Tolerance of Diversity and the Influence of Happiness


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1 Introduction

Tolerance is respect, acceptance and appreciation of the rich diversity of our world’s cultures, our forms of expression and ways of being human. It is fostered by knowledge, openness, communication and freedom of thought, conscience and belief. Tolerance is harmony in difference. It is not only a moral duty, it is also a political and legal requirement. Tolerance, the virtue that makes peace possible, contributes to the replacement of the culture of war by a culture of peace.

Tolerance is studied globally, on national and individual levels, were it is compared to economic measurements and cultural values. There is an interest for tolerance and non-tolerance in politics, worldwide organizations, in governmental institutes and in education. Social scientists, psychologists and economists study tolerance from different perspectives. In 1971 Kenneth Arrow explained racial discrimination in the labor market by using neoclassical tools such as utility and profit maximization (Arrow 1971). Recently, more research has been conducted on tolerance to find out its relationship it has with economic measurements such as GDP and personal income, but also to find out which demographic and social components that are important for tolerance. Das et al. (2008) shows that tolerant countries are correlated with economic development, long-run economic growth and competitiveness. The most tolerant countries have more net immigrants and are able to attract more talented workers (Das et al. 2008; Florida & Gates 2002). Tolerance has a positive effect on economic and social freedom and is linked with social factors such as trust and happiness (Berggren & Nilsson 2013; Das et al. 2008). Those who report high levels of happiness also tend to be more tolerant (Inglehart et al. 2008). People who are psychologically insecure tend to have lower levels of trust and therefore are less tolerant (Fetner & Anderson 2008).

Happiness is a well-known measurement among behavioral economists and can be considered a proxy for utility, the general concept of welfare in economic models (Graham 2010). Since many researchers have taken interest in tolerance it leads to the following question, how important is tolerance?
1.1 Problem
An effort to untangle tolerance as a phenomenon appears many times in published articles, as well as an effort to understand the role tolerance plays in an economic or social context. Whether it is to detect social tolerance or the effects of tolerance on economic growth, researchers seem to agree that tolerance plays an important part in peoples lives and the societies we live in. Democratization and self-expression values are shown to affect levels of happiness, tolerance and trust positively. When there is room for autonomy and freedom of choice, societies are more likely to focus on well being than on economic development (Berggren & Elinder 2010; Inglehart et al. 2008; Inglehart & Welzel 2005). The problem here is to be able to detect the determining factors of tolerance. The roots of tolerance might be difficult to distinguish. If people with higher levels of happiness are more tolerant, how does happiness influence tolerance?

1.2 Research question
Are happy people more tolerant towards people of a different race, immigrants/foreign workers, people who speak a different language, people with a different religion and homosexuals?

1.3 Purpose
The purpose of this study is to examine the demographic factors affecting tolerance and to determine if happiness is a predictor of tolerance of diversity.

1.4 Method
To form a theory and hypothesis, a research approach is used, where relevant literature and peer-reviewed articles about tolerance are studied. The theoretical model of this study is a linear model, where Tolerance of diversity is a function of Happiness, along with individual-level variables, which are known to affect tolerance. The model is tested statistically using secondary data from the World Value Survey, wave 4 (2005-2009). An ordinary least square (OLS) regression analysis will test the data to find out if people with higher self-reported levels of happiness are more tolerant towards different groups of people in society. The dependent variable, tolerance of diversity, is a discrete variable with five levels of tolerance. The independent variable happiness is a discrete variable with three levels of happiness. Both variables are derived from the World Value Survey, wave 4, 2005-2009. A hierarchical regression method is used to be able to detect unique predictive influence of new independent
variables on the dependent variable. This method is chosen in order to decide the order of which variables are entered in the regression based on the theoretical background.

1.5. Limitations
Factors such as freedom of expression, trust and democratization are linked with happiness and could be interesting to investigate further as well as in terms of tolerance. This study will not include these factors. If variables are correlated with both happiness and tolerance it could cause a problem of multicollinearity and thus make the hypothesis testing more complex. In the hypothesis testing of tolerance, only individual level variables will be considered. The possibility to cluster variables depending on country or geographical region will not be applied. This essay will look at the importance of happiness at one specific point in time and not consider time-series data. These decisions have been made in order for the research question to be more specific and the method of analysis manageable within the time limits.

