Resilience, Social Capital, Active Citizenship and Subjective Wellbeing: the Contribution of Generativity

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the contribution of generativity

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Abstract

We define generativity as the combination of creativity and care for others wellbeing. Based on John Stuart Mill, Robert Kennedy and Antonio Genovesi quotes we test several research hypotheses on the available waves of the European Social Survey and find that generativity is associated positively and significantly with subjective wellbeing (under the different dimensions of life satisfaction and positive affect), resilience, interpersonal trust, active citizenship and participation to political elections. Our findings are robust across survey waves, gender, age, education splits and significant in estimates considering only individuals living in the same country. With an IV approach we provide evidence that the investigated nexus hides a direct causality link from all our the dependent variables.

1. Introduction

Mill "Those only are happy, I thought, who have their minds fixed on some object other than their own happiness, on the happiness of others, on the improvement of mankind, even on some art or pursuit, followed not as a means, but as itself an ideal end. Aiming thus at something else, they find happiness by the way"

John Stuart Mill, Principles of Political Economy, 1893: p.117

Work hard for your own interest, no man could do otherwise, as he would be less human by not doing so: but do not work for the misery of others and, if possible, work out how to make them happy. The more you are self-interested, the more you must be virtuous if you are not fool. Is a natural law that you cannot make your own happiness without making that of other human beings"

Antonio Genovesi, Autobiografia e lettere, p. 449

"Ask not what your country can do for you – ask what you can do for your country,"

John F. Kennedy's inaugural address

The history of the mankind can be seen a chain of overlapping generations where each generation stands on the shoulder of knowledge and discoveries of the former. As a consequence, the social or scientific innovations that any generation creates become foundations or cornerstones for new more advanced scientific or social outcomes of those who will come after.

What happens to individuals who contribute positively and significantly to this transmission ? Is there an intrinsic reward to the contribution given to the human progress ?

Our research hypothesis aims to answer to this research question and starts by assuming that there is something like a "life satisfaction counter" that measures and rewards creative other-regarding individuals for what they are doing for the civil progress and for the wellbeing of those who will follow. We may interpret this "counter" as correlated to the intuition that individuals have that what they are doing makes sense and can contribute to the improvement of wellbeing of other human beings. The rationale for our hypothesis can as well and alternatively be interpreted in evolutionary terms. We can conveniently assume that in ancient times there were different population types, ie. creative individuals finding satisfaction for being as such, creative individuals not finding satisfaction for that, non creative individuals finding satisfaction for being so. Among the three types, the first was more beneficial for the evolution of the human species (ie. contributed to find solutions for their groups to survive in difficult living environments) and therefore evolution determined its prevalence over time.

Based on these considerations we formulate our research hypothesis and test whether the combination of creativity and care for other people wellbeing, that we define as generativity, is significantly and positively associated with various measures of subjective wellbeing (more

specifically, cognitive measures such as life satisfaction and several affective measures related to feelings perceived in a close interval around survey interviews). We as well test whether generativity positively contributes to other related psychological and social virtues such as resilience, interpersonal trust, participation to political elections and active citizenship.

Our paper contributes to several strands of the literature. The first relates to the investigation on the drivers of life satisfaction. The focus of this literature has been first and mainly on the nexus between income and life satisfaction, challenged by the so called Easterlin paradox (Easterlin and Angelescu, 2009). The analysis has been progressively extended in several directions involving not only strictly economic variables (such as unemployment and inflation as in Di Tella et al. 2001) but also topics at the crossroad of different social sciences such as the effect of age, relative income (Ferrer-i-Carbonell, 2005), hedonic adaptation, quality of relational life (Becchetti et al. 208) and many more (Frei and Stutzer, 2000 and 2002). To our knowledge however the role of generativity as defined in our research hypothesis has never been object of scientific investigation.

