



UNIVERSITÀ DEGLI STUDI DI PALERMO

DOTTORATO DI RICERCA IN SCIENZE ECONOMICHE, STATISTICHE, PSICOLOGICHE E SOCIALI
DIPARTIMENTO DI SCIENZE ECONOMICHE, AZIENDALI E STATISTICHE (SEAS)
Settore Scientifico Disciplinare SPS/07

EXPLORING SUBJECTIVE WELL-BEING: INSIGHTS FOR RESEARCHERS AND PRACTITIONERS

(Borsa di studio finanziata dal Fondo per il sostegno dei giovani D.M. 198/03)

IL DOTTORE
Marco Ciziceno

IL COORDINATORE
Prof. Vito M. R. Muggeo

IL TUTOR
Prof. Fabio Massimo Lo Verde

CICLO XXX
ANNO CONSEGUIMENTO TITOLO 2018



UNIVERSITÀ DEGLI STUDI DI PALERMO





UNIVERSITÀ DEGLI STUDI DI PALERMO

ACKNOWLEDGMENTS

This Ph.D. thesis is the final step of a long process to which several people have contributed by different ways. They deserve all my gratitude for their support.

Firstly, I would like to express my sincere gratitude to my advisor Prof. Fabio Massimo Lo Verde for the continuous support of my Ph.D. study. His supervision during these years encouraged me in doing the best always.

I am also grateful to Prof. Giovanni A. Travaglino for its useful insights. His guidance helped me in the writing of this thesis. Thanks Giovanni, because you allowed me to spend a beautiful experience during my visiting period at the University of Kent (School of Psychology, United Kingdom).

Many thanks to Prof. Marcello Chiodi (Head of SEAS Department) and his staff, for being always helpful during this period.

My sincere thanks also goes to all the colleagues and friends that I have met during these years. Special thanks to Roberto, Jenny, Gianluca and Marianna for their essential statistical support. Thanks to Pietro for our numerous discussions that have allowed me to improve this thesis.

Finally, thanks to Fabio and all the other very kind colleagues of the SEAS Department for the nice time spent during our breaks.

I am deeply grateful to my family for his continued and unconditional love and support during these years of study and research.

Thanks for believing in me.

Yours Sincerely,

Marco



UNIVERSITÀ DEGLI STUDI DI PALERMO



INDEX

INTRODUCTION	I
--------------	---

CHAPTER 1: THE LAY CONCEPTION OF SUBJECTIVE WELL-BEING: A PROTOTYPE ANALYSIS

1.1 Introduction	p. 1
1.2 Conceptualise Subjective Well-Being: The theoretical background	p. 2
1.3 Method and Materials	p. 3
1.3.1 The Prototype Analysis	p. 3
1.4 Study 1	p. 4
1.4.1 Results Study 1	p. 5
1.5 Study 2	p. 6
1.5.1 Results Study 2	p. 6
1.6 General discussion	p. 9
1.7 Limits of the Study and Conclusions	p. 11

CHAPTER 2: THE HARMFUL EFFECTS OF PERCEIVED CORRUPTION ON PEOPLE'S LIFE SATISFACTION

2.1 Introduction	p.14
2.2 Literature review	p.15
2.2.1 Perceived corruption and Institutional trust	p.15
2.2.2 Life satisfaction and Perceived corruption	p.16
2.3 Research hypotheses and Method	p.17
2.4 Study 1: The US sample	p.18
2.4.1 Materials	p.18
2.4.2 Results and Discussion	p.20
2.5 Study 2: The MENA region sample	p.22
2.5.1 Materials	p.22
2.5.2 Results and Discussion	p.23
2.6 General discussion	p.26
2.7 Limitations and Directions for future research	p.27
2.8 Conclusions	p.28
Appendix A	p.29

INDEX

CHAPTER 3: RELIGIOUS INVOLVEMENT AND PEOPLE'S LIFE SATISFACTION: EVIDENCES FROM EUROPEAN STATES

3.1 Introduction	p.30
3.2 Literature review and Research hypotheses	p.31
3.2.1 Religion and People's life satisfaction	p.31
3.3 Data and Method	p.32
3.3.1 Data	p.33
3.3.2 Method	p.37
3.4 Results	p.37
3.5 General discussion	p.40
3.6 Conclusions	p.41
Appendix B	p.42

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH	p.43
--	------

REFERENCES	p.46
------------	------

INTRODUCTION

Research on subjective well-being, life satisfaction or happiness has been growing dramatically in recent decades (Austin 2016; Diego-Rosell et al. 2016; Veenhoven 2005).

By definition, subjective well-being refers to a comprehensive evaluation of one's life as a whole, either in terms of current emotional states (i.e., positive and negative emotions) and in relation to the fulfilment of one's goals, expectations, standards of living and relatives (Diener 1994; Diener et al. 1985). Results from cross-sectional, longitudinal and experimental studies indicate that well-being is systematically associated with desirable life outcomes, including better physical and mental health (Taylor and Brown 1988; Scheier and Carver 1987), longevity (Sadler et al. 2011), altruistic behaviours (Aknin et al. 2013), social connectedness (Ryan and Deci 2001) and, to a lesser extent, with high productivity (Sparks et al. 2011) and greater involvement in social activities (e.g., political participation and volunteering) (see Helliwell 2006 and Morrow 1999). As a result, governments around the world are starting to revisit the ways in which they promote the well-being of their citizens and despite some initial reluctances, many national and international social surveys account directly citizens' opinions about how is going their life (Austin 2015; Veenhoven 2005) (e.g., World Value Survey¹, European Social Survey², Gallup World Poll³ and Better Life Index⁴). Tracking citizens' perceptions of well-being is a declared goal for many political agendas (in theory) because policy-makers could use this information to drive public policies and improve people's quality of life (Hicks et al. 2013). However, in practice, current measurements of well-being are limited by conceptual and methodological concerns (Fernández-Ballestreros et al. 2010) with different studies assessing different concepts in different ways (Diener and Seligman 2004). Although this mismatch has been stressed either by researchers and practitioners, what constitutes a reliable measure of subjective well-being is a matter that has not received much attention in the scientific literature and a clear conceptualisation of the term has been needed by several public institutions (see WHO 2013).

¹ <http://www.worldvaluessurvey.org/wvs.jsp>

² <http://www.europeansocialsurvey.org/>

³ <http://www.gallup.com/services/170945/worldpoll.aspx>

⁴ <http://www.oecdbetterlifeindex.org/>

This dissertation aims at improving our knowledge about subjective well-being (either in theory and in practice) by addressing the crucial question of which mechanisms explain people's sense of well-being. We support the general hypothesis that while economic growth plays an essential role in increasing people's life standards, subjective well-being is in part explained by noneconomic factors (see Frey and Stutzer 2000; McGillivray 2005). These include individual psychological traits (see Chapter 1), generalised levels of trust (see Chapter 2), social support and involvement in social activities (see Chapter 3). Our results may serve as a reference point for educators, researchers, policy-makers, and all those working in the field.

In Chapter 1, we addressed the crucial question of how people actually conceive subjective well-being by examining definitions spontaneously answered by individuals about the meaning of the term. We performed a Prototype Analysis (Rosh 1975) in order to check whether individual' perception of well-being matches exactly with the academic definitions. We have surveyed two samples of Italian high school students and we have found, above all, that people often associate the term well-being with internal psychological states (e.g., peacefulness, happiness and self-acceptance), but people do not necessarily have a psychological concept in mind when they think about well-being. For example, participants frequently answered definitions of well-being referring to a broad range of objective life domains, such as *good physical health, economic security, good social relations, family and education*. Our analysis has shown that conceptions of well-being resemble with scholars' definitions but, in some cases, individuals conceive it in a different way from how literature suggests. This mismatch indicates a lack of alignment between individuals' meaning of well-being and researchers' perspective. Results from this study could refine the existing theoretical models of well-being and may elicit scholars in the elaborations of new evidence-based measurement tools.

In Chapter 2, we investigated the complex relationship between perceived corruption, individual's life satisfaction and institutional trust. Although previous studies have dealt with the harmful effects of corruption on the economic performance, very little is known about the negative consequences of corruption on trust and well-being. We examine such relationships and propose that corruption reduces individuals' life satisfaction by undermining confidence that individuals have in judicial, economic and governmental bodies. We contribute to the literature on subjective well-being and policy-making by providing evidence that reliable public institutions (i.e., low in corruption) encourage people's life satisfaction (i.e., a component of subjective well-being; see Diener

et al. 1985) because they make the external environment stable, controllable and thus more predictable. This research contributes to our understanding of how the institutional-level factors (as opposed to individuals' traits) may potentially determine peoples' well-being.

Finally, Chapter 3 explored what influence religious involvement (i.e., religious identity and church services attendance) exerts on people's subjective well-being across the European Countries. Inspired by previous studies, we examined the role played by religious community in boosting people's life satisfaction. A logistic regression analysis indicates that actually religious involvement has a positive effect on one's life satisfaction, because the social bonds formed within the religious community provide people social and emotional support, especially in times of need. However, we did not find similar results for all countries and religions. This suggests that the religious effect varies across countries and between religious denominations. Results from this study may support evidence-based interventions aimed at improving well-being within or outside the religious contexts.

In conclusion, we have attempted to shed further lights on the elusive structure of subjective well-being. In order to overcome the opposite perspectives conceiving well-being either as the result of one's personal income or, in contrast, a state of mind, we have suggested a cross-disciplinary approach (both in theory and in practice) to provide additional insights for researchers and practitioners.

THE LAY CONCEPTIONS OF SUBJECTIVE WELL-BEING: A PROTOTYPE ANALYSIS

1.1 INTRODUCTION

Interest in subjective well-being (SWB) has grown dramatically in the last decades and a great deal of research has investigated factors associated with the “good life” (Kim et al. 2007). For example, studies indicate that people experience greater well-being when their institutional bodies perform well and ensure them democracy (Hraba et al. 1996), economic prosperity (Helliwell 2007; Layard 2005), social equality (Veenhoven and Ouweneel 1995), and the respect of human rights (Kurian 1979). Other studies have linked well-being to demographic characteristics or to individual psychological traits (Muñoz Sastre 1999). These include age and gender (Inglehart 1990), religion (Rosmarin et al. 2009; Maton and Wells 1995), personal income (Diener and Fujuita 1995), marital status (Lee et al. 1991), but also social relations (Requena 1995) physical and mental health (Okun and Stock 1987), self-esteem (Rector and Roger 1996) and the belief in a just world (Lipkus et al. 1996).

Research on well-being is usually to survey the levels of satisfaction in the general population or with specific areas of life (as indicated by the list given above). However, the ingredients of subjective well-being are generally chosen *a priori* by scholars (Bojanowska and Zalewska 2016) and they neglect the crucial question of how individuals actually conceive it. In other words, it is the researcher that implicit decides which components are important for individuals (Torras 2008) and, apart from few exceptions (see Delle Fave et al. 2011; Oishi et. al 2013), well-being has been rarely investigated *per se*. The need for increasing conceptual clarity of well-being has been stressed either by scholars and policymakers (Carlquist et al. 2017) and investigations on the lay conceptions are essential to determine what is actually researched in subjective well-being studies (Bojanowska and Zalewska 2016). Improve our understanding of well-being have several implications for researchers and practitioners. On the one hand, a more detailed definition of well-being

may elicit scholars in elaborating reliable indicators of societal progress, as recommended by the HWO (2013). On the other hand, it could be used to inform decision-makers about the effects of their policies and help them to address evidenced-based interventions.

In this research, we are interested in what people think when they refer about the term well-being. A total of 238 Italian high school students participated in two studies. In study 1, we collected a set of definitions of well-being via an open-ended response format.

In study 2, we measured the centrality ratings of the endorsements obtained in study 1, involving an independent sample of respondents. A Prototype Analysis (Rosh 1975), shows that well-being has an internal structure and not all its definitions have equal meaning for respondents. Results indicate substantial differences both in how people describe well-being (i.e., some features are cited more frequently) and in how they judge these features in terms of importance (i.e., some features are considered more central than others). Our analysis shows that health, self-acceptance, peacefulness, inner harmony and goals achievement are essential to describe well-being for respondents. We find that people conceive the term well-being differently by literature, but certain aspects of well-being appear to be almost universal. Insights for further research and limitation of the studies are discussed.

1.2 CONCEPTUALISE SUBJECTIVE WELL-BEING: THE THEORETICAL BACKGROUND

Subjective Well-Being (SWB) is usually defined as the evaluation of one's life as a whole, either in terms of life satisfaction or emotional response to life events (i.e., positive and negative emotions) (Diener et al. 1985; Diener et al. 2002). There is now a burgeoning literature on the nature of the good life around the world (Chuluun et al. 2016) and extensive studies have dealt with desirable conditions for people's well-being. For example, empirical research indicates that subjective well-being is frequently associated with social activities (Veenhoven 1999), community involvement and volunteering, (Helliwell 2003; Helliwell and Putnam 2004), financial satisfaction (Van Praag et al. 2003), political participation (Zheng et al. 2017), and with the opportunities offered to individuals by the external environment (Muñoz Sastre 1999).

However, little studies have investigated how people define well-being and, apart from few exceptions (see Muñoz Sastre 1999 and Hone et al. 2015), studies on the lay conception of well-being are limited. Existing literature shows that people understand well-being as a system of beliefs about anything is important in their life (McMahan and Estes 2011; Diener 1985). These include internal psychological states and the satisfaction of

basic needs (Carlquist et al. 2017). Recent findings also suggest that cultural and demographic characteristics of individuals may affect their conception of well-being. For example, Mogilner et al. (2011) demonstrated that the representations of happiness shift over the life course. They have shown that younger people are more likely to associate happiness with sense of excitement, while when they get older tend to link happiness with peacefulness. Delle Fave et al. (2016) have found national and cultural differences in adults' definition of happiness. Diener et al. (1995) have shown that individualistic cultures mostly associate well-being with self-esteem and personal freedom, whereas in developing countries it is frequently linked to financial satisfaction. Chiasson et al. (1996) investigated the meaning of happiness in a sample of people from USA, Canada and El Salvador. They have found that respondents place particular emphasis on family relations and positive attitude toward oneself when one's asked what make them happy. However, other studies have demonstrated that certain aspects of well-being are to some extent universal. These include family environment (Pflug 2009), social relationships (Delle Fave et al. 2011), pursuit valued goals and self-acceptance (Oishi et al. 2013). Chuluun et al. (2016) have conducted an extensive study of well-being in Mongolia, drawing to the conclusion that there are not broad differences in what promotes well-being in Mongolia (i.e., individual income, health, marital status) than in other parts of the world.

1.3 METHOD AND MATERIALS

1.3.1 THE PROTOTYPE ANALYSIS

The classical category membership study defines a set of conditions (necessary and sufficient) that attributes must meet to be included within a category (Kearns and Fincham 2004). In contrast with this view, the prototype analysis approach assumes that some concepts are prototypically organised around an internal structure and they could be ordered according to their degree of similarity to a prototype (Rosh 1975). For example, scholars have explored the prototypical structure of concepts such as forgiveness (Kearns and Fincham 2004), the hero (Kinsella et al 2015), love (Fehr 1994), honour (Travaglino et al. 2016) and modesty (Gregg et al. 2008). Prototype approach has been also used to investigate the differences of concepts related to each other, such as love and commitment (Fehr 1988). In this research, a prototype analysis of the concept of well-being is used to explore the everyday meaning of this term in two samples of high school students. We hypothesise that well-being presents an internal structure (i.e., is prototypically organised) and not all its attributes are equally important for individuals. To perform a prototype

analysis it must meet two conditions: the first is that participants are able to list a set of features representative of the concept (study 1). The second, is that respondents give meaningful judgments about which features are more central (i.e., important) or peripheral (i.e., less important) to define the prototype (study 2).