1.6 Disposition
This study is divided in five chapters. Chapter one introduces the subject of tolerance of diversity and the research question. The second chapter covers the general background of tolerance and happiness. It explains why tolerance and happiness are important in an economic perspective and the relationship between these parameters. Known determinants of tolerance are presented based on empirical evidence. Relevant terminology and definitions for both tolerance and happiness are presented. Chapter three brings forward the theory, the hypothesis and the model for tolerance of diversity. It also includes a description of the dependent, the independent as well as individual control variables. Chapter four then presents the results with descriptive statistics of the data, correlation coefficients and the estimates of the independent variables on tolerance of diversity. This is followed by an analysis of the data and regression. Finally, chapter five covers the conclusion.

2 Background
Tolerance is generally considered to be a part of social capital, which is an important factor for economic development. Regardless of different definitions of social capital, numerous studies have found that higher levels of social capital lead to economic growth, development and prosperity in institutions and on a national level (Das et al. 2008). In social capital the term “social tolerance” is often used and implies attitudes of one social group towards members of
another social group (Das et al. 2008). Knack & Keefer (1997) found that social capital defined as trust and civic norms has a strong and significant effect on economic growth. Social tolerance is sometimes used to measure tolerance towards particular minority groups. Tolerance towards African Americans has for example been measured by the willingness to vote for a black president. Tolerance towards homosexuals has been measured by looking at how supportive people are of homosexual’s civil rights (Das et al. 2008).

2.1 The importance of tolerance
Previously, economists have discussed the importance of diversity of industrial structures for economic performance. In our time of knowledge-economy it is more likely that ethnic and cultural diversity become more important (Florida & Gates 2002). In the study *Tolerance and Technology*, Florida & Gates (2002) find that people’s tolerance level for ethnic and social diversity in metropolitan areas in the US is correlated with the areas success of attracting talented workers. Among the 50 most populated areas in the US, those, which are accepting of gays, immigrants, artists and free thinkers, are also successful in attracting talented business people. Based on a composite diversity index, (the sum of a gay-index, a bohemian index and a foreign-born index), Florida & Gates find that overall diversity is a strong predictor of high-technology success in metropolitan areas. A large gay population has the strongest positive correlation and is also a predictor for growth of high technology industries. As the global economy has become more dependent on technology-based industries it requires a higher demand of an educated and talented work force (Das et al. 2008). Florida (2005) states that an invisible division of America is threatening the country’s long-run competitiveness, where regions, which are open and tolerant, will advance in innovation and economic growth while regions, which are anxious and resistant to change will have disadvantages in the domestic and international market.

2.2 Economic measurements and tolerance
Tolerance based on attitudes towards homosexuals has a negative relationship with income inequality. When income inequality rises in a country, the level of tolerance towards homosexuals decreases according to a study by Fetner & Anderson (2008). Their results also support the theory that economic development leads to more tolerant attitudes. Increased levels of national income have a positive and significant effect on tolerance overall. However, it was found that economic development does not have the same effect for people from different social classes. The working class generally has less tolerant attitudes, and these attitudes are
less likely to be affected by the country’s wealth. Tolerance levels of the upper class on the other hand, improve when national income increases (Fetner & Anderson 2008). Depending on the definition and measurement of tolerance it does not always have positive effects. Pool (1972) found that linguistic diversity used as a proxy for tolerance lead to factionalism and social division, suggesting it could negatively affect economic development. However, he points out that the results are sensitive to the definition of the variable examined.

2.3 Determinants of tolerance
Higher education has a positive relationship with social tolerance. Education is the most important predictor for tolerance, especially for tolerance towards homosexuals. It is although not clear if this is due to the exposure of different lifestyles or because people obtain a better understanding of social norms and values through their education (Davis 1975; McCutcheon 1985; Stouffer 1955; Jackman 1972, Lottes & Kuriloff 1994, referred to in Fetner & Anderson 2008). Gender also affects tolerance, men are less tolerant than women. Married people with children tend to be less tolerant. Older people are less tolerant than younger people, although the levels of tolerance can be affected by the values people have in different generations (Fetner & Anderson 2008). The degree of urbanization has a correlation with tolerance, those who live in urban areas are also more tolerant (Côté & Erickson, 2009).

