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Life satisfaction during the economic crisis

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Abstract

This study explores how life satisfaction varies among socio-demographic groups as the wider economic environment crumbles. Our primary goal is to identify which socio-demographic groups are most vulnerable during an economic crisis as far as life satisfaction is considered. The empirical data is based on a cross-sectional study that was conducted in Finland in October 2015. Based on our analyses (ANOVA and logistic regression) and a sample of 976 Finns, we argue that during an economic crisis, life satisfaction is greatest among women, people who live with partners, people having more than basic education, entrepreneurs and the higher income groups. The unemployed and those in ambiguous employment situation as well as those with only primary education have the lowest level of life satisfaction. High levels of life satisfaction for certain groups may be explained by future prospects (students) and self-efficacy and job control (entrepreneurs) in working life.

Keywords: economic crisis, life satisfaction, Finland, well-being, socio-economic groups

Introduction and purpose

During the last two and half decades we have witnessed several economic crises throughout the world. In the late 1990s the Asian crisis inflicted economic damage across much of East and Southeast Asia and raised fears of a global economic meltdown (Friedman & Duncan, 2009). In late 2008 and early 2009 there emerged a 'global financial crisis' triggered by the US subprime mortgage crisis (Donaldson, 2012). Europe, in turn, has suffered a severe debt crisis since the end of 2009 (Guardiola et al., 2015).

As economic crises have become more frequent and more serious, concerns have arisen about how the economic crises affect people's well-being (see e.g., Arechavala et al., 2015; Guardiola et al., 2015; Guardiola & Guillen-Royo, 2015; Sibley et al., 2011). Guardiola et al. (2015) state that the profound and widespread effects of the economic crises have created a need to capture the well-being of societies and develop an understanding of how these crises affect the quality of life.

The general belief is that an economic crisis decreases human well-being (Gudmundsdottir, 2013; Arampatzi et al., 2015; Aytaç et al., 2015). This view has received strong support from several studies. For example, Graham et al. (2010) studied the effects of the deep economic crisis of 2008 and 2009 on happiness in the US and found it had profound effects on individuals' happiness. Guardiola and Guillen-Royo (2015) studied the effect of the economic crisis in Spain and found that if it led to a negative change in the household's economic level it had a significant and negative association with subjective well-being. Aytaç and

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colleagues' (2015) analysis of the social impact of the 2008 global economic crisis in Turkey showed that it had a significant adverse effect on individual well-being. Arechavala et al. (2015) studied EU countries in 2007 and 2011 in order to quantify the impact of the economic crisis on Europeans' well-being. According to their findings, 18 countries out of the 27 had experienced a drop in the quality of life.

While the majority of studies indicate that economic crises have a negative impact on individuals' well-being, some studies have shown that the impact may not be that strong or that it varies among different groups. For example, Gudmundsdottir's (2013) study of the effects of Iceland's economic crisis found that even though there was an economic breakdown and people lost trust in financial and social institutions, the crisis had a limited effect on Icelanders' well-being (see also Barrett & O'Sullivan, 2014; Tekin et al., 2013). Graham et al. (2010), in turn, emphasized that the effects of the economic crisis vary significantly depending on people's socioeconomic cohort and their states of mental and physical health. Sibley et al. (2011) revealed that the financial crisis affected the well-being of disadvantaged groups such as ethnic minorities more than it affected privileged groups. Kaytaz and Gul (2014) found that individuals' responses to an economic crisis depend upon their level and type of income.

Against this background, our aim is to improve the understanding of individuals' well-being when the economic crisis is escalating and the fear of economic meltdown is real. Because well-being is a multidimensional construct consisting of several components, it can also be approached from different perspectives and utilizing various scales (Busseri et al., 2007; Diener et al. 1985; Dolan et al., 2008; Pavot et al., 1991; Pavot & Diener et al., 1993; Schimmack, 2008). Given our interest in an overall assessment of individuals' lives, we focus on the concept of life satisfaction. Life satisfaction is defined as the cognitive component of subjective well-being (Schimmack, 2008). Voicu (2015, p. 995) emphasizes that life satisfaction 'encompasses the extent to which one is satisfied with his/her life in general, with no specific reference to any domain, of greater or lesser importance'. In this study, life satisfaction is measured by utilizing the Satisfaction with Life Scale (SWLS) developed by Diener et al. (1985).

Our primary goal is to identify which socio-demographic groups are the most vulnerable during an economic crisis as far as life satisfaction is considered. As the empirical data we are using are cross-sectional, we do not wish to study the effects of the economic crisis per se. To be more specific, our research question can be formulated as follows: how does life satisfaction vary between certain groups during a crisis as the wider economic environment is crumbling and the prospects for the future are gloomy?

The article is organized as follows. First, we review prior research related to effects of economic crises from the viewpoint of well-being. Following this, we provide the details of our research context, sample, measures and analysis. We conclude by discussing the results and implications for researchers and policymakers. Finally, limitations and opportunities for future research are discussed.

Theoretical background

Regarding the theme of the study one may first ask: what is an economic crisis? Although economic crisis is a widely used construct, there is no clear-cut definition for it. The Oxford dictionary (2016) defines crisis as 'a time of intense difficulty or danger.'