A second research field to whom the paper contributes relates to the effects of generativity. Empirical analyses on the impact of generativity are concentrated in the field of social psychology where the concept of generativity has first been developed by Erikson (1993) as the key for one of the development stages in adult life, and generativity indexes such as the Loyola Generativity scale and the Generativity Behavioral Checklist (GBC) have been progressively elaborated (McAdams and St. Aubin, 1992 and 1998). The effect of GBC on subjective wellbeing has been tested by Shahen et al. (2019), while Jia et al. (2006 and 2007) and Matsuba et al. (2012) focus on the nexus between generativity and environmental sustainability. Our empirical analysis tests whether evidence on the role of generativity found on small groups in the psychology literature is robust and can be extended to a large cross-country sample of observations collected across different survey waves.

A third research field related to our work is that of drivers of resilience, intended as the capacity to revert as quick as possible to the previous wellbeing level after a negative shock. The two main dimensions of resilience concern psychology and economics. The literature has discussed the various genetic, psychological, cultural, socioeconomic factors that may affect resilience. According to Southwick et al. (2014) hope or "meaning-making" is the crucial factor affecting resilience. A nice reference from this point of view is a well-known quote from Vaclav Havel, Czech statesman and former dissident saying that ''hope is not the conviction that something is going to turn up well, but the certainty that something makes sense, however things are going to turn out''. If this is the case sense making plays a crucial role on resilience because people whose life is rich of sense have an important reason to stand up and keep on their endeavour in spite of adversities. On this point we as well observe that resilience can be in turn a factor affecting positively life satisfaction. If we assume that, on average, all individuals are exposed to the same number of negative shocks, resilient individuals recover earlier and therefore suffer for a reduced amount of time the negative effect of the shocks on subjective wellbeing. We therefore argue that generativity can have a direct effect on subjective wellbeing and an indirect effect on it through enhanced resilience. This is the reason why, in order to test the direct effect of generativity on subjective wellbeing, we consider resilience as a mediating factor of the effect of generativity on subjective wellbeing and perform robustness checks testing the effect of generativity on subjective wellbeing conditional to each given resilience level.

A final and fourth field of research concerns drivers of active citizenship. Mascherini et al. (2009) use our same European Social Survey data and investigate how age, education, income and religiousness affect active citizenship. We argue that generativity has to be added to these standard drivers since the two ingredients of generativity (creativity and care for other people) both prompt active citizenship actions.

Our paper therefore contributes originally to these different research fields by showing how the newly defined concept of generativity, intended as the combination of creativity and care for others wellbeing, has a positive and significant effect on subjective wellbeing, resilience, social capital and active citizenship. The paper is divided into seven sections. In the second section we explain how we create our main variables and illustrate our research hypotheses. In the third section we present our database and descriptive findings. In the fourth section we illustrate and comment our econometric findings. In the fifth section we discuss some robustness checks. The sixth section presents and discusses instrumental variable findings. The eight section concludes.

2. Variable construction and research hypotheses

We define generativity as the combination of two components: creativity and care for other people wellbeing. Our underlying argument is that reliance on only one of the two components is not enough to make an individual generative. On the one side, creativity without care for other people wellbeing is highly likely to produce innovation that is economically or socially useless or not oriented to the improvement of other people lives. On the other side, care for others wellbeing without creativity and innovation can often lead to frustration as it makes difficult to make new steps forward in the solution of social problems with respect to the existing state of affairs and therefore does not contribute to subjective wellbeing and confidence of those who care but lack of the creativity attribute.

Some historical examples can help us to understand. Albert Bruce Sabin was a Polish American medical researcher that developed the oral polio vaccine. He renounced to the patent in order to spread even more the benefits of his discovery. Albert Sabin maximised the combination of generativity intended as combination of creativity and care for other people wellbeing and created great benefits for the future generations. A more recent example of the same kind is that of Uğur Şahin and Özlem Türeci who created RNA based vaccine that is demonstrating to be effective against COVID-19 disease.

On the side of individuals who did not combine the two variables the biography of William James Sidis (1898-1944) can be taken as example of incredible creativity (a child prodigy with exceptional mathematical skills) who lived however extremely isolated, died relatively young and suffered lack of care for other wellbeing ending up with no important contributions to societal progress.