2.4 Happiness
International organizations such as the OECD and the World Bank have done research on happiness as an attempt in finding a better measurement of wellbeing (Guven, 2009). Graham (2011) describes happiness as a new science, where in recent time happiness has moved from the realm of philosophy to a subject of debate among policymakers and economists. Today it is known that, tools introduced by behavioral economics give a broader explanation of welfare. The discussion about adding national wellbeing to the standard measurements of GDP exists in the academic world and among policymakers. As an example in 2008, the former president of France, Nicolas Sarkozy called for a broader measurement of national wellbeing and the subject came up for public debate (Graham 2011).

One widely accepted view is that happiness fluctuates around a fixed set point. According to research, neither economic growth nor times of recession affects happiness in the long run. Aggregated levels of happiness remain stable over time and across nations (Inglehart et al. 2008). A possible explanation is that happiness is determined relative to a reference point and that levels of happiness adjust over time. Social comparison theory states that people compare
their happiness to people around them and therefore happiness is shaped by a person’s relative position in society. When levels of national income increase, happiness remains the same due to a shift in reference (Easterlin, 1974). Evidence that supports constant levels of happiness over time is data from the United States, which reports stable levels of subjective wellbeing among Americans since 1946 (Inglehart et al. 2008).

2.6 Terminology and definitions
In economic literature “happiness”, “well-being”, “subjective well-being” and “life satisfaction” are interchangeable and often used synonymously, while psychologists define the terms more precisely and distinguish the differences between them (Graham 2011). Although the different terms are related, they have distinct meanings. The different meanings could imply different policy implications. “Happiness” is the term least well defined and which appears frequently in published articles. According to Diener & Ryan (2009) happiness refers to pleasant moods and emotions experienced at any given time. Subjective wellbeing is a general term used by psychologists, which describes the level of individual’s wellbeing according to subjective evaluations of their life situation. The evaluation involves life satisfaction, reactions to life events, and satisfaction with work, relationships, health and other important factors (Diener & Ryan 2009). Life Satisfaction is a measurement of how people evaluate their life as a whole rather than their current feelings and will be used in this essay for the independent variable, happiness.

In social studies the term social tolerance is often used, as mentioned, defined as one social group’s tolerance towards another social group. Tolerance in economic studies can have different meaning depending on the research question. Florida (2003) defines tolerance as; “openness, inclusiveness, and diversity to all ethnicities, races and walks of life”. This study will follow Florida’s definition for tolerance of diversity, because it captures attitudes towards people of different social and ethnic groups and reflects acceptance and openness. Those who are tolerant, accept the presence of different people and respect diversity. Tolerating different people in one’s community or as their neighbors does not necessarily imply liking their way of living, or liking their religion or ethnicity (Berggren & Nilsson 2013). The underlying motivation for a person’s tolerant attitude is less important for this study and will not be further invested.
3. Theory and hypothesis

Inglehart et al. (2008), demonstrate a human development model, where freedom of choice has an impact on rising levels of happiness. The global study shows that the increase of democratization, economic development and social tolerance over time affects people’s perception about free choice and therefore increases happiness, measured as subjective well-being. Living in a tolerant society is especially significant for increasing levels of happiness because it enhances people’s free choice. Happiness is correlated with social tolerance, however, also with tolerance of outgroups and gender equality, according to Inglehart & Welzel (2005).

The beginning of this theory starts with theories of traditional values versus secular-rational values. In recent times, socioeconomic development has brought forward the possibility of rising knowledge societies and increased self-expression. The importance of freedom of expression, individual autonomy and happiness are increasing in secular-rational societies. Traditional societies, with more strict intellectual and social constraints focus on survival values and find economic development and physical security to be important. Other factors that traditional societies have in common is that they maintain traditional gender roles and belief in authoritarian political figures. As presented by Inglehart & Welzel (2005) postindustrial values increase self-expression, which pushes for a more democratic society. Democracy and self-expression values in their turn take part in forming tolerance. Inglehart & Welzel (2005) find that self-expression (secular-rational) values have a relationship with tolerance and trust, with an emphasis on subjective well-being in societies. Societies with traditional values on the other hand, experience intolerance of foreigners, homosexuals and other outgroups because they feel threatened by diversity and cultural change. The change in societies from traditional values to self-expression values increases tolerance of diversity and individual autonomy. When there is movement towards a “humanistic culture”, as Inglehart & Welzel (2005) calls it, individual freedom and self-expression become important values.