Economic crisis is typically defined by statistical measures, such as negative GDP growth (see e.g., Kaytaz & Gul, 2014; Mertens & Beblo, 2016). Also, several researchers have demonstrated that the rising unemployment rates are one of the most important indicators of an economic crisis (see e.g., Guardiola & Guillen-Royo, 2015; Gudmundsdottir, 2013). Frozen wages and a curtailing of non-wage benefits can also be signals of economic crisis (Jiho, 2003) as well as stock market information indicating negative growth (Graham et al., 2010).

This study defines economic crisis as a time period in which the country experiences great economical and financial difficulties that affect the whole society and its people widely and profoundly (see e.g., Guardiola et al., 2015). During an economic crisis, confidence in the financial system often shakes, there

is social exclusion and worsening social conditions coupled with an increase in citizens' mistrust of public institutions (see e.g., Arechavala et al., 2015; Jiho, 2003).

It is relatively widely agreed that an economic crisis has a negative impact on individuals' well-being, but the effects may vary substantially across different groups (see e.g., Adema & Ali, 2015; Aytaç et al., 2015; Guardiola et al., 2015). The current literature helps us to understand which groups are the most affected by an economic crisis.

Employment status plays an important role in the effects of an economic crisis upon individuals. For example, Aytaç et al. (2015) studied the impact of the global economic crisis on well-being in Turkey and found that those who were underemployed and had reduced earnings were more stressed and depressed. Guardiola and Guillen-Royo's (2015) research in Spain during the economic crisis revealed that being unemployed undermined the ability to experience satisfaction with life. Arampatzi et al. (2015), in turn, found that employed people who were financially well-off and who had good prospects were not affected by the economic crisis.

In contrast, Graham et al. (2010), studying the effects of the deep economic crisis of 2008 and 2009 on happiness in the US, found that people at the lowest income levels barely reacted to negative events in the economy whereas those with incomes above the mean reacted more quickly and more strongly to the economic crisis. Graham et al. (2010, p. 738) summarized their key findings as follows: 'In all instances, it seems that those with the most to lose are the most reactive to events, while the already vulnerable have either already internalized the negative effects or have less room for variance as their scores are already low.'

Friedman and Duncan (2009) studied Indonesia's economic crisis of 1993–2000 and concluded that in those years, the people who were less educated were more likely to report anxiety, while those who had a better education were significantly less likely to do so. In a similar vein, Guardiola and Guillen-Royo (2015) found that higher education was a strong determinant of well-being during Spain's economic crisis.

Friedman and Duncan (2009) also found that a substantial fraction of males and females were psychologically distressed during the economic crisis. However, they found that females were significantly more likely to report sadness and anxiety. Burns et al. (2012) showed that women had as strong or stronger negative emotions about the economic crisis than men. In contrast, Gudmundsdottir (2013), who studied the effects of economic decline in Iceland, found no significant difference between women and men in their feeling of happiness.

In their study, Graham et al. (2010) found that the middle-aged people (36–55) had the strongest and most consistent reactions to both negative and positive events; the youngest (19–35) and the oldest (55 and up) age groups were the least reactive to negative events. Gudmundsdottir (2013), in turn, found that being married or committed, or having healthy and good quality relationships with family and friends can reduce the negative effect of the economic crisis. Blanchflower and Oswald (2004) revealed that well-being is greatest among women, married people, the highly educated, and people who had not experienced parental separation in their childhood (see also Dolan et al., 2008). Graham et al. (2010) looked at the role of friendships in the economic crisis and concluded that people who did not report having friends reacted much later in the crisis. This was seen to be due to more social interaction and crisis related information exchange among those who had close ties with their peers. On the contrary, those without friends received less personal information on the events of the crises and thus they were 'less attuned to what was happening' (Graham et al., 2010, p. 736).

Based on the above, it is clear that human well-being is affected by the wider economic, social and political environment (see e.g., Diener et al. 1995; Dolan et al., 2008). Therefore, well-being is a critical factor in evaluating the impact of economic crisis on individuals. Although it is widely agreed that an economic crisis tends to decrease well-being, the effects may vary substantially across different groups (see e.g., Aytaç et al., 2015; Gudmundsdottir, 2013). Our study aims to understand how the life satisfaction as a cognitive component of subjective well-being varies between certain demographic groups as the wider economic environment is unstable.

Methodology

Research context and previous studies on well-being

The present study is conducted in Finland. According to the IMF (2015), Finland's economy has been in a downturn for several years. The Finnish Ministry of Finance (2015) has likewise reported that the Finnish economy was in an extremely difficult situation in the fall of 2015. The country's GDP growth was close to zero and unemployment was rising. In the fall of 2015 the unemployment rate was almost 10% (Ministry of Finance, 2015). The culmination of the economic crisis has been pinpointed to the Prime Minister's speech on the Finnish Broadcasting Company YLE on September 16, 2015 (Sipilä, 2015). In this very unusual move, the Finnish Prime Minister addressed the country's serious economic problems.

His historic speech included the following statements (Prime Minister's Office, 2015):

- Finland's economic growth is the lowest in Europe and the economy has been in long-tem decline
- In no other country in Europe is unemployment growing as fast as in Finland.
- Finnish work and production have lost their competitiveness.
- Finland's debt has grown quicker than that of other EU countries.
- Central and local government expenditure is significantly greater than revenue.