1.4 STUDY 1

Participants: Study 1 was based on a sample of 118 high school students (20 males, 98 female)⁵. Participants were, on average, 17.169 years old ($SD_{age} = .574$).

Individuals were selected using a convenience sampling. In order to obtain a sample as balanced as possible, we have chosen exclusively the 4th and 5th classes students.

Procedure: The goal of study 1 was collected features and attributes of the concept of well-being. We asked participants to list features they usually associated with the term well-being by using an open-ended format. Before the submission of the questionnaire, participants were briefly introduced to the aims of the research. Subsequently, they received the following instructions adapted from previous studies (Fehr and Russel 1984, Study 6):

[In this research, we are interested in exploring the most common features and attributes that people link to the concept of well-being. For example, if you were asked to list the characteristics of a person experience fear, you might write: danger occurs, escape, run fast. In this study, we are interested in the attributes of well-being. Imagine that you having to describe the word well-being to a person who has never experienced it before and list a series of features. You might include words or brief statements. Finally, remember that these features may be positive or negative].

Analysis: Following the Rosenberg and Jones (1972) and Rosenberg and Sedlak (1972) procedure, the amounts of features generated by study 1 were extracted and classified into linguistic units. Monolexemic terms such as *health*, *relax* and *friends* were rapidly identified. When a participant used a phrase to describe well-being, the statement was divided in one or more linguistic unit. For example, “*Well-being is the love of my parents, but it is also having an economic security*” was coded as two different linguistic units: *be loved by parents* and *economic security*. The statement referring to a superordinate category of the concept, such as the tautological expressions (e.g., “*well-*

⁵ Participants were recruited from “Liceo Statale G.A. De Cosmi”, Palermo (Italy).

being is essential in one's life”), were excluded. The total number of linguistic units extracted was 734. Of these, a small number of responses (15) were idiosyncratic (i.e., mentioned by respondents only once) and thus were discarded from the analysis. The amount of linguistic units included in the analysis was 719. Subsequently, the linguistic units were grouped into categories. Following the Fehr (1988) procedure, linguistic units have fallen into a category if they were:

1. different grammatical form of the same word (e.g., “*friend*” and “*friends*”).
2. modified by terms, adverbs, such as *sometimes*, *frequently* or adjectives such as *extremely* or *very* (e.g., “*social relations*” and “*good social relations*”).
3. identical in meaning. The aim of the study was to be as conservative as possible. However, we coded words or statements substantially similar (i.e., identical in meaning) into the same category. For example, *be respected* and *be a respectable person* were collapsed in the category “*respect*”.

The final coding scheme offers a more detailed definition of certain categories considered by literature (Ryff 1989; Seligman 2012) strong predictors of well-being. For example, due to the high frequency of respondents who mentioned “*social relations*”, three categories were created to differentiate social relations (in general), friends and family.

Similarly, the categories “*wealth*” and “*economic security*” were created to distinguish people referring to wealth in general, from those referring to sufficient money to meet basic needs.

1.4.1 RESULTS STUDY 1

Table 1.1 shows well-being categories generated by Study 1. A total of 719 linguistic units were extracted from the questionnaires. For each participant, on average, 6.1 linguistic units were mentioned ($SD_{\text{LinguisticUnits}}=1.825$). Subsequently, the 719 linguistic units were reduced to 39 categories of well-being according the procedure mentioned above. Frequency scores for categories were calculated by summing the number of occurrences (linguistic units) who have fallen into each category. A substantial variability results from our analysis, with certain categories cited more frequently than others. Over half the sample (54.2%) endorsed most frequently peacefulness as the primary component of well-being, followed by happiness (39.8%) and love (38.9%). A substantial agreement existed among the following categories: good physical health (38.1%), self-acceptance (37.3%) and good social relations (34.7%).

Notably, categories such as freedom (3.4%), respect (2.5%), meaning in life (1.7%) leisure time (1.7%) were the last mentioned by respondents in terms of frequency.

1.5 STUDY 2

Participants: 120 high school students participated in Study 2 (30 males, 90 female)⁶. Participants were, on average, 17.758 years old ($SD_{age} = .869$). As in study 1, we used a convenience sample composed by last classes students.

Procedure: The aim of study 2 was to explore the prototype structure of well-being. We investigated whether well-being definitions generated from study 1 were considered central (i.e., important) or peripheral (i.e., less important) to describe well-being by another sample of respondents. We submitted to participants the list of categories processed in study 1 and then we asked them to rate, for each category, its degree of centrality (i.e., importance) with well-being by using a Likert scale ranging from 1 (*poor central*) to 8 (*extremely central*). We expected that not all categories have the same degree of importance to describe well-being and that certain definitions it would be seen as more central (i.e., prototypical) than others. Before the submission of the questionnaire, participants were provided with the following instruction adapted from Kearns and Fincham (2004):

[In a previous study we have asked to a sample of high school students to list attributes of the concept of well-being. The most frequent definitions are presented in the list below. Now, we are interested in discovering how these definitions are important or central to describe well-being according to you. For each feature of well-being given below, please get a score from 1 (*poor central with well-being*) to 8 (*extremely central with well-being*)].

1.5.1 RESULTS STUDY 2

In study 2 we calculated the mean score for each category of well-being generated by study 1. Our analysis has shown that participants considered certain definitions of well-being more important (i.e., central) than others. Our results show that achieve value goals (6.96), self-esteem (6.87) and life satisfaction (6.82) are perceived as central components of well-being, with respect to wealth (4.87) and sports activities (5.30).

Comparing the mean centrality ratings from study 2 with the endorsement's frequencies from study 1 (see Table 1.2), we have found that some attributes frequently

⁶ Participants were recruited from "Istituto Magistrale Statale "Regina Margherita", Palermo (Italy).

mentioned (study 1) were also viewed as more central (i.e., important) in defining well-being in study 2. These include good physical health (7.41), self-acceptance (7.40), peacefulness (7.01), and happiness (6.93). Furthermore, the analysis indicates that in some cases features endorsed relatively small in study 1, have obtained a high centrality rate in study 2. These are respect (6.92), meaning in life (6.84), freedom (6.76) and help other people (6.47), among others. Our analysis has shown that the categories faith/spirituality and be accepted were both the less mentioned in study 1 and few important (i.e., peripheral) in study 2. To comparing results drawn from the two studies, we ranked categories of well-being according to both centrality rates (study 2) and individuals' endorsements frequencies (study 1). The association between study 1 and study 2 is presented in Fig. 1.1. For example, good physical health was ranked 2nd in study 2 and 4th in study 1, whereas other categories such as achieve value goals were ranked among the top five in study 2 (5th), but 19th in study 1.

Table 1.1 Well-being features generated by Study 1 (N=118; linguistic units=719).

Features	Frequencies	Frequencies (%)	% Participants
Peacefulness	64	8.9	54.24
Happiness	47	6.5	39.83
Love	46	6.4	38.98
Good physical health	45	6.3	38.14
Self-acceptance	44	6.1	37.29
Good social relations	41	5.7	34.75
Family	36	5.0	30.51
Friends	34	4.7	28.81
Inner harmony	34	4.7	28.81
Economic security	33	4.6	27.97
Not a care in the world	29	4.0	24.58
Relax	27	3.8	22.88
Good mental health	23	3.2	19.49
Entertainment	20	2.8	16.95
Healthy lifestyle	20	2.8	16.95
Wealth	18	2.5	15.25
Life satisfaction	16	2.2	13.56
Travel	16	2.2	13.56
Achieve value goals	12	1.7	10.17
Carefreeness	12	1.7	10.17
Hobbies	11	1.5	9.32
Sport	10	1.4	8.47
Have a good job	10	1.4	8.47
Education	10	1.4	8.47
Wellness	10	1.4	8.47
Sense of fulfilment	9	1.3	7.63
Listen my favourite music	6	0.8	5.08
Self-esteem	6	0.8	5.08
Faith/Spirituality	5	0.7	4.24
Be positive	4	0.6	3.39
Freedom	4	0.6	3.39
Sleep well	3	0.4	2.54
Be accepted	3	0.4	2.54
Respect	3	0.4	2.54
Help other people	2	0.3	1.69
Meaning in life	2	0.3	1.69
Not be alone	2	0.3	1.69
Leisure time	2	0.3	1.69

1.6 GENERAL DISCUSSION

In this research, we have explored the everyday meaning of well-being by performing a Prototype Analysis on two samples of Italian high school students. In study 1, we collected a set of definitions via a free-response format. The aim of the study 1 was to explore which attributes were frequently associated with the term well-being.

Preliminary analysis has led to a set of 39 categories representative of the concept, coded by using the Kearns and Fincham (2004) and Fehr (1988) procedure. We have found that respondents often associated well-being with internal psychological states (such as sense of peacefulness and self-acceptance), but individuals do not necessarily have a psychological concept in mind when they think about well-being. Indeed, results from study 1 have shown that people's conceptions of well-being are not limited to the psychological sphere, but they also include more objective and external components. For example, answers comprised definitions referring to a broad range of objective life domains, such as good physical health, economic security, good social relations, family and education. This finding is consistent with Carlquist et al. (2017). They have investigated the everyday understanding of happiness, good life and life satisfaction (i.e., terms related to well-being) in a Norwegian sample and they have found that participants mentioned relations components (i.e., family and interpersonal relationships) as the most frequent topics linked to well-being. Delle Fave et al. (2016) studied the cultural and demographic differences in the lay conceptions of happiness, drawing to the conclusion that, across countries, family and interpersonal relationships were the most frequent categories cited. Bojanowska and Zalewska (2016) have investigated the associations' networks recalled by the term happiness in a Polish sample. They found that participants most frequently linked happiness with physical health and social relations, rather than with positive emotions.

In study 2 we submitted the pre-determined list of well-being components from study 1 to another sample of students. We asked them to score which components were central (i.e. important) for well-being, and which were peripheral (i.e., less important). Our results have demonstrated that not all components frequently mentioned in study 1 were also considered important to define well-being in study 2. For example, terms such as love and relax often answered in study 1, were subsequently considered peripheral (i.e., few important) in describing well-being in study 2. This finding is consistent with Hone et al. (2015). They have conducted a prototype analysis of the term well-being in a sample of

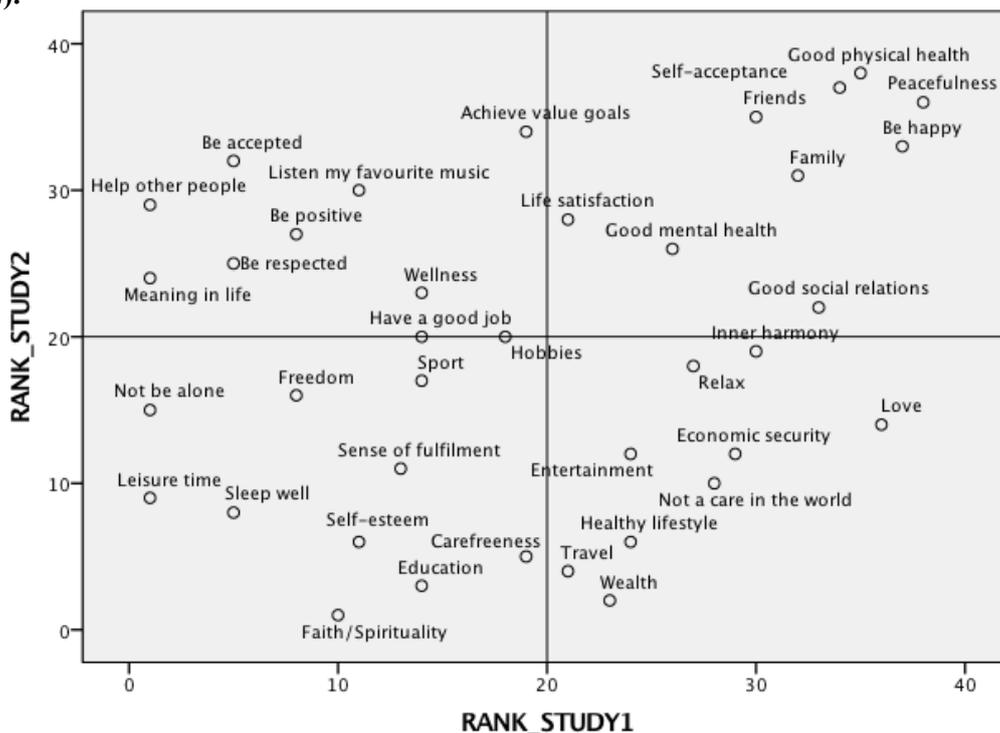
New Zealander's workers and have found that some components frequently listed by participants, were subsequently scored low in terms of importance in defining well-being.

Collectively, results from study 1 and study 2 demonstrated that the term well-being shares all the features of the prototype (Rosh 1975). In other words, some components of well-being have been recognized as more typical (i.e., central) than others and they could be ordered according to their degree of similarity or centrality to a prototype.

Our results have shown that subjective (and psychological) dimensions of well-being are considered more important than objective material conditions. For example, self-acceptance, peacefulness and the achievement of value goals were scored higher than economic security and education. This finding is consistent with Muñoz Sastre (1999) that have found as health, self-acceptance, positive relations and purpose in life were judge essential to assess well-being.

In overall, we have found that conceptions of well-being resemble with scholars' definitions, but there are certain components omitted from the current academic models (e.g., help other people, respect or freedom). In some cases, people conceive their well-being in a different way from how literature indicates. This mismatch indicates a lack of alignment between peoples' meaning of well-being and researchers' perspective.

Fig. 1.1 Correlation between frequencies ranking (from study 1) and centrality ranking (from study 2).



1.7 LIMITS OF THE STUDY AND CONCLUSIONS

The term well-being has not received any unanimously accepted definition in the scientific discourse (Fernández-Ballestreros et al. 2010; Gasper 2010) and, more important, scholars are not agreed in what constitutes a “gold standard” for measuring well-being (Huppert 2009). However, research on well-being has been considered an emerging science (Diener 2006) and governments spend time and effort to promote the happiness of their citizens. Despite the growing interest in well-being research, too little attention has been paid to how people experience it in their lives and few studies have matched people’s conceptions with definitions provided by academia. This is a crucial question because improve our understanding about the nature of well-being could refine the existing theoretical models and may elicit researchers in the elaboration of new measurement tools.

In this research, we have attempted to fill this gap by examining definitions spontaneously answered by individuals about the meaning of well-being. We have surveyed two samples of Italian high school students and we have found, above all, that individuals have no problem answering questions about their well-being. Their responses reflect conceptions which, in certain aspects, coincides with that of researchers in the field.

