Generational Differences in Work Values and Job Satisfaction

Erasmus University Rotterdam

Erasmus School of Economics

Master Thesis: Economics of Management and Organisation

Supervisor: Prof. dr. Robert Dur

Author: Ondrej Palicka

Student number: 431772

August 2016

Abstract

This thesis examines generational differences in work values and job satisfaction. The purpose of this thesis is to investigate whether there are significant differences in work values between four examined generations and if these differences can be assigned to generations or to age. In addition, a second aim of the study is to perform same investigation for job satisfaction, hence, are there significant differences between generations in job satisfaction? If so, are they assigned to generations or to age? For this study we used four waves of European Values Study. The surveys include more than 160 000 observations from 47 countries. I found that significant differences are present in both work values and job satisfaction, yet some work values are most likely driven by age, some by generations and job satisfaction seems to be driven by generations.

Table of Contents

1. Introduction

Job satisfaction and work aspects are one the most complex areas faced by today's managers in terms of managing employees. The most common definition of job satisfaction is that it is the extent to which people like (satisfaction) or dislike (dissatisfaction) their job. Job satisfaction is important because it is directly or indirectly involved in personal and organizational well-being (Judge, Bono & Locke, 2000, Wright 2005). Other studies claim that job satisfaction has an effect on employee productivity (Kahn 1960; Kazanas 1978; Argyle 1989; Böckerman & Ilmakunnas 2012) and hence productivity of a firm. And study from Oswald et. al. (2015) found that even level of happiness has effect on productivity. Thus, it is in interests of employers to keep job satisfaction high. Moreover, work values and job satisfaction are highly connected. One of the definitions of work values is that they are global aspects of work that are important to a person's job satisfaction.

According to Ryder (1965), a generation can be defined as a group of individuals who share a different set of values, because they shared specific event and experiences within the same time period. As demographics of today's workplace change, new generations of workers integrate in the workforce. In contrast, other generation is approaching retirement (i.e. Baby Boomers). With changing employee's behaviour, organizations, workplace and economy, it is very important to have job satisfaction and work values on mind, especially when Generation Y workers, who are indeed considered as high-demanding, take place in the workforce. Nowadays, there are three generations in workplace – Baby Boomers, Generation X and Generation Y – and one retired the Silent Generation, and every generation has specific characteristics. The Silents are hard-working, value job security and want to avoid any risks. Baby Boomers are for example considered as loyal employees who respect authority and hierarchy in the workplace and are often called workaholics. Members of Generation X want work-life balance and put family and friends on the first place, while work on the second one. Unlike Boomers, they do not share emphasis on loyalty to employers. Generation Y, or Y-ers as they are called, value comfort, work-life balance and are dynamic and do not mind changing job every couple of years. Hence, at first glance it seems to be that there are differences in work values and every generation finds important different aspects of work.

In this thesis we will investigate whether these differences are present across generations and whether these differences can be assigned to generations. Hence, our first research question is:

1) Are there generational differences in work values across generations?

If we find that differences are present, then the second research question follows:

2) Are these differences assigned to generations or to age?

In order to answer these question, we examine 13 different work values - specifically good pay, pleasant people, not too much pressure, job security, good hours, useful job for society, generous holidays, achieving something, responsible job, interesting job, meeting people, learning new skills and family friendly job - across four generations in our unique data set which contains more than 160 000 observations from four different waves of surveys. The surveys are from 1981, 1990, 1999 and 2008. We performed mean analysis and wave regression analysis as well. At the end of the analysis we proceed with fixed effect regression and we performed Wald test to see if the generational coefficients differ from each other. Our hypotheses are that significant differences between generations are present and are driven by generations themselves.

Furthermore, we investigated whether there are also differences in job satisfaction across four generations. Thus, this leads to the third research question:

3) Are there significant differences in job satisfaction across generations?

To provide results to this question, we again performed mean analysis, fixed effect analysis and Wald test, this time with a reduced sample containing more than 84 000 observations from four different periods. The hypothesis is again that there is a significant difference in job satisfaction between four investigated generations and are assigned to generations and not age.

Providing an answer to these research questions is important because it helps to understand how different generations value the same work values and what is important for particular generation. Moreover, the findings should also uncover possible productivity improvements, the determinants of job satisfaction, and the comparison delivers a better understanding of these four generations and how we can better manage workers and make them happy. Job satisfaction is important because it is directly or indirectly involved in personal and organizational well-being. Moreover, the findings have practical implications for the recruitment and management of the emerging workforce.

The thesis, as we are aware of, is the first study that examines differences in work values across generations, compares them at different points of time and uses data sample not restricted to one country or one particular group of people at the same time. Using the unique European Values Study dataset, this study is able to describe whether these differences are related to generation or to age. Evidence from this thesis will help to have a clear view on this topic and findings from our research will contribute to the existing literature on three streams. Moreover, understanding the work values helps companies to know how to attract new generations to their workforce. What a previous generations found valuable, today's generations might consider not interesting and thus, some management or recruitment practices may not be effective nowadays.

The second chapter gives an overview on the existing literature on the investigated topics. Afterwards, the chapter 3 discusses data we used for the study and methodology of the research. The section 4 provides results of analyses and section 5 concludes, and discusses limitations and future research ideas.

2. Literature review

This thesis is related to three streams of literature. Firstly, it relates to the literature on the generational differences in work values. The second stream of the literature is about general differences in generations. Lastly, it refers to the existing literature about the job satisfaction and its determinants.

Before reviewing the existing literature, it is important to specify what a generation is. Ryder (1965) states it is a group of individuals who share a different set of values, because they shared specific event and experiences within the same time period. One of the most important papers in this area was written by Rhodes (1983). She suggested that the differences might be divided into cohort effects, age effects and period effects. Moreover, the study also proposed that the age effects are caused by biological or psychosocial ageing and the cohort effects are results of the environmental changes or experiences. Hence, distinguishing these two effect might be difficult. If such differences in work values are related to the age effect, then we can expect younger adults to become like older adults with ageing. On the other hand, if they are related to cohort (i.e. generational) effect, such differences between generations would remain same. Yet, there is still a difference between generation and cohort. Nevertheless, Rhodes (1983) also suggests that cohort is more of a a-theoretical concept and is acting as a proxy for generations. With regard to the period effect, Rhodes explains it as a difference which

represents present environmental influences. For example, among them she counts changes in the work and non-work environment (i.e. changes in labor market conditions, co-worker's relations or rewards) and age-related expectations of others. In addition, the study generally proposed that any differences between generations are caused by a combination of the age, period and cohort effects.

Many researchers previously studied the generational differences in work values in many different ways. Some of the studies focused on a particular field, others concentrated on specific values. For example, Gursoy et. al. (2008) studied differences and similarities between Baby Boomers, Generation X and Generation Y among employees and managers from hospitality services by collecting data from group discussions. They found main differences in terms of world views, authority and perspectives on work. This research also tried to identify how generations see each other. Generally, both older generations have very low view of the Millennials[1]. And X-ers and Y-ers stated that Baby Boomers are very good hardworking employees. However, this study has huge limitations since the group discussions took place at one US hotel and the number of discussants was quite small as it was only 150. Study from Chen & Choi (2008) focusing also on hospitality services found differences in views of personal growth and work environment. Another study by Young et. al. (2013), this time from leisure services, also compared three generations and their attitudes toward job satisfaction. The findings showed differences toward job satisfaction in three out of four analysed sections, specifically in working conditions, work and environment, and resource and employee benefits.

Wong et. al. (2009) focused with their analyses to differences in personality and motivation across three different generations and their implications to workplace. Regarding personality traits, surprisingly Baby Boomers were the least focused on career development, however, this could be due to the age since they are approaching the end of the working live and hence career might be less priority for them. In addition, findings also suggest that Baby Boomers were significantly more optimistic than other two generations. In terms of motivation differences, they, for example, found that there is a difference in progression factor and no difference was found in personal growth. But they suggest that most of the differences are related to age than birth cohorts. Jurkiewicz & Brown (1998) focused on employees (Matures[2], Baby Boomers, Generation X) in public sector and not many differences were found, exceptions were in terms

---

[1] i.e. Generation Y

[2] Different name for the Silent generation

of life and career stages. However, all these previously mentioned studies had one key limitation and it is the use of cross-sectional data from one year only. The study by Twenge (2010) reviewed all available studies on this topic and most studies agreed that X-ers and Y-ers rate work as less central to their lives, leisure time is more important to them and they have weaker work ethic as older generations. Moreover, extrinsic values are valued higher by Generation X and Y, but no differences were found in altruistic values and some, such as intrinsic values, had conflicting results. Similar paper which critically reviewed all available studies was presented by Parry & Urwin (2011). It mentioned that many research papers were not able to distinguish between generation and age as drivers of differences in work values because of the use of cross-sectional datasets. We found two studies who used panel data to investigate this topic. Twenge et. al. (2010) examined differences in work values among 16 000 US high school seniors with data collected in 1976, 1991 and 2006. Baby Boomers, Generation X and Y were in comparison and their findings by performing factor and invariance analysis suggest that work centrality declined over time, extrinsic values had peak in Generation X and Y-ers do not favour altruistic and intrinsic work values more than other generations. The second study in this area which used panel data was written by Kowske et. al. (2010). They worked with a sample of more than 115 000 US employees across five generations obtained from repeated survey for 18 years. Authors performed regressions and examined the residual random effects of generation for every work attitude. The study found again differences across generations, however they were relatively small. Moreover, Y-ers had higher level of overall job satisfaction, job security satisfaction and career development, but showed similar satisfaction with salary and benefits compared to other generations. However, both studies used dataset with US observations only and Twenge's study even focused only on respondents who are 17-18 years old at the time of questioning. Hence, both studies still have some limitations. All in all, the findings from many studies are somehow mixed as some studies found differences in specific values and others did not. However, from such papers we can conclude that there generally are significant differences between generations.

In the following Table 1, a brief summary of the three generations currently found in today's work place and one retired generation is presented.

Table 1: Description of generations

Generation	Birth year	Description
Silent	1928 – 1944	- Have high concern for job security - Want to avoid any risks - Seen as hard-working, dependable, unadventurous - Value loyalty, financial rewards and security
Baby Boomers	1945 - 1964	- Perceived as the most competitive generation - Characterized as loyal employees who respect authority and hierarchy in the work place - Focus on career, find personal satisfaction in work, often called workaholics - Value promotions, titles and recognition
Generation X	1965 - 1979	- Many were raised in single-parent home - Known as resourceful, independent people who put friends and family on the first place - Value work-life balance, direct feedback, fun at work and challenging projects - Do not share emphasis on loyalty to employer and consider technology as important part in their lives
Generation Y	1980 - 2000	- Considered as the most diverse and the most accepting diversity - Use large variety of social media, are good with technology and highly value comfort, work-life balance and flexible schedules - Characterized as dynamic, confident and straightforward - Often lose sense of significance, enthusiasm and challenge in their work

<u>Job satisfaction</u>

Job satisfaction is a phenomenon that has an effect on organisational and personal happiness. However, despite its common usage in research topics, there is still missing a clear definition of what it in fact is. Probably the first definition provided Hoppock (1935) who defined job satisfaction as a combination of psychological, physiological and environmental circumstances that cause a person to say "I am satisfied with my job". But such definition only indicates several variables that affect job satisfaction. Several years later, Vroom (1964) in his definition states that job satisfaction is considered to be an individual's perceptual/emotional reaction to important facets of work. Another definition provided Locke (1969) by defining job satisfaction as a pleasurable or positive emotional state form the appraisal of one's job experience. The most known and indeed general definition of job satisfaction was delivered by Spector (1997). According to him, it is the extent to which people like (satisfaction) or dislike (dissatisfaction) their job. During the past twenty years, countless other definitions were introduced.