In accordance with Graham et al. (2010), people's hope and optimism for the future are apparently more influenced by these policy signals and statements (and how the media covers them) than more objective assessments of particular situations. Based on this and factual events in the Finnish economy, it can be said that in the fall of 2015 Finland became a laboratory for the present kind of study that aims to understand citizens' beliefs and attitudes in a situation when a country's economy is truly crumbling.

There are several previous studies that have evaluated Finns' happiness and well-being (see e.g., ESS, 2015 or Statistics Finland, 2017). In general, most of these studies state that Finland is one of the happiest countries in the world. For example, in 2010 Finland was chosen as the best country in the world based on its national well-being – measured by a high quality of education, health, quality of life, economic competitiveness and political environment (Newsweek, 2010). The World Happiness Report (World Economic Forum, 2016), measuring happiness using factors that included GDP, healthy years of life expectancy, social support, trust, perceived freedom to make life decisions and generosity, has ranked Finland the fifth happiest country in world. Eurostat (2017) has found that Finns are the second most satisfied with their life among Europeans.

Generally speaking, it can be argued that happiness and well-being are relatively stable factors, and real changes at least in the short-run are rare. However, there can be significant differences in how happiness and well-being are experienced across different socio-demographic groups. Moreover, an economic crisis can bring these differences up in a new way (see e.g., Adema & Ali, 2015; Aytaç et al., 2015; Guardiola et al., 2015). The aim of this article is to shed light on these differences more closely by its unique data set that is presented next.

Sample

The survey was conducted in October 2015 and the sample was randomly drawn from the adult population of mainland Finland. A total of 3500 questionnaires and self-addressed pre-paid envelopes were mailed to Finnish citizens. Out of 3500 questionnaires, 976 (27.9%) usable responses were returned. Table 1 lists the detailed demographics of the respondents. In comparison to the demographic proportions of the Finnish population, the sample to some extent over represents women, elderly people and those with a university degree (OSF, 2016). A similar bias is often reported when using surveys as a research instrument, at least in Finland (Alastalo, 2005).

Table 1. Characteristics of the respondents (N=976).

	%
Gender	
Female	59.9
Male	40.1
Income quartile	
1st (lowest): 2900 € or less	34.4
2nd: 2901 – 3900 €	15.2
3rd: 3901 – 5900 €	27.1
4th: (highest) 5901 € or over	23.3
Age	
Under 26	12.7
26–35	12.4
36–45	12.8
46–55	14.0
56–65	22.4
Over 65	25.8
Employment status	
Employed	40.5
Unemployed or other	9.2
Entrepreneur	5.6
Student	8.9
Retired	35.8
Living status	
Alone	20.8
With parents	4.1
With partner	50.0
Partner & kids	20.3
Single parent	2.8
Other arrangement	2.0
Education	
Primary school	16.2
Vocational school	36.7
Upper secondary school	13.4
University/polytechic/Post grad	33.7

Measures

Dependent variable: Life satisfaction

Life satisfaction is defined as the cognitive component of subjective well-being (Schimmack, 2008). In this study life satisfaction was measured by utilizing the Satisfaction with Life Scale (SWLS). Pavot and Diener (1993) argue that SWLS can accurately measure changes in well-being and intervention outcomes. Pavot et al. (1991), in turn, claim that SWLS is a valid and reliable measure that is suited for use with many age groups. SWLS was developed by Diener et al. 1985 (see also Diener, 1994; Pavot & Diener, 1993) and it has the following five items that assess the overall judgment of life satisfaction:

- In most ways my life is close to my ideal.

- The conditions of my life are excellent.
- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.

All items were measured on a 7-point scale and these items exhibited a reliability of 0.890 (Cronbach's Alpha). In the analyses that follow a life satisfaction construct is used as the dependent variable. The construct is a sum of the above-mentioned five items. The sum was normalized and re-scaled onto a 7-point scale. Thus, for example the means presented below (Table 2) refer to the sum construct (ranging from 1 to 7).

In general, Finns' life satisfaction is relatively high although Finland has faced great difficulties during the last few years. The mean of life satisfaction among all respondents is 5.15 (7 being the maximum). This aggregate level corroborates the measures of happiness produced by European Social Survey (ESS) data, which gives important over-time reference information relevant for the present study. (See further details in the Appendix. Moreover, it must be noted that the measure of life satisfaction used in the present study is not totally comparable with most of the statistics referred to, including the ESS, as they typically base their measures on the aggregate level of happiness and well-being.)

The present study's result of the Finnish average level of life satisfaction would translate on the ESS scale as a value of 7.35. According to the ESS, the mean for happiness in Finland in 2014 was 8.04 (means for various sub-groups and several years are presented in the Appendix Table 1.). The level of happiness has generally been very high in Finland, the means having fluctuated only slightly during the past decade (values ranging from 7.96 to 8.09, the 'low year' being 2010).

In order to highlight the distinction between low and high level of life satisfaction, the dependent variable was dichotomized ('low level of life satisfaction' = 0, 'high level of life satisfaction' = 1). We use the median (5.40) as the cut-off point: respondents whose score on the life satisfaction construct is less than 5.40 are classed as having low life satisfaction. Since the cut-off point is based on the median, the share of both categories is almost equal: 50.3 percent are classed as having low life satisfaction whereas 49.7 percent have high life satisfaction.