In terms of similarities, we have found that self-acceptance, positive relations and purpose in life were components of well-being frequently mentioned by literature and also featured by Ryff (1989), and Seligman (2012) models’. However, our analysis has shown a partial lack of alignment between the current academic models of well-being and some definitions resulted from our studies. This mismatching has at least two explanations. First, we used a convenience sample mainly composed by female young students (from 16 to 18 years old). Because the nature of our data do not allow the generalization of the findings, our results have no universal value but are exclusively referred to the reality we observed (a limit of this study). Second, the lack of alignment between researchers’ perspectives and some categories resulted from our studies may be explained by differentiations in the use of terms related to well-being (i.e., synonyms). Our results reflect a pitfall in the conceptualization of well-being within the academia, with definitions often used interchangeably by researchers. Future research should pay more attention to people’s understanding of well-being in order to clarify the terms related with it and improve its theoretical background. Finally, a potential limit of the current research may be constituted by the researcher’s opinion in collapsing linguistic units into categories. Although we have followed procedures previously used in other studies, the coding scheme may present some interpretation biases. Further explorations of the individuals’ conceptions are needed to

consolidate the current theoretical models and to allow the development of more reliable statistical indices of well-being.

Table 1.2 Well-being features generated in study 1, sorted by centrality ratings in study 2.

Features	Study 1		Study 2	
	Frequency	% Participants	Mean	<i>SD</i>
Good physical health	45	38.14	7.41	1.127
Self-acceptance	44	37.29	7.40	1.145
Peacefulness	64	54.24	7.01	1.318
Inner harmony	34	28.81	6.99	1.482
Achieve value goals	12	10.17	6.96	1.356
Be happy	47	39.83	6.93	1.329
Respect	3	2.54	6.92	1.596
Family	36	30.51	6.91	1.652
Self-esteem	6	5.08	6.87	1.315
Meaning in life	2	1.69	6.84	1.501
Life satisfaction	16	13.56	6.82	1.430
Freedom	4	3.39	6.76	1.501
Good mental health	23	19.49	6.74	1.498
Not a care in the world	29	24.58	6.63	1.911
Sleep well	3	2.54	6.50	1.614
Help other people	2	1.69	6.47	1.614
Education	10	8.47	6.46	1.714
Good social relations	41	34.75	6.43	1.559
Hobbies	11	9.32	6.41	1.458
Have a good job	10	8.47	6.41	1.606
Friends	34	28.81	6.38	1.445
Relax	27	22.88	6.35	1.612
Wellness	10	8.47	6.34	1.617
Be positive	4	3.39	6.18	1.747
Leisure time	2	1.69	6.17	1.871
Love	46	38.98	6.14	1.921
Economic security	33	27.97	6.13	1.658
Healthy lifestyle	20	16.95	6.13	1.752
Sense of fulfilment	9	7.63	6.07	1.834
Not be alone	2	1.69	5.98	2.056
Be accepted	3	2.54	5.91	1.870
Entertainment	20	16.95	5.85	1.809
Listen my favourite music	6	5.08	5.85	1.986
Carefreeness	12	10.17	5.80	1.904
Travel	16	13.56	5.77	2.016
Sport	10	8.47	5.30	1.886
Wealth	18	15.25	4.87	2.198
Faith/Spirituality	5	4.24	4.51	2.490

THE HARMFUL EFFECTS OF PERCEIVED CORRUPTION ON PEOPLE'S LIFE SATISFACTION

2.1 INTRODUCTION

Corruption is the misuse of public power in order to obtain private gains (Akçay 2006; Ko and Weng 2011). It distorts public decisions, penalizes innovation, and discourages legal investments (Akçay 2006; Kaufmann and Wei 1999; Murphy et al. 1993). The negative consequences of corruption are not only restricted to economic performance. Recent findings indicate that corruption is associated with reduced levels of subjective well-being and life satisfaction (Bjørnskov et al. 2008; Helliwell 2006; Rothstein 2010; Tavits 2008).

However, the question of *how* corruption affects well-being has not received much attention in the scientific literature (for an exception see Wu and Zhu 2016). This is an important question because identifying the mechanisms that explain the association between corruption and well-being may improve our understanding of how individuals experience the presence of corruption. This may in turn enable practitioners and policy makers to design more effective, evidence-based interventions aimed at improving people's well-being.

In this research, we examine this question empirically and test the role of institutional trust in mediating the relationship between corruption and life satisfaction.

The concept of institutional trust refers to the degree of confidence that individuals have in legislative, economic and governmental bodies. Institutional trust is essential for the correct functioning of modern democracies, because stronger trust is associated with several predictors of life satisfaction, including better civic participation, sense of reciprocity, endorsement of shared rules and a more predictable environment (Bjørnskov 2003; Pretty and Ward 2001).

Corruption does not only weaken public institutions. It also corrodes individuals' trust in them because it implies that institutions are unable to manage public goods fairly (Chang and Chu 2006). Thus, we hypothesize that perceived corruption reduces indirectly

life satisfaction via institutional trust. We test this hypothesis by using two studies involving different geographical and socio-political contexts. In study 1, we investigate the indirect effect of corruption on people's life satisfaction in a sample of 251 American people. In study 2 we use the same empirical strategy in a larger and representative sample of 9508 individuals from countries belonging to the Middle East and North Africa (MENA) region.

2.2 LITERATURE REVIEW

2.2.1 PERCEIVED CORRUPTION AND INSTITUTIONAL TRUST

Institutional trust is defined as the degree of confidence that people have in different types of institutions, including the government, political parties and the judicial system (Putnam 1993), as well as citizens' evaluations of the performance of such institutions. High levels of trust enable citizens to live in a predictable, stable and controllable environment and at the same time contribute to maintaining social cohesion because they elicit cooperative behaviours among citizens (Levi and Stoker 2000).

Perceived corruption reduces social trust in general (Morris and Klesner 2010), and confidence in public institutions in particular (Kostadinova 2009). This is because high levels of corruption mean that institutions tend to represent particular interests rather than general ones (Kotzian 2011). Moreover, when individuals perceive public institutions as corrupted, such institutions lose credibility in their eyes and are seen as inefficient (Pellagata and Memoli 2015; see also Seligson 2002; Rothstein and Stolle 2008).

Recently, Clausen et al. (2011) examined the issue of the causal directionality of the relationship between perceived corruption and institutional trust. The authors provided convincing evidence that such a relationship was more likely to flow from corruption to institutional trust, rather than *vice versa*.

Importantly, there is also evidence that institutional trust predicts people's sense of well-being and life satisfaction (Rose-Ackerman 1999). Trust is based on the expectation that others behave predictably (Kubbe 2013: 121). In the context of institutional trust, such expectations are about the institutions' social and economic performance, their ability to foster equality, justice and economic prosperity. Thus, societies with higher levels of institutional trust tend also to be characterised by better governance, higher standards of living and more efficient market economies (Di Tella et al. 2003; Frey and Stutzer 2002; Rothstein and Uslaner 2005). For instance, Leung et al. (2011) demonstrated the existence of a strong association between the three components of social capital (Coleman 1988),

whose core element is trust (Fukuyama 1995; Putnam 1993), and happiness. In addition, Hudson (2006) investigated the impact of institutional trust on well-being across European countries. He showed that confidence in a range of different institutions, including the National Government, the European Central Bank, the judicial system, the European Union, the UN and big business, had a considerable impact on individuals' life satisfaction.

2.2.2 LIFE SATISFACTION AND PERCEIVED CORRUPTION

Corruption is an economic evil that strongly affects people's material environment, increases inequality (Uslaner 2008) and crime (Montinola and Jackman 2002), and lowers the quality of public decisions (Akçay 2006). Because corruption distorts the allocation of resources, it also hampers government performance, undermining economic growth and decreasing the efficiency of public and private institutions (Voliotis 2011). Despite the argument that in some contexts (e.g., underdeveloped countries) corruption may have some positive effects because it eases bureaucratic procedures and encourages extra-legal investments (Leff 1964), overall authors seem to agree on the fact that corruption slows economic growth and impairs the government's effectiveness (Montes and Paschoal 2016).

However, the consequences of corruption are not only limited to the spheres of economy and governance. Individuals tend to be acutely aware of the presence of corruption in their environment and perceive accurately how corrupted their country is (Lancaster and Montinola 2001; Ko and Samajdar 2010; Mishler and Rose 2001; Wallace and Latcheva 2006). For instance, Pellegata and Memoli (2016) matched citizens' perceptions to experts' opinions concerning the levels of corruption across different EU member states. They found that, overall, citizens' estimates matched those of experts.

Thus, research has examined the implications of corruption at the individual level of analysis (Tavits 2008; Uslaner 2003; Seligson 2002). An important finding is that there is an association between the subjective experience of corruption and individuals' well-being and satisfaction with life (Wu and Zhu 2016; Zheng et al. 2016). For instance, using cross-national data from 68 different countries, Tavits (2008) demonstrated that individuals tend to report higher levels of happiness when – among other factors – the government performs well (i.e., the levels of corruption are lower). More recently, Wu and Zhu (2016) used data from the *Asian Barometer Survey* to demonstrate that perceived corruption impacts negatively on people's life satisfaction in China, especially when the external environment is overall low in corruption. Although these results provide evidence that

corruption affects people's life satisfaction, the explanatory process underlying this relationship remains unclear.

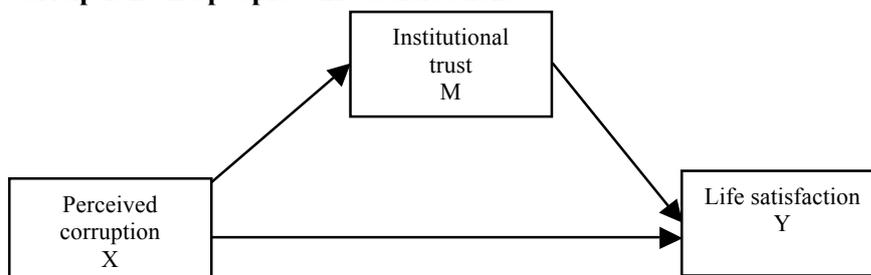
2.3 RESEARCH HYPOTHESES AND METHOD

In this research, we investigate the relationship between corruption and life satisfaction in two different samples and geographical contexts, the USA (a richer and developed economy) and countries from the MENA region (poorer and developing economies). Furthermore, we test the proposition that institutional trust mediates this relationship. Specifically, we test the contention that one of the ways in which perceived corruption reduces an individual's level of life satisfaction is by undermining her trust in institutions.

On the basis of previous research on corruption and trust (e.g., Clausen et al. 2011; Kostadinova 2009) and trust and well-being (Rose-Ackerman 1999; Hudson 2006), we hypothesize that perceived corruption is associated with a reduced level of institutional trust (H1) and that lower institutional trust predicts lower levels of life satisfaction (H2). Finally, we hypothesize the existence of an indirect effect of perceived corruption on life satisfaction, through institutional trust (H3).

To test H3, we use a mediation analysis (Hayes 2013) and the SPSS Process Macro⁷ (model 4). Mediation analyses enable researchers to investigate the mechanism through which one variable may affect another through a third explanatory variable. They are useful tools to test hypotheses about whether the effect of a variable X (perceived corruption in the context of this research) is transmitted on variable Y (life satisfaction) through another variable M (institutional trust) (see Fig. 2.1).

Fig. 2.1 Mediation model of institutional trust in the relationship between perceived corruption and people's life satisfaction.



⁷ For more details about the PROCESS macro see: <http://www.processmacro.org/index.html>.

In study 1, we test our hypotheses in a sample of 251 Americans' citizens, whereas in study 2 we used a larger and representative sample of 9,508 individuals from Mena region countries. In both studies, age, sex, education level and annual income of participants were entered as covariates in the model to control for their effects and influence. Equations 1 and 2 express the model for i-th individual:

$$\text{TRUST}_i = \beta_0 + \beta_1 \text{COR}_i + \beta_2 \text{CONTROL}_i + \varepsilon_1 \quad (2.1)$$

$$\text{LIFE}_i = \gamma_0 + \gamma_1 \text{TRUST}_i + \gamma_2 \text{COR}_i + \gamma_3 \text{CONTROL}_i + \varepsilon_2 \quad (2.2)$$

where β_1 is the effect of perceived corruption on institutional trust (the mediator), β_2 is a vector of coefficients for the control variables (i.e., age, sex, education level and annual income) and ε_1 is the error (equation 1). In the equation (2), γ_1 is the effect of the mediator (institutional trust) on life satisfaction controlled for γ_2 (i.e., the effect of perceived corruption) and γ_3 (i.e., a vector of coefficients for the control variables included in the model), whilst ε_2 is the error. According the product of coefficients approach (MacKinnon et al. 2002), the indirect effect is given by the simple product of $\hat{\beta}_1 * \hat{\gamma}_1$ (standard errors estimated via bootstrap). Note that the circumflex accents above each parameter indicate the estimate of the coefficient in equations (2.1) and (2.2).

2.4 STUDY 1: THE US SAMPLE

2.4.1 MATERIALS

Participants and Procedure. A total of 251 American citizens (107 males and 144 females) participated in the study. Participants were aged between 19 and 74 years old ($M_{\text{age}} = 34.21$, $SD_{\text{age}} = 11.12$). Annual income was measured using four categories, ranging from “\$0.00 level income” to “\$100.000 and more”. Just over a third (34.3%) of participants reported an annual income of less than, or equal to \$14.999, 28.7% reported an annual income ranging between \$15.000 and \$39.999, 27.6% had annual income between \$40.000 and \$79.999, and only 9.4% reported an annual income greater than \$79.999. The ratio of participants with a college-education or a higher education level (i.e., master degree and doctoral degree) was 85.7 % and 14.3 % had received only a primary or lower level of education. Participants were recruited via on-line data collection software⁸, in April 2016. They were invited to participate in a study “about social issues” and were

⁸ Individuals were selected using a convenience sampling. For details see: <https://www.qualtrics.com/login/>

informed that participation in the study was completely anonymous. Participants received a small monetary incentive at the end of the survey. The overall response rate was approximately 99%. This response rate is based on the number of questionnaires started vs. completed.

Perceived Corruption. A three-item measure of perceived corruption was used in the study. The items were adapted from previous studies (Tan et al. 2016; Li et al. 2016) and from The Corruption perception index (2015) provided by Transparency International⁹. All items were measured on a seven-point scale ranging from *1 = strongly disagree* to *7 = strongly agree*. Sample items were “In general, corruption is a very common phenomenon in my country and spreads to almost every industry” and “Every civil servant and politician in my country is corrupted”. The average score of the items was calculated as a general indicator of perceived corruption. The reliability of the scale reached conventional levels of acceptability ($\alpha = .72$).

Institutional trust. A five-item measure of confidence in institutions was used as a measure of institutional trust. The variable was assessed by asking respondents to express their degree of confidence in Police, Banks, Judicial System, Health Care System and Government. All items were measured on a seven-point scale, ranging from *1 = no confidence at all* to *7 = a great deal of confidence*. The average score was calculated as indicator of institutional trust. To check that all the five trust items loaded on the same factor, we performed a factor analysis by using principal components as method of extraction. The analysis yielded a one-factor solution (range factor loadings .78 to .84) and the scale had a good reliability ($\alpha = .86$).