Many previous researchers also tried to establish models of job satisfaction, its elements and the relationship. For example, Locke's (1976) Range of Affect Theory is considered as the most famous job satisfaction model. The model states that job satisfaction is basically a discrepancy between what an employee has in a job and what he wants in a job. Another commonly used is Herzberg's (1966) Two-Factor Theory. This theory distinguishes between so called Motivators (recognition, work itself or promotion opportunities, i.e. intrinsic factors) which make people want to work and provide with satisfaction, and Hygiene factors (salary, working conditions, company policies, i.e. extrinsic to work itself) which do not give people higher satisfaction or motivation. Several other models were presented during the past years such as Locke and Latham's (1990) model, Brown and Peterson's (1993) model or Christen's et. all (2006) model. However, some studies (Lee & Wilbur 1985; Kalleberg 1977; Martin & Hanson 1985) criticised the Herzberg's two-dimensional model and suggested that the characteristics of an employee interact with the internal and external characteristics. Moreover, as economists started to realise that the personal characteristics have effect on job satisfaction, the actual job satisfaction might be more a fit between the worker's needs and his work requirements on one side and the job characteristics on the other (DeSantis & Durst 1996). The study of Blackburn and Bruce (1989) found that quality of work life has little impact on job satisfaction. In fact, they propose that job satisfaction might be a product of factors such as age, education or job tenure. Nevertheless, there is no need to say that high job satisfaction results

in positive behaviour and vice versa. Many studies were concerned about the components of job satisfaction. Some of them focused on the effect of monetary characteristics such as income (Bonsang & Van Soest 2012; Card et. al. 2012; Clark & Oswald 1996; Linz & Semykina 2012), others investigated non-pecuniary factors as motivation (Elnaga 2013), work environment (Raziq & Maulabakhsh 2015; Connis et. al. 1978; Sell & Cleal 2011), gender (Clark 1997), age (Young et. al. 2013; Lee & Wilbur 1985), or human resource management (Steijn 2004). Furthermore, Hellman's (1997) study shows that workers who are more satisfied with job are less likely to quit. And indeed job performance is positively correlated with job satisfaction (Pugno & Depedri 2010). As already mentioned, Young et. al. (2013) studied generational differences and job satisfaction in leisure services and results suggest that Baby Boomers were more satisfied with their jobs than members of Generations X and Y, and found no difference between these two latest generations. Very similar results found also Wilson et. al. (2008).

This thesis differs from the previous two studies in a way that we examine differences in work values across generations, compare them at different points of time and use a data sample not restricted to one country or one particular group of people at the same time. The results will help to have a better view on this topic and findings from our research will contribute to the existing literature on the three mentioned streams. Furthermore, understanding the work values helps companies to know how to attract new generations to their workforce. What a previous generations found valuable, today's generations might consider not interesting and thus, some management or recruitment practices may not be effective nowadays.

3. Data and methodology

3.1 Data

The data used in this master thesis comes from the European Values Study (EVS 2015) which is a large-scale cross-national and longitudinal survey research program. The survey was collected in four waves in years 1981, 1990, 1999 and 2008. These four waves contain a wide range of topics such as work, leisure time, family, sexuality, religion, politics and ethics. The observations are from a wide range of nationalities (mostly from Europe) and occupations. There are observations from 47 different countries. The overall sample size of the specific wave is 67 786 units from 2008, 41 125 observations from 1999, 38 213 units in 1990 and 19 378 observations from 1981 wave. After excluding the invalid values in our variables of interests, the sample size was reduced to 61 260 observations in wave from 2008, 40 029 units from 1999,

37 350 from 1990 and 19 018 from the wave in 1981. For the repeated cross-sectional data analysis and job satisfaction analysis, other reductions of the datasets apply. We used all four waves and aggregate these date into one unbalanced pooled cross-sectional data set with 160 744 observations within 4 different periods. For the analysis regarding job satisfaction, we had to reduce the sample again due to missing values for the dependent variable – job satisfaction. The size of the sample reduced to unbalanced pooled cross-sectional data with 84 711 observations within four periods after all edits.

There are several key variables in this study which can be divided into three sections – work values, job satisfaction and control variables. Regarding measures of the variables used in the study, the respondents were asked several questions and the choice of answers differs. With regard to work values variables, respondents had to answer the question "*Here are some aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job?*" and the respondent had to state whether the particular aspect, i.e. work value, is important to him. If so, the answer was marked as 1, if not, then it has value of 0. We did not include any histograms of these work values because of the dummy design of the variables.

About the job satisfaction variable, respondents were asked the question "*Overall, how satisfied or dissatisfied are you with your job?*" and the possible answers are at a scale from 1 to 10 where 1 means dissatisfied and 10 satisfied. A potential problem with answering this question is that there are not offered all answers, only value 1 and value 10 is specified. Hence, the values between 1 and 10 are not given and thus may have a different explanation which is based on the subjective feeling of the respondent. Moreover, as the scale starts at "dissatisfied" and ends with "satisfied", there is not a lot of variance between possible answers and the scale would be better if starting with for example "extremely dissatisfied" and ending with "extremely satisfied". As can be seen from the Figure 1, the data of job satisfaction variable are skewed right. This means, that the median (8.0) is larger than the mean (7.34). Hence, based on these values we can conclude that people are mostly satisfied with their jobs.

Figure 1: Distribution of job satisfaction
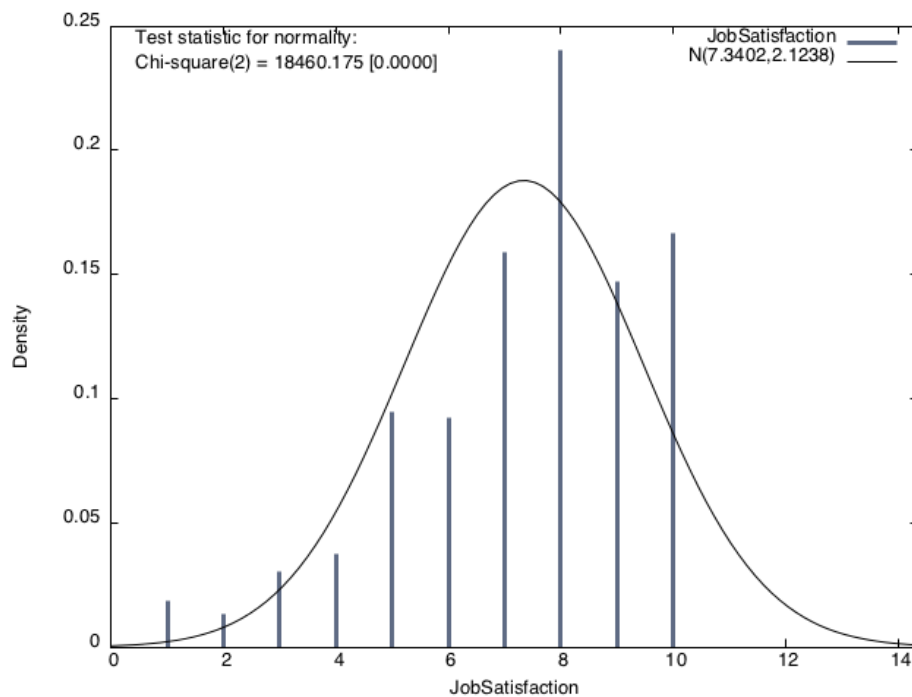
Regarding education, the choice of possible answers is lower, middle and upper education. The lower education stands for primary education, usually until the age of 15, middle education is equivalent of high school and upper education means Bachelor degree, Master degree or Doctorate. Hence, we constructed dummies for middle and upper education. The study also uses generational dummies, which have value 1 if a respondent is a member of the particular generation and 0 otherwise.

Firstly, this study uses several work value variables. The survey asked respondents if such values are important for them personally in a job. Among these values is included good pay, pleasant people, not too much pressure, job security, good hours, useful job for society, generous holidays, achieving something, responsible job, interesting job, meeting people, learning new skills and family friendly job. The last two values are specific only for the 2008 wave, however all other values are in all four waves of the survey. Secondly, the job satisfaction itself. And thirdly, there are also some control variables such as age, gender, specific generation or education. The Table 1 shows descriptive statistics for all waves. We can see that the means of work values quite differ with range from 0,31 to 0,79. The full sample contains 46 % of women and the average age across four waves and four generations is 45 years. Moreover, the sample consists of 24 % of member of Silent Generation, 38 % of Baby Boomers, 21 % of

Generation X and 8 % of Y-ers[3]. The mean 7.34 and the median 8.0 of job satisfaction implies that people are relatively satisfied with their job. The Tables 1 to 4 in the Appendix then show values for specific generations.

Table 2: Summary statistics for the whole sample across four waves

Summary Statistics, using the observations 160 744					
(missing values were skipped)					
Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Good pay	0.787183	1.00000	0.00000	1.00000	0.409300
Not too much pressure	0.378359	0.00000	0.00000	1.00000	0.484979
Job security	0.648037	1.00000	0.00000	1.00000	0.477584
Good hours	0.508927	1.00000	0.00000	1.00000	0.499922
Generous holidays	0.318314	0.00000	0.00000	1.00000	0.465823
Achieving something	0.575151	1.00000	0.00000	1.00000	0.494322
Responsible job	0.448956	0.00000	0.00000	1.00000	0.497389
Interesting job	0.648130	1.00000	0.00000	1.00000	0.477555
Pleasant people	0.718677	1.00000	0.00000	1.00000	0.449646
Useful job	0.420824	0.00000	0.00000	1.00000	0.493693
Meeting people	0.476851	0.00000	0.00000	1.00000	0.499465
Job Satisfaction*	7.3402	8.0000	1.00000	10.0000	2.1238
Sex	0.46064	0.00000	0.00000	1.00000	0.498450
Age	44.8626	43.0000	15.0000	108.000	17.4695
Silent Generation	0.240476	0.00000	0.00000	1.00000	0.427374
Baby Boomers	0.382876	0.00000	0.00000	1.00000	0.486090
Generation X	0.213513	0.00000	0.00000	1.00000	0.409788
Generation Y	0.0882770	0.00000	0.00000	1.00000	0.283698

*values for Job satisfaction taken from reduced sample consisting of 84 711 observations

3.2 Methodology

Firstly, to investigate whether there truly are some differences in work values between different generations at different points of time, the study starts by analysing work values in the 2008 wave. After the examination of the latest wave, the thesis then analyses other three waves from 1999, 1990 and 1981. The study examines the differences simply by mean differences between Silent Generation, Baby Boomers, Generation X and Generation Y. Furthermore, an

---

[3] The rest of the sample was born before 1924 and hence is not assigned to any generation examined in this thesis.

OLS regression was also performed as we would like to distinguish the effects and confirm that the differences are linked to generation and not to age. This step was also performed for all waves and all work values available. To perform such analysis, the regression specification is as follows:

$$Work\ value_i = \alpha + \beta_1 * Gen\ Silent_i + \beta_2 * Gen\ BB_i + \beta_3 * Gen\ X_i + \beta_4 * Gen\ Y_i + \beta_5 \\ * Age_i + \beta_6 * Age_i^2 + \beta_7 * Education\ Middle_i + \beta_8 * Education\ Upper_i \\ + \beta_9 * Male_i + \epsilon_i$$

where Work value is the particular value of interest, Gen Silent, Gen BB, Gen X and Gen Y are dummies for a specific generation, and age, age squared, gender male and education dummies are the control variables. The index i indicates values for all variables for particular individual. We would like to establish that differences are generational instead of linked to age. Hence, the hypothesis is that β_5 and β_6 is insignificant, thus equal to zero, and β_1, β_2, β_3 and β_4 should be significantly different from zero. This regression was performed for the 2008 and 1999 wave.

Due to missing values for education, the model for 1990 and 1981 waves was slightly different as there were no education dummies, but all other variables remained same and hence, the model is below:

$$Work\ value_i = \alpha + \beta_1 * Gen\ Silent_i + \beta_2 * Gen\ BB_i + \beta_3 * Gen\ X_i + \beta_4 * Gen\ Y_i + \beta_5 \\ * Age_i + \beta_6 * Age_i^2 + \beta_7 * Male_i + \epsilon_i$$

with same hypotheses as in the regression above. That is, generational coefficients are significant and coefficient of age and age squared insignificant. Again, the index i indicates values for all variables for particular individual. In all regression models above the baseline are individuals not assigned to any examined generations. Hence, for example, a significant generational coefficient would suggest that particular generation have lower (higher) values of specific work value than this unassigned group. However, as our main goal is to see whether the differences are driven by generations or by age, setting our baseline group have no harm.

Next step in the analysis is performing a fixed effect regression with aggregated data for all four waves. Our pooled cross-sectional data are unbalanced as four waves have different number of observations. The model is the same as in the 1990 and 1981 waves but now with wave fixed effects included in the regression. This regression does the same as the wave regression, but it compares members of particular generations in different waves and not only in one wave. This regression should catch any changes over time. The generation-coefficients

look for systematic differences that persist independent of age, the age-coefficients are estimated using all samples. Thus, the model is as follows:

$Work\ value_{iw}$

$$= \alpha + \beta_1 * Gen\ Silent_{iw} + \beta_2 * Gen\ BB_{iw} + \beta_3 * Gen\ X_{iw} + + \beta_4 * Gen\ Y_{iw}$$
$$+ \beta_5 * Age_{iw} + \beta_6 * Age_{iw}^2 + \beta_7 * Male_{iw} + \delta_w + \epsilon_{iw}$$

where the only difference is δ_w representing the wave fixed effects. This model will bring more understanding to the first research question. We hypothesize, again, that the generation-coefficients will be significant, hence different from zero, and the age-coefficient will be insignificant. The indices i and w indicate values for all variables for particular individual in a particular wave. Again, our baseline group are unassigned individuals. But since this fixed effect regression is our main model, we will compare differences between the generational coefficients by performing Wald test. We also performed all models with cubic age variable, but the results showed that adding this had almost no effect on significance and effect of other variables and models mostly remained the same. Hence, we proceed with age and squared age only.