3.Creation of the generativity variable and descriptive statistics

The database used in our empirical analysis is the European Social Survey (ESS). The dataset contains information for 33 countries across 9 different waves on social and political preferences, beliefs and socio-demographic variables of a large sample of European respondents aged 15 and over.

In order to be consistent with our theoretical definition of generativity as a combination of creativity and care for others wellbeing we calculate our generativity measures starting from these two claims included in the European Social Survey database:

i)   Important to think new ideas and being creative
ii)   Important to help people and care for others wellbeing

Degree of consent to both sentences can be given by respondents by choosing one of the six modalities (very much like me, like me, somewhat like me, a little like me, not like me, not like me at all). We attribute a value of six to the first modality, five to the second, up to one to the last. We therefore create a product variable between the two scores that we call *ProdGenerativity* ranging from 1 to 36. Its distribution shows that around 8 percent of respondents report the highest score, while 37.7 percent register a score of 18 (the average generativity level) or below (Figure 1).

The goal of our empirical analysis is to test the nexus between *ProdGenerativity* and the selected set of dependent variables including life satisfaction, positive affect, resilience, social capital and active citizenship. Descriptive findings of the dependent variables used in the empirical analysis that follows are shown in Table 2 and Figures 2A-2F. Almost 58 percent of the sample have felt calm and peaceful and 53 percent cheerful and in good spirits most of the time or all time past week. Around half of the sample declares oneself resilient by disagreeing on the claim that when things go wrong in her/his life it takes a long time to get back normal, almost 67 percent agree or strongly agree to feel very positive about her/himself, while 26 percent of the sample declares a life satisfaction level between 8 and 10. 77 percent of sample respondents have voted in the last political election, while 38 percent of them are "active citizens" according to our classification (i.e. they have done at least one of the following activities - worked in political party or action group, worked in another organisation or association, worn or displayed campaign badge/sticker, signed petition, taken part in lawful public demonstration, boycotted certain products - in the last 12 months). The sample is almost exactly gender balanced with males being around 46 percent. 21.8 percent of sample respondents are single and 27 percent find difficult or very difficult to live with present income.

In order to provide an idea of the descriptive correlation of our product generativity measure with the selected dependent variables we group *ProdGenerativity* in six classes (first class from 1 to 6, second to 7 to 12, up to sixth class from 31 to 36) for simplicity of exposition and plot the corresponding confidence intervals of each class for all our dependent variables (Figures 3A-3F). In Figure 3A we find that life satisfaction grows significantly with no (95 percent confidence interval) overlap among subsequent generativity classes. The remarkable distance in terms of average life satisfaction levels between the lowest and the highest generativity class is around 1.7 that is, almost one standard deviation of the life satisfaction variable. When looking at our first positive affect variable (have felt cheerful and in good spirit in the last two

weeks) we find that the distance between the two extreme generativity classes is associated to a gap of around .8 that is, two third of its standard deviation. The same gap is close to one standard deviation for the feel positive variable, while the magnitude of the impact is slightly lower for the resilience and feeling calm and peaceful variables.

Overall, these descriptive statistics suggest a strong positive link between generativity, on the one side, and resilience and both cognitive and positive affect subjective wellbeing variables on the other side. As we already mentioned in the introduction resilience, the property of reacting quickly to a negative shock reverting as soon as possible to previous situation can also be seen as a mediating mechanism through which generativity affects subjective wellbeing. If generative people are more resilient, this helps them to have on average a higher level of cognitive (life satisfaction) and affective (cheerful and in good spirit, calm and peaceful, feel positive) wellbeing. More specifically, if resilient and non resilient people suffer the same number of shocks it is more likely, due to resilience properties, that the former feel more positive affect in the days before the interview or in general report a higher level of life satisfaction. Our hypothesis is descriptively supported in Figure 2x where we find a significant correlation between resilience and life satisfaction.

Our confidence interval plots also show a strong positive link between generativity and social capital variables (Figures 4A-4C). The distance between the two extreme generativity classes is associated to a .1 higher likelihood to have voted in the last national election, higher interpersonal trust (other people can be trusted) and probability of active citizenship. The strongest descriptive result on social capital variables is on active citizenship (around half one standard deviation) while lower on the other two.