Life satisfaction. A five-item measure drawn from the Satisfaction with Life Scale (Diener et al. 1985) was used to assess people’s satisfaction with their lives. Sample items were “I am satisfied with my life” and “So far I have gotten the important things I want in life”. All items were measured on a seven-point scale, ranging from *1 = strongly disagree* to *7 = strongly agree*. The average score was calculated as indicator of people’s life satisfaction. Higher scores indicated greater satisfaction with life. This was a very reliable scale ($\alpha = .93$).

⁹ <http://www.transparency.org/cpi2015>

2.4.2 RESULTS AND DISCUSSION

Preliminary analyses. Items' means and standard deviations are reported in Table 2.1. Correlation coefficients among variables are presented in Table 2.2. Perceived corruption was negatively associated with institutional trust (in line with H1) and age.

Notably, and seemingly in contrast with previous literature, the correlation between perceived corruption and life satisfaction was not statistically significant. Supporting H2, institutional trust was strongly correlated with life satisfaction and only weakly related to income. Finally, individual's annual income was associated with all other variables but perceived corruption.

In order to investigate further the relationship between perceived corruption and life satisfaction we ran a regression analysis. Control variables added in the model were, age, sex (coded: 0 = male, 1 = female) education level and annual income. All the continuous variables were standardized prior to analyses. Results of these preliminary analyses do not support the existence of a direct link between perceived corruption and life satisfaction. We then proceeded to test the indirect effect of perceived corruption to life satisfaction through institutional trust.

Table 2.1 Means and standard deviations for all items used in study 1.

Items	<i>M</i>	<i>SD</i>
<i>Corruption perception (average scale score)</i>	4.42	1.088
1. In general, corruption is a very common phenomenon in my country and spreads to almost every industry	5.12	1.314
2. Most people who have opportunities to be corrupted, will be corrupted	4.65	1.369
3. Every civil servant and politician in my country is corrupted	3.51	1.638
<i>Institutional trust (average scale score)</i>	3.78	1.355
1. I have confidence in the Police	4.37	1.730
2. I have confidence in the Banks	3.92	1.774
3. I have confidence in the Health Care System	3.75	1.658
4. I have confidence in the Judicial Systems	3.65	1.649
5. I have confidence in the Government	3.24	1.590
<i>Life satisfaction (average scale score)</i>	4.42	1.557
1. In most way my life is close to my ideal	4.40	1.700
2. The conditions of my life are excellent	4.45	1.699
3. I am satisfied with my life	4.67	1.785
4. So far I have gotten the important things I want in life	4.75	1.652
5. If I could live my life over, I would change almost nothing	3.84	1.909

Table 2.2 Correlation matrix for all variables used in study 1.

	1	2	3	4	5	6	7
<i>Perceived Corrupt. (1)</i>	-						
<i>Institutional Trust (2)</i>	-.284**	-					
<i>Life Satisfaction (3)</i>	-.010	.345**	-				
<i>Age (4)</i>	-.185**	.048	-.095	-			
<i>Gender (5)</i>	.004	-.059	.110	.187	-		
<i>Education (6)</i>	-.086	.099	.090	.058	-.080	-	
<i>Income (7)</i>	-.115	.148**	.212**	.179**	-.132*	.360**	-

*p < .05, **p < .01

Mediation analysis The models predicting trust in institutions (the mediator), $F(5, 244) = 5.40, p < .001, R^2 = .01$, and life satisfaction (the outcome), $F(6, 243) = 10.88, p < .001, R^2 = .21$, were both significant. As predicted, and in line with H1 higher level of perceived corruption were significantly associated to lower institutional trust, $b = -.34, SE = .08, p < .001$. In line with H2, institutional trust (the mediator) positively predicted people's life satisfaction $b = .42, SE = .07, p < .001$. After controlling for demographic variables and for the effect of the mediator, the direct effect of perceived corruption was not significantly associated with people's life satisfaction $b = .14, SE = .09, p = .115$. We then estimated the indirect effect of perceived corruption on life satisfaction through institutional trust using five-thousand bootstraps for the estimates (see Table 2.3).

Table 2.3 Results of Mediation Analysis: direct and indirect effects of corruption perception (X) on people's life satisfaction (Y) considering institutional trust (M).

Model without mediator						
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Perceived corruption	.1364	.0864	1.5786	.1157	-.0338	.3067
Model with mediator						
	<i>b</i>	<i>Boot SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Perceived corruption	-.1427	.0442	-	-	-.2427	-.0684

*p < .05, **p < .01

In line with H3, the indirect effect was significant demonstrating that institutional trust mediated the negative effect of perceived corruption on people's life satisfaction $b = -.14$, $SE = .04$. The indirect effect was significant as indicated by the absence of 0 in the 95% confidence interval [95%CI = -.25 to -.07]¹⁰.

Study 1 provided preliminary evidence for the hypothesis that institutional trust explains the relationship between perceived corruption and life satisfaction. Individuals who perceived their country as more corrupt also reported lower trust in their institutions, which in turn lowered their satisfaction with life. However, Study 1 had some limitations. In this study, we tested our hypotheses in a relatively small, *ad hoc* sample from the richer region of the world. To provide a stronger test of the hypotheses we used data from the World Value Survey and investigated the model in a larger and representative sample of 9,508 individuals from a relatively less developed region.

2.5 STUDY 2: THE MENA REGION SAMPLE

2.5.1 MATERIALS

Study 2 aimed to replicate results from Study 1 in another geographical context and with a larger and representative sample. Data were retrieved from the World Value Survey (WVS) – Wave 6 (2010-2014) which included measures of perceived corruption, institutional trust, and life satisfaction, among others. Perceived corruption items were only available for the following countries from the Middle East and North Africa (MENA) region: Algeria, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Tunisia and Yemen. We therefore focus on this sub-set of countries to test our hypotheses. MENA Countries are relatively poorer economies and therefore provide an interesting setting to investigate the relationship between corruption and life satisfaction, and the mediating role of institutional trust in institutions.

Participants and Procedure. A total of 9,508 people ($M_{age} = 37.89$, $SD_{age} = 14.38$) from eight countries belonging to the MENA region were included in the analyses. Table 4 summarizes sample characteristics in each country. Across countries, the sample included 5,018 males and 4,445 females (45 participants did not report their gender). Education was measured using an ordinal-level scale from $1 = no\ formal\ education$ to $9 = university-level\ education, with\ degree$. About 34.9% of the sample had completed primary school education or less, 40% had at least some form of secondary education, and 25.1% had at

¹⁰ As a further check, we also tested the statistical significance of the indirect effect of institutional trust using the Sobel test (1982), obtaining the same results [$b = -.14$, $SE = .044$, $z = -3.53$, $p = .004$].

least some form of university level education. In the WVS, annual income is measured using a scale with ten steps ranging from 1 (*lowest income group*) to 10 (*highest income group*). The average income was 5.15 ($SD_{\text{income}} = 2.17$).

Perceived Corruption. A two-item scale was used to tap participants' perception of corruption in their country. The two items asked "How widespread do you think that corruption is within businesses in your country?" and "How widespread do you think that corruption is within the government in your country?" (from 1 = *none/low corruption* to 10 = *high corruption*). The two items were strongly correlated ($r = .82$) and were therefore averaged in a scale.

Institutional trust. In this study, a fourteen-item measure of confidence in institutions was used. The stem of the item was "I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them?" (from 1 = *a great deal* to 4 = *none at all*). The list of 14 institutions included in this study were drawn from a larger list of 17 institutions. Selection of an institution for inclusion depended on whether it was used in all the countries included in the analysis (to limit number of missing data and preserve sample characteristics). The institutions were: the churches, the press, television, the police, the courts, the government, parliament, the civil service, universities, companies, banks, environmental organisations, women's organisations and charitable or humanitarian organisations. This is a wider range of institutions relative to those used in Study 1. To examine whether all items loaded on the same factor, we performed a factor analysis on the fourteen items using principal components as method of extraction. The analysis yielded a two-factor solution with one major factor explaining 49.17% of the variance and a lesser factor explaining only 8.69% of the variance. Items were therefore averaged to form a scale of institutional trust ($\alpha = .92$). The scale was reversed and in the following analyses higher score indicates stronger trust in institutions.

Life satisfaction. The WVS uses one item to measure satisfaction with life, "All things considered, how satisfied are you with your life as a whole these days?", (from 1 = *completely dissatisfied* to 10 = *completely satisfied*).

2.5.2 RESULTS AND DISCUSSION

Preliminary analyses. Items' means and standard deviations are reported in Table 2.4. Intercorrelations among variables are summarised in Table 2.5. Interestingly, and in line with previous literature (Tavits 2008; Helliwell 2008; Welsch 2008), in this study the

direct link between perceived corruption and life satisfaction was significant albeit small ($r = -.03$, $p = .002$). Perceived corruption was associated negatively with life satisfaction, demonstrating that people who perceived their environment as more corrupt were also more likely to be less satisfied with life. Table 2.5 shows that there were small, but systematic associations between the covariates, perceived corruption, institutional trust and life satisfaction. Therefore, and in line with Study 1, in the subsequent analyses we control for the influence of age, gender, income and education levels on both the mediator and the outcome.

Table 2.4 Means and standard deviations for all items used in study 2.

Items	<i>M</i>	<i>SD</i>
<i>Corruption perception (average scale score)</i>	6.57	2.924
1. How widespread corruption is within businesses in your country?	6.48	3.052
2. How widespread corruption is within the government in your country?	6.67	3.082
<i>Institutional trust (average scale score)</i>	2.46	.671
1. I have confidence in the Churches	2.02	.984
2. I have confidence in the Press	2.80	.921
3. I have confidence in Television	2.65	.934
4. I have confidence in the Police	2.25	1.000
5. I have confidence in the Courts	2.32	1.017
6. I have confidence in the Government	2.62	1.049
7. I have confidence in the Parliament	2.95	1.001
8. I have confidence in the Civil service	2.69	.972
9. I have confidence in the Universities	2.37	.958
10. I have confidence in the Major companies	2.61	.962
11. I have confidence in the Banks	2.48	.989
12. I have confidence in the Environmental organizations	2.59	.974
13. I have confidence in the Women's organizations	2.71	.970
14. I have confidence in the Charitable or humanitarian organizations	2.44	.987
<i>Life satisfaction</i>		
1. I am satisfied with my life	6.36	2.329

Table 2.5 Correlation matrix for all variables used in study 2.

	1	2	3	4	5	6	7
<i>Perceived Corrupt. (1)</i>	-						
<i>Institutional Trust (2)</i>	-.227**	-					
<i>Life Satisfaction (3)</i>	-.032*	.151**	-				
<i>Age (4)</i>	.003	.063**	-.051**	-			
<i>Gender (5)</i>	-.007	.037**	0.21*	.008	-		
<i>Education (6)</i>	-.010	.043**	.168**	-.281**	-.102**	-	
<i>Income (7)</i>	-.054**	.147**	.294**	-.087**	-.010	.313**	-

* $p < .05$, ** $p < .01$

Mediation analysis. To test the hypothesis that institutional trust mediates the relationship between perceived corruption and life satisfaction, and in line with Study 1, we ran a mediation analysis using Hayes' (2013) Process macro (model 4). Differences in the degrees of freedom in the models below are due to missing observations in the dataset.

The models predicting trust in institutions (the mediator), $F(5, 8783) = 146.12, p < .001, R^2 = .08$, and life satisfaction (the outcome), $F(6, 8782) = 172.41, p < .001, R^2 = .11$, were both significant. In line with H1, higher levels of perceived corruption were systematically associated with lower levels of institutional trust, $b = -.05, SE = .01, p < .001$. In line with H2, institutional trust (the mediator) positively predicted people's life satisfaction, $b = .42, SE = .04, p < .001$. People who had more confidence in their institutions, also reported more satisfaction with life. Controlling for the demographics and the effect of the mediator, the direct effect of perceived corruption was not significantly related to satisfaction with life, $b = -.012, SE = .01, p = .16$.

Supporting H3, the indirect effect of perceived corruption on life satisfaction through institutional trust was significant and negative, $b = -.02, SE = .002, [95\%CI = -.03 \text{ to } -.02]$ ¹¹.

Replicating Study 1 and in line with the hypotheses, we found evidence that institutional trust mediates the relationship between perceived corruption and life satisfaction. Individuals who perceived their environment as more corrupted, also have less confidence in their institutions. This in turn predicted lower satisfaction with life. The effects held also controlling for gender, age and income (see Table 2.6).

¹¹ The Sobel test provided equivalent results, $b = -.02, SE = .002, z = -10.08, p < .001$.

Table 2.6 Results of Mediation Analysis: direct and indirect effects of corruption perception (X) on people’s life satisfaction (Y) considering institutional trust (M) in study 2.

Model without mediator						
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Perceived corruption	0.119	.0084	1.4175	.1564	-.0046	.0285
Model with mediator						
	<i>b</i>	<i>Boot SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Perceived corruption	-.0215	.0023	-	-	-.0261	-.0171

*p < .05, **p < .01

2.6 GENERAL DISCUSSION

This research investigated the important question of how perceived corruption affects individuals’ satisfaction with life. We drew on research on corruption and well-being (Tavits 2008; Hudson 2006; Welsch 2008), and institutional trust (Seligson 2002; Rothstein and Stolle 2008) and proposed that the degree of trust individuals have in their institutions explains (i.e., mediates) the relationship between perceived corruption and satisfaction with life. Specifically, we hypothesized that the more individuals perceive their environment as corrupt, the less they trust institutions. In turn, we hypothesized that lower trust in institutions is associated with lower satisfaction with one’s life. Using two studies and two different samples from the USA (a richer context) and the MENA region (a poorer context) we found convincing evidence in support of these hypotheses.

Study 1 involved a convenience sample of 251 people from the USA. In this study, there was no direct association between perceived corruption and life satisfaction. Wu and Zhu (2016) demonstrated that the environment plays an important role in the association between these two variables, in the Chinese context. Future research should investigate the role of the environment in moderating the link between perceived corruption and life satisfaction also in the North American context.

Importantly, in line with our hypotheses, results from Study 1 showed an indirect effect of perceived corruption on life satisfaction through institutional trust. This result is consistent with previous research demonstrating that the credibility of institutions influences people’s life satisfaction (Kotzain 2011; Bjørnskov 2006; Helliwell 2006; Hudson 2006). For instance, when citizens have confidence in the judicial system, the Government or the banks they feel their rights are more strongly protected, which is then reflected in stronger satisfaction with life (Frey and Stutzer 2000). Perceived corruption is

detrimental to individuals' confidence in institutions because it implies that public goods are not managed fairly (Anderson and Tverdova 2003; Chang and Chu 2006).

Study 2 replicated these findings in a different geographical and socio-economic context. A limitation of Study 1 was that it was based on relatively small sample, which was not representative of the North American population. In study 2 we used data from the WVS and focused on the subset of countries which had data on the constructs needed to test our hypotheses. This enabled us to test our model on a total sample of 9,508, representative of 8 countries belonging to MENA region (see Table 4 for full list).

Supporting our hypotheses, and replicating results from Study 1, Study 2 demonstrated that when people perceive corruption to be widespread in their environment they lose confidence in institutions and tend to be more dissatisfied with life (see also Ryan and Deci 2001; Warren 2004). This result supports the generalization of the findings to countries with a different type of governance system and characterized by different types of institutions. This result also contributes to the literature on corruption by examining the relationship between perceived corruption and life satisfaction in poorer, developing economies (i.e., MENA region). It is a task future research to investigate differences and similarities between the two contexts directly, designing studies with comparable measures and samples across the two regions.