The last part of the analysis of this thesis is to investigate whether there are differences between generations in job satisfaction. We performed the mean analysis as well as fixed effect regression. Due to the nature of the dependent variable which is based on 10 point likert scale, performing a regression using an ordered logit model with fixed effects would be correct, however, due to easier interpretation of the results we used panel least squares regression. The same pooled cross-sectional data as in the previous analysis was used, however the size of the sample significantly reduced due to missing values. The model we proceeded with is the same as the previous one with the change of dependent variables which is now job satisfaction. Thus, the model is:

$Job\ Satisfaction_{iw}$

$$= \alpha + \beta_1 * Gen\ Silent_{iw} + \beta_2 * Gen\ BB_{iw} + \beta_3 * Gen\ X_{iw} + + \beta_4 * Gen\ Y_{iw}$$
$$+ \beta_5 * Age_{iw} + \beta_6 * Age_{iw}^2 + \beta_7 * Male_{iw} + \delta_w + \epsilon_{iw}$$

Hypotheses remained same and hence we expect the generation-coefficients to be significant and the coefficient of age insignificant, thus equal to zero. The indices i and w indicate values for all variables for particular individual in a particular wave. Our baseline population is same as above.

4. Analysis and results

4.1 Mean analysis

As already mentioned in the previous section, we firstly established whether there are differences in work values among different generations. Firstly, the means of work values of all four generations were compared between each other in the 2008 wave. As can be seen from the Table 2, there are differences in most work values, however, several exceptions are present. Quite surprisingly, there is no difference in job security between Silent Generation and other three generations and between Baby Boomers and Generation X. Furthermore, no difference was also found between Silent and Y-ers in value Useful for society, between X and Y in Responsible job value between Silent and Boomers in Family friendly value. Mostly, the differences are significant at 1 percent level, however, there are also some exceptions with significance at 5 or 10 percent level. Altogether, there are differences in 71 out of 78 possible combinations and hence, we can conclude that there are significant differences between generations in work values in the 2008 wave. However, as standard deviation varies between 0,31 and 0,51, the economic significance of the differences between generations is thus small.

Table 3: Mean differences between generations in the 2008 wave

Work value	2008 - means				Differences					
	Silent	BB	X	Y	Silent vs. BB	Silent vs. X	Silent vs. Y	BB vs. X	BB vs. Y	X vs. Y
Good pay	0,7854	0,8241	0,8605	0,8844	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Pleasant people	0,6896	0,7415	0,7764	0,7987	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Not too much pressure	0,3983	0,4527	0,4815	0,5290	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Job security	0,7014	0,6970	0,6979	0,7101	0,417	0,5287	0,1461	0,8639	0,0116**	0,0245**
Good hours	0,5003	0,5511	0,5996	0,6289	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Useful for society	0,4607	0,4472	0,4325	0,4619	0,0214**	0,000***	0,864	0,0045***	0,0095***	0,000***
Generous holidays	0,3076	0,3492	0,3794	0,4268	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Achieving something	0,5674	0,5961	0,6252	0,6704	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Responsible job	0,4779	0,4889	0,5113	0,5206	0,0618*	0,000***	0,000***	0,000***	0,000***	0,115
Interesting job	0,6459	0,6691	0,6918	0,7245	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***
Meeting people	0,4746	0,4922	0,5071	0,5413	0,0028***	0,000***	0,000***	0,0042***	0,000***	0,000***
Family friendly	0,5400	0,5457	0,6026	0,5744	0,3334	0,000***	0,000***	0,000***	0,000***	0,000***
Learning new skills	0,4484	0,4984	0,5663	0,6361	0,000***	0,000***	0,000***	0,000***	0,000***	0,000***

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

The same analysis was performed with data from 1999. This wave is missing two work values, specifically Family friendly and Learning new skills, so we compare now 11 available work values. The Table 3 shows the results. This wave shows significant differences between generations in 55 out of possible 66 combinations. Again, the difference is mostly significant at the 1 percent level. The results show that in 4 of 11 compared work values, specifically Good pay, Good hours, Responsible jobs and Interesting job, there are no significant differences between Generation X and Generation Y. Job security value shows again no difference between Silent Generation and all other and also no difference between Baby Boomers and Generation Y. Moreover, no difference was also found between Boomers and Y-ers. Nevertheless, as in the previous wave, the standard deviation of all work values is between 0,35 and 0,5 and hence, even though the difference is statistically significant, the economic significance is again very small. However, we can still conclude that again there are significant differences in work values in 1999 wave.

Table 4: Mean differences between generations in the 1999 wave

Work value	1999 - means				Differences					
	Silent	BB	X	Y	Silent vs. BB	Silent vs. X	Silent vs. Y	BB vs. X	BB vs. Y	X vs. Y
Good pay	0,7577	0,8204	0,8523	0,8535	0,000***	0,000***	0,000***	0,000***	0,0012***	0,9073
Pleasant people	0,6421	0,7098	0,7665	0,7941	0,000***	0,000***	0,000***	0,000***	0,000***	0,0157**
Not too much pressure	0,3164	0,3627	0,3957	0,4332	0,000***	0,000***	0,000***	0,000***	0,000***	0,0047***
Job security	0,6652	0,6684	0,6566	0,6856	0,5924	0,1827	0,1115	0,0441**	0,1706	0,0236**
Good hours	0,4544	0,5185	0,5495	0,5571	0,000***	0,000***	0,000***	0,000***	0,0037***	0,5718
Useful for society	0,4414	0,4303	0,4200	0,4493	0,0832*	0,0016***	0,5565	0,0930*	0,1511	0,0285**
Generous holidays	0,2706	0,3140	0,3436	0,3706	0,000***	0,000***	0,000***	0,000***	0,000***	0,0366**
Achieving something	0,5020	0,5659	0,6294	0,6572	0,000***	0,000***	0,000***	0,000***	0,000***	0,0334**
Responsible job	0,4206	0,4428	0,4653	0,4526	0,001***	0,000***	0,0178**	0,000***	0,4641	0,3458
Interesting job	0,5958	0,6655	0,7128	0,7198	0,000***	0,000***	0,000***	0,000***	0,000***	0,5652
Meeting people	0,4515	0,4929	0,5287	0,5797	0,000***	0,000***	0,000***	0,000***	0,000***	0.000***

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

Mean analysis of work values in 1990 wave is shown in Table 4. Because the survey was conducted in 1990, there are no members of Generation Y as the first ones were born in 1980 and the youngest respondents in the survey are 16 years old. Hence, the mean comparison was performed only between the Silent Generation, Baby Boomers and Generation X. The analysis shows differences in 29 out of 33 possible combinations. The few exceptions are no difference between the Silent Generation and Boomers in Not too much pressure value and Responsible

job value, and no differences in values Good hours and Useful for society between Boomers and Generation X. The significance is mostly on 1 percent level with several exceptions which are significant are 5 or 10 percent level. However, as the differences are mostly even less than a quarter of standard deviation, the economic significance is small. All in all, there are significant differences in work values in the 1990 wave between those three generations.

Table 5: Mean differences between generations in the 1990 wave

Work value	1990 - means				Differences		
	Silent	BB	X	Y	Silent vs. BB	Silent vs. X	BB vs. X
Good pay	0,7151	0,7561	0,7739	N/A	0,000***	0,000***	0,0056***
Pleasant people	0,6665	0,6983	0,7638	N/A	0,000***	0,000***	0,000***
Not too much pressure	0,3128	0,3060	0,3308	N/A	0,2421	0,0146**	0,000***
Job security	0,5998	0,5678	0,5517	N/A	0,000***	0,000***	0,0317**
Good hours	0,4311	0,4574	0,4608	N/A	0,000***	0,000***	0,652
Useful for society	0,4361	0,3831	0,3887	N/A	0,000***	0,000***	0,4526
Generous holidays	0,2641	0,2745	0,3085	N/A	0,0583*	0,000***	0,000***
Achieving something	0,5367	0,5601	0,5913	N/A	0,000***	0,000***	0,000***
Responsible job	0,4215	0,4142	0,4015	N/A	0,2356	0,0107**	0,0882*
Interesting job	0,5697	0,6349	0,6846	N/A	0,000***	0,000***	0,000***
Meeting people	0,4315	0,4466	0,5064	N/A	0,0144**	0,000***	0,000***

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

The last wave from 1981 also does not have any members of the Generation Y and only 87 members of the Generation X. Hence, the results for X-ers might not be accurate due to small number of observations. However, we can see from the results in the Table 5 that there are less significant differences than in the previous waves. As in 1990 wave, there are also 33 possible combinations and 22 are significantly different. There is no difference between generations in Not too much pressure value, in Useful for society value only the difference between Silent Generation and Boomers is significant. Apart from this, couple of work values showed no difference between Boomers and Generation X, specifically values Pleasant people, Achieving something and Interesting job. With regard to economic significance, there are two differences which we should take a closer look. The difference between Boomers and X-ers in Generous holidays value is one third or standard deviation, and the difference between the same generations in Responsible job value is two thirds of standard deviations. Hence, only these two differences are statistically and economically significant. However, this could be due to low number of observations from Generation X.

Table 6: Mean differences between generations in the 1981 wave

Work value	1981 - means				Differences		
	Silent	BB	X	Y	Silent vs. BB	Silent vs. X	BB vs. X
Good pay	0,6710	0,7106	0,7931	N/A	0,000***	0,016**	0,0908*
Pleasant people	0,6766	0,7443	0,8046	N/A	0,000***	0,0112**	0,1992
Not too much pressure	0,3215	0,3090	0,3678	N/A	0,1187	0,359	0,2376
Job security	0,6142	0,5917	0,4828	N/A	0,0076***	0,01258**	0,0397**
Good hours	0,4553	0,4703	0,5977	N/A	0,0791*	0,0081***	0,0178**
Useful for society	0,3828	0,3606	0,3563	N/A	0,0076***	0,6145	0,9341
Generous holidays	0,2715	0,2817	0,1379	N/A	0,187	0,0053***	0,003***
Achieving something	0,5213	0,5703	0,6552	N/A	0,000***	0,0131**	0,1114
Responsible job	0,4066	0,4093	0,1609	N/A	0,7531	0,000***	0,000***
Interesting job	0,5497	0,6402	0,6552	N/A	0,000***	0,0497**	0,7714
Meeting people	0,4269	0,4712	0,3448	N/A	0,000***	0,1248	0,0187**

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

From the mean analysis of all four waves we can conclude that during almost 30 years there are significant differences in work values between generations. Indeed, there are some exceptions such as job security value in waves from 2008 and 1999 in which we see that not many differences were found and thus it seems that job security is valued more or less same across generations in the last 15 years. But, as we found statistically significant differences, the economic significance is missing. Hence, the differences between generations are present, but are very small. However, the difference might be related to age and not to particular generations. And this may be the case not only with the job security value but with others.

To differentiate between the age effect and the generation effect, we proceeded with further step in the mean analysis. We compared means of all work values for a specific generation across different waves. If the differences are related to generation, we would expect the means to be similar with not much movement across years. We performed this analysis only for Silent Generation, Baby Boomers and Generation X as there are only two waves out of four which include any members of Generation Y. As can be seen from the Figures 1,2 and 3 in the Appendix, most means of work values increased in the last wave from 2008 for all generations. The results also suggest that some work values increased steadily over the three decades and hence might be connected more to age. The graph for Generation X show some significantly lower means in the 1981 wave, for example for values Meeting People, Generous Holidays or Responsible job. However, this might again be due to low number of observations as was

17

mentioned previously. Before drawing any detailed conclusions, we have to go further in the analysis which is described in the following section.

4.2 Wave regressions

To investigate whether the differences are linked to a particular generation and not to age, we also performed OLS regression for each work value as stated in the Section 3. The key difference between the analysis here and above are the controls. Adding them to the analysis is important as we would like to see whether the controls might be responsible for a shift in differences from those found above in the raw data. Moreover, as already mentioned, by adding them to the model we can distinguish whether the differences are linked to generations or to age. Since our dependent variables, which in this case are the particular work values, are binary, we have also tried logit regression but the results were similar. We expect the coefficients of all generations to be significant and the coefficient of age to be insignificant.