Independent variables

Six in dependent variables were used in the analysis. Gender had values 1) female and 2) male.

Income was measured as the total monthly gross income of the household. The initial categorization had 10 categories with roughly 1000 euro intervals (the median income category was 3901–4900€), but for the analysis, the income brackets were recoded to approximate income quartiles. The income quartile categories are thus: 1) 2900 euros or less, 2) 2901 to 3900 euros, 3) 3901 euros to 5900 euros, and 4) over 5900 euros. Due to the fact that the original measure was categorized, the quartiles are approximates.

Age was measured as a continuous variable (based on year of birth) that was categorized to six age groups as follows: 1) under 26, 2) 26–35, 3) 36–45, 4) 46–55, 5) 56–65, and 6) over 65. There was a substantial share of missing values for age (13.4%). No treatment for the missing values was made, and thus age was omitted in the logistic regression modeling.

Employment status had five categories: 1) employed, 2) unemployed or seeking for a job, or on parental leave, or 'other', 3) entrepreneur, partner in a company, or freelancer, 4) student, and 5) retired.

Living status had six categories: 1) living alone, 2) living with parents, 3) living with a spouse, 4) living with a spouse and child(ren), 5) living with children (single parent household), and 6) other living arrangement.

Education refers to the respondent's highest level of education and it had the following categories: 1) primary/comprehensive school, 2) vocational school, 3) matriculation (upper secondary school), and 4) university/polytechnic degree or academic post graduate diploma.

Analytic technique

The analysis proceeds in two steps. First, we examine how the level of life satisfaction varies between socio-demographic factors by using analysis of variance (ANOVA). In Table 2, we present the means, F-values and p-values produced by the ANOVA procedure. This helps us to find out what factors determine the overall level of LS. Secondly, we proceed to examine which attributes explain the LS patterns in regard to the level of life satisfaction (high LS or low LS).

This is done by dividing the respondents into two: those with a high level of life satisfaction and those with a low level. In order to explore which socioeconomic groups are more likely to have high levels of life satisfaction we conducted a logistic regression analysis. This method allows us to estimate the likelihood for high level of life satisfaction of given category in relation to the reference category. The models' parameter estimates produce odds ratios that predict the 'likelihood,' or 'risk' to have a high level of life satisfaction from a set of independent variables.

Effects for those socioeconomic variables that proved to be significant in the previous analysis, namely gender, living status, employment status, income and education are presented in tables 3 and 4. Table 3 presents the unadjusted main effects. In addition to the unadjusted main effects we also present models (Table 4) that control for various socioeconomic variables at the same time, and show the adjusted effects of variables that had the most significant effects on LS. We present the effects of the independent variables as odds ratios (OR). The variances accounted for in the models are interpreted using Nagelkerke's pseudo-coefficients of determination (r^2). A pseudo-coefficient of determination provides an approximation of the strength of association between variables.

Results

First, let us look at the general tendency of life satisfaction. Table 2 shows the unadjusted main effects for each demographic factor against the measure for life satisfaction.

In general, Finns' life satisfaction is relatively high although Finland has faced great difficulties during the last few years. The mean of life satisfaction among all respondents is 5.15 (7 being the maximum).

ANOVA analyses confirmed the significance of several demographic factors in enhancing one's life satisfaction. The largest effect sizes (*F*-value) were for income, gender and living status.

The higher the income, the more positive the outlook on one's own life satisfaction. Furthermore, female respondents and respondents living with a partner exhibited higher levels of life satisfaction. Those who live alone (or with their parents) reported the lowest level of life satisfaction.

While employment status was statistically very significantly associated with life satisfaction, education's effect was only modest (*p*-value being almost insignificant at 0.043). The unemployed and those in ambiguous employment situation as well as those with only primary education had the lowest level of life satisfaction. Age, in contrast, did not have a statistically significant association with life satisfaction.

Next, we examine life satisfaction further by dividing the respondents into those with a high level of life satisfaction and those with a low level. The results for the logistic regression analyses are presented in tables 3 and 4.

All the unadjusted effects were statistically significant although the coefficients of determination remained low. Independent variables that had the strongest association with LS were living status (χ^2 54.39; pseudo r^2 7.4) and income (χ^2 47.83; pseudo r^2 6.6) The smallest effect on LS seemed to be produced by gender (only 0.6 percent of the variation in LS was explained by gender), although employment status and level of education were also surprisingly modest in their impact.

Table 2. Results of analysis of variance (ANOVA) regarding life satisfaction, means, F-values and significance (p), unadjusted effects.

	Life satisfaction	
Total	5.15	
		F (sig.)
Gender		13.74**
Female	5.24	
Male	5.00	
Income quartile		17.86***
1st (lowest)	4.79	
2nd	5.06	
3rd	5.29	
4th (highest)	5.53	
Age		1.26(ns)
Under 26	-5.05	
26–35	-4.94	
36–45	-5.31	
46–55	-5.15	
56–65	-5.17	
Over 65	-5.22	
Employment status		6.07***
Employed	5.20	
Unemployed or other	4.62	
Entrepreneur	5.62	
Student	5.11	
Retired	5.14	
Living status		13.56***
Alone	4.66	
With parents	4.56	
With partner	5.26	
Partner & kids	5.53	
Single parent	4.79	
Other arrangement	4.87	
Education		2.73*
Primary	4.98	
Vocational	5.13	
Upper secondary	5.03	
University/Polytech/Post grad	5.15	

Notes: The scale for life satisfaction ranges from 1 to 7. ns= not significant. The means are presented in parenthesis when $p<0.05$. *$p<0.05$; **$p<0.01$; ***$p<0.001$.

