.26		
Medium	-0.021	-2.30	0.047	2.33	0.94	-0.27
					1.45	2.37
Smoker	0.011	1.37	-0.024	-1.38	0.83	-1.42
Health Insurance	-0.024	-2.52	0.052	2.59	1.49	2.77
Base Probabilities	***0.059***		***0.856***			
Number of cases	***2,238***					

See notes to Table 2

Table 5: Relationship Between Satisfaction with Health and Long-term illness

Degree of satisfaction with health↓	Does not have Long-term illness	Has Long-term illness	Total
Very satisfied	1,214	23	1,237
	40.2%	*5.6%*	
Satisfied	1,509	99	1,608
	49.9%	*24.1%*	
Neither satisfied nor dissatisfied	218	105	323
	7.2%	*25.6%*	
Dissatisfied	69	135	204
	2.3%	*32.9%*	
Very dissatisfied	14	49	63
	0.5	*11.9%*	
Total	3,024	411	3,435
	100%	*100%*	

Table 6: Marginal Probabilities from Ordered Logit Model of Quality of Life for Employed, Unemployed, and Unable to Work Respondents

	Very poor or poor		**Very good or good**			
	Marginal probability	Z value	Marginal probability	Z value	Odds Ratios	Z value
Female	0.002	0.58	-0.008	-0.59	0.89	-0.59
Social Class						
A B	-0.007	-1.84	0.037	1.88	1.96	1.52
C1 C2	-0.008	-1.86	0.039	1.96	1.74	2.06
Farmers	0.002	0.26	-0.009	-0.26	0.88	-0.27
Age						
15-29	-0.002	-0.54	0.010	0.54	1.17	0.52
30-50	-0.005	-1.45	0.023	1.48	1.42	1.47
Education						
High	0.006	1.05	-0.030	-1.07	0.65	-1.13
Medium	-0.002	-0.40	0.008	0.40	1.13	0.40
Marital Status						
Married	0.001	0.36	-0.006	-0.36	0.91	-0.36
Divorced	0.008	1.15	-0.037	-1.19	0.62	-1.40
Housing						
Owner Occupier	-0.005	-1.37	0.023	1.41	1.39	1.45
Employment						
Employed	-0.023	-1.99	0.105	2.21	2.96	3.07
Unemployed	-0.008	-2.38	0.038	2.44	2.12	1.89
Income						
High	-0.011	-2.95	0.054	3.17	2.82	2.47
Medium	-0.006	-1.33	0.027	1.36	1.47	1.43
Health Status						
Very satisfied	-0.193	-5.11	0.534	9.41	28.52	12.06
Fairly satisfied	-0.010	-4.25	0.052	5.05	3.20	3.88
Smoker	0.004	1.27	-0.019	-1.29	0.76	-1.35
Health Insurance	-0.004	-1.06	0.021	1.09	1.34	1.17
Base Probability	***0.014***		***0.928***			
Number of observations	***1,365***					

See notes to Table 2