<u>2008 wave</u>

The Table 5 in the Appendix shows the results for the latest wave where all 13 work values were examined. As can be seen, some work values have none, one, two or three generation coefficients significant. If the generational coefficients are significant, they are positive with one exception Family friendly value. This work value has three coefficients significant and negative as opposite to other work values. The dummy variable of Silent Generation is positive and significant at values Good pay, Job security, Achieving something, Responsible job and Interesting job. The coefficient is between 0,03 and 0,04 and hence a member of Silent Generation has 3-4 percent higher probability of stating that those values are important to him than for an individual not assigned to any examined generation in the 2008 wave. There is only one value with significant coefficient of Baby Boomers, specifically Family friendly value. Being a member of this generations means 8% lower probability of stating that Family friendly work value is important to him than for our baseline population. Same holds for coefficient of Generation X as it is only significant and negative at Family friendly value. The effect here is lower as it is only 6 percent less probable to state such value is important to him. The dummy variable for Generation Y is significant in four work values out of thirteen. Positive coefficient is present at Job security, Achieving something and Responsible job models with effect of around 5 percent, and negative is in Family friendly model with effect of 11 percent. All taken at ceteris paribus conditions and lower (higher) levels are relative to our baseline group.

Regarding the age variable, we can see that it is significant in 6 out of 13 work values, all coefficients are negative except the one in the Job security model. Specifically, it is significant at 1 percent level in the Good pay, Generous holidays and Interesting job models, and at 5 percent level at the Learning new skills model. And 10 percent significance is at the Useful job model. The positive coefficient in the Job security model is significant at 1 percent level. However, the economic significant of all age coefficients is small. Age squared coefficient is significant and negative in the Not too much pressure, Job security and Family Friendly models at the 1 percent level. There is also 5 % significance at the Interesting job model. These results of age variable imply that as people get older they are less likely to say that those values are important in the job. In case of job security, people are more likely to state that. Moreover, the significant and negative coefficient of age squared means that as people get older the effect of age is lessoned. Both education dummies are mostly significant at the 1 percent level and negative, however with some exceptions where the coefficient is positive, especially in the higher education. Also the last variable, being a male, is significant in seven models and the coefficient is positive or negative depending on a specific model.

Let's focus now discussion on which differences are now difference from those found in the mean analysis. In models with work values Good pay, Pleasant people and Not too much pressure were found differences between all generations in the analysis above, however, this is probably due to age in Good pay model and other controls in the other two models. Good hours, Meeting people, Achieving something and Responsible job models also showed differences between all generations, nevertheless this is most likely due to control variables education and gender as age and generational coefficients are insignificant with exceptions for Silent generation and Generation Y in the last two models. Family friendly model showed differences between all but Silent vs. BB combination in the mean analysis and regression results are in line with this. In the rest of the models, differences between generations are most likely caused by age or control variables.

<u>1999 wave</u>

The results of this wave are shown in the Table 6 in the Appendix. The model is same as in the 2008 wave with only 11 work values now. The coefficient of Silent Generation is significant in two models, specifically Job security and Useful job models. Both has positive coefficients with the effect of 4 percent higher probability of stating the particular value is important than for an individual not assigned to any examined generation. The Baby Boomers dummy variable is significant only in Job security model. Member of this generation is 5 %

more probable of stating that job security is important to him. The Generation X coefficient is significant and positive in the models Not too much pressure and Job security, but negative in the Interesting job model. The size of the effect is between 5 to 6 percent in both ways. The very same stands for coefficient of Generation Y. Moreover, it is also significant in the Useful job model. The effect is 7-8 percent is positive and 6 % if negative. The age variable is significant in four models, specifically Job security with positive coefficient, and Achieving something, Interesting job and Meeting people with negative coefficient. Age squared is also significant in four models and always negative. As in the wave 2008, both education variables are mostly significant with Middle education all but one positive coefficients, and Higher education has some positive and some negative coefficients. The dummy of higher education has in some cases big economic significance, for example in Good hours model or Interesting job model. Regarding the gender variable, it is significant in eight models out of 11 and again with some positive and some negative coefficients. The model with Job security value as dependent variable shows all coefficients significant except the gender one.

In the first two work values, there are significant differences between all generations but one, yet these are probably driven by education and gender. The Pressure model also found difference between all generations and regressions results suggest they might be driven by generation coefficients. Same holds for Useful for society model with exception that the mean analysis found no difference between the Generation Y and Silents. Contrary to our findings from the analysis in the previous section regarding Job security model, regression results show significant all generational coefficients. Differences between generations in other models are driven mostly by education and gender, and sometimes by age.

<u>1990 wave</u>

This wave also investigated 11 available work values, however due to missing variables on education the model is slightly different. Moreover, as already mentioned, logically, there are no members of Generation Y, hence only three generational dummy variables are present. The results are shown in the Table 7 in the Appendix. The coefficient of Silent Generation is significant and positive in Not too much pressure and Useful job models. Being a member of this generation means 3-4 percent higher probability of stating that such values are important than for an individual not assigned to any examined generation. Baby Boomers variable is significant and negative in two models – Pleasant people and Job security. The effect is 6 and 4 percent less probably of saying that, respectively. The coefficient of Generation X is significant in four models with negative effect in Pleasant people and Good hours, and positive

effect in models Not too much pressure and Useful job. Regarding the age variable, it is significant in seven models with two positive and five negative coefficients. Age squared is significant only in three models, two coefficient have negative effect and one positive. With regard to gender variable, which is again male dummy, it has significance in all but two models with both positive and negative coefficients. The effect varies between 1 to 7 percent in both ways.

Again, there are some models which are not in line with the findings from the raw data. In some models, the differences can be assigned to the generation variables or to age, but in Holidays, Achieving something and Responsible job model are differences most likely driven by gender and other unobserved characteristics.

<u>1981 wave</u>

The last examined wave is from 1981, results shown in the Table 8 in the Appendix. As in previous wave, there are no members of Generation Y or education dummies. This wave has also only 87 observations of Generation X and hence the results might not be absolutely valid. The dummy variable of Silent Generation is significant in three models – Good pay and Good hours with positive effect, and Job security with negative coefficient. Baby Boomers have significant coefficients in same models as Silents and on top of that Generous holidays model which is also negative. The effect is between 5 to 8 percent. For example, member of this generation is 8 percent more probable to say that having a good pay in job is personally important to him than for our baseline group. Regarding coefficients of Generation X, it has significant values in seven models. The economic significance is high, however, this is possibly due to small number of observations. The age coefficient is significant and positive in models Good pay, Job security, Good hours, Useful job, and negative in Interesting job and Meeting people models. Age squared is also mostly significant with all but one negative coefficients. Last variable of interest is again gender - male. It has significance at 1 percent level in all but two models with effect between 2 to 8 percent in both positive or negative way. The results from the last wave show three work values with all significant variables which does not say much which effect is stronger and hence, we need to look deeper.

In this wave the mean analysis found no differences at all in Not too much pressure work value and the regression result is in line with this finding. Models Generous holidays and Responsible job showed statistically and economically significant differences between X-ers and Boomers and in both models the coefficient of Generation X is significant. Differences

between generations in Good pay, Job security and Good hours models seem to be driven by the generations. Differences in other models are most likely driven by age or gender variables.

To conclude, interpretation of results of these wave regressions is somehow mixed. Some models showed significant generational coefficients, others did not, and several models showed significant and positive age variable. Moreover, for example the Job security model has significant all these variables in two waves. It has a logical explanation – since older generations and older people are closer to retirement and losing their job might be a huge inconvenience, they value job security more, hence the coefficient of age is significant and positive. The results are sometimes in line with the findings from the mean analysis, but some models showed differences for which controls are responsible. In addition, as we compared the effects of being a member of examined generations relative to our baseline group, we did not investigate whether there are differences between the generational coefficients. However, to bring any detailed conclusions, a deeper analysis is needed. This part will be explained in the following section.

4.3 Fixed effect regression

Next step in our analysis is a fixed effect regression with our pooled cross-sectional data which should bring more light into mixed results from the previous chapter. This model is described in the section 3.2. We proceeded with a simple panel least squares regression with wave fixed effects. Thus, in the model, the age-coefficients are estimated using all samples. The generation-coefficients look for systematic differences that persist independent of age. For this type of regression, we had to aggregate data from all four waves into one unbalanced pooled cross-sectional data. Furthermore, we had to exclude all invalid values for job satisfaction variable, so we ended up with 160 744 observations across four different periods which represent four waves of the survey. The results are shown in the Table 7 below.

Table 7: Work values panel regression for all waves

	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job
const	0.8449***	0.8481***	0.3257***	0.5868***	0.5446***	0.3409***
	(0.01703)	(0.01891)	(0.02032)	(0.02010)	(0.02096)	(0.02088)
Gen_S	0.009315	-0.002432	-0.009529	0.0003289	-0.008142	0.02413***
	(0.005693)	(0.006320)	(0.006792)	(0.006719)	(0.007006)	(0.006979)
Gen_BB	0.004713	0.0001458	-0.008080	-0.02162**	-0.008052	0.01166
	(0.008438)	(0.009367)	(0.01007)	(0.009959)	(0.01038)	(0.01034)

22

Gen_X	0.0006540	0.006099	0.02030	-0.02072	0.006364	0.01766
	(0.01115)	(0.01237)	(0.01330)	(0.01315)	(0.01372)	(0.01366)
Gen_Y	-0.003866	-0.01088	0.06543***	0.007887	0.02399	0.05527***
	(0.01367)	(0.01517)	(0.01630)	(0.01613)	(0.01682)	(0.01675)
Age	-0.001016**	-0.002551***	0.003554***	0.003740***	0.001643***	0.002217***
	(0.0004212)	(0.0004676)	(0.0005025)	(0.0004971)	(0.0005184)	(0.0005163)
Age^2	-1.566e-05***	-3.395e-07	-4.683e-05***	-4.172e-05***	-3.774e-05***	-1.596e-05***
	(3.928e-06)	(4.360e-06)	(4.685e-06)	(4.635e-06)	(4.834e-06)	(4.815e-06)
Male	0.04412***	-0.03031***	-0.006479***	0.004467*	-0.04405***	-0.003118
	(0.002013)	(0.002235)	(0.002402)	(0.002376)	(0.002478)	(0.002468)
Fixed effects	Wave	Wave	Wave	Wave	Wave	Wave
n	160744	160744	160744	160744	160744	160744
R2	0.0349	0.0145	0.0217	0.0126	0.0202	0.0032

	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Meeting people
const	0.3824***	0.6377***	0.4033***	0.8574***	0.6299***
	(0.01960)	(0.02082)	(0.02097)	(0.02006)	(0.02105)
Gen_S	-0.02045***	0.006517	-0.004110	0.004328	0.01725**
	(0.006552)	(0.006959)	(0.007009)	(0.006707)	(0.007037)
Gen_BB	-0.03015***	0.005103	-0.01349	0.004214	0.007843
	(0.009711)	(0.01031)	(0.01039)	(0.009941)	(0.01043)
Gen_X	-0.02228*	0.01484	-0.003752	-0.01938	0.0007098
	(0.01283)	(0.01362)	(0.01372)	(0.01313)	(0.01378)
Gen_Y	0.002444	0.03017*	0.008437	-0.04805***	-0.005035
	(0.01573)	(0.01670)	(0.01683)	(0.01610)	(0.01689)
Age	-5.028e-05	-0.001480***	0.001972***	-0.006248***	-0.004149***
	(0.0004847)	(0.0005148)	(0.0005185)	(0.0004962)	(0.0005206)
Age^2	-1.901e-05***	-6.667e-06	-2.726e-05***	3.155e-05***	2.139e-05***
	(4.520e-06)	(4.801e-06)	(4.835e-06)	(4.627e-06)	(4.855e-06)
Male	0.007034***	0.02148***	0.05760***	0.007847***	-0.05066***
	(0.002317)	(0.002461)	(0.002479)	(0.002372)	(0.002489)
Fixed effects	Wave	Wave	Wave	Wave	Wave
n	160744	160744	160744	160744	160744
R2	0.0132	0.0115	0.0094	0.0160	0.0097

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

In general, most of the work values have insignificant coefficients of generations and significant coefficient of age, contrary to our hypotheses. All interpretations below are with ceteris paribus conditions and are relative to our baseline group which are individuals not assigned to any examined generations. The Good pay model has significant age variable at 5 %

level with negative coefficient and negative coefficient of age squared at 1 percent level. However, the economic significance is small as 10-year difference between two individuals makes only 1 percent change in the importance of this work value. The negative coefficient of the age squared variable means that the effect of age is lessening. Moreover, males are more likely by 4 percent to say that good pay is important aspect in the job. All generation coefficients are insignificant. The second model is with Pleasant people work value as the dependent variable. Again, all coefficients of generations are insignificant. The coefficient of age remained negative with significance at 1 percent level, however the effect now more than doubled. The gender variable is now negative and significant with effect of 3 %. In the Pressure model, we can see that the coefficient of Generation Y is now positive and significant at the 1 % level with the effect of 6 percent. Because of the mean of 0,38, the economic significance is high. Other generational coefficients are still insignificant. Age, age squared and gender variables are again significant, all at the 1 percent level. The effect of age is now positive with size of 3,6 % and due to the mean it is also economically significant. Age squared is negative and gender variable as well with very low economic significance. The next regression is with Job security variable. This model also showed one generation-coefficients significant. Members of the Baby Boomers generation are 2 percent less likely to state that job security is important aspect in their job. Other generations have no effect on the importance of the work value. Quite surprising is the insignificant coefficient of the Silents as they are often characterized as a generation who values security. The age and age squared variables are again significant at 1 percent level, with positive effect of age of 3,7 % and negative effect of age squared. Being a male has a small positive effect, though significant only at the 10 percent level. The fifth model is with Good hours aspect. None of the generational coefficients are now significant, however age, age squared and gender variables have again significant coefficients at the 1 % level. Nevertheless, the effect of age is small and negative effect of age squared again suggests that the effect decreases with the age. Gender variable is negative thus males are 4,4 % less probable to say that Good hours is important work value. The next model is with Useful job as our dependent variable. Here we have two significant generation-coefficients as Silents and Y-ers are now significant at the 1 percent level. Silents are now 2,4 % more likely to value useful job, and Generation Y even 5,5 % more likely. Both are economically significant. The Generation X and the Baby Boomers variables are insignificant. Age is positive and significant, age squared again negative and significant – both at the 1 percent level. This model shows no effect of gender. Next, we performed model with Generous holidays as a dependent variable. Three out of four generation-coefficients are now significant and negative. The Silent generation variable shows effect of