4. Econometric analysis

In order to test the impact of generativity on the selected dependent variables we estimate the following specification

$$
\begin{aligned}
DepVar = \alpha_0 + \alpha_1 ProdGenerativity_i + \alpha_2 Male_i + \sum_f \beta_f DAgeClass_{f,i} \\
+ \sum_j \gamma_j DIncomeDecile_{j,i} + \alpha_3 NHMembers_i + \sum_k \delta_k DEducation_{k,i} \\
+ \sum_m \theta_m DMarital\_status_{m,i} + \sum_n k_n DSelf\_Assessed\_Health_{n,i} \\
+ \sum_s \rho_s DJob\_status_{s,i} + \sum_w \varphi_w DWave_w + \sum_z \omega_z DCountry_{z,i} + e_i
\end{aligned}
$$

(1)

where our dependent variable is, in turn, a subjective wellbeing, resilience or social capital variable of those described in Table 1 legend and *Prodgenerativity* is the product of the answers to the two generativity (creativity and care for helping others) variables as described in section 3.

Among controls we include a gender (0/1) dummy for female respondents, nine ten-year age classes to account for the potentially nonlinear effect of age on subjective wellbeing and the other dependent variables, income decile dummies (the first lowest decile being the omitted benchmark) and the number of household members. Education variables are based on harmonized ISCED2 classification. More specifically we use the following dummies: unclassified according to ISCED2 standards, lower secondary, lower tier upper secondary, upper tier upper secondary, advanced vocational, sub-degree, lower tertiary education, higher tertiary education with the upper tertiary class being the omitted benchmark. Marital status dummies include those capturing being in a civil partnership, separated, divorced, widowed, never married and never in civil partnership, with the married status is the omitted benchmark. Self-assessed health is captured by four dummies (good, fair, bad, very bad), with the "very good" response being the omitted benchmark. Employment status is captured by four variables (student, unemployed inactive, unemployed active and retired), with paid workers being the omitted benchmark. In order to capture factors affecting economic conditions beyond income we add feeling for present income measured with three dummies (coping on present income, difficult, very difficult) with living comfortably being the omitted benchmark). Wave and country dummies are finally added to the specification.

All our estimates are clustered at country level and use ESS post stratification weights including design weight in order to increase representativeness of our findings.

4.1 Econometric findings

In Table 3, columns 1-8 we present regression findings for specifications testing the effect of generativity on the eight selected dependent variables. The first is a measure of cognitive subjective wellbeing (life satisfaction in column 1), the next three are different measures of positive affect such as feeling positive about one's own life (column 2); being in good spirit (column 3) and feeling calm and peaceful (column 4). The following dependent variable is a measure of resilience (column 5). The last three are measures of civicness and social capital and, more specifically, how much people can be trusted (column 6), having voted in the last general election (column 7) and a composite index of active citizenship (column 8). Note that only a few variables are measured through all the nine rounds, while dependent variable in column 3 is only present in wave 5 and variables in columns 2, 4 and 5 only in wave 6.

We use probit specifications for the (0/1) variables of the decision to vote and active citizenship, while ordinary least squares for the other variables, performing robustness checks with ordered probit estimates that keep account their discrete qualitative nature.

The generativity variable is strongly positive and significant in all of the eight estimates (Table 3.1). Its magnitude in the life satisfaction estimate is smaller than that observed in Figures 1a-1f due to the effects of the other controls introduced in the estimate. More specifically, the impact on life satisfaction corresponds to a distance of .8 points of the dependent variable from the lowest to the highest generativity value. Consider as well that what we estimate in our econometric specifications is just a net generativity effect without considering that generativity can impact on education, income and therefore, though them, indirectly on subjective wellbeing. This is similar to what occurs when we calculate the net impact of education on life

satisfaction without considering that education acts on life satisfaction also through its positive effect on income.