According to cross-sectional data from the World Value Survey, 1987-2005, tolerance of outgroups increased in most countries, over time. In the survey, respondents determined different groups of people, (referred to as outgroups in the study), that they would not like to have as neighbors, these are drug addicts, people of a different race, people with AIDS, immigrants/foreign workers, homosexuals, people with a different religion and heavy drinkers. Tolerance of homosexuals, measured as the acceptance or rejection of homosexuality, is a sensitive variable for overall tolerance of different outgroups. According to regression analysis, tolerance of outgroups is a strong predictor of happiness, while controlling for economic
development and the countries initial levels of happiness (Inglehart & Welzel 2005). Based on these findings there is reason to believe that happiness is an important factor for tolerance and there is reason to investigate if happiness is a determinate of tolerance of diversity. The research hypothesis is stated:

People with higher levels of happiness are more tolerant of diversity.

3.1 Model
In this model tolerance of diversity is based on individual data, from one time period, 2005-2009. A classical linear regression model will be used to test tolerance of diversity.

\[ Y = \alpha + \beta_1 X_1 + \beta_i X_i + u_i, \]  

(1)

where Y is tolerance of diversity, \( X_1 \) is happiness and \( X_i \) are the individual control variables, which will be added one by one in the regression analysis and \( u_i \) is the error term. The intercept of the model is denoted, \( \alpha \), the estimate for tolerance of diversity is denoted \( \beta_1 \) and the estimate for the individual control variables are denoted \( \beta_i \).

3.2 Data and measurements
In this study, data from the World Value Survey, wave 4 (2005-2009) is used. The World Value Survey is a longitudinal, cross-national survey program of human values. The fourth wave includes data from 48 countries all over the world with 67 268 respondents. For information on the World Value Survey and the survey method, see appendix 1.

3.3 The dependent variable
In the World Value Survey respondents are asked to mention any group of people that they would not like to have as neighbors. Respondents can chose from nine different groups of people and can mention as few or as many they as they like. The following five groups of people will be used to compose the dependent variable tolerance of diversity in this study; people of a different race, immigrants/foreign workers, homosexuals, people of a different religion and people who speak a different language. These variables best reflect tolerance of diversity and are cohesive with the definition of tolerance used for this study. The other variables; drug addicts, people who have AIDS, heavy drinkers and unmarried couples living together are not included since they do not reflect tolerance of diversity, but rather tolerance of
social problems, social differences and tolerance of people with sicknesses. The first step is to recode data into new variables for each of the five groups of people to show the tolerance for each group rather than the non-tolerance. When a respondent has mentioned a group of people that they would not like to have as their neighbor, this is indicated as 0. When a respondent has not mentioned a group of people that they would not like to have as a neighbor, this is indicated as 1. The new variables are called; recoded different race, recoded immigrants, recoded homosexuals, recoded religion and recoded language. The second step is to sum the recoded variables of each group of people, creating the dependent variable, tolerance of diversity. Tolerance of diversity therefore demonstrates the tolerance of different groups of people, from zero (intolerant) up to five (tolerant of all groups).

3.4 The independent variable
The independent variable, happiness will be measured by using self-reported levels of life satisfaction from the World Value Survey, wave 4 (2005-2009). Respondents are asked the question; All things considered, how satisfied are you with your life as a whole these days? Life satisfaction is rated on a scale from 1 to 10, where 1 is “completely dissatisfied” and 10 being “completely satisfied”. Life satisfaction rates are transformed into a variable with three scales of happiness, 1= unhappy (1-3), 2 = moderately happy (4-6) and 3 = very happy (7-10). Old values of the life satisfaction scale are in the parentheses. This is done in order to give the independent variable happiness, fewer scales to be more comprehensive. The three categories give a clear picture to if respondents are unhappy, moderately happy or very happy, rather than a large scale.

3.5 Individual control variables
The control variables that will be used are gender, age, education, and town size and income level. The first dummy variable created is for gender, where female is denoted 1 and male is denoted 0. The following dummy variables are created for education; Primary school, for individuals with no formal education up to completed primary school, Secondary school, for individuals with incomplete or complete secondary school (this is the reference), University preparatory, for individuals with incomplete or complete university preparatory type education and University level, for individuals with some university education or a university degree. Town size is transformed into the dummy variables, Rural for population up to 10 000 habitants, Midsize for 10 000 - 100 000 habitants (this is the reference), Metropolitan for 100 000 habitants and more. The measurement for income levels is based on self-indicated levels of
income from 1, the “lowest income decile” to 10, the “highest income decile” in the respondent respective country. Dummy variables are created for different levels of income; Low income (1-3), Median income (4-6), (this is the reference) and High income (7-10). Old values of income levels according to the 10-point scale are indicated in the parentheses. Age is transformed into dummy variables; Young for ages 15-29, Middle age for ages 30-49 (this is the reference) and Old for ages 50-98.