2 percent, the Baby Boomers 3 %, both at the 1 percent significance level, and X-ers 2,2 % with 10 percent significance level. The coefficient of age lost its significance and is insignificant, however age squared still remained negative and significant. And gender variable is significant and positive. Next regression is with Achieving something aspect. The coefficient of Generation Y is significant at 10 percent level with 3 percent positive effect. Other generation variables are insignificant. Age variable is negative and significant at the 1 percent level, but age square is now insignificant. Gender variable has a positive effect of about 2 percent. The ninth regression is regarding Responsible job work value. None of the generation-coefficients is significant in this model. The age-coefficient is significant at the 1 percent level and positive, age squared is also significant and negative. Male individuals are 5,7 % more probable to state that such value is important in a job. Next model is for Interesting job aspect. The only significant generational coefficient is for Y-ers with negative effect of 4,8 %. Moreover, both age and age squared are significant at the 1 percent level, however age is now negative and age squared positive, with age being economically significant. Being male has significant and positive effect. The last model is Meeting people regression. Member of the Silent generation is 1,7 % more likely to say this work value is important in a job, however none of the other generation-coefficients is significant. The coefficient of age is negative and significant, age squared positive and significant, both at the 1 % level. Gender variable is again significant and negative as males are 5 % less probable to say that meeting people is important aspect of work.

We also ran the same regressions without the age variables, to see how much of supposedly generational differences are absorbed by the set of age variables and we found that all but two models have significant all generational coefficients at the 1 percent level. This means, that adding the age variables changes the significance of the generational variables and the differences are mainly absorbed by age. The two exceptions are Useful job and Job security models which have only 2 or 3 significant generational coefficients, respectively.

The discussion above investigates whether the differences are assigned to generations, age or control variable. However, it does not say anything about the differences between generational coefficients and hence we performed Wald test to examine if the those are different from each other. The results of p values are shown in the Table 8 below. Our hypothesis for Wald tests are that the two coefficients are the same. The highlighted cells indicate statistically different generational coefficients as we consider 5 percent significance level. As can be seen, in 9 out of 11 models there is a significantly different coefficient between Generation X and Y. On the other hand, only two models have significantly different coefficients between the Silents

and Baby Boomers. Interestingly, there is no difference between coefficients in Good pay and Meeting people models. Quite opposite results were found in models Pressure and Interesting job. There are differences between all coefficients except Silents and Baby Boomers.

Table 8: Wald tests for generational coefficients

	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job
S v BB	0,37	0,62	0,78	0	0,98	0,02
S v X	0,24	0,3	0	0,01	0,11	0,47
S v Y	0,19	0,45	0	0,5	0,01	0,01
BB x X	0,33	0,2	0	0,85	0	0,24
BB v Y	0,22	0,15	0	0	0	0
X v Y	0,36	0	0	0	0	0

	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Meeting people	
S v BB	0,06	0,79	0,09	0,98	0,09	
S v X	0,82	0,35	0,96	0	0,07	
S v Y	0,05	0,06	0,31	0	0,08	
BB x X	0,1	0,06	0,06	0	0,17	
BB v Y	0	0	0,01	0	0,14	
X v Y	0	0,01	0,05	0	0,35	

The Figures 2 and 3 shows how a Job Security work value and Generous Holidays work value evolves with age according to our regressions results. We picked these values as we consider is as one of the most important one and we personally found the results interesting. The graphs are based for male individuals. As can be seen below, the Job security importance increased with age with its peak at 45 years and the in decreases. The Generation Y has the highest values contrary to our predictions as we expected the Silents to have the highest values as they are characterized as those who value job security.

26

Figure 2: Job Security work value

Job Security work value
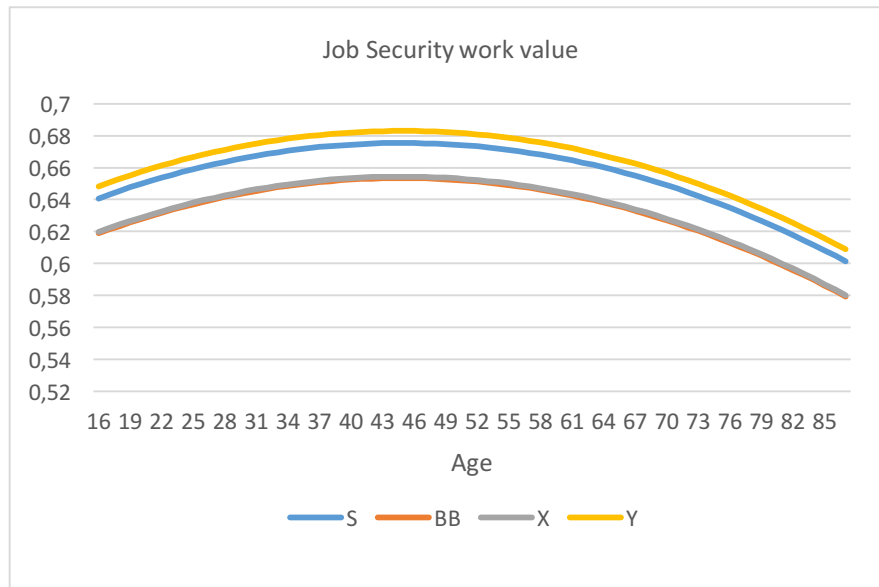
The next figure shows Generous Holidays work value. We see that the importance of this work value is decreasing with age. This is also unexpected as older people should prefer generous holidays because they would like to spend more time with their families. The highest values have again the Generation Y, yet it is the only generation with insignificant coefficient.

Figure 3: Generous Holidays work value

Generous Holidays work value
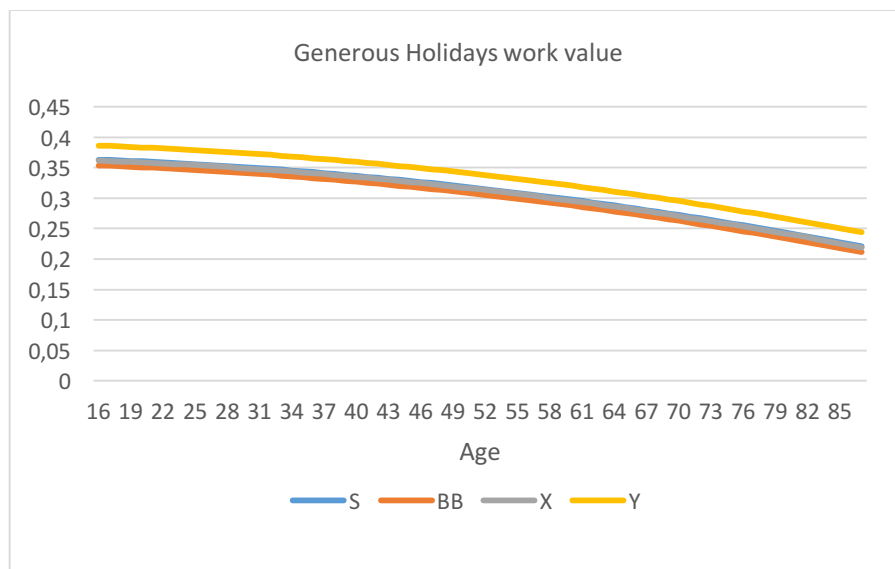
As the results from the panel regression and Wald test were discussed in the paragraphs above, we may conclude in several points. Firstly, generation-coefficients are mostly insignificant with several exceptions. If significant, the effect is both positive and negative with strength between 1 to 6 percent. However, only Generous holidays model includes more than two significant generational coefficients and no model shows all generation variables

27

significant as predicted by our hypotheses. On the other hand, the age coefficients are significant at 1 percent level in all but one models with both positive and negative effect. The effect varies between 0,1 to 0,6 percent in both ways per one year. The economic significance also differs as in some cases it is economically significant and in some not. Age squared variable is significant in all except two regressions with both positive and negative effect, hence, the effect of age is not linear. Last variable in our model is gender which is also significant in all models with one exception. Both effect and economic significance varies across models. The Wald test uncovered that in some work values there is a significant difference between coefficients and in some not. To sum it up, this analysis showed that differences in work values between generations depend on the specific work value as some are driven by age and some by generations.

4.4 Job satisfaction analysis

The final part of the thesis investigates whether there are differences in job satisfaction between generations. The procedure is similar as was in the work values examination, we firstly investigate differences by mean analysis and then run a panel least squared regression with the model described in the section 3.2. Afterwards, we perform Wald test.

<u>Mean analysis</u>

The Table 6 below shows the results of means of job satisfaction of different generations. There are 12 766 observations in the Silent generation, 41 629 members of Baby Boomers, 22 799 units in Generation X and 6 047 Y-ers. With the rest of the sample not assigned to any observed generations it makes 84 711 units.

From the table below we can see there are significant differences in job satisfaction between all generations except Generation X and Generation Y. Moreover, Baby Boomers are significantly more satisfied with job then X-ers and Y-ers. These results are in line with the findings from studies by Young et. al. (2013) and Wilson et. al. (2008). In addition, mean 7,67 for the Silent generation is indeed the highest from all generations and it suggests that the oldest generation is the most satisfied with their job. From the analysis we can conclude that there are significant differences between generations with of course one exception and hence, this confirms our hypothesis.

Table 9: Mean differences of job satisfaction between generations

Job Satisfaction - means			
Silent	BB	X	Y
7,6745	7,3004	7,1994	7,2441
Differences					
Silent vs. BB	Silent vs. X	Silent vs. Y	BB vs. X	BB vs. Y	X vs. Y
0,000***	0,000***	0,000***	0,000***	0,000***	0,1461

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

<u>Panel regression</u>

The second part of the job satisfaction investigation is the panel least squares regression. As already mentioned, the model includes same variables as the model we used for work values analysis. We predict that there are differences in job satisfaction and these are driven by the generations and not by age. The Table 7 shows the regression results. Only the coefficient of Baby Boomers is significant at the 5 percent level, other generation-coefficients are insignificant. The coefficient of Baby Boomers means that people belonging to this generation have lower job satisfaction by 0,19 than our baseline group in ceteris paribus conditions. The coefficient of age variable is significant at the 1 percent level and has a positive effect. Hence, as people get older, they are more satisfied with their job. This is in line with the result from analysis above as the Silent generation is the most satisfied with their job. The insignificant coefficient of age squared suggests that the effect of age is linear. Furthermore, the gender variable is significant at the 5 % level, however, its economic significance is small.

Table 10: Panel regression for job satisfaction

Dependent Variable: Job Satisfaction					
Method: Panel Least Squares			Sample: 1981 - 2008		
Total panel (unbalanced) observations: 84711			Periods included: 4		
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
Const	6.750073	0.136048	49.61536	0.0000	***
Gen_S	-0.107616	0.066997	-1.606277	0.1082	
Gen_BB	-0.197040	0.079960	-2.464234	0.0137	**
Gen_X	-0.051050	0.095825	-0.532747	0.5942	
Gen_Y	0.101418	0.111566	0.909042	0.3633	
Age	0.018277	0.004044	4.520030	0.0000	***
Age^2	-2.01E-05	4.50E-05	-0.446391	0.6553	
Male	0.037113	0.014593	2.543289	0.0110	**
Period fixed (dummy variables) – Wave fixed effects					

R-squared	0.012106	Mean dependent var	7.340180
Adjusted R-squared	0.011989	S.D. dependent var	2.123848
S.E. of regression	2.111078	Akaike info criterion	4.332405
Sum squared resid	377478.4	Schwarz criterion	4.333618
Log likelihood	-183490.2	Hannan-Quinn criter.	4.332776
F-statistic	103.7910	Durbin-Watson stat	1.974799
Prob(F-statistic)	0.000000		

* represents significance at 10 percent level, ** at 5 percent level and *** at 1 percent level

We again performed Wald test to see if the generational coefficients differ from each other. The results reported that there is significant difference between all generational coefficients with one exception – Silents and Generation X. Yet the mean analysis showed opposite results.