2.7 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

In this paper, we have reported evidence regarding the role played by institutional trusts in explaining the relationship between individuals' perceived corruption and life satisfaction. The studies contribute to our understanding of the mechanisms through which perceived corruption is associated to individuals' well-being. Institutions play a key role to maintain social order and stability within a society. This research demonstrates that, to the extent that perceived corruption undermines confidence in institutions, it indirectly affects individuals' satisfaction with life. A priority for policy-makers should be that of monitoring, sustaining and creating means for boosting individuals' confidence in institutions (Bjørnskov et al. 2006).

This study is affected by some limitations. First, the cross-sectional nature of the data does not enable us to draw strong causal conclusions about the model. It should be noted that previous research has tackled the issue of causal directionality between perceived corruption and institutional trust (Clausen et al., 2011) and between institutional trust and life satisfaction (Hudson 2006). Such research provides importance evidence in

support of the causal flow hypothesized in the present article, as discussed earlier.

Moreover, a cross-sectional indirect effect is a necessary step to provide evidence for the existence of mediation. Future research should use longitudinal and experimental studies to test how the relationship between perceived corruption, trust in institutions and life satisfaction changes over the time, as well as testing the causal directionality between variables directly.

Another limitation of this study concerns the sample used in Study 1. Study 1 used an opportunity sample from the US. Results cannot be therefore generalized to the entire population. However, the hypothesized relationship also emerged in countries from MENA region, using a representative sample. Future research should test the relationship between perceived corruption, institutional trust and satisfaction with life in different contexts, and use samples from different populations and geographical areas.

2.8 CONCLUSIONS

This research investigated the relationship between perceived corruption and individuals' life satisfaction in two different geographical contexts, the US (a richer and more developed economy) and the MENA region (a poorer and less developed one).

Across independent contexts, we found support for the proposition that institutional trust explains the relationship between these two variables. Results are in line with the idea that corruption does not only affect individuals' material and economic conditions, but it also affect individuals' psychological sphere (i.e., life satisfaction) by undermining their confidence in institutions. Thus, this research contributes to our understanding of how institutional-level factors (as opposed to individuals' traits) may potentially determine peoples' well-being. More research is needed on this topic.

APPENDIX A

Table A.1 Descriptive statistics for all countries included in study 2.

Country/Demographic variables	<i>N</i>	<i>M</i>	<i>SD</i>	
Algeria	Gender	1200	1.49	0.500
	Age	1200	37.80	15.105
	Education	1199	4.60	2.737
	Annual income	1200	4.68	2.015
Bahrain	Gender	1200	1.45	0.498
	Age	1200	39.30	13.969
	Education	1200	5.55	2.420
	Annual income	971	6.03	2.117
Iraq	Gender	1200	1.48	0.500
	Age	1200	36.61	13.398
	Education	1198	4.91	2.619
	Annual income	1191	5.35	1.859
Jordan	Gender	1200	1.50	0.500
	Age	1200	39.78	15.456
	Education	1200	5.21	2.496
	Annual income	1195	4.99	2.072
Kuwait	Gender	1258	1.36	0.481
	Age	1245	36.49	11.705
	Education	1263	6.82	1.997
	Annual income	1143	5.92	2.054
Lebanon	Gender	1200	1.51	0.500
	Age	1200	38.37	14.854
	Education	1182	6.20	2.391
	Annual income	1192	5.83	1.954
Tunisia	Gender	1205	1.47	0.500
	Age	1205	38.82	16.208
	Education	1204	4.12	2.705
	Annual income	1154	4.68	2.066
Yemen	Gender	1000	1.50	0.500
	Age	1000	35.59	13.278
	Education	998	3.48	2.844
	Annual income	968	3.56	2.153
MENA	Gender	9463	1.47	0.048
	Age	9450	37.84	1.491
	Education	9444	5.11	1.086
	Annual income	9014	5.13	0.833

RELIGIOUS INVOLVEMENT AND PEOPLE'S LIFE SATISFACTION: EVIDENCES FROM EUROPEAN STATES

3.1 INTRODUCTION

Research findings show that endorsing a religion is to some extent related to positive health outcomes, including fewer anxiety symptoms (Rosmarin et al. 2009; Koenig 2009), lower levels of stress (Kendler et al. 2003) and reduced unhealthy behaviours, such as alcohol abuse and smoking (Jones 2004). Other studies indicate that religion practice increases the likelihoods of making new friends (Lu and Qin 2017), elicits supportive behaviours among believers (Lim and Putnam 2010) and contributes to the respect of shared rules (Putnam and Campbell 2012).

However, what effects religion exerts on the perception that people have about their life is a question largely neglected in the scientific discourse. Literature indicates that religious experience is a fertile ground for positive emotions (Van Cappellen et al. 2016) and those who declare themselves as religious tend to report greater self-esteem (Clemente and Sauer 1976), better mental health (Levin and Chatters 1998) and higher satisfaction with their life (Krause and Hayward 2012). However, not all researchers have found convincing evidence about these positive associations (Lewis et al. 2000; Ciarrocchi and Deneke 2005). For example, comparative studies reported better health outcomes in not religious people (Ventis 1995) and highest levels of happiness in most of the secular societies (Beit-Hallahmi 2009; Zuckerman 2008).

Given this background, exploring whether and how religion actually promotes, or hampers, people's life satisfaction is a question that needed to be further explained. This because understanding the mechanism by which religion influence people's well-being may enable policy makers to design evidence-based interventions within or outside the religious context.

In this research, we explore the possible effects of religious involvement on individuals' life satisfaction across the EU-28¹² countries. We find that having a religious identity increases the likelihoods to be more satisfied about one's life, compared to non-religious people. Our results show that people who regularly attend religious services report higher levels of life satisfaction than their peers who have no such religious practices. We contribute to the literature by offering new insights about the positive association between religious involvement and people's life satisfaction in Western societies. Results, limits of the study and direction for future research are discussed.

3.2 LITERATURE REVIEW AND RESEARCH HYPOTHESES

3.2.1 RELIGION AND PEOPLE'S LIFE SATISFACTION

Religion practices has been associated with numerous well-being outcomes (Strawbridge et al. 2001; Koenig et al. 2012; Steffen et al. 2017). These include the tendency to avoid unhealthy behaviours (Jones 2004; Wallace and Forman 1998), better physical health (Ellison et al. 2001; Strawbridge et al. 2001) and, in overall, a positive attitude towards the world (Ai et al. 2002). There is evidence that religion operates as a protective factor against the psychological distress (Hamblin and Gross 2013) since offers people a comprehensive framework for the interpretation of negative events (Ellison 1991), serious illnesses or relatives (Hogg et al. 2010). As a result, people who define themselves as more religious report higher self-esteem (Keyes and Reitzes 2007), have more coping skills (Banthia et al. 2007) and experience existential certainty and purpose in life (Diener et al. 1999; Inglehart 2010). For example, Strawdridge et al. (1998) found that religiosity is positively related with mental health and it buffers the harmful effects of family stressors on depression. Other studies indicate that religious teaching encourages a more optimistic worldview, which in turn may promotes personal happiness and well-being (Koenig et al. 2001; Stark and Finke 2000). Recently, the association between religious involvement and life satisfaction has been explored by means of panel data from Germany (Sinnewe et al. 2015), Australia (Kortt et al. 2015) and United States (Lim and Putnam 2010). The main conclusion drawn from this body of research is that religious participation boosts peoples' life satisfaction by the building of social ties within the religious community. Scholars have found that people who regularly attend religious services receive social support from their churchgoers (Ellison and George 1994), have greater likelihoods to making new

¹² Currently EU-27. The research has been realised before Brexit decision and included United Kingdom (UK).

friends (Lu and Qin 2017; Argyle 2001), perceive higher the quality of their relations and report greater subjective well-being (Bradley 1995). These results are consistent with Durkheim's argument (1951[1897]) that religious participation increases social integration and therefore lowers the probability of suicide.

However, some other studies have found that religion does not always impacts positively on subjective well-being. For instance, Büssing et al. (2009), in a sample of patients with chronic diseases, found that spirituality and a strong belief in God were not generally associated with better mental health. Abu-Raiya et al. (2016) examined the impact of several religious factors on well-being, drawing to the conclusion that there are some aspects of religion (e.g., religious spiritual struggle) frequently related to psychological disorders and lower subjective well-being. Krause (2006) using data from a longitudinal nationwide survey of older adults found that religious doubt is systematically associated with a decline in well-being over the life course.

In this research, we are interested in exploring whether religious identity and church service attendance, (i.e., standard measures of religious involvement, see Putnam and Campbell 2010) are associated with one's life satisfaction. On the basis of existing literature, we hypothesise that being affiliated with a religious group (versus people not affiliated) is predictive of higher life satisfaction (H1). In line with this hypothesis, we expect that people who attend religious services frequently (i.e., are more involved in their religious community) benefit from social support provided them by religious community and report higher life satisfaction than people who never take part in religious activities (H2).

3.3 DATA AND METHOD

Data used in this study were drawn from the European Social Survey (ESS).

Individuals were selected using a probability-based sampling where the single population unit has a greater than zero probability of being included into the sample.

Information were collected via face-to-face interviews, with a response rate of about 70%. We used cross-sectional data from the ESS Round 7 (2014) involving EU-28 countries. Data were only available for the following countries: Austria, Belgium, Czech Republic, Germany, Denmark, Spain, Finland, France, United Kingdom, Hungary, Ireland, Lithuania, Netherlands, Poland, Portugal, Sweden and Slovenia. We therefore focus on this sub-set of countries to test our hypotheses. The study included self-reported measures of life satisfaction, religious involvement (i.e., church attendance and religious affiliation) and

detailed socio-demographic information of each participant. Our analysis was based on a sample of 34633 individuals aged 14 years and over. The 53.3% of sample was composed by female and the 46.7% by male. The mean age of respondents was 49.59 years ($SD_{age} = 18.654$). More than half of participants (63.7%) has attained a secondary or lower education level, whereas only about one third (36.3%) has received a sub-degree or upper education level (including Bachelor, Master degree or Ph.D.). The demographic characteristics of the sample are summarized in Table 3.1.

3.3.1 DATA

Life satisfaction. A single-item was used to measure people's cognitive judgments about the satisfaction with their lives as a whole. Life satisfaction was assessed by the following question: "*All things considered, how satisfied are you with your life as a whole nowadays?*". The item was measured on a ten-point scale, ranging from 0 (*extremely dissatisfied*) to 10 (*extremely satisfied*).

Religious involvement. Religious involvement was assessed by asking to respondents their religious affiliation and their frequency at religious services. The religious affiliation was coded by a set of categorical variables identifying Catholics (35.2%), Protestants (13.0%) and Other religions (6.3%). The category Other religions included: Orthodox (2.6%), Other Christian religion (1.7%) and Islamic (2.0%). Respondents who were not members of any religious group (i.e., not religious) (45.5%) were selected as reference group. The variable religious attendance was assessed by the following question: "*Apart from special occasions such as weddings and funerals, about how often do you attend religious services nowadays?*". The item was measured on a seven-point scale, ranging from 1 (*never*) to 7 (*every day*).

Control Variables. We included a wide set of control variables considered strong predictors of life satisfaction (Sinnewe et al. 2015; Kortt et al. 2015; Argyle 2001): sex (0 = female; 1 = male); age of respondents (in years) and the square of respondents' age¹³; level of education attained (ES-ISCED classification); household total net income (a ten-point scale ranging from 1 = *lowest household income* to 10 = *highest household income*); self-reported health status (a five-point scale ranging from 1 = *very bad* to 5 = *very good*) and employment status (0 = unemployed; 1 = employed). Moreover, we included the country fixed-effects to control for unobservable country specific factors which may affect

¹³ Assuming a not linear relation between age of respondents and life satisfaction we included the square of respondents' age for a better fitting of the model.

life satisfaction (i.e., a series of dummy variables indicating 1 = *home country of respondent*; 0 = *otherwise*). Descriptive statistics for all variables are presented in Table 3.2.

Table 3.1 Demographic statistics for each country included in the study (N= 34633).

Countries/Demographics		Gender	Age	Level of education (ES – ISCED)	Household's income
Austria	N	1795	1789	1794	1348
	Mean	.48	49.22	3.59	4.65
	Std. Deviation	.500	18.060	2.882	2.440
Belgium	N	1769	1769	1765	1619
	Mean	.51	46.94	4.19	5.85
	Std. Deviation	.500	18.967	3.929	2.463
Czech Republic	N	2126	2138	2132	1553
	Mean	.47	46.80	3.92	5.14
	Std. Deviation	.499	17.064	1.402	2.475
Germany	N	3045	3032	3031	2705
	Mean	.51	49.90	4.19	5.88
	Std. Deviation	.500	18.392	1.709	2.823
Denmark	N	1502	1502	1498	1327
	Mean	.52	48.13	4.15	5.78
	Std. Deviation	.500	18.939	2.642	2.906
Spain	N	1925	1925	1921	1519
	Mean	.51	48.54	3.15	4.91
	Std. Deviation	.500	18.649	2.092	2.689
Finland	N	2087	2087	2085	1941
	Mean	.49	51.31	4.22	5.65
	Std. Deviation	.500	19.070	2.173	2.699
France	N	1917	1914	1912	1799
	Mean	.48	49.88	3.82	5.10
	Std. Deviation	.500	18.736	1.919	2.826
United Kingdom	N	2264	2243	2252	1901
	Mean	.45	52.20	5.03	4.95
	Std. Deviation	.498	18.389	8.179	2.995
Hungary	N	1698	1698	1693	1207
	Mean	.43	49.87	3.78	6.41
	Std. Deviation	.495	18.338	2.620	2.722
Ireland	N	2390	2380	2360	1918
	Mean	.46	49.39	3.90	4.01
	Std. Deviation	.499	18.193	3.981	2.525
Lithuania	N	2250	2249	2239	1824
	Mean	.39	49.73	4.15	5.27
	Std. Deviation	.487	18.522	1.732	2.850
Netherlands	N	1919	1916	1917	1729
	Mean	.45	50.74	4.11	5.84
	Std. Deviation	.497	18.254	4.521	2.738
Poland	N	1615	1615	1614	1205
	Mean	.46	47.30	3.52	5.25
	Std. Deviation	.498	18.797	1.811	2.785
Portugal	N	1265	1265	1265	1069
	Mean	.45	52.90	2.77	4.72
	Std. Deviation	.498	19.327	2.944	2.699
Sweden	N	1791	1790	1784	1643
	Mean	.50	49.70	4.40	6.34
	Std. Deviation	.500	19.900	3.652	2.927
Slovenia	N	1224	1224	1219	994
	Mean	.46	49.58	3.75	4.70
	Std. Deviation	.499	18.648	1.431	2.598
Total	N	34633	34581	34530	27301
	Mean	.47	49.59	4.00	5.34
	Std. Deviation	.499	18.654	3.371	2.801

Table 3.2 Descriptive statistics for all variables used in the study (N= 34633).