4 Results and analysis
Based on the dataset from the World Value Survey, wave 4 (2005-2009), individuals are on average tolerant towards 3.85 groups of people, out of maximum 5 groups, as can be seen in Table 1. The majority of respondents are tolerant towards four or five of the different groups of people. Very few respondents are not tolerant towards any groups of people. The spread of tolerance is depicted with a histogram (Figure 1) in appendix 1. The mean score for happiness is 2.49 on a scale of 3, which shows that individuals are on average quite happy. The remaining variables are dummy variables; therefore the mean can be interpreted as percentages. Among the respondents, 52 percent are women. Regarding the age groups, 29 percent are young, 39 percent are middle age and 32 percent are older. The educational level among respondents is quite evenly distributed among the four categories; 31 percent of respondents have primary education, 26 percent have a secondary school education, 23 percent have a university preparatory level education and 20 percent have a university level education. The majority of respondents (64 percent) live in mid size towns and 26 percent live in rural areas, and 21 percent in metropolitan cities. Based on self-assessment, half of the respondents have mean income in their respective country, 31 percent have low income and 19 percent have high income.
Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance diversity</td>
<td>59603</td>
<td>0</td>
<td>5</td>
<td>3.85</td>
<td>1.344</td>
</tr>
<tr>
<td>Happiness</td>
<td>66400</td>
<td>1</td>
<td>3</td>
<td>2.49</td>
<td>.677</td>
</tr>
<tr>
<td>Female</td>
<td>67222</td>
<td>0</td>
<td>1</td>
<td>.52</td>
<td>.500</td>
</tr>
<tr>
<td>Young</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.29</td>
<td>.452</td>
</tr>
<tr>
<td>Old</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.32</td>
<td>.465</td>
</tr>
<tr>
<td>Primary school</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.31</td>
<td>.464</td>
</tr>
<tr>
<td>University preparatory</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.23</td>
<td>.418</td>
</tr>
<tr>
<td>University level</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.20</td>
<td>.401</td>
</tr>
<tr>
<td>Rural</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.26</td>
<td>.441</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.21</td>
<td>.409</td>
</tr>
<tr>
<td>Low income</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.31</td>
<td>.461</td>
</tr>
<tr>
<td>High income</td>
<td>67268</td>
<td>0</td>
<td>1</td>
<td>.19</td>
<td>.391</td>
</tr>
</tbody>
</table>


As seen in table 2 below, 80-85 percent of respondents are tolerant towards four of the five different groups of people. Tolerance towards homosexuals is lower than the rest of the groups of people, 53 percent of respondents are tolerant towards homosexuals.

Table 2. Descriptive statistics for tolerance of each group of people

<table>
<thead>
<tr>
<th>Deviation</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recoded diff. race</td>
<td>59603</td>
<td>0</td>
<td>1</td>
<td>.84</td>
<td>.371</td>
</tr>
<tr>
<td>Recoded immigrants</td>
<td>59603</td>
<td>0</td>
<td>1</td>
<td>.80</td>
<td>.402</td>
</tr>
<tr>
<td>Recoded homosexuals</td>
<td>59603</td>
<td>0</td>
<td>1</td>
<td>.53</td>
<td>.499</td>
</tr>
<tr>
<td>Recoded diff. religion</td>
<td>59603</td>
<td>0</td>
<td>1</td>
<td>.84</td>
<td>.368</td>
</tr>
<tr>
<td>Recoded diff. language</td>
<td>59603</td>
<td>0</td>
<td>1</td>
<td>.85</td>
<td>.354</td>
</tr>
</tbody>
</table>