Table 3. High level of life satisfaction, unadjusted logistic regression models, odds ratios (OR), (95% confidence intervals), significance (χ^2), Nagelkerke's pseudo coefficient of determination.

	High level of life satisfaction vs. low level				
Gender (ref: Male)					
Female	**1.31** (1.01-1.69)				
Income quartile (ref: 1st, lowest)					
4th (highest)		**3.40** (2.37-4.86)			
3rd		**1.88** (1.35-2.62)			
2nd		**1.55** (1.04-2.31)			
Employment status (ref: Employed)					
Unemployed or other			**0.49** (0.30-0.79)		
Retired			0.78 (0.58-1.04)		
Entrepreneur			1.30 (0.73-2.34)		
Student			0.80 (0.50-1.28)		
Living status (ref: Alone)					
Other arrangement				1.56 (0.60-4.06)	
With parents				1.20 (0.58-2.46)	
With partner				**2.40** (1.69-3.40)	
Partner & kids				**4.25** (2.79-6.49)	
Single parent				1.47 (0.65-3.36)	
Education (ref: Primary)					
University/Polytechic/Post grad					**1.57** (1.07-2.30)
Upper secondary					0.97 (0.60-1.54)
Vocational					1.30 (0.89-1.90)
χ^2	4.17	47.83	12.11	54.39	8.30
Pseudo r^2	0.6	6.6	1.7	7.4	1.1

Notes: ref= reference group. Reference groups have an odds ratio of 1. Pseudo r^2 is measured by Nagelkerke's coefficient of determination and presented as r^2*100. ORs in bold: $p<0.05$.

When unadjusted effects are considered (Table 3), the results for gender predict that women have 1.3 times higher odds to have a high level of LS than men. The higher the income level the more likely one is

to have high level of LS. For example, those in the highest income quartile bracket have 3.4 times higher odds to be high in LS than those in the lowest income quartile. Employment status determines LS in terms of unemployment: those with no job or an ambiguous work situation have half the odds to be high in LS compared to those in employment. When compared to the employed, the other groups do not display a significant difference in their likelihood to have a high level of LS. On the other hand, living status has a significant impact on LS. The LS of those who live alone deviates clearly from the groups who live with their spouse (with or without children). Respondents who live with their partner have 2.4 times higher odds to have a high level of LS, whereas those who live with their partners and their children have even higher likelihood to be highly content in their life (OR 4.25) than those who live alone. The only statistical difference found between education groups is that between primary level education and the highest level. The highest education group has 1.6 times greater odds of having a high level of LS in comparison to the lowest educated group.

There are a few noteworthy changes in the ORs for life satisfaction when various independent variables are controlled in the same model (Table 4).

First, there are effects that appear for the life satisfaction level between the genders when a control is added. Mostly these appear with the inclusion of income and living status. When income is controlled women have an even higher likelihood of having a high level of LS than men (GEN+INC Table 4). On the other hand, controlling for gender, the LS for other income quartiles increases slightly in relation to the lowest income group. Living status has a similar effect on gender as income. When living status is controlled, there is an increase in the level of LS among women. Controlling for gender, however, does not have an effect on LS among the various household types (GEN+LIV, Table 4).

Second, there is an interesting effect regarding the relationship between high LS and education. When income level is held constant, the effects of education on LS disappear. The same effect for education also holds in models controlling for living status and employment status. (The latter mentioned results are not shown here, but they mainly resemble the model INC+EDU.) This finding is against previous findings. On the other hand, the effect of income remains even after controlling for education. This means that the educational effect on LS we see in the unadjusted model (Table 3) is most likely explained by factors other than education.

Third, the mutual effects of income and living status decrease the odds of high LS when added into same model (Table 4, INC+LIV). In other words, when living status is controlled for, the LS of those with higher income converges with that of the other income groups. Vice versa, when income level is taken into consideration, the positive effect of living with a partner is smaller (yet noticeably larger than that of living alone) than in the unadjusted model. The explanation for higher income groups' higher level of LS may thus be an effect of the household type and vice versa. Rather naturally, the households with two adult members tend to have a higher monthly income.

Fourth, a model containing employment status and income makes the effect of employment status disappear. In other words, when income level is held constant an individual's employment status does not have a significant effect on their life satisfaction (Table 4, EMP+LIV).

Finally, when several controls are added into one model, education no longer provides a significant impact on high level of LS. Thus the last column in Table 4 shows the full model with all the independent variables that are significant (gender, income, employment status and living status). The model with these four independent variables explains 12.1 percent of the variation detected in LS.

In this model, several odds ratios decrease, for example the differences in LS between income groups and living statuses are leveled. However, the LS of those with the highest and second highest income is still considerably greater than those in the lowest income group (odds ratios of 2.7 and 1.5 respectively).

Living with a partner (either with children or without) still predicts a high level of LS in comparison to living alone, even after controlling for other demographic factors. The odds ratios are mostly smaller than in the models presented above, however still as considerable as 3.0 (partner and children) and 1.7 (living with a partner).