As in the work value analysis, the Figure 4 then shows how a Job satisfaction evolves with age according to our regressions results. The graph is again based for a male individual. The graph show that the effect of age is linear and increasing. The satisfaction with work varies between 6,9 and 8,3. The most satisfied with their job are Generation Y according to our results, however the coefficient is insignificant. Baby Boomers are the least satisfied with their job. These results are not in line with the mean analysis.

Figure 4: Job satisfaction

From the above results of the job satisfaction analysis we can conclude that there are significant differences in job satisfaction between generations and they seem to be driven again by generations themselves. Hence, this leads to accepting our hypothesis. Moreover, the

findings also showed some contradiction to the mean analysis, but also showed a confirmation that older people are more satisfied with their job.

5. Conclusion

This research used data from European Values Study which is a large-scale cross-national and longitudinal survey research program to investigate whether there are significant differences in work value and job satisfaction between four generations – Silent Generation, Baby Boomers, Generation X and Generation Y. The survey took place at four different wave, particularly in 1981, 1990, 1999 and 2008 and hence, the structure of data allows us to examine if the differences are driven by generations of by age.

Firstly, we performed simple mean analysis to uncover if there truly are differences between generations in work values. We found that in all four waves the differences are significant which is in line with findings from previous studies. Afterwards, we proceeded with regressions for particular waves. In these models, controls were also present. Results from this analysis were somehow mixed as some models showed significant generational coefficients and others did not. To investigate further, we ran a fixed effect regression with our pooled cross-sectional data. Findings reveal that generational coefficients are mostly insignificant and age coefficients in almost all models significant. The effect of both is negative or positive depending on the model. In addition, we performed Wald test to see if the generational coefficients differ from each other. This analysis showed that differences in work values between generations depend on the specific work value as some seem to be drive by age or by other variables and others by generations themselves.

The second part of the thesis investigated whether there are differences in job satisfaction between generations. The setup was similar as we performed mean analysis, then fixed effect regression and Wald test as the last part of our analysis. The mean analysis uncovered that significant differences in job satisfaction are between all generations but Generation X and Generation Y. This is in line with our hypothesis. Next, we ran panel least squares regression with wave fixed effects. Results showed significant age variable. The Wald test then found that there is significant difference between all generational coefficients with one exception between Silents and Generation X. This means that the differences are most likely driven by generations themselves. Hence, we have to accept our hypothesis.

These findings have practical implications for the recruitment and management of the emerging workforce. Furthermore, understanding the work values helps companies to know how to attract new generations to their workforce. Apart from this, as older generations occupy management positions in many companies and younger generations are their subordinates, managers need to take into account different perceptions of work values to ensure good relationship at the workplace.

Indeed, the study has some limitations. First, as four waves vary in countries, number of observations and used questionnaires, we were unable to add more control variables to our models. Moreover, we uncovered statistically significant relations between variables, yet these need not represent causal relationship. Another limitation is that job satisfaction might be quite difficult to interpret as it depends on the current job individual has. However, without more detailed information on the job it is difficult to control for this. In addition, also current state of economy might influence the level of job satisfaction. In times of recession, the job satisfaction might be lower than in times of growth as the levels might be higher due to the lower/higher levels of wealth and income. Again, it would very hard to control for this. However, it might be that in times of growth the levels of job satisfaction would increase for all individuals regardless of generation. But it is a potential threat to our study as we use four waves and the survey were most likely conducted in different states of economy.

A recommendation for future research is to use the same dataset in a more detailed analysis, perform similar methodology for particular countries or occupation to see if there are any differences between those. In addition, one can also extent the research by performing the similar investigation using different dataset with panel data characteristics if such exists. This would be even more suitable for our research.

References

Blackburn, J. W., & Bruce, W. M. (1989). Rethinking concepts of job satisfaction: The case of Nebraska municipal clerks. Review of Public Personnel Administration, 10(1), 11-28.

Bonsang, E., & Van Soest, A. (2012). Satisfaction with job and income among older individuals across European countries. Social Indicators Research, 105(2), 227-254.

Brown, S. P., & Peterson, R. A. (1993). Antecedents and consequences of salesperson job satisfaction: Meta-analysis and assessment of causal effects. Journal of marketing research, 30(1), 63.

Card, D., Mas, A., Moretti, E., & Saez, E. (2012). Inequality at work: The effect of peer salaries on job satisfaction. The American Economic Review, 102(6), 2981-3003.

Chen, P. J., & Choi, Y. (2008). Generational differences in work values: a study of hospitality management. International Journal of Contemporary Hospitality Management, 20(6), 595-615.

Christen, M., Iyer, G., & Soberman, D. (2006). Job satisfaction, job performance, and effort: A reexamination using agency theory. Journal of Marketing, 70(1), 137-150.

Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? Labour economics, 4(4), 341-372.

Clark, A. E., & Oswald, A. J. (1996). Satisfaction and comparison income. Journal of public economics, 61(3), 359-381.

Connis, R. T., Braukmann, C. J., Kifer, R. E., Fixsen, D. L., Phillips, E. L., & Wolf, M. M. (1979). Work environment in relation to employee job satisfaction in group homes for youths. Child care quarterly, 8(2), 126-142.

Del Webb, Baby Boomer Survey: Working to live, not living to work (2010, April 13) Business Wire, available at http://www. dwboomersurvey.com/ (accessed 15 April 2016).

DeSantis, V. S., & Durst, S. L. (1996). Comparing job satisfaction among public-and private-sector employees. The American Review of Public Administration, 26(3), 327-343.

Elnaga, A. A. (2013). Exploring the link between job motivation, work environment and job satisfaction. Journal Of Business and Management Vol. 5 No. 24 Page. 34, 41.

EVS (2015): European Values Study 1981-2008, Longitudinal Data File. GESIS Data Archive, Cologne, Germany, ZA4804 Data File Version 3.0.0 (2015-07-30), doi:10.4232/1.12253.

Gursoy, D., Maier, T. A., & Chi, C. G. (2008). Generational differences: An examination of work values and generational gaps in the hospitality workforce. International Journal of Hospitality Management, 27(3), 448-458.

Hellman, C. M. (1997). Job satisfaction and intent to leave. The Journal of Social Psychology, 137(6), 677-689.

Herzberg, F. (1966). Work and the Nature of Man. Cleveland: World, 91-106.

Hoppock, R. (1935). Job satisfaction.

Jurkiewicz, C. L., & Brown, R. G. (1998). Generational comparisons of public employee motivation. Review of public personnel administration, 18(4), 18-37.

Kalleberg, A. L. (1977). Work values and job rewards: A theory of job satisfaction. American sociological review, 124-143.

Karp, H., Fuller, C. and Sirias, D. (2002) Bridging the Boomer Xer Gap: Creating Authentic Teams for High Performance at Work, Palo Alto, CA, Davies-Black.

Kowske, B. J., Rasch, R., & Wiley, J. (2010). Millennials'(lack of) attitude problem: An empirical examination of generational effects on work attitudes. Journal of Business and Psychology, 25(2), 265-279.

Lee, R., & Wilbur, E. R. (1985). Age, education, job tenure, salary, job characteristics, and job satisfaction: A multivariate analysis. Human Relations, 38(8), 781-791.

Linz, S. J., & Semykina, A. (2012). What makes workers happy? Anticipated rewards and job satisfaction. Industrial Relations: A Journal of Economy and Society, 51(4), 811-844.

Locke, E. A. (1969). What is job satisfaction? Organizational behavior and human performance, 4(4), 309-336.

Locke, E. A. (1976). The nature and causes of job satisfaction. Handbook of industrial and organizational psychology, 1, 1297-1343.

Locke, E. A., & Latham, G. P. (1990). A theory of goal setting and performance.

Martin, J. K., & Hanson, S. L. (1985). Sex, family wage-earning status, and satisfaction with work. Work and Occupations, 12(1), 91-109.

Parry, E., & Urwin, P. (2011). Generational differences in work values: A review of theory and evidence. International Journal of management reviews, 13(1), 79-96.

Pugno, M., & Depedri, S. (2010). Job performance and job satisfaction: an integrated survey. Economia politica, 27(1), 175-210.

Raziq, A., & Maulabakhsh, R. (2015). Impact of Working Environment on Job Satisfaction. Procedia Economics and Finance, 23, 717-725.

Rhodes, Susan R. "Age-related differences in work attitudes and behavior: A review and conceptual analysis." Psychological bulletin 93.2 (1983): 328.

Ryder, N. B. (1965). The cohort as a concept in the study of social change. American sociological review, 843-861.

Sell, L., & Cleal, B. (2011). Job satisfaction, work environment, and rewards: Motivational theory revisited. Labour, 25(1), 1-23.

Spector, P. E. (1997). Job satisfaction: Application, assessment, causes, and consequences (Vol. 3). Sage publications.

Steijn, B. (2004). Human resource management and job satisfaction in the Dutch public sector. Review of Public Personnel Administration, 24(4), 291-303.

Strauss, W., & Howe, N. (1991). Generations. New York: William Morrow, 58-68.

Twenge, J. M. (2010). A review of the empirical evidence on generational differences in work attitudes. Journal of Business and Psychology, 25(2), 201-210.

Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. Journal of management, 36(5), 1117-1142.

Vroom, V.H. (1964). Work and motivation, John Wiley and Sons, New York, p.99

Wilson, B., Squires, M. A. E., Widger, K., Cranley, L., & Tourangeau, A. N. N. (2008). Job satisfaction among a multigenerational nursing workforce. Journal of nursing management, 16(6), 716-723.

Wong, M., Gardiner, E., Lang, W., & Coulon, L. (2008). Generational differences in personality and motivation: Do they exist and what are the implications for the workplace? Journal of Managerial Psychology, 23(8), 878-890.

Young, S. J., Sturts, J. R., Ross, C. M., & Kim, K. T. (2013). Generational differences and job satisfaction in leisure services. Managing Leisure, 18(2), 152-170.

Zemke, R., Raines, C. and Filipczak, B. (2000) Generations at Work: Managing the Clash of Veter- ans, Boomers, Xers, and Nexters in Your Workplace, New York, AMACOM.

Appendix

Table 1 – Summary statistics for the Silent generation

Summary Statistics, using the observations 1 - 38626					
Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Good pay	0.740822	1.00000	0.00000	1.00000	0.438189
Not too much pressure	0.338813	0.00000	0.00000	1.00000	0.473312
Job security	0.647362	1.00000	0.00000	1.00000	0.477797
Good hours	0.460622	0.00000	0.00000	1.00000	0.498453
Generous holidays	0.279993	0.00000	0.00000	1.00000	0.449001
Achieving something	0.531792	1.00000	0.00000	1.00000	0.498995
Responsible job	0.434034	0.00000	0.00000	1.00000	0.495636
Interesting job	0.595635	1.00000	0.00000	1.00000	0.490775
Pleasant people	0.668229	1.00000	0.00000	1.00000	0.470855
Useful job	0.434785	0.00000	0.00000	1.00000	0.495735
Meeting people	0.446901	0.00000	0.00000	1.00000	0.497179
Job Satisfaction*	7.674531	8.0000	1.00000	10.0000	2.063902
Sex	0.45829	0.00000	0.00000	1.00000	0.498264
Age	61.2213	62.0000	18.0000	84.0000	10.3550

*values for Job satisfaction taken from reduced sample consisting of 12 766 observations

Table 2 – Summary statistics for Baby Boomers

Summary Statistics, using the observations 1 - 61474					
Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Good pay	0.789114	1.00000	0.00000	1.00000	0.407941
Not too much pressure	0.369262	0.00000	0.00000	1.00000	0.482609
Job security	0.640108	1.00000	0.00000	1.00000	0.479972
Good hours	0.507450	1.00000	0.00000	1.00000	0.499949
Generous holidays	0.312018	0.00000	0.00000	1.00000	0.463321
Achieving something	0.573966	1.00000	0.00000	1.00000	0.494503

Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Responsible job	0.443537	0.00000	0.00000	1.00000	0.496806
Interesting job	0.655611	1.00000	0.00000	1.00000	0.475173
Pleasant people	0.722598	1.00000	0.00000	1.00000	0.447720
Useful job	0.411784	0.00000	0.00000	1.00000	0.492160
Meeting people	0.476087	0.00000	0.00000	1.00000	0.499432
Job Satisfaction*	7.300416	8.0000	1.00000	10.0000	2.130643
Sex	0.463480	0.00000	0.00000	1.00000	0.498669
Age	42.2816	44.0000	16.0000	75.0000	11.3236

*values for Job satisfaction taken from reduced sample consisting of 41 629 observations