Table 3 shows that the independent variable happiness has a weak correlation with tolerance of diversity, .138. Among the individual-level variables, primary school has a weak negative correlation with tolerance of diversity, -.120, suggesting that when more individuals have low education levels, tolerance of diversity slightly decreases. The remaining individual level-variables have close to zero correlation with tolerance of diversity.
Table 3. Correlation of individual-level variables with tolerance of diversity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>.138</td>
</tr>
<tr>
<td>Gender (Female=0)</td>
<td>.033</td>
</tr>
<tr>
<td>Young</td>
<td>.041</td>
</tr>
<tr>
<td>Old</td>
<td>.032</td>
</tr>
<tr>
<td>Primary school</td>
<td>-.120</td>
</tr>
<tr>
<td>University preparatory</td>
<td>.000</td>
</tr>
<tr>
<td>University level</td>
<td>.099</td>
</tr>
<tr>
<td>Rural</td>
<td>-.070</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>.053</td>
</tr>
<tr>
<td>Low income</td>
<td>-.046</td>
</tr>
<tr>
<td>High income</td>
<td>.060</td>
</tr>
</tbody>
</table>


Notes: All correlation coefficients have a p-value < 0.001.

Regression analysis

The first step in the regression analysis is to test the null model with a bivariate analysis of happiness on tolerance of diversity. In Model 0 of Table 3, the intercept is 3.161, which is the value of tolerance of diversity when happiness is zero. The estimate of happiness is .277, which is the marginal increase of tolerance of diversity due to happiness. When happiness increases by 1, tolerance of diversity increases by .277. The results are statistically significant at the 0.1 percent level. This means that the coefficient of happiness is not equal to zero and happiness therefore has an effect on tolerance of diversity. The second step of the hierarchical method of regression is to introduce control variables in the model one by one. Model 1 includes gender, which at first has nearly no affect on tolerance. Model 2 includes age groups young and old compared to the reference group, middle age. The age groups hardly affect tolerance, although the estimate for young people is slightly negative and the estimate for old people is slightly positive. Coefficients for happiness and gender remain the same in model 2.

Contradictory to the first two models, when education levels are introduced in Model 3, changes occur. Females are more tolerant than men by .112. Young people are less tolerant than middle age people, (-.123) and older people are more tolerant than middle age people (.116), thus tolerance increases with age in Model 3. Most importantly, there are significant differences in tolerance depending on the educational level. People with no education or
primary school education have .327 lower levels of tolerance than people with secondary school level education. University preparatory level education is close to zero, therefore not much different from secondary level education, however a negative value. University level education has .160 higher levels of tolerance than the reference, Secondary school education.

Model 4 introduces Town size in the regression model. Habitants in rural areas (up to 10 000 habitants) have lower levels of tolerance than midsize town habitants, (-.126). Respondents in metropolitan cities (100 000 habitants and more) have higher levels of tolerance than midsize town habitants (.146). The intercepts and coefficients for the other independent variables in model 4 remained very close to the same values as in model 3. Lastly, in model 5, income levels have nearly no effect on tolerance. The estimate for low income is .039 and the estimate for high income is .061. These estimates are in comparison to the reference, mean income. Recall that this variable demonstrates respondents' levels of income on a scale in relation to income levels in their own country.

The coefficient of determination (R squared) in model 0 is .019, which is close to zero, meaning that the variation in tolerance cannot be explained by the independent variable happiness. Further, R squared increases slightly for each new variable introduced, however the model fit remains presentably low. In model 5 the R squared value is .044, which means that 4,4 percent of variance in tolerance is explained by this model. In all five models the standard errors of the estimates are low, suggesting that there is little error and that the predictions of the regression model are accurate. However, it should be noted that when plotting the unstandardized residuals (the error term) against the predicted values of tolerance there seems to be a pattern. When the residuals are depicted in a histogram, they are slightly skewed to the right, (scatterplot and histogram are not presented). These results suggest that the residuals are not completely normally distributed, which could cause a problem for the significance of the estimates. With this being stated, it can still be assumed that the coefficients are normally distributed since the dataset used is very large.
<table>
<thead>
<tr>
<th>Model</th>
<th>Intercept</th>
<th>Happiness</th>
<th>Gender (female=1)</th>
<th>Age groups</th>
<th>Levels of education</th>
<th>Town size</th>
<th>Income</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Middle age; reference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Young</td>
<td>.097</td>
<td>-.123</td>
<td>-.130</td>
<td>-.129</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Old</td>
<td>.054</td>
<td>.116</td>
<td>.118</td>
<td>.118</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Primary school</td>
<td>-.327</td>
<td>-.323</td>
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Notes: All estimates and constants have a p-value < 0.001 except for one estimate. *p-value < 0.01.
5 Conclusion