Variables	Description	Mean/ Percentage	SD
Dependent variable			
Life Satisfaction	All things considered, how satisfied are you with your life as a whole nowadays? (original scale from 0 to 10) 1 = satisfied; 0 = otherwise (threshold value 7.0)	0.50	0.500
Religious affiliation			
Catholic	1 = Catholic; 0 = otherwise	35.2 (%)	-
Protestant	1 = Protestant; 0 = otherwise	13.0 (%)	-
Other religions	1 = Other religions; 0 = otherwise	6.3 (%)	-
Not religious	Reference group	45.5 (%)	-
Control variables			
Sex	1 = male; 0 = female	0.47	0.499
Age	Age of respondents in years	49.59	18.654
Age ²	The square of age in years	-	-
Education	Level of education attained, coded as follow: 1 = ES-ISCED I; 2 = ES-ISCED II; 3 = ES-ISCED IIIa; 4 = ES-ISCED IIIb; 5 = ES-ISCED IV; 6 = ES-ISCED V1; 7 = ES-ISCED ES-ISCED V2	4.00	3.371
Household's income	A ten-point scale ranging from 1 = lowest household income to 10 = highest household income	5.34	2.801
Subjective health status	Self-reported health status (a five-point scale ranging from 1 = very bad to 5 = very good)	3.78	0.907
Employment status	1 = employed; 0 = unemployed	0.51	0.500
Country	1= home country of respondent 0 = otherwise	-	-
Religious involvement			
Religious attendance	Apart from special occasions such as weddings and funerals, about how often do you attend religious services nowadays? (a seven-point scale ranging from 1 = never to 7 = every day)	5.53	1.492

3.3.2 METHOD

In order to investigate the effect of religion involvement on life satisfaction, we performed a logistic regression analysis. Odds ratios (OR) with 95% confidence intervals estimate the probability to be satisfied with one's life. In our model, we estimated the impact of both religious affiliation and church attendance on life satisfaction, controlling for a considerable set of variables indicated by existing literature as predictors of life satisfaction.

Previous empirical studies reported no statistical differences in modelling life satisfaction either as ordinal (e.g., using a logistic regression model) or numeric variable (e.g., using an OLS regression model) (Ferrer-i-Carbonell and Frijters 2004; Kortt et al. 2015). However, in order to reduce potential selection-bias method, we used either methods for estimates. In our analyses with OLS regression model, we treated life satisfaction as a numeric variable (results are presented in Table B.1. See Appendix B). In setting our logistic regression model, life satisfaction has been collapsed into a binary format. Following the Winkelmann and Winkelmann (1998) procedure, we fixed the threshold value to the overall mean score, which it was approximately 7.0 (6.99). Thus, if the self-reported score of life satisfaction was equal or greater to 7.0 the variable was coded as 1, otherwise as 0. In our preliminary elaborations, we also used the median as the threshold value of life satisfaction, obtaining similar and broadly unchanged results.

Finally, the model used is:

$$\text{LOGIT}(\pi_i) = \beta_0 + \beta_1^t \mathbf{R}_i + \beta_2^t \mathbf{CNT}_i + \beta_3 \text{REL}_i + \varepsilon_1 \quad (3.1)$$

where π_i is the probability that i-th individual is satisfied about his life, \mathbf{R}_i is a vector of religious affiliation (i.e. Catholic, Protestant, Other religions, Not religious), \mathbf{CNT}_i is a vector of control variables including: sex, age, age², level of education, household income, self-reported health status, employment status and home country of respondent, REL_i is a measure of religious involvement and finally ε_1 is the error.

3.4 RESULTS

Results of our analysis are presented in Table 3.3 and refer to a sample of 34633 respondents. In our model, we test the hypothesis (H1) that be affiliated with a religious group impacts positively on peoples' life satisfaction with respect those who do not practice a religion. In order to test this hypothesis, we fixed as reference group category individuals declaring themselves as not religious. Overall, we have found greater

likelihoods of life satisfaction in Protestants (OR= 1.106) and Catholics (OR= 1.090) than in not religious people. Notably, our results show a not statistically significant association between life satisfaction and those who are members of other religious groups (i.e., Orthodox, Other Christian religion and Islamic). Analysis for control variables shows that gender (OR= .911) age² (OR= 1.001), education level (OR= 1.015) and household income (OR= 1.152) contribute significantly to increase life satisfaction. Results indicate that female, aged, educated and wealthy people have higher probability to be more satisfied with their life, compared to those is male, younger, poor and less educated. Surprisingly, the employment status is not related to life satisfaction in this analysis, whereas subjective health status emerged as a predictor of life satisfaction. We have found that for an increasing unit of subjective health status, the probability to be satisfied about one’s life rises of 91% (OR= 1.910). As expected, and in line with H2, religious service attendance boosts people’s life satisfaction and those who regularly attend religious services have about the 7% (OR= 1.071) of chances to be more satisfied with one’s life. In order to control for the unobserved individuals’ heterogeneity, we included in our model the country fixed effects, with Germany as reference category (see Fig. 3.1). After control, the positive association between religious service attendance and subjective well-being remains positive and statistically significant. The inclusion of country fixed-effects in the model indicates that people living in the North Europe (i.e., Denmark and Finland) have higher chances to be more satisfied with their life compared to those living in Germany, whereas living in southern (e.g., Spain and Portugal) or eastern (e.g., Lithuania, Hungary, Czech Republic) European countries is associated with lower levels of life satisfaction.

Fig. 3.1 Predicted levels of Life Satisfaction among Europe with Germany as reference group (Odds-ratio and confidence interval 95%).

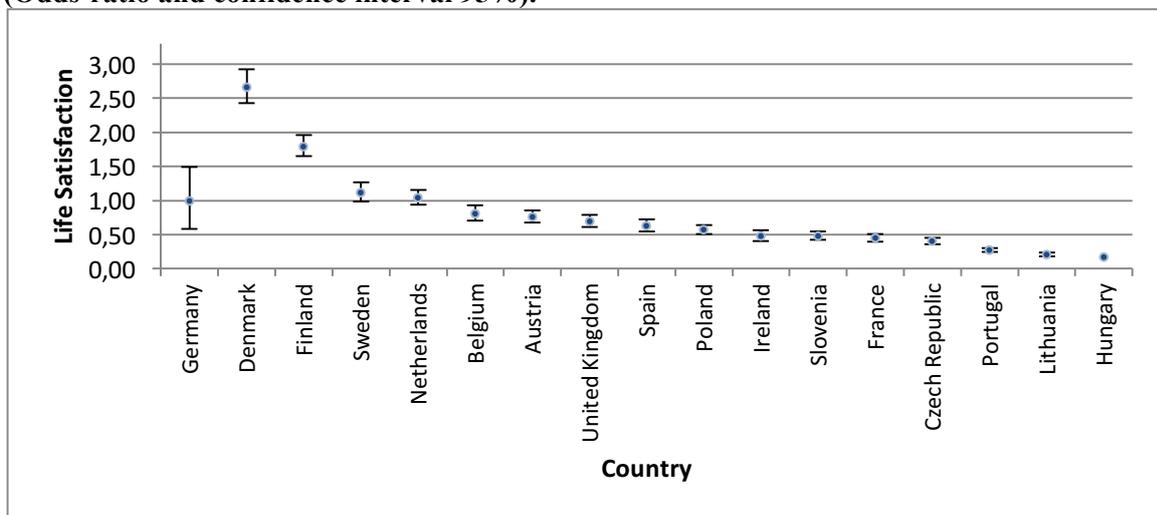


Table 3.3 Logistic regressions model with life satisfaction as response variable (N= 34633). Odds-ratio and confidence interval 95%.

	Exp(B)	S.E.	Lower	Upper
Religious affiliation				
Catholic	1.090*	.040	1.008	1.179
Protestant	1.106*	.049	1.005	1.216
Other religions	.878	.072	.762	1.010
Not religious	0	0	0	0
Religious involvement				
Religious attendance	1.071**	.012	1.047	1.095
Control Variables				
Gender	.911*	.028	.863	.961
Age	.957**	.004	.949	.965
Age ²	1.001**	.000	1.000	1.001
Education	1.015**	.004	1.007	1.024
Employment status	1.027	.034	.960	1.099
Household income	1.152**	.006	1.139	1.164
Subjective health status	1.910**	.018	1.843	1.979
country__1[Austria]	.765**	.074	.661	.884
country__2[Belgium]	.811*	.069	.709	.928
country__3[Czech Republic]	.405**	.071	.353	.466
country__4[Denmark]	2.659**	.087	2.242	3.153
country__5[Spain]	.632**	.071	.549	.726
country__6[Finland]	1.792**	.069	1.564	2.053
country__7[France]	.453**	.068	.396	.517
country__8[United Kingdom]	.694**	.066	.610	.789
country__9[Hungary]	.170**	.084	.144	.200
country__10[Ireland]	.482**	.070	.420	.552
country__11[Lithuania]	.209**	.075	.180	.242
country__12[Netherlands]	1.040	.068	.910	1.188
country__13[Poland]	.571**	.080	.488	.668
country__14[Portugal]	.275**	.086	.233	.325
country__15[Sweden]	1.118	.071	.973	1.285
country__16[Slovenia]	.481**	.082	.409	.565
country__17[Germany]	0	0	0	0
Constant	.099	.135	-	-

*p < .05, **p < .01

3.5 GENERAL DISCUSSION

In this paper, we have explored what influence religious involvement (i.e., religious identity and church services attendance) exerts on people's subjective well-being. By addressing this research question, we performed a binomial logistic regression analysis on a sample of 34633 individuals. We have found that people affiliated with a religious group tend to report higher life satisfaction than not religious people. This finding is consistent with Ferris (2002) who found that religious group's members were happier than those without any religious affiliation. A potential explanation of this finding is that church (as well as any religious institution) represents a social agency by which people build their cultural identity and orient their behaviors (Abbruzzese 1996).

However, endorsing a religion is not always predictor of greater subjective well-being. Particularly, we did not find a significant statistical association between Orthodox, Other Christian religion and Islamic (Other religion) and life satisfaction. This finding need to be interpreted with some cautions, since only the 6.3% of observations fallen into the "Other religion" category.

Regarding the denomination preferences, our results indicate that Protestants have more chances to be satisfied with their life, compared to Catholics and those who do not express any religious preference. This result has been advocated by Kim (2003) who found greater reported well-being in Protestants than in Catholics and Buddhists, and by Sheldon (2006) and Argyle (2001) whom showed as Protestants are, on average, the most satisfied with their life. Because Protestant creed encourages the pursuit of happiness (Ferriss 2002) and fosters the affirmation of self-worth and self-confidence (Jung 2014), we have interpreted this result as a direct influence transmitted them by their religious belief.

In line with H2 we have found that actually regular attendance at religious services is associated with higher sense of well-being. We have found that people who frequently attend religious services are more satisfied with their life because they benefit from the church-based social support. Such social support represents a fertile ground for people's well-being as demonstrated by previous studies. For example, Ellison and George (1994) have found that regular churchgoers draw comfort from their congregation members, they experience a reduced sense of loneliness (Ellison 1991) and they report lower suicide rates (Stack and Wasserman 1992; Martin 1984; see also Durkheim 1951[1897]). In support to our results, Lim and Putnam (2010) have found that people involved in a religious group are more satisfied with their life versus not religious people because they build social ties within their religious community and this, in turn, boosts their sense of well-being. Kortt et

al. (2015) investigated the association between religious participation and life satisfaction in an Australian sample drawing to the same conclusion. Jung (2014) demonstrated that in South Korea woman church attenders tend to report greater happiness and lower levels of stress.

Finally, we have exploited the cross-sectional nature of our dataset by introducing the country fixed-effects in our model. We have found higher likelihoods to report better life satisfaction in Denmark and Finland, rather than in other European countries. We interpreted this finding as a direct influence exerted by the welfare systems on citizens' well-being (i.e., people tend to be more satisfied in countries where the economic markets perform well and the governments ensure them democracy and economic prosperity). In support to our finding, Frey and Stutzer (2002) have demonstrated that either economic variables (i.e., income, unemployment rates) and institutional factors in the form of direct democracy, systematically influence how satisfied individuals are about their life.

3.6 CONCLUSIONS

Although this study provides convincing evidence that religious involvement promotes peoples' life satisfaction, some aspects surrounding this association need to be further investigated. First, we did not find a statistically significant association between life satisfaction and some religious denominations such as Orthodox and Islamic. Our results were in part justified by the small number of observations referred to these subgroups of respondents. Further research could be focused specifically on these religions.

Second, we have found a positive association between church services attendance and life satisfaction, assuming that social bonds people formed within their religious congregation may mediate this relationship. However, this explanation is exclusively based on evidences provided by previous studies (see Lim and Putnam 2010) and we are not able to test this association empirically (a possible limitation of the study). Further investigations aimed at improving well-being within the religious context should investigate the effect of other forms of religious participation (i.e., pray frequency or involvement in church-oriented activities or volunteering) on peoples' life satisfaction.

APPENDIX B

Table B.1 OLS regression model results. Life Satisfaction as response variable. $N= 34633$, Adjusted $R^2 = .239$, $F(326, 609)$, $p < .001$.

	Beta	S.E.	T-stat	Sig.
Religious affiliation				
Catholic	.015	.034	1.996	.046
Protestant	.010	.040	1.557	.119
Other religions	-.024	.061	-4.167	.000
Not religious	0	0	0	0
Religious involvement				
Religious attendance	.070	.010	10.306	.000
Control Variables				
Gender	-.014	.023	-2.657	.008
Age	.062	.001	10.026	.000
Education	.014	.004	2.613	.009
Employment status	-.017	.027	-2.730	.006
Household income	.177	.005	29.179	.000
Subjective health status	.293	.015	48.385	.000
country__1[Austria]	-.014	.065	-2.066	.039
country__2[Belgium]	-.014	.061	-2.166	.030
country__3[Czech Republic]	-.085	.062	-12.912	.000
country__4[Denmark]	.064	.065	10.019	.000
country__5[Spain]	-.043	.063	-6.495	.000
country__6[Finland]	.050	.057	7.265	.000
country__7[France]	-.107	.059	-15.892	.000
country__8[United Kingdom]	-.036	.057	-5.348	.000
country__9[Hungary]	-.158	.066	-25.039	.000
country__10[Ireland]	-.083	.061	-11.619	.000
country__11[Lithuania]	-.186	.061	-26.613	.000
country__12[Netherlands]	.013	.059	2.015	.044
country__13[Poland]	-.059	.070	-8.762	.000
country__14[Portugal]	-.125	.071	-19.571	.000
country__15[Sweden]	.022	.060	3.303	.001
country__16[Slovenia]	-.064	.072	-10.383	.000
country__17 [Germany]	0	0	0	0
(Constant)	3.449	.086	39.970	.000

C ONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Over the last twenty years, the debate surrounding the inclusion of subjective measures of well-being for policy uses has intensified around the world. Scholars and policymakers widely acknowledge that subjective well-being (SWB) may be used as complementary measure of individual and societal welfare, beyond the traditional national accounts (such as GDP, health or life expectancy).