Table 3 – Summary statistics for Generation X

Summary Statistics, using the observations 1 - 34256					
Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Good pay	0.844699	1.00000	0.00000	1.00000	0.362197
Not too much pressure	0.419547	0.00000	0.00000	1.00000	0.493492
Job security	0.657024	1.00000	0.00000	1.00000	0.474711
Good hours	0.558851	1.00000	0.00000	1.00000	0.496532
Generous holidays	0.355733	0.00000	0.00000	1.00000	0.478742
Achieving something	0.619629	1.00000	0.00000	1.00000	0.485485
Responsible job	0.470253	0.00000	0.00000	1.00000	0.499122
Interesting job	0.700286	1.00000	0.00000	1.00000	0.458139
Pleasant people	0.768946	1.00000	0.00000	1.00000	0.421513
Useful job	0.416161	0.00000	0.00000	1.00000	0.492928
Meeting people	0.512932	1.00000	0.00000	1.00000	0.499840
Job Satisfaction*	7.199405	8.0000	1.00000	10.0000	2.116762
Sex	0.462430	0.00000	0.00000	1.00000	0.498594
Age	30.4585	31.0000	15.0000	44.0000	7.16208

*values for Job satisfaction taken from reduced sample consisting of 22 799 observations

Table 4 – Summary statistics for Generation Y

Summary Statistics, using the observations 1 - 14159					
Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Good pay	0.886362	1.00000	0.00000	1.00000	0.317382
Not too much pressure	0.502013	1.00000	0.00000	1.00000	0.500014
Job security	0.706688	1.00000	0.00000	1.00000	0.455296
Good hours	0.617981	1.00000	0.00000	1.00000	0.485898
Generous holidays	0.420651	0.00000	0.00000	1.00000	0.493681
Achieving something	0.671728	1.00000	0.00000	1.00000	0.469601
Responsible job	0.505544	1.00000	0.00000	1.00000	0.499987
Interesting job	0.733103	1.00000	0.00000	1.00000	0.442354
Pleasant people	0.795536	1.00000	0.00000	1.00000	0.403323
Useful job	0.450526	0.00000	0.00000	1.00000	0.497564
Meeting people	0.544036	1.00000	0.00000	1.00000	0.498075
Job Satisfaction*	7.244182	8.0000	1.00000	10.0000	2.149601
Sex	0.469101	0.00000	0.00000	1.00000	0.499062
Age	22.6026	22.0000	15.0000	29.0000	3.31970

*values for Job satisfaction taken from reduced sample consisting of 6 047 observations

In all regressions, * indicates significance at the 10 percent level, ** at the 5 percent level and * at the 1 percent level**

Table 5 – Work values regression for 2008 wave

OLS estimates

2008	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Learning new skills	(12) - Family friendly	(13) - Meeting people
const	0.9865***	0.8218***	0.5487***	0.6312***	0.7373***	0.5387***	0.5577***	0.6118***	0.4095***	0.7624***	0.6648***	0.7602***	0.5758***
	(0.03282)	(0.03856)	(0.04443)	(0.04096)	(0.04406)	(0.04459)	(0.04299)	(0.04353)	(0.04476)	(0.04158)	(0.04430)	(0.04425)	(0.04480)
Gen_S	0.04364***	-0.0005059	0.01965	0.03565*	0.005402	0.02125	-0.007478	0.04208*	0.03825*	0.04182**	0.01765	-0.02880	0.001578

	(0.01668)	(0.01960)	(0.02259)	(0.02082)	(0.02240)	(0.02267)	(0.02186)	(0.02213)	(0.02275)	(0.02114)	(0.02252)	(0.02250)	(0.02278)
Gen_BB	0.03053	0.007409	0.02073	0.02006	0.006954	0.01036	-0.004945	0.03216	0.02802	0.02374	0.002107	-0.0816***	0.003379
	(0.02103)	(0.02471)	(0.02848)	(0.02625)	(0.02824)	(0.02858)	(0.02756)	(0.02790)	(0.02869)	(0.02665)	(0.02839)	(0.02836)	(0.02871)
Gen_X	0.01588	0.008148	0.01423	0.03069	0.01279	-0.01788	-0.02044	0.02999	0.04170	0.001105	0.01013	-0.0628***	0.0004584
	(0.02303)	(0.02706)	(0.03119)	(0.02874)	(0.03092)	(0.03130)	(0.03018)	(0.03055)	(0.03141)	(0.02918)	(0.03109)	(0.03106)	(0.03144)
Gen_Y	-0.006277	0.01351	0.04164	0.05664*	0.009022	-0.002692	-0.01759	0.05972*	0.05696*	-0.002027	0.04158	-0.1091**	0.02030
	(0.02427)	(0.02852)	(0.03286)	(0.03029)	(0.03258)	(0.03297)	(0.03179)	(0.03219)	(0.03310)	(0.03075)	(0.03276)	(0.03272)	(0.03313)
Age	-0.00311***	-0.0008254	0.001048	0.004154***	-0.001135	-0.002441*	-0.0037***	-0.001268	0.001280	-0.00471***	-0.003021**	0.0009858	-0.001402
	(0.001078)	(0.001266)	(0.001459)	(0.001345)	(0.001447)	(0.001464)	(0.001412)	(0.001429)	(0.001470)	(0.001365)	(0.001455)	(0.001453)	(0.001471)
Age^2	-2.276e-06	-1.218e-05	-4.023e-05***	-4.503e-05***	-2.092e-05	1.758e-05	8.386e-06	-3.200e-06	-1.745e-05	2.843e-05**	-4.117e-06	-3.992e-05***	3.400e-06
	(1.007e-05)	(1.184e-05)	(1.364e-05)	(1.257e-05)	(1.353e-05)	(1.369e-05)	(1.320e-05)	(1.336e-05)	(1.374e-05)	(1.276e-05)	(1.360e-05)	(1.358e-05)	(1.375e-05)
Edu_middle	-0.02646***	-0.01002**	-0.0631***	-0.03448***	-0.0615***	-0.0432***	-0.0297***	0.01216**	0.001199	0.05719***	-0.01835***	-0.0508***	-0.01124**
	(0.003623)	(0.004257)	(0.004906)	(0.004522)	(0.004865)	(0.004923)	(0.004747)	(0.004806)	(0.004942)	(0.004590)	(0.004890)	(0.004885)	(0.004946)
Edu_higher	-0.07630***	0.03122***	-0.1074***	-0.1169***	-0.1076***	0.002927	-0.0658***	0.06952***	0.05287***	0.1176***	0.04365***	-0.0716***	-0.001880
	(0.004220)	(0.004959)	(0.005714)	(0.005267)	(0.005666)	(0.005734)	(0.005529)	(0.005598)	(0.005756)	(0.005347)	(0.005696)	(0.005690)	(0.005761)
Male	0.02185***	-0.0260***	-0.005257	-0.005798	-0.0418***	-0.005818	0.001951	0.01514***	0.04571***	-0.004813	0.005536	-0.0680***	-0.0370***
	(0.002975)	(0.003496)	(0.004028)	(0.003713)	(0.003995)	(0.004043)	(0.003898)	(0.003946)	(0.004058)	(0.003769)	(0.004016)	(0.004012)	(0.004062)
n	61260	61260	61260	61260	61260	61260	61260	61260	61260	61260	61260	61260	61260
R2	0.0182	0.0108	0.0149	0.0090	0.0174	0.0026	0.0099	0.0093	0.0055	0.0120	0.0215	0.0113	0.0036

Table 6 - Work values regression for 1999 wave

OLS estimates

1999	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Meeting people
const	0.8259***	0.8191***	0.4194***	0.5824***	0.5574***	0.3824***	0.3943***	0.6894***	0.3938***	0.8308***	0.6910***
	(0.03611)	(0.04184)	(0.04421)	(0.04356)	(0.04595)	(0.04585)	(0.04272)	(0.04554)	(0.04587)	(0.04347)	(0.04611)
Gen_S	-0.002475	-0.02231	0.009402	0.03521**	0.002980	0.03921**	-0.0009361	-0.009835	0.007623	-0.0009598	0.005894
	(0.01446)	(0.01676)	(0.01770)	(0.01745)	(0.01840)	(0.01836)	(0.01711)	(0.01824)	(0.01837)	(0.01741)	(0.01846)
Gen_BB	0.01313	-0.02606	0.03691	0.05137**	0.02933	0.03767	0.01688	-0.01495	0.02319	-0.01727	-0.01802

	(0.02034)	(0.02357)	(0.02491)	(0.02454)	(0.02589)	(0.02583)	(0.02407)	(0.02566)	(0.02584)	(0.02449)	(0.02598)
Gen_X	0.02122	-0.007747	0.05425*	0.06215**	0.04704	0.03499	0.02184	-0.004621	0.04609	-0.04666*	-0.03828
	(0.02309)	(0.02676)	(0.02827)	(0.02786)	(0.02938)	(0.02932)	(0.02732)	(0.02912)	(0.02933)	(0.02780)	(0.02949)
Gen_Y	0.005372	0.01202	0.06975**	0.08115**	0.03719	0.07530**	0.02678	0.01116	0.04262	-0.05704*	-0.01151
	(0.02673)	(0.03097)	(0.03272)	(0.03224)	(0.03401)	(0.03394)	(0.03162)	(0.03371)	(0.03395)	(0.03217)	(0.03413)
Age	0.0009533	0.0003310	-0.0001949	0.003680**	0.002177	0.0001829	-0.001337	-0.002815*	0.0006846	-0.005822***	-0.003478**
	(0.001292)	(0.001497)	(0.001582)	(0.001559)	(0.001644)	(0.001641)	(0.001529)	(0.001630)	(0.001642)	(0.001556)	(0.001650)
Age^2	-3.312e-05***	-3.761e-05**	-1.550e-05	-3.723e-05**	-4.660e-05***	2.933e-06	-4.991e-06	-3.660e-06	-1.053e-05	2.426e-05	1.214e-06
	(1.284e-05)	(1.488e-05)	(1.572e-05)	(1.549e-05)	(1.634e-05)	(1.630e-05)	(1.519e-05)	(1.619e-05)	(1.631e-05)	(1.545e-05)	(1.639e-05)
Edu_middle	-0.002437	-0.02043***	-0.05927***	-0.04010***	-0.05278***	-0.01543***	-0.03926***	-0.004744	-0.03312***	0.06302***	-0.01148*
	(0.004595)	(0.005324)	(0.005626)	(0.005543)	(0.005847)	(0.005834)	(0.005436)	(0.005795)	(0.005837)	(0.005531)	(0.005867)
Edu_higher	-0.05303***	0.01127*	-0.09422***	-0.1475***	-0.1122***	0.03411***	-0.05667***	0.06959***	0.03420***	0.1366***	0.01234*
	(0.005685)	(0.006588)	(0.006961)	(0.006859)	(0.007235)	(0.007219)	(0.006726)	(0.007171)	(0.007223)	(0.006844)	(0.007260)
Male	0.03896***	-0.03542***	-0.01207**	-0.005325	-0.04865***	-0.008853*	0.006151	0.02147***	0.05332***	0.002394	-0.05725***
	(0.003910)	(0.004530)	(0.004787)	(0.004717)	(0.004975)	(0.004964)	(0.004625)	(0.004931)	(0.004967)	(0.004706)	(0.004992)
n	40029	40029	40029	40029	40029	40029	40029	40029	40029	40029	40029
R2	0.0180	0.0182	0.0114	0.0126	0.0169	0.0018	0.0074	0.0174	0.0070	0.0234	0.0107

Table 7 - Work values regression for 1990 wave

OLS estimates

1990	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Meeting people
const	0.8263***	0.9186***	0.2357***	0.5085***	0.6210***	0.1978***	0.3348***	0.5713***	0.3870***	0.8122***	0.6063***
	(0.03784)	(0.03969)	(0.03981)	(0.04260)	(0.04278)	(0.04229)	(0.03835)	(0.04285)	(0.04240)	(0.04185)	(0.04272)
Gen_S	0.001916	-0.02093	0.03137**	-0.01588	0.01807	0.03788***	0.01095	0.007117	-0.0009687	-0.01429	0.008511
	(0.01297)	(0.01360)	(0.01365)	(0.01460)	(0.01467)	(0.01450)	(0.01314)	(0.01469)	(0.01453)	(0.01434)	(0.01464)
Gen_BB	-0.007721	-0.06001***	0.02582	-0.04128**	-0.001286	0.02714	-0.006728	-0.002831	-0.01546	-0.02156	-0.02035
	(0.01804)	(0.01892)	(0.01898)	(0.02031)	(0.02039)	(0.02016)	(0.01828)	(0.02043)	(0.02021)	(0.01995)	(0.02036)
Gen_X	-0.02691	-0.04780**	0.06118***	-0.03418	-0.04293*	0.08111***	0.005268	0.01281	-0.02929	-0.03023	0.003038
	(0.02250)	(0.02359)	(0.02367)	(0.02533)	(0.02543)	(0.02514)	(0.02280)	(0.02548)	(0.02521)	(0.02488)	(0.02540)
Age	-0.002728**	-0.004452***	0.002081	0.004221***	-0.005138***	0.006062***	-0.001874	3.770e-06	0.0006222	-0.005233***	-0.003580**