The aim of this study was to explain the influence of happiness on tolerance of diversity. Independent variables known to affect tolerance were also explored. The analysis shows that happiness is not a predictor of tolerance of diversity. Firstly, the correlation between tolerance and happiness was quite low (.138). This is surprising since a correlation has been found by Inglehart & Welzel (2005), which also were using data from the World Value Survey. Secondly, the regression analysis showed that the linear model did not fit the data. The coefficient of determination (R squared) was consistently low, regardless of which control variables were used. Happiness, does however seem to have some affect on tolerance according to the estimate. In all five regressions, the estimate for happiness remained steady around the value of .25, implying that an increase of tolerance is due to happiness by 25 percent. Standard errors of estimates are low, constants and estimates are significant at the 0.1 percent level, giving reason to believe in the validity of these results. Although the residuals were not completely normally distributed, this is disregarded since the dataset was very large.

This study also examined the demographic factors; gender, age, education and town size and income level. Females were slightly more tolerant than men, as previous tolerance studies have shown. Younger people were slightly less tolerant and older people were slightly more tolerant than middle age people. These results present the opposite to previous results regarding age groups and tolerance (Fetner & Anderson 2008). Different levels of education had most effect on tolerance among the control variables. Lower levels of education affected tolerance negatively (-.37) and university education had higher levels of tolerance (.146) than the reference group, respondents with secondary school education. As shown before by Fetner & Anderson 2008; Côté & Erickson 2009, education is a strong predictor of tolerance, since education increases understanding of societies and different people. The town size also affected tolerance, demonstrating higher levels of tolerance for respondents in metropolitan areas and lower levels of tolerance for respondents from rural areas (compared to midsize towns). These results were also consistent with empirical evidence of the correlation between urbanization and tolerance (Côté & Erickson 2009). It is likely that higher educational levels can affect urbanization since metropolitan cities attract well-educated people (Florida & Gates 2002). Surprisingly, in the contrary to studies by both and Inglehart & Welzel (2005) and Fetner & Anderson (2008), different income levels did not affect tolerance. Since the levels of income in this data depended on the individual’s income in reference to levels in their own country, perhaps this could explain why it did not affect tolerance of diversity.
The descriptive statistics in table 2 presented the different recoded variables, which composed the variable tolerance of diversity. It is clear that tolerance of homosexuals differed from the rest of the variables. Fewer respondents were tolerant of homosexuals based on data from this study. Only 53 percent of all respondent were accepting of having homosexuals as their neighbors. Although the tolerance of homosexuals as an individual variable was not tested further, this finding is similar to other studies of tolerance of homosexuals because this variable usually differs more than other tolerance measurements. The more tolerant people are of homosexuals, the more improvements can be seen in economic growth. Intolerance of homosexuals is related to more income inequality (Fetner & Andersson 2008; Inglehart & Welzel 2005).

To conclude, happiness has some influence on tolerance of diversity, however it is not a determinate and not able to predict tolerance levels. Tolerance is not well described by a linear regression model with happiness in this study. There is a possibility that the measurements of happiness and tolerance were not properly composed for a regression analysis because of too few scales. Possible improvements could have been to include subjective well-being in the measurement of happiness and not only use life satisfaction. This option could give a broader picture of the individuals overall wellbeing. As Inglehart & Welzel (2005) found, economic and human development brings forward happier and more tolerant societies. The underlying reasons and conditions for tolerant societies should therefore be studied further in order to find out if there are other phenomenon’s linking both tolerance and happiness. Variables, such as life satisfaction and income level, from the World Value Survey can have different meaning depending on country and culture since the responses are subjective evaluations. Future studies could therefore divide or label data into subgroups where it could be possible to distinguish tolerance depending on cultures, values and tradition.
References


Appendix 1

The World Value Survey

The World Value Survey is a Non-Profit Association located in Stockholm, Sweden. They conduct worldwide studies of changing values and their impact on social and political life. The Surveys in each country are carried out by participants from the given society, to ensure that the fieldwork is carried out with an inside understanding of the investigated country. Interviews are conducted face-to-face by a local field organization and supervised by academic researchers. A core questionnaire translated into the local language is used. Random samples are aimed for when possible (World Value Survey 2013).
Appendix 2

Figure 1.


Figure 1 shows the spread of tolerance of diversity, which is the sum of tolerance towards people of a different race, immigrants/foreign workers, and homosexuals, people of a different religion and people who speak a different language.