Table 4. High level of life satisfaction, selected adjusted logistic regression models, odds ratios (OR), (95% confidence intervals), significance (χ^2), Nagelkerke's pseudo coefficient of determination.

High level of life satisfaction vs. low level						
	GEN+ INC	GEN+ LIV	INC+ EDU	INC + LIV	INC+ EMP	GEN+INC+ EMP+LIV
Gender (χ^2) (ref: Male)	*7.14*	*6.92*				*8.59*
Female	**1.45**	**1.44**				**1.53**
	(1.10-1.89)	(1.10-1.88)				(1.15-2.03)
Income quartile (χ^2) (ref: 1st, low)	*51.80*		*41.64*	*19.9*	*35.85*	*18.23*
4th (high)	**3.60**		**3.34**	**2.52**	**3.21**	**2.69**
	(2.51-5.20)		(2.29-4.87)	(1.66-3.83)	(2.17-4.76)	(1.69-4.29)
3rd	**1.97**		**1.83**	1.41	**1.82**	**1.52**
	(1.41-2.75)		(1.30-2.56)	(0.97-2.06)	(1.28-2.60)	(1.00-2.30)
2nd	**1.61**		**1.55**	1.32	**1.56**	1.45
	(1.08-2.40)		(1.04-2.30)	(0.86-2.02)	(1.04-2.34)	(0.93-2.27)
Employment status (χ^2) (ref: Employed)					*7.01*	*9.66*
Unemployed or other					0.64	0.70
					(0.39-1.07)	(0.41-1.20)
Retired					1.07	1.13
					(0.78-1.47)	(0.79-1.61)
Entrepreneur					1.55	1.61
					(0.83-2.89)	(0.84-3.08)
Student					1.23	**1.81**
					(0.74-2.05)	(1.02-3.19)
Living status (χ^2) (ref: Alone)		*57.10*		*24.77*		*29.18*
Other arrangement		1.54		1.33		0.90
		(0.59-4.03)		(0.51-3.52)		(0.32-2.53)
With parents		1.24		0.69		0.57
		(0.60-2.54)		(0.31-1.52)		(0.24-1.35)
With partner		**2.48**		**1.66**		**1.65**
		(1.74-3.52)		(1.12-2.48)		(1.10-2.49)
Partner & kids		**4.43**		**2.75**		**2.95**
		(2.89-6.77)		(1.69-4.48)		(1.78-4.88)
Single parent		1.37		1.18		1.16
		(0.60-3.13)		(0.51-2.75)		(0.49-2.73)
Education (χ^2) (ref: Primary)			*2.85*			
University/Polytech/Post grad			1.09			
			(0.72-1.65)			
Upper secondary			0.81			
			(0.50-1.32)			
Vocational			1.15			
			(0.77-1.71)			
χ^2 model	55.80	61.43	50.48	73.35	49.87	86.67
Pseudo r^2	7.7	8.3	6.9	10.2	7.9	12.1

Notes: ref= reference group; EMP= employment status; LIV= living status; EDU= education; INC= income quartile; GEN= gender. Reference groups have an odds ratio of 1. Pseudo r^2 is measured by Nagelkerke's coefficient of determination and presented as r^2*100. ORs in bold: $p<0.05$.

The last model shows that when other factors are controlled for, the difference between the employed and unemployed becomes insignificant, whereas the greatest effect in terms of employment status is found for students. The unadjusted models indicated that there was no particular effect of employment statuses other than being unemployed on high LS when compared to the employed group. But the fuller model indicates that students have odds twice as high as those in employment to have high LS. Therefore, taking into account several intervening variables, it seems that overall the students in our sample have the highest likelihood to have a high level of LS.

Conclusions and discussion

There have been several economic crises around the world in the past 25 years. In particular, several European countries have seen hard times since the end of 2009 with rising unemployment rates and growing labor market uncertainties. As a consequence, many Europeans' high quality of life is threatened and people are more worried about their future (see e.g., Arampatzi et al., 2015; Guardiola et al., 2015). Therefore, there is an increasing interest in the relationship between economic crises and well-being.

In this study, our aim was to increase the understanding of life satisfaction (as a cognitive component of subjective well-being) when an economic crisis is escalating. In particular, we were interested in studying how life satisfaction varies between certain socio-demographic groups as the country's economy is facing a very difficult time-period. In our study we measured life satisfaction by utilizing the Satisfaction with Life Scale (SWLS) developed by Diener et al. (1985).

We approached our research questions by conducting a cross-sectional survey in October 2015. The timing of the survey was pivotal: an economic crisis had struck Finland and the fear of an economic meltdown among Finns was tangible. The culmination of the economic crisis was the Prime Minister's historical speech on 16th September 2015. In this very unusual move, Finnish Prime Minister addressed the country's extremely difficult economic situation (see more Prime Minister's Office, 2015).

Based on our analyses on a sample of 976 Finns, we argue that during an economic crisis:

- The unemployed and those in an ambiguous employment situation as well as those with only primary education have the lowest level of life satisfaction.
- Life satisfaction is greatest among women, those who live with partners (with or without children), those with more than a basic education, entrepreneurs and the higher-income groups.
- Age does not significantly influence life satisfaction.
- A few quite surprising effects were found after controlling for other demographic factors. First, a higher level of income predicts a higher level of life satisfaction even when employment status and education are taken into account. Second, the level of life satisfaction of the unemployed does not differ from that of the employed when other factors are controlled for. Instead, being a student predicts greater odds of having high life satisfaction. Thirdly, quite contrary to expectations, education does not bring about great differences in the life satisfaction between the groups when other things are held constant.