5

	(0.001388)	(0.001456)	(0.001460)	(0.001563)	(0.001569)	(0.001551)	(0.001406)	(0.001572)	(0.001555)	(0.001535)	(0.001567)
Age^2	1.943e-06	9.497e-06	-2.233e-05	-4.287e-05***	3.108e-05**	-4.333e-05***	4.987e-06	-1.861e-05	-1.074e-05	1.728e-05	1.479e-05
	(1.392e-05)	(1.460e-05)	(1.465e-05)	(1.567e-05)	(1.574e-05)	(1.556e-05)	(1.411e-05)	(1.577e-05)	(1.560e-05)	(1.540e-05)	(1.572e-05)
Male	0.06567***	-0.03129***	-0.0009016	0.01329***	-0.04271***	-0.001211	0.01316***	0.03225***	0.07180***	0.01497***	-0.06619***
	(0.004544)	(0.004765)	(0.004780)	(0.005115)	(0.005137)	(0.005078)	(0.004604)	(0.005146)	(0.005091)	(0.005025)	(0.005129)
n	37350	37350	37350	37350	37350	37350	37350	37350	37350	37350	37350
R2	0.0123	0.0100	0.0014	0.0017	0.0045	0.0029	0.0028	0.0050	0.0055	0.0122	0.0090

Table 8 - Work values regression for 1981 wave

OLS estimates

1981	(1) Good pay	(2) Pleasant people	(3) - Pressure	(4) - Job security	(5) - Good hours	(6) – Useful job	(7) - Holidays	(8) - Achieving something	(9) - Responsible job	(10) - Interesting job	(11) - Meeting people
const	0.5316***	0.7487***	0.2791***	0.5686***	0.2970***	0.2883***	0.3417***	0.5616***	0.3734***	0.6991***	0.6517***
	(0.04528)	(0.04436)	(0.04506)	(0.04768)	(0.04832)	(0.04699)	(0.04320)	(0.04842)	(0.04751)	(0.04762)	(0.04806)
Gen_S	0.03458**	0.002646	-0.002297	-0.04496**	0.03514**	-0.006845	-0.02568	0.01163	-0.01042	-0.009291	0.001373
	(0.01659)	(0.01626)	(0.01652)	(0.01748)	(0.01771)	(0.01722)	(0.01583)	(0.01775)	(0.01741)	(0.01745)	(0.01761)
Gen_BB	0.07162***	0.03835	-0.01093	-0.07515***	0.08029***	-0.009550	-0.04980**	0.03367	-0.02190	0.02024	-0.02734
	(0.02460)	(0.02411)	(0.02449)	(0.02591)	(0.02626)	(0.02554)	(0.02348)	(0.02631)	(0.02582)	(0.02588)	(0.02612)
Gen_X	0.1619***	0.08908	0.05498	-0.1742***	0.2308***	0.0005978	-0.2040***	0.1090*	-0.2720***	0.008568	-0.1858***
	(0.05745)	(0.05629)	(0.05718)	(0.06050)	(0.06131)	(0.05963)	(0.05482)	(0.06144)	(0.06029)	(0.06042)	(0.06098)
Age	0.004044***	-0.0008711	0.002371	0.004951***	0.005736***	0.003864**	-0.0004548	-0.001013	0.001483	-0.004092***	-0.005789***
	(0.001475)	(0.001446)	(0.001469)	(0.001554)	(0.001575)	(0.001531)	(0.001408)	(0.001578)	(0.001548)	(0.001552)	(0.001566)
Age^2	-5.583e-05***	-1.003e-05	-3.012e-05**	-7.266e-05***	-5.952e-05***	-3.984e-05***	-1.628e-05	-3.990e-06	-2.838e-05*	1.611e-05	2.977e-05*
	(1.477e-05)	(1.447e-05)	(1.470e-05)	(1.555e-05)	(1.576e-05)	(1.533e-05)	(1.409e-05)	(1.579e-05)	(1.550e-05)	(1.553e-05)	(1.567e-05)
Male	0.08444***	-0.02660***	0.001086	0.04233***	-0.02773***	0.01954***	0.02622***	0.008244	0.07939***	0.03136***	-0.04855***
	(0.006754)	(0.006617)	(0.006722)	(0.007112)	(0.007208)	(0.007010)	(0.006444)	(0.007223)	(0.007088)	(0.007103)	(0.007169)
n	19018	19018	19018	19018	19018	19018	19018	19018	19018	19018	19018
R2	0.0203	0.0120	0.0006	0.0043	0.0054	0.0012	0.0030	0.0062	0.0087	0.0149	0.0100

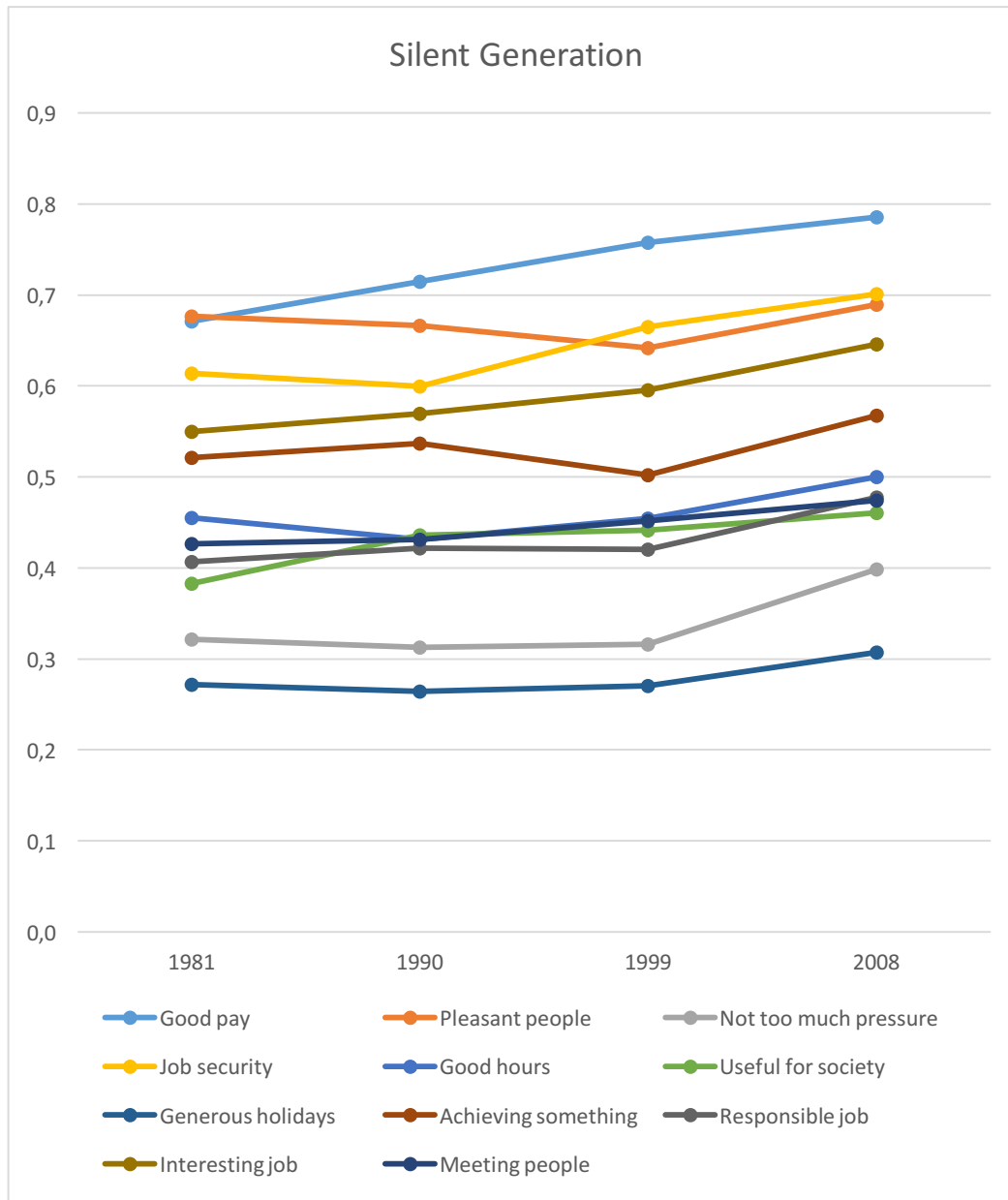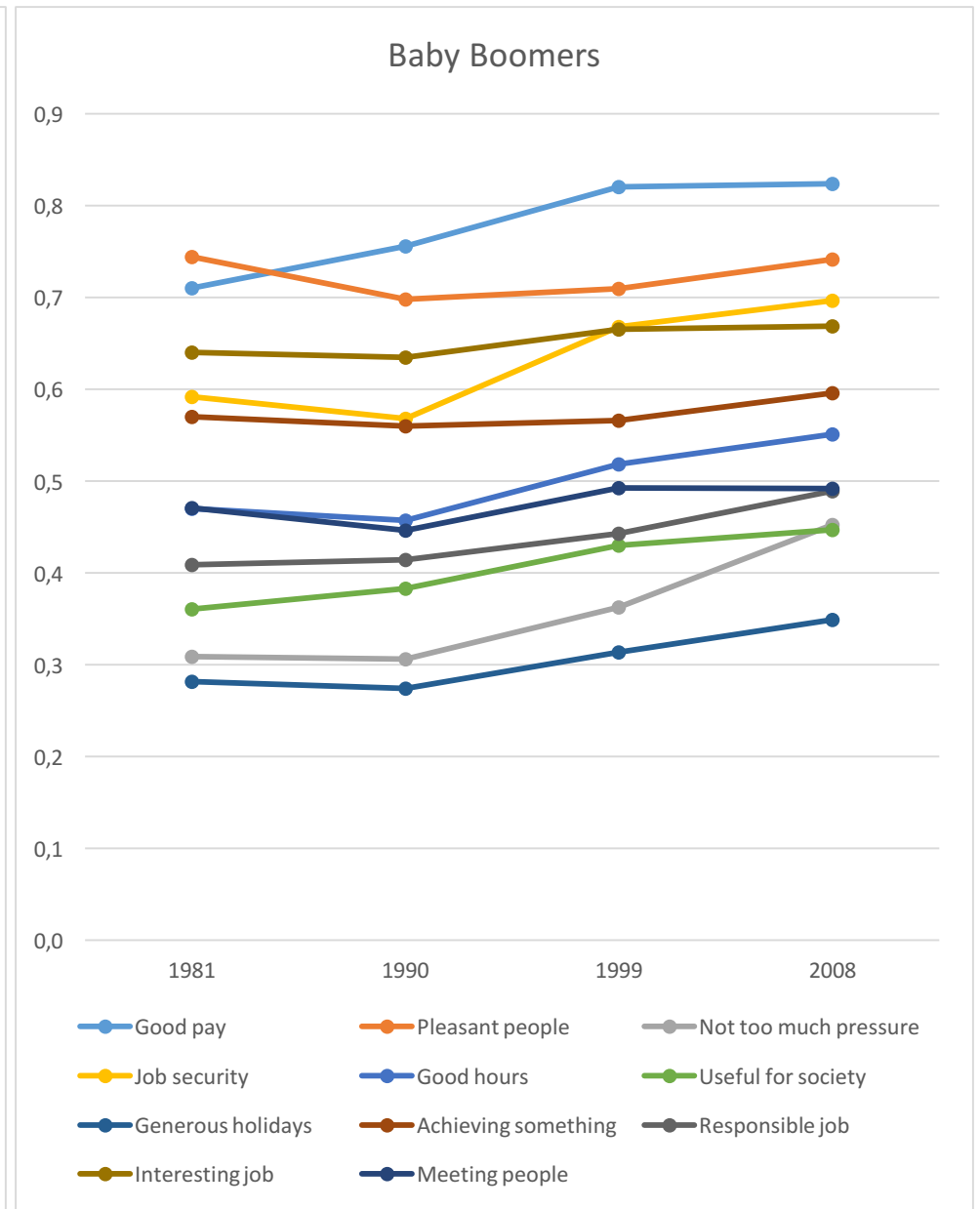**Figure 1: Means of work values for the Silent Generation**   **Figure 2: Means of work values for the Baby Boomers**

Figure 3: Means of work values for the Generation X

Generation X

Legend:
- Good pay
- Pleasant people
- Not too much pressure
- Job security
- Good hours
- Useful for society
- Generous holidays
- Achieving something
- Responsible job
- Interesting job
- Meeting people