Many national statistical offices survey directly people's perceptions about their lives and empirical studies demonstrate that subjective well-being predicts desirable life outcomes – including better social relations, good physical and mental health, high levels of generalised trust. However, these measures are not completely legitimated within the political arena and governments often rely on traditional economic indicators for policy purposes. This because the measurement of well-being is a matter subjects to theoretical and methodological limitations. First, the concept of well-being is variously interpreted by researchers and there is not a general agreement – among scholars – in what constitutes a standard unit for measuring individuals' well-being. Second, perceptions that people have about their life (such as satisfaction with their health-status or work-place) may change over the life course and are strongly related to cultural and individuals' characteristics.

Although these arguments against, many researchers pointed out that it is time for policymakers to include opinions citizens have about their lives in the evaluation of public choices.

In this thesis, we have discussed how subjective well-being may be used as reliable measure of social growth and a driver for policy makers. To this aim, we have addressed some of the theoretical concerns mentioned above. By using either qualitative (i.e., Prototype Analysis) and quantitative methods (i.e., Mediation analysis; Logistic regression analysis) we have also proposed a mixed-methods approach to the study of well-being.

In order to shed further lights on the elusive structure of subjective well-being, in Chapter 1 we explored the everyday meaning of this term. By using two samples of Italian high school students, we have tested whether people's perceptions of well-being matched with the academic definitions. Results from our study indicated that – at the individual level – people conceive well-being as a complex system of internal psychological states (e.g., self-acceptance, peacefulness), values and beliefs (e.g., faith/spirituality, respect) and

personal goals (e.g., economic security, good physical health, self-actualization). However, we have found that not all definitions provided by the academia resemble from individuals' conceptions of well-being. For this reason, we recommend researchers and all those work in the field to pay more attention to how people understand well-being in order to consolidate its theoretical ground.

To establish whether and how – at the institutional level – the correct functioning of such institutions hampers or facilitate people's sense of well-being, in Chapter 2 we have explored what effect perceived corruption exerts on life satisfaction. In two studies, a mediation analysis provided convincing results for the indirect effect of perceived corruption on life satisfaction through lower institutional trust. Our findings demonstrated that corruption does not only retard economic growth – in general – and degrade the quality of public institutions – in particular – but it undermines the levels of subjective well-being by reducing confidence people have in the public sphere (e.g., government, banks, police). These results may serve as reference point either for policymakers to elaborate more effective and evidence-based interventions aimed at reducing the spread of corruption in their countries. Such results may also contribute to the growing literature on the effects of institutional factors on well-being and prosperity.

In Chapter 3, we have addressed the question of how the social involvement contributes in maintaining individuals' well-being. Particularly, we have explored what influence religious involvement (i.e., a form of social involvement) exerts on people's life satisfaction on a sample of 34633 individuals from European Countries. Results from this comparative study demonstrated that actually higher involvement in religious activities is linked to greater satisfaction with life. We have found and discussed that people who frequently attend religious services (a proxy of religious involvement) are more satisfied with their life because they benefit from the church-based social support. Such social support represents a fertile ground for people's well-being since contributes to the building of their identity, orient their behaviors and reduces the likelihoods of social exclusion.

However, we have found substantial differences in life satisfaction within religious groups and across countries. Further research could investigate which mechanisms underlie (i.e., explain) these differences.

In conclusion, this thesis provides a framework for a more comprehensive understanding of subjective well-being. The current findings add new evidences to the existing literature on well-being and its determinants, by improving our knowledge of how people experience it. Although these results are subject to some limitations (as every

scientific study), they may serve to researchers, practitioner and all those work in the field as a reference point for future research. In conclusion, results from this thesis offer valuable insights in order to evaluate the impact of public policies on well-being and design more accurate evidence-based interventions in different contexts and by different ways.

REFERENCES

- Abbruzzese, S. (1996). Reintegrazione e carisma: riflessioni sulla religiosità in Italia. *Studi di Sociologia*, 34(4), 409-417. Retrieved from <http://www.jstor.org/stable/23004683>.
- Abu-Raiya, H., Pargament, K. I., & Krause, N. (2016). Religion as problem, religion as solution: Religious buffers of the links between religious/spiritual struggles and well-being/mental health. *Quality of Life Research*, 25(5), 1265-1274.
- Ai, A. L., Peterson, C., Bolling, S. F., & Koenig, H. (2002). Private prayer and optimism in middle-aged and older patients awaiting cardiac surgery. *The Gerontologist*, 42(1), 70-81.
- Akçay, S. (2006). Corruption and human development. *Cato Journal*, 26 (1), 29-48.
- Aknin, L. B., Barrington-Leigh, C. P., Dunn, E. W., Helliwell, J. F., Burns, J., Biswas-Diener, R., ... & Norton, M. I. (2013). Prosocial spending and well-being: Cross-cultural evidence for a psychological universal. *Journal of Personality and Social Psychology*, 104(4), 635.
- Anderson, C. J., & Singer, M. M. (2008). The sensitive left and the impervious right: multilevel models and the politics of inequality, ideology, and legitimacy in Europe. *Comparative Political Studies*, 41(4-5), 564-599.
- Anderson, C. J., & Tverdova, Y. V. (2003). Corruption, political allegiances, and attitudes toward government in contemporary democracies. *American Journal of Political Science*, 47(1), 91-109.
- Argyle, M. (2001). *The psychology of happiness* (2nd ed.) New York: Routledge.
- Austin, A. (2016). On well-being and public policy: Are we capable of questioning the hegemony of happiness?. *Social Indicators Research*, 127(1), 123-138.
- Banthia, R., Moskowitz, J. T., Acree, M., & Folkman, S. (2007). Socioeconomic differences in the effects of prayer on physical symptoms and quality of life. *Journal of Health Psychology*, 12(2), 249-260.
- Beit-Hallahmi, B. (2009). *Morality and Immorality Among the Irreligious*. *Forthcoming in Atheism and Secularity*. Zuckerman P. (Eds). Westport, CT: Praeger.
- Bjørnskov, C. (2003). The happy few: cross-country evidence on social capital and life satisfaction. *Kyklos*, 56(1), 3-16.
- Bjørnskov, C. (2006). The multiple facets of social capital. *European Journal of Political Economy*, 22(1), 22- 40
- Bjørnskov, C., Dreher, A., & Fischer, J. A. (2008). Cross-country determinants of life satisfaction: exploring different determinants across groups in society. *Social Choice and Welfare*, 30(1), 119-173.
- Bojanowska, A., & Zalewska, A. M. (2016). Lay understanding of happiness and the experience of well-being: Are some conceptions of happiness more beneficial than others?. *Journal of Happiness Studies*, 17(2), 793-815.
- Bradley, E. (1995). Religious involvement and social resources: evidence from the data set Americans' changing lives. *Journal for the Scientific Study of Religion*, 259-267.
- Büssing, A., Fischer, J., Ostermann, T., & Matthiessen, P. F. (2009). Reliance on God's help as a measure of intrinsic religiosity in healthy elderly and patients with chronic diseases. correlations with health-related quality of life?. *Applied Research in Quality of Life*, 4(1), 77-90.

REFERENCES

- Carlquist, E., Ulleberg, P., Delle Fave, A., Nafstad, H. E., & Blakar, R. M. (2017). Everyday understandings of happiness, good life, and satisfaction: Three different facets of well-being. *Applied Research in Quality of Life*, 12(2), 481-505.
- Chang, E. C., & Chu, Y. H. (2006). Corruption and trust: exceptionalism in Asian democracies?. *The Journal of Politics*, 68(2), 259-271.
- Chiasson, N., Dube, L., & Blondin, J. P. (1996). Happiness: A look into the folk psychology of four cultural groups. *Journal of Cross-Cultural Psychology*, 27(6), 673-691.
- Chuluun, T., Graham, C., & Myanganbuu, S. (2016). Who is happy in the land of eternal blue sky? Some insights from a first study of wellbeing in Mongolia. *International Journal of Wellbeing*, 6(3), 49-70.
- Ciarrocchi, J. W., & Deneke, E. (2005). Hope, optimism, pessimism, and spirituality as predictors of well-being controlling for personality. *Research in the Social Scientific Study of Religion*, 16, 161.
- Clausen, B., Kraay, A., & Nyiri, Z. (2011). Corruption and confidence in public institutions: Evidence from a global survey. *The World Bank Economic Review*, 25(2), 212-249.
- Clemente, F., & Sauer, W. J. (1976). Life satisfaction in the United States. *Social Forces*, 54(3), 621-631.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American journal of sociology*, 94, S95- S120.
- Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. P. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research*, 100(2), 185-207.
- Delle Fave, A., Brdar, I., Wissing, M. P., Araujo, U., Solano, A. C., Freire, T., ... & Nakamura, J. (2016). Lay definitions of happiness across nations: The primacy of inner harmony and relational connectedness. *Frontiers in Psychology*, 7(30), 1-23.
- Diego-Rosell, P., Tortora, R., & Bird, J. (2016). International Determinants of Subjective Well-Being: Living in a Subjectively Material World. *Journal of Happiness Studies*, 1-21. doi.org/10.1007/s10902-016-9812-3.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, 31(2), 103-157
- Diener, E. (2006). Guidelines for national indicators of subjective well-being and ill-being. *Journal of Happiness Studies*, 7(4), 397-404.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Diener, E., & Seligman, M. E. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5(1), 1-31.
- Diener, E., Lucas, R. E., & Oishi, S. (2002). Subjective well-being. *Handbook of Positive Psychology*, 16(2), 63-73.
- Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, 54(1), 403-425.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being three decades of progress. *Psychological Bulletin*, 125(2), 276-302.
- Diener, E., Wolsic, B., & Fujita, F. (1995). Physical attractiveness and subjective well-being. *Journal of Personality and Social Psychology*, 69(1), 120.
- Durkheim, E. (1951). *Suicide: a study in sociology* [1897]. Translated by J.A. Spaulding and G. Simpson (Glencoe, Illinois: The Free Press, 1951).

REFERENCES

- Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior*, 80-99.
- Ellison, C. G., & George, L. K. (1994). Religious involvement, social ties, and social support in a southeastern community. *Journal for the Scientific Study of Religion*, 33(1), 46-61. doi:10.2307/1386636
- Ellison, C. G., & Lee, J. (2010). Spiritual struggles and psychological distress: is there a dark side of religion?. *Social Indicators Research*, 98(3), 501-517.
- Ellison, C. G., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction?. *Social Forces*, 68(1), 100-123. doi:10.1093/sf/68.1.100
- Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology*, 55(4), 557.
- Fehr, B. (1994). Prototype based assessment of laypeople's views of love. *Personal Relationships*, 1(4), 309-331.
- Fehr, B., & Russell, J. A. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General*, 113(3), 464.
- Fernández-Ballesteros, R., Garcia, L. F., Abarca, D., Blanc, E., Efklides, A., Moraitou, D., ... & Orosa, T. (2010). The concept of 'ageing well' in ten Latin American and European countries. *Ageing & Society*, 30(1), 41-56.
- Ferrer-i-Carbonell, A., & Frijters, P. (2004). How important is methodology for the estimates of the determinants of happiness?. *The Economic Journal*, 114(497), 641-659.
- Ferriss, A. L. (2002). Religion and the quality of life. *Journal of Happiness Studies*, 3(3), 199-215.
- Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *The Economic Journal*, 110(466), 918-938.
- Frey, B. S., & Stutzer, A. (2002). What can economists learn from happiness research?. *Journal of Economic Literature*, 40(2), 402-435.
- Fukuyama, F. (1995). Social capital and the global economy. *Foreign Affairs*, 74(5), 89-103.
- Gaspar, D. (2010). Understanding the diversity of conceptions of well-being and quality of life. *The Journal of Socio-Economics*, 39(3), 351-360.
- Gregg, A. P., Hart, C. M., Sedikides, C., & Kumashiro, M. (2008). Everyday conceptions of modesty: A prototype analysis. *Personality and Social Psychology Bulletin*, 34(7), 978-992.
- Hakhverdian, A., & Mayne, Q. (2012). Institutional trust, education, and corruption: A micro-macro interactive approach. *The Journal of Politics*, 74(3), 739-750.
- Hamblin, R., & Gross, A. M. (2013). Role of religious attendance and identity conflict in psychological well-being. *Journal of Religion and Health*, 52(3), 817-827.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, 20(2), 331-360.
- Helliwell, J. F. (2007). Well-being and social capital: Does suicide pose a puzzle?. *Social Indicators Research*, 81(3), 455-496.
- Helliwell, J. F. (2008). Life satisfaction and quality of development. NBER Working Papers, No. w14507. *National Bureau of Economic Research* (retrieved from: <http://www.nber.org/papers/w14507>).

REFERENCES

- Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 359(1449), 1435.
- Helliwell, J.F., (2006). Well-being, social capital, and public sector: What's new? *Economic Journal*, 116(510), C34-C45.
- Hicks, S., Tinkler, L., & Allin, P. (2013). Measuring subjective well-being and its potential role in policy: perspectives from the UK office for national statistics. *Social Indicators Research*, 114(1), 73-86.
- Hogg, M. A., Adelman, J. R., & Blagg, R. D. (2010). Religion in the face of uncertainty: An uncertainty-identity theory account of religiousness. *Personality and Social Psychology Review*, 14(1), 72-83.
- Hone, L., Schofield, G., & Jarden, A. (2016). Conceptualizations of wellbeing: Insights from a prototype analysis on New Zealand workers. *New Zealand Journal of Human Resource Management*, 12(2), 97-118.
- Hraba, J., Lorenz, F. O., Lee, G., & Pechačová, Z. (1996). Gender and well-being in the Czech Republic. *Sex Roles*, 34(7), 517-533. doi.org/10.1007/BF01545030
- Hudson, J. (2006). Institutional trust and subjective well-being across the EU. *Kyklos*, 59(1), 43-62.
- Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology: Health and Well-Being*, 1(2), 137-164.
- Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton, New Jersey: Princeton University Press.
- Inglehart, R. (2010). *Faith and freedom: Traditional and modern ways to happiness*. In E. Diener, J.F. Helliwell, D. Kahneman (Ed.), *International differences in well-being* (pp. 351-397). Oxford: Oxford University Press.
- Jones, J. W. (2004). Religion, health, and the psychology of religion: How the research on religion and health helps us understand religion. *Journal of Religion and Health*, 43(4), 317-328.
- Jung, J. H. (2014). Religious attendance, stress, and happiness in South Korea: do gender and religious affiliation matter?. *Social Indicators Research*, 118(3), 1125-1145.
- Kaufmann, D., & Wei, S. J. (1999). Does "grease money" speed up the wheels of commerce? NBER Working Papers, No. w7093. *National Bureau of Economic Research*, (retrieved from: <http://www.nber.org/papers/w7093.pdf>).
- Kearns, J. N., & Fincham, F. D. (2004). A prototype analysis of forgiveness. *Personality and Social Psychology Bulletin*, 30(7), 838-855.
- Kendler, K. S., Liu, X. Q., Gardner, C. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *American Journal of Psychiatry*, 160(3), 496-503.
- Keyes, C. L., & Reitzes, D. C. (2007). The role of religious identity in the mental health of older working and retired adults. *Aging and Mental Health*, 11(4), 434-443.
- Kim, A.E. (2003). Religious influences on personal and societal well-being. *Social Indicator Research*, 62 (1-3), 149-170. doi: 10.1023/A:1022641100109
- Kim, M. S., Kim, H. W., Cha, K. H., & Lim, J. (2007). What makes Koreans happy?: Exploration on the structure of happy life among Korean adults. *Social Indicators Research*, 82(2), 265-286.
- Kinsella, E. L., Ritchie, T. D., & Igou, E. R. (2015). Zeroing in on heroes: a prototype analysis of hero features. *Journal of Personality and Social Psychology*, 108(1), 114.