In general, our findings partially support the study conducted by Guardiola and Guillen-Royo (2015) who found that employment status and education are strong determinants of life satisfaction during the economic crisis. Our analyses did not show education having a very strong effect, though. Our results are also consistent with the findings presented by Blanchflower and Oswald (2004) who showed that income has an effect upon well-being. This finding is rather natural during the crisis that has impacts of economic nature in particular. Our study very clearly corroborates the previous studies that have concluded that quality of relationships, or in our case household structure, may reduce the negative effect of the economic crisis (Dolan et al., 2008; Graham et al., 2010; Gudmundsdottir, 2013). In short, it could be argued that if people's basic building blocks of life are in order, an economic crisis should not be a big threat to life satisfaction at least in the short run.

On the one hand, in contrast to the common belief that economic crisis would be a greater shock for women than men (see e.g., Burns et al., 2012; Friedman & Duncan, 2009; Walby, 2009), our results indicate that Finnish women report higher life-satisfaction than men even in a difficult economic time. On the other hand, Dolan et al. (2008) and Blanchflower and Oswald (2004) have noted that women tend to report higher well-being than men, which is also echoed by the ESS data. This might also be the case during an economic crisis even if it decreases general life satisfaction more broadly. All in all, this finding warrants further investigation.

One interesting finding is that entrepreneurs experience greater life satisfaction than other employment groups. Even though the deviations found between employment categories were not significant, the higher level of LS among entrepreneurs is a finding that would warrant further exploration. One explanation for this finding could be that entrepreneurs have higher job control (i.e. decision authority) and this is beneficial for their well-being (Stephan & Roesler, 2010). Entrepreneurs are also closely associated with characteristics of optimism and self-efficacy (see e.g., Shane & Venkataraman, 2000). All these characteristics may lead to entrepreneurs' higher experience of life-satisfaction compared with other groups, even during the economic crisis.

In addition, it was rather surprising to find students having greater odds of having high life satisfaction than those in the employment after controlling for intervening variables. We interpret this as the unstable nature of the working atmosphere during an economic crisis that casts its shadow on those in the employment. The future outlook and the prospects are likely to be brighter for those who are yet to begin their career, and thus reflected in their current high level of life satisfaction. However, also this finding warrants further research.

Based on the above, we see the present study as having several strengths. First, the time point when the survey was conducted provides a unique possibility to get fresh sentiments out of a social and economic situation that was very particular. The ESS data in 2014 was not able to capture the social upheaval and events in late 2015 and by the collection of ESS's year 2016 round the effects of the events would already be muted down significantly. Secondly, while subjective well-being and happiness have been studied in Finland to some extent, a measure taking into account as versatile aspects as Diener's scale has not been used previously. We believe that the statements used for our life satisfaction construct provides a more reliable view on the actual subjective well-being than measuring happiness with one question only (like the ESS). Thirdly, the supplementary use of the ESS for providing comparative measures also contributes to the bigger picture depicting changes in Finns' subjective well-being over the years.

For policymakers the results in this study reveal interesting insights into Finnish society from a life satisfaction perspective. In particular, the present study also shows which groups are most and least vulnerable to the effects of an economic crisis. All in all, we hope that this study fosters further discussion on the ways in which life satisfaction can be promoted.

Limitations and future research

The following limitations suggest caution in assessing our findings. First of all, this study approached well-being by analysing life satisfaction, i.e. the judgemental or cognitive component of well-being, whereas the affective component was not taken into account. Therefore, in further studies it would be interesting to study affective well-being and how it is related to the wider economic environment. However, as Pavot and Diener (1993) state that although cognitive and affective components of well-being are separate constructs, they are also correlated (see also Schimmack, 2008). Still, it is worth bearing in mind that the cognitive and affective components are somewhat distinctive and could provide complementary information.

Second, this study used a cross-sectional design. Therefore, it is not possible to establish causality between the economic crisis and life satisfaction. In fact, in cross-sectional analyses causality is often open to debate. To resolve this problem, future studies should employ longitudinal data. For example, the

present study could be repeated in the future as Finland's economic crisis is clearly over and the economy is growing. In this way it would be worthwhile to study the change in life satisfaction in relation to changes in the wider economic environment. This kind of study could reveal new insights on life satisfaction and its relation to the economy.

A third limitation is related to our sample. Our sample is sourced from Finland and the characteristics of the Finnish society, social welfare system, culture and lifestyle may explain the findings of the present study (cf. Dolan et al., 2008). Therefore, it would be important to conduct comparative studies in other countries. However, as several northern European countries share the features of social-democratic welfare states (cf. Kouvo & Räsänen, 2015), our results could be found in these societies.

For further studies, we argue that there is a need for qualitative studies to obtain a deeper understanding of citizens' well-being and life satisfaction during an economic crisis. These in-depth qualitative studies could reveal issues that would enable more thorough operationalization of the concepts linked to life satisfaction and economic sociological theories in general.