The effect of controls on subjective wellbeing is consistent with what generally found in the literature: self-assessed health has a strong significant effect, age is U-shaped, income is positive and significant and marital status and employment variables have the usual sign and significance. Results tend to be similar but not identical for the different positive affect dependent variables. Self-assessed poor health has negative effect, as expected, on both subjective wellbeing and social capital variables. Success of relational life impacts more positively on the dependent variables than widowhood and separation. Male gender is positively correlated with resilience confirming findings on the gender happiness/depression paradox (Becchetti and Conzo, 2020). Signs for the unemployed tend to be negative and significant, while those of the retired positive and significant vis-à-vis the employed omitted benchmark.

5. Discussion and robustness checks

We re-estimate OLS specifications of Table 3.1 (column 1 and columns 4-8) with ordered probit taking into account the discrete qualitative nature of most wellbeing and social capital variables. Our main findings are unchanged. We use alternative generativity indexes such as the sum of the two individual components, the unweighted average or the same variables setting to zero the first two more negative answers to the creativity and care for others questions. Our main findings are unchanged and the alternative generativity indicators maintains the same sign and significance (results are omitted for reasons of space and available upon request). We as well introduce as additional controls the frequency of meetings with friends (as proxy of relational life) and self-declared political opinions. Again our findings do not change. We as well try estimates removing the more subjective "feeling about present income" variable without substantial changes in our findings. All these preliminary robustness checks are omitted for reasons of space and available upon request

We argued in the introduction that generative individuals are more resilient because having a clearer sense of life helps them to stand up after a shock, and that the resilient have higher subjective wellbeing because, coeteris paribus, they recover faster from a shock. We therefore wonder whether the positive impact of generativity on subjective wellbeing persists when conditional to the same level of resilience. In other terms we want to test whether there is an impact of generativity on subjective wellbeing independent from its indirect effect mediated through resilience. We find that this is the case (Table 4.1). Generativity is significant on life satisfaction and positive affect in each of the separate estimates conditional to a given level of resilience. The magnitude of the effect becomes much larger for individuals with the two lowest levels of resilience where the difference between highest and lowest generativity creates a difference of 1.08 in the life satisfaction scale. This specific robustness check therefore shows that, once controlling for the level of resilience, generativity has a positive and significant effect on life satisfaction.

We test whether our findings are robust across the nine different waves and find that they are (Table 4.1). We as well consider that differences in languages and national cultures can bias

perception of dependent variables (life satisfaction, positive affect, creativity, helping others). We therefore estimate the model separately for each of the 33 countries in the EES database. We find that results are remarkably stable and significant in each of the 33 countries but Turkey (Table 4.1). In general robustness checks presented in Table 4.1 show that most of the heterogeneity of the generativity effect is at country level with coefficient magnitude varying from country to country, while heterogeneity is extremely limited across waves, gender, income and level of education.

We repeat the same checks of Table 4.1 for dependent variables different from life satisfaction and find similar robust findings (Tables 4.2 - 4.8). We finally augment our base specification introducing country/wave shocks and month of the year interview. In the first case we control for country specific shocks that can have occurred in some of the considered waves affecting our dependent variables. In the second case we want to clean our findings from weather related effects at the time of interview. Our findings are unchanged. Results are omitted for reasons of space and available upon request.

6. Instrumental variable approach

The significant and robust association between generativity and our independent variables can be affected by endogeneity or reverse causality. We therefore devise an instrumental variable approach to test for the existence of a direct causality link going from generativity, on the one side, to subjective wellbeing, social capital, resilience or active citizenship on the other side. As is well known it is hard to find instruments, especially when the dependent variable is subjective wellbeing since it is difficult to imagine a valid instrument that has not impact on it directly.