REFERENCES

- Klingemann, Hans-Dieter (1999). Mapping Political Support in the 1990s: A Global Analysis. In P., Norris (Ed), *Critical Citizens: Global Support for Democratic Government* (pp. 31-56). Oxford: Oxford University Press.
- Ko, K., & Samajdar, A. (2010). Evaluation of international corruption indexes: Should we believe them or not?. *The Social Science Journal*, 47(3), 508-540.
- Ko, K., & Weng, C. (2011). Critical review of conceptual definitions of Chinese corruption: A formal–legal perspective. *Journal of Contemporary China*, 20(70), 359-378.
- Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *The Canadian Journal of Psychiatry*, 54(5), 283-291.
- Koenig, H. G., Al Zaben, F., & Khalifa, D. A. (2012). Religion, spirituality and mental health in the West and the Middle East. *Asian Journal of Psychiatry*, 5(2), 180-182.
- Kortt, M. A., Dollery, B., & Grant, B. (2015). Religion and life satisfaction down under. *Journal of Happiness Studies*, 16(2), 277-293.
- Kostadinova, T. (2009). Abstain or rebel: Corruption perceptions and voting in East European elections. *Politics & Policy*, 37(4), 691-714.
- Kotzian, P. (2011). Public support for liberal democracy. *International Political Science Review*, 32(1), 23-41.
- Krause, N. (2006). Religious doubt and psychological well-being: A longitudinal investigation. *Review of Religious Research*, 287-302.
- Krause, N. (2008). The social foundation of religious meaning in life. *Research on Aging*, 30(4), 395-427.
- Krause, N., & Hayward, R. D. (2012). Religion, meaning in life, and change in physical functioning during late adulthood. *Journal of Adult Development*, 19(3), 158-169.
- Krause, N., Ellison, C. G., & Wulff, K. M. (1998). Church-based emotional support, negative interaction, and psychological well-being: Findings from a national sample of Presbyterians. *Journal for the Scientific Study of Religion*, 37(4), 725-741.
- Kubbe, I. (2013). Corruption and trust: A model design. *Zeitschrift für Vergleichende Politikwissenschaft*, 7(1), 117-135.
- Kurian, G. T., & Marti, J. (1991). *New book of world rankings*. London, England: McMillians' Reference Books.
- Lancaster, T. D., & Montinola, G. R. (2001). Comparative political corruption: Issues of operationalization and measurement. *Studies in Comparative International Development*, 36(3), 3-28.
- Layard, R. (2005). Rethinking public economics: The implications of rivalry and habit. *Economics and Happiness*, 1(1), 147-170.
- Lee, G. R., Seccombe, K., & Shehan, C. L. (1991). Marital status and personal happiness: An analysis of trend data. *Journal of Marriage and the Family*, 53, 839-844.
- Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist*, 8(3), 8-14.
- Leung, A., Kier, C., Fung, T., Fung, L., & Sproule, R. (2011) Searching for happiness: The importance of social capital. *Journal of Happiness Studies*, 12(3), 443-462.
- Levi, M., & Stoker, L. (2000). Political trust and trustworthiness. *Annual Review of Political Science*, 3(1), 475- 507.
- Levin, J. S., & Chatters, L. M. (1998). Religion, health, and psychological well-being in older adults: Findings from three national surveys. *Journal of Aging and Health*, 10(4), 504-531.

REFERENCES

- Lewis, C. A., Maltby, J., & Burkinshaw, S. (2000). Religion and happiness: Still no association. *Journal of Beliefs and Values*, 21(2), 233-236.
- Li, H., Gong, T. & Xiao, H. (2016). The perception of anti-corruption efficacy in China: An empirical analysis. *Social Indicator Research*, 125(3), 885-903. doi:10.1007/s11205-015-0859-z.
- Lim, C., & Putnam, R. D. (2010). Religion, social networks, and life satisfaction. *American Sociological Review*, 75(6), 914-933.
- Lipkus, I. M., Dalbert, C., & Siegler, I. C. (1996). The importance of distinguishing the belief in a just world for self versus for others: Implications for psychological well-being. *Personality and Social Psychology Bulletin*, 22(7), 666-677.
- Lu, J., & Gao, Q. (2017). Faith and Happiness in China: Roles of Religious Identity, Beliefs, and Practice. *Social Indicators Research*, 132(1), 273-290.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83-104.
- Martin, W.T. (1984). Religiosity and United States Suicide Rates, 1972-1978. *Journal of Clinical Psychology*, 40: 1166-1169.
- Maton, K. I., & Wells, E. A. (1995). Religion as a community resource for well-being: Prevention, healing, and empowerment pathways. *Journal of Social Issues*, 51(2), 177-193.
- McGillivray, M. (2005). Measuring noneconomic well-being achievement. *Review of Income and Wealth*, 51(2), 337-364.
- McMahan, E. A., & Estes, D. (2011). Hedonic versus eudaimonic conceptions of well-being: Evidence of differential associations with self-reported well-being. *Social Indicators Research*, 103(1), 93-108.
- Mishler, W., & Rose, R. (2001). What are the origins of political trust? Testing institutional and cultural theories in post-communist societies. *Comparative Political Studies*, 34(1), 30-62.
- Mogilner, C., Kamvar, S. D., & Aaker, J. (2011). The shifting meaning of happiness. *Social Psychological and Personality Science*, 2(4), 395-402.
- Montes, G. C., & Paschoal, P. C. (2016). Corruption: what are the effects on government effectiveness? Empirical evidence considering developed and developing countries. *Applied Economics Letters*, 23(2), 146-150.
- Montinola, G. R., & Jackman, R. W. (2002). Sources of corruption: a cross-country study. *British Journal of Political Science*, 32(01), 147-170.
- Morris, S. D., & Klesner, J. L. (2010). Corruption and trust: Theoretical considerations and evidence from Mexico. *Comparative Political Studies*, 43(10), 1258-1285.
- Morrow, V. (1999). Conceptualising social capital in relation to the well-being of children and young people: a critical review. *The Sociological Review*, 47(4), 744-765.
- Murphy, K. M., Shleifer, A., & Vishny, R. W. (1993). Why is rent-seeking so costly to growth?. *The American Economic Review*, 83(2), 409-414.
- Oishi, S., Graham, J., Kesebir, S., & Galinha, I. C. (2013). Concepts of happiness across time and cultures. *Personality and Social Psychology Bulletin*, 39(5), 559-577.
- Okun, M. A., & Stock, W. A. (1987). Correlates and components of subjective well-being among the elderly. *Journal of Applied Gerontology*, 6(1), 95-112.
- Pavot, W. & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3(2), 137-152.

REFERENCES

- Pellegata, A., & Memoli, V. (2016). Can corruption erode confidence in political institutions among European countries? Comparing the effects of different measures of perceived corruption. *Social Indicators Research*, 128(1), 391-412.
- Pflug J. (2009). Folk theories of happiness: a cross-cultural comparison of conceptions of happiness in Germany and South Africa. *Social Indicators Research*, 92(3), 551-563. doi:10.1007/s11205-008-9306-8.
- Pretty, J., & Ward, H. (2001). Social capital and the environment. *World development*, 29(2), 209-227.
- Putnam, R. D. (1993). *Making Democracy Work*, (with Robert Leonardi and Raffaella Y. Nanetti). Princeton, NJ: Princeton University Press.
- Putnam, R. D., & Campbell, D. E. (2012). *American grace: How religion divides and unites US*. New York, NY: Simon and Schuster.
- Rector, N. A., & Roger, D. (1996). Cognitive style and well-being: A prospective examination. *Personality and Individual Differences*, 21(5), 663-674.
- Requena, F. (1995). Friendship and subjective well-being in Spain: A cross-national comparison with the United States. *Social Indicators Research*, 35(3), 271-288.
- Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General*, 104 (3), 192-233.
- Rose-Ackerman, S., (1999). *Corruption and government: causes, consequences, and reform*. Cambridge: Cambridge University Press.
- Rosenberg, S., & Jones, R. (1972). A method for investigating and representing a person's implicit theory of personality: Theodore Dreiser's view of people. *Journal of Personality and Social Psychology*, 22(3), 372.
- Rosenberg, S., & Sedlak, A. (1972). Structural representations of implicit personality theory. *Advances in Experimental Social Psychology*, 6, 235-297. doi.org/10.1016/S0065-2601(08)60029-5.
- Rosmarin, D. H., Krumrei, E. J., & Andersson, G. (2009). Religion as a predictor of psychological distress in two religious communities. *Cognitive Behaviour Therapy*, 38(1), 54-64.
- Rothstein, B. (2010). Happiness and the welfare state. *Social Research: An International Quarterly*, 77(2), 441- 468.
- Rothstein, B., & Stolle, D. (2008). The state and social capital: An institutional theory of generalized trust. *Comparative Politics*, 40(4), 441-459. Retrieved from <http://www.jstor.org/stable/20434095>.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069.
- Sadler, M. E., Miller, C. J., Christensen, K., & McGue, M. (2011). Subjective wellbeing and longevity: a co-twin control study. *Twin Research and Human Genetics*, 14(3), 249-256.
- Sastre, M. T. M. (1999). Lay conceptions of well-being and rules used in well-being judgments among young, middle-aged, and elderly adults. *Social Indicators Research*, 47(2), 203-231.

REFERENCES

- Scheier, M. E., & Carver, C. S. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality*, 55(2), 169-210.
- Seligman, M. E. (2012). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Simon and Schuster.
- Seligson, M. A. (2002). The impact of corruption on regime legitimacy: A comparative study of four Latin American countries. *The Journal of Politics*, 64(2), 408-433.
- Sheldon, K. M. (2006). Catholic Guilt? Comparing Catholics' and Protestants' Religious Motivations. *The International Journal for the Psychology of Religion*, 16(3), 209-223.
- Sinnewe, E., Kortt, M. A., & Dollery, B. (2015). Religion and life satisfaction: evidence from Germany. *Social Indicators Research*, 123(3), 837-855.
- Sobel, M.E. (1982) Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. In: S., Leinhardt (Ed.), *Sociological Methodology* (pp. 290-312). San Francisco: Jossey-Bass.
- Sparks, K., Faragher, B., & Cooper, C. L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational and Organizational Psychology*, 74(4), 489-509.
- Stack, S., & Wasserman, I. (1992). The Effect of Religion on Suicide Ideology: An Analysis of the Networks Perspective. *Journal for the Scientific Study of Religion*, 31(4), 457-66.
- Stark, R., & Finke, R. (2000). *Acts of faith: Explaining the human side of religion*. Berkley, CA: University of California Press.
- Steffen, P. R., Masters, K. S., & Baldwin, S. (2017). What Mediates the Relationship Between Religious Service Attendance and Aspects of Well-Being?. *Journal of Religion and Health*, 56(1), 158-170.
- Strawbridge, W. J., Shema, S. J., Cohen, R. D., & Kaplan, G. A. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. *Annals of Behavioral Medicine*, 23(1), 68-74.
- Tan, X., Liu, L., Huang, Z., Zhao, X., & Zheng, W. (2016). The dampening effect of social dominance orientation on awareness of corruption: Moral outrage as a mediator. *Social Indicators Research*, 125(1), 89- 102.
- Tavits, M. (2008). Representation, corruption, and subjective well-being. *Comparative Political Studies*, 41(12), 1607-1630.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: a social psychological perspective on mental health. *Psychological Bulletin*, 103(2), 193.
- Torras, M. (2008). The subjectivity inherent in objective measures of well-being. *Journal of Happiness Studies*, 9(4), 475-487.
- Travaglino, G. A., Abrams, D., & de Moura, G. R. (2016). Men of honor don't talk: The relationship between masculine honor and social activism against criminal organizations in Italy. *Political Psychology*, 37(2), 183-199.
- Uslaner, E. M. (2003). Trust and civic engagement in East and West. In: Badescu G., Uslaner E. (Ed.), *Social capital and the transition to democracy* (pp. 81-94). London: Routledge.
- Uslaner, E. M. (2008). *Corruption, inequality, and the rule of law: the bulging pocket makes the easy life*. Cambridge: Cambridge University Press.
- Van Cappellen, P., Toth-Gauthier, M., Saroglou, V., & Fredrickson, B. L. (2016). Religion and well-being: The mediating role of positive emotions. *Journal of Happiness Studies*, 17(2), 485-505.

REFERENCES

- Van Praag, B. M., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, 51(1), 29-49.
- Veenhoven, R. (1999). Quality-of-life in individualistic society. *Social Indicators Research*, 48(2), 159-188.
- Veenhoven, R. (2005). Return of inequality in modern society? Test by dispersion of life-satisfaction across time and nations. *Journal of Happiness Studies*, 6(4), 457-487.
- Veenhoven, R., & Ouweneel, P. (1995). Livability of the welfare-state. *Social Indicators Research*, 36(1), 1-48.
- Ventis, W.L. (1995). The Relationships between Religion and Mental Health. *Journal of Social Issues*, 51(2), 33-48. doi:10.1111/j.1540-4560.1995.tb01322.x
- Voliotis, S. (2011). Abuse of ministerial authority, systemic perjury, and obstruction of justice: corruption in the shadows of organizational practice. *Journal of Business Ethics*, 102(4), 537-562.
- Wallace Jr, J. M., & Forman, T. A. (1998). Religion's role in promoting health and reducing risk among American youth. *Health Education & Behavior*, 25(6), 721-741.
- Wallace, C., & Latcheva, R. (2006). Economic transformation outside the law: corruption, trust in public institutions and the informal economy in transition countries of Central and Eastern Europe. *Europe-Asia Studies*, 58(1), 81-102.
- Warren, M. (2004). What does corruption mean in a democracy?. *American Journal of Political Science*, 48(2), 328-343.
- Weber, M. (1905). *The protestant ethic and the spirit of capitalism* (Eds. 1958). New York, NY: Charles Scribner's Sons.
- Welsch, H. (2008). The welfare costs of corruption. *Applied Economics*, 40(14), 1839-1849.
- Wilson G., Aruliah D.A., Brown C.T., Chue Hong N.P., Davis M., Guy R.T., et al. (2014). Best Practices for Scientific Computing. *PLoS Biol* 12(1): e1001745. doi:10.1371/journal.pbio.1001745.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica*, 65(257), 1-15.
- World Health Organization. (2013). *The European Health Report 2012: charting the way to well-being*. Copenhagen: World Health Organization Regional Office for Europe.
- Wu, Y., & Zhu, J. (2016). When are people unhappy? Corruption experience, environment, and life satisfaction in Mainland China. *Journal of Happiness Studies*, 17(3), 1125-1147.
- Zheng, W. W., Liu, L., Huang, Z. W., & Tan, X. Y. (2017). Life Satisfaction as a buffer of the relationship between corruption perception and political participation. *Social Indicators Research*, 132(2), 907-923. doi:10.1007/s11205-016-1318-1.
- Zuckerman, P. (2008). *Society Without God: What the least religious nations can tell us about contentment*. New York, NY: New York University Press.

Printed in February 2018 (Palermo, Italy)