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Appendix

In order to examine the changes in the level of subjective well-being in Finland over the previous years, European Social Survey (ESS, European Social Survey Rounds 3, 5 and 7) data are used for complimentary information. The European Social Survey (ESS) is a biennial cross-national (and cross-sectional) survey of attitudes and behaviour using probability samples which are representative of all persons aged 15 and over resident within private households in each country. (ESS, 2017.)

The ESS has been conducted seven times (in two years' intervals starting from 2002). In the Appendix table below the means of happiness are shown for three points in time, representing ups and downs of the

Finnish economy. In 2006 the Finnish economy was in bloom reaching its peak soon after. After the recession years in the mid 1990s the growth had been steady until 2008. (Gulan et al. 2014; Lindblom 2017.) However, the global times of austerity after the financial crisis in 2008 also affected the Finnish economy. The crisis impacted Finland the hardest in 2009 when 8.5 per cent of GDP was lost. The means from ESS2006 thus reflect the 'good years' whereas ESS2010 shows more or less the level of happiness after or even during an economically turbulent period. There was a brief time of recovery, but since early 2012 Finland's GDP has been on a downward path again (Lindblom 2017; Suni & Vihriälä, 2016).

Some of the socio-economic measures in the ESS data have slightly different categorisations from the data used in this study (referred to as 'CRIS2015' in the appendix table). The most prominent difference between ESS and CRIS data sets is the variable used for measuring subjective well-being. The ESS measures SWB simply by asking 'Taking all things together, how happy would you say you are?' (on a 11-point scale where 0= very unhappy and 10= very happy) whereas CRIS measures life satisfaction with a construct with various items (see ' measures' above). As the measures are not comparable, only referential comparisons between the means derived from ESS and CRIS data are made.

There clearly are impacts of economic fluctuation on the levels of happiness in Finland (Appendix Table 1). These are structured along various social determinants, but the effects are not straightforward. For example, the happiness level of the students and the retired has increased over time despite the fluctuations in the economic situation. On the other hand, the relative happiness is very differently perceived between those in employment and those out of it. The employed tend to have rather high levels of happiness, yet the economic downturn affects it to some degree (year 2010). Instead, the unemployed have a relatively low level of happiness to start with, yet their happiness level seems to exceed that of the employed during a low point in the Finnish economy. All in all, the recent years show the unemployed being the least happy among the labour market statuses, which is also the finding in our data (CRIS2015).

In terms of age, happiness has decreased in the youngest cohort over the past decade. For the other age groups, the development has been rather on the contrary. In some age brackets the economic downturn decreases the happiness level to a small degree, but this effect is by no means linear. For age there are most discrepancies between the ESS and the CRIS data. Whereas in the latter the respondents aged 36–45 and those over 65 were the most satisfied with their life, in 2014 ESS data the happiest age groups were slightly younger (aged 26–45). ESS2014 indicated the youngest and the oldest age groups being the least happy ones. We must bear in mind that the economic turbulence increased significantly after the collection of the ESS2014 data.

Men seem to be more pessimistic during the economic crisis, whereas the economic downturn does not affect substantially the happiness perceived by women, quite the contrary. Overall, women feel more happy or satisfied with their life than men. This finding is repeated with all the data sets.

According to ESS, it seems that happiness fluctuates concurrently with the economic trend only for the most educated group (decrease in the negative growth year 2010). Those with only primary education have been feeling happier each time measured over the past years, whereas the trend has been reversed for the upper secondary degree holders. Individuals with vocational schooling on the contrary were the happiest in relative terms during the economic slump.

In general, the ESS data indicates that the level of happiness increases in tow with education: the higher educated groups are happier than those with lower level education (although this is not totally supported by the CRIS data).

Appendix Table 1. Means of happiness (ESS) and life satisfaction (CRIS) in Finland across various socio-demographic groups. Source: ESS Round 3, 5 and 7 Data (2006; 2010; 2014), authors' calculations.

	ESS2006 (N=1896)	ESS2010 (N=1878)	ESS2014 (N=2087)	CRIS2015 (N=976)
Employment status[1]				
Employed	8.15	7.49	8.23	8.17
Unemployed or other	6.33	8.00	7.80	7.26
Student	7.71	7.94	8.41	8.03
Retired	7.69	7.91	8.00	8.08
Age				
Under 26	8.24	7.95	7.82	7.94
26–35	8.21	8.06	8.19	7.76
36–45	7.96	8.07	8.19	8.34
46–55	7.97	7.79	8.09	8.09
56–65	7.86	7.83	8.04	8.12
Over 65	7.90	7.99	7.93	8.2
Gender				
Female	8.16	8.18	8.14	8.23
Male	7.84	7.73	7.94	7.86
Education[2]				
Primary	7.76	7.78	7.81	7.83
Vocational	7.91	8.09	7.99	8.06
Upper secondary	8.01	7.94	7.93	7.90
University/Polytechic/ Post grad	8.21	8.16	8.20	8.09

Notes: ESS measures happiness on a scale from 0 to 10 (extremely unhappy to extremely happy). CRIS2015 life satisfaction measure is modified from 7-point scale to 11-point, which allows comparison to ESS to some extent.

ESS variables:

[1] In ESS 'paid work' was used instead of 'employed'.

[2] In ESS 'less than lower secondary education', 'lower secondary education', 'upper secondary education' and 'tertiary education' were used instead of the variables shown here.