In order to select our instrument we must consider the implicit trade-off between weakness and validity. An instrument that is too far from the respondent can be weak even though valid (not directly affecting the dependent variable), while an instrument closer to the respondent is stronger but with higher probability of not being valid. We find a right balance for some of our dependent variable in the average generativity level of 30 year older individuals of the opposite sex of the respondent's country. More specifically, we use this instrument for life satisfaction, feeling positive about oneself, being calm and peaceful and active citizenship. The instrument is relevant since it is significantly correlated with generativity of the respondent. The rationale is that it affects domestic generativity atmosphere that is significantly correlated with the respondent's generativity. The nexus can be partly cultural partly genetic but we have no grounds to evaluate this point. We as well assume that the instrument is valid since there is no reason to believe that it affects directly the level of the dependent variables formulated by the respondent. We find results not contradicting this hypothesis by showing in a falsification exercise that the selected instrument is not significant when included in the non instrumented estimate that is, the instrument does not affect directly the dependent variable if not through the instrumented variable (respondent's generativity). Second stage coefficients of IV estimates are significant and slightly higher in magnitude than in the corresponding non IV estimates thereby not rejecting the hypothesis of a causality link from generativity and our dependent variables.

The balance between relevance and validity of our instruments is found at a 40 (instead of 30) year distance when considering other two dependent variables (resilience and being in good spirit), while at the corresponding age for the (0/1) dependent variable capturing respondents who voted in the last elections.

We do not find a proper instrument for the people trust variable among generativity averages and use alternatively a (0/1) dummy taking value one if the father of the respondent was self-employed or high skilled when the respondent was 14th including in the estimate only respondents who are 60 or older in order to create a proper time distance between the two answers. Consider that in our estimate we as well control for additional drivers that can be suspected of fuelling indirect causality patterns such as respondent income and education. As a matter of fact our falsification test shows also in this case that the instrument (father job characteristic when the respondent was 14) is not significant if added in our standard regression (Table 5). The instrument is significant in first stage of our IV estimate that is, it positively and significantly affects current generativity. The interpretation is that having a father with a skilled job or being self-employed when adolescent stimulated respondents generativity. Second stage regression is as well significant with the instrumented generativity variable affecting significantly and positively the level of trust.

5. Conclusions and policy implications

We find several traces in the history of economic and political thought (from John Stuart Mill, to Genovesi, to Robert Kennedy) of the importance of generativity for human beings. We conceptualise this idea by creating a generativity variable conceived as a product of creativity and care for others wellbeing. We test the association of this variable with (cognitive and positive affect) measures of subjective wellbeing, resilience, social capital and active citizenship over more than 400,000 individual observations in the nine waves of the European Social Survey.

Our findings provide strong support and evidence on the significant association between generativity, on the one side, and the above described selected dependent variables, on the other side. Estimated findings are quite robust across gender, age and education splits and independent from time and cultural country specific effects since they remain significant in estimates considering only individuals living in the same country.

In order to identify a direct causality link we use as instrument average generativity values of elder individuals in the same country. We find that our instruments are relevant, while its validity is also supported by falsification tests.

Policy implications of our results are quite relevant. Strategies that can enhance creativity and care for others wellbeing can play a crucial role to increase social capital, active citizenship, subjective wellbeing and resilience. From these points of view we consider that school experiences can be crucial if teaching is not limited to face-to-face transmission of concepts from the teacher to students while involving lab activities where students can express their creativity and experience that they can contribute to improve other people wellbeing with it.

All other experiences stimulating creativity and care for others wellbeing during young age can play an important role.

Looking at life experiences along all age classes a more general policy implication is that institutions should define generativity targets for their policies. Active ageing is for instance an important target to support generativity of the elder. Fostering various types of grassroot initiatives such as community management of local public and common goods can also contribute significantly to develop a sense of generativity in all population categories.

Overall the main conclusion of our paper is that policymakers and the civil society should find mutual benefit in fixing as their goal to create generative society and to use generativity indicators to evaluate their choices and policies.

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Table 1 Generativity and Dependent Variables legend

Life satisfaction	How satisfied with life as a whole (answers on a 0-10 scale, 0=extremely dissatisfied, 10= extremely satisfied)
Good spirit	Have felt cheerful and in good spirit last 2 weeks (all of the time, most of the time, more than half of the time, less than half of the time, some of the time, at no time)
Calm and peaceful	Felt calm and peaceful often last week (non or almost none of the time, some of the time, most of the time, all or almost all of the time)
Resilience	When things go wrong it takes a long time to get back to normal (agree strongly, agree, neither agree nor disagree, disagree, disagree strongly)
Feeling positive	In general feel very positive about myself (agree strongly, agree, neither agree nor disagree, disagree, disagree strongly)
Vote	Voted last national election
Trust on other people	Most people can be trusted or you can't be too careful (answers on a 0-10 scale, 0=you can't be too careful, 10= most people can be trusted)
Active citizenship	(0/1) dummy taking value one if the individual has done at least one of the following activities (worked in political party or action group, worked in another organisation or association, worn or displayed campaign badge/sticker, signed petition, taken part in lawful public demonstration, boycotted certain products) in the last 12 months
Creative	Important to think new ideas and being creative (6=very much like me, 5=like me, 4=somewhat like me, 3=a little like me, 2=not like me, 1=not like me at all)
Help care	Important to help people and care for others wellbeing (6=very much like me, 5=like me, 4=somewhat like me, 3=a little like me, 2=not like me, 1=not like me at all)
ProdGenerativity	Product of the Creative and Help care variables (with values ranging from 1 ot 36)

Figures 1A-1C Distributions of the generativity, creativity and care for others wellbeing variables
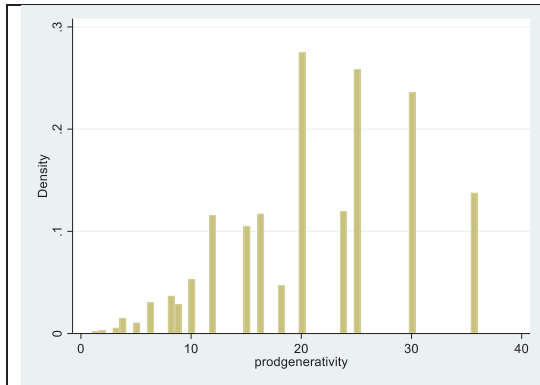
Fig. 1.A Generativity
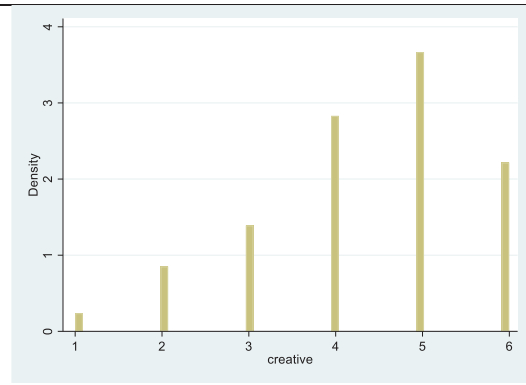
Fig. 1.B creative
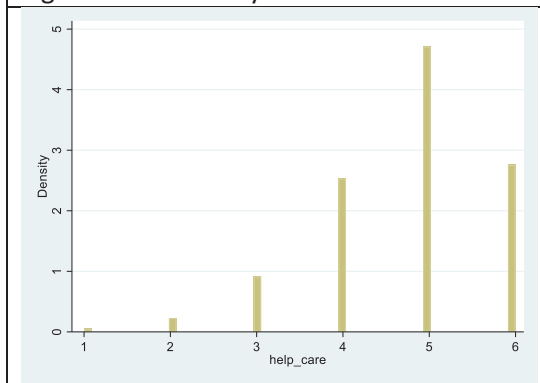
Fig. 1.C Care for others wellbeing

Figures 4A-4F Distribution of dependent variables
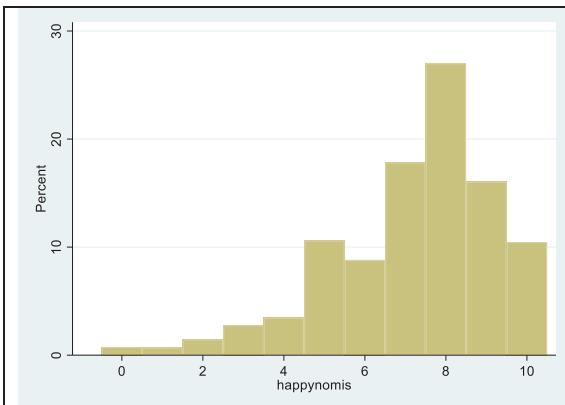
How satisfied with life as a whole (0=extremely dissatisfied, 10= extremely satisfied)
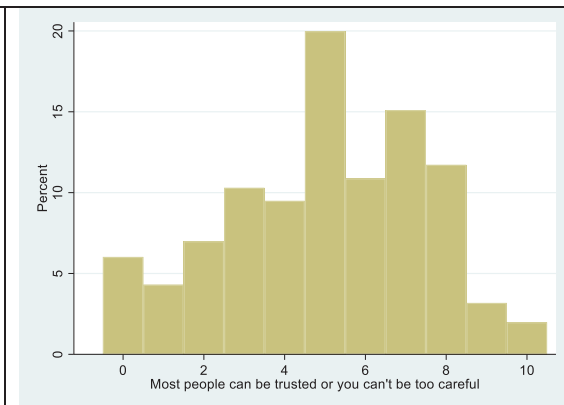
Most people can be trusted or you can't be too careful (0=you can't be too careful, 10= most people can be trusted)
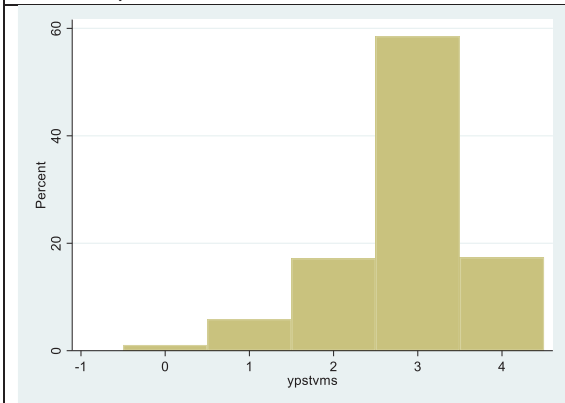
positive about myself (4=agree strongly, 3=agree, 2=neither agree nor disagree, 1=disagree, 0=disagree strongly)
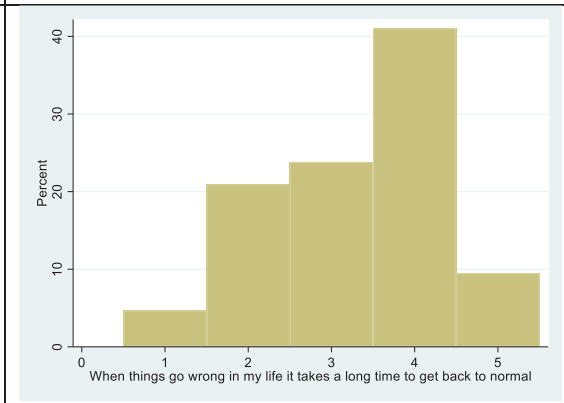
Lack of Resilience (5=agree strongly, 4=agree, 3=neither agree nor disagree, 2=disagree, 1=disagree strongly)
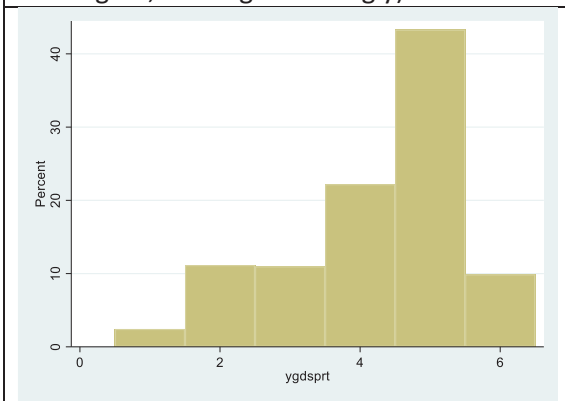
Feeling in good spirit (6=all of the time, 5=most of the time, 4=more than half of the time, 3=less than half of the time, 2=some of the time, 1=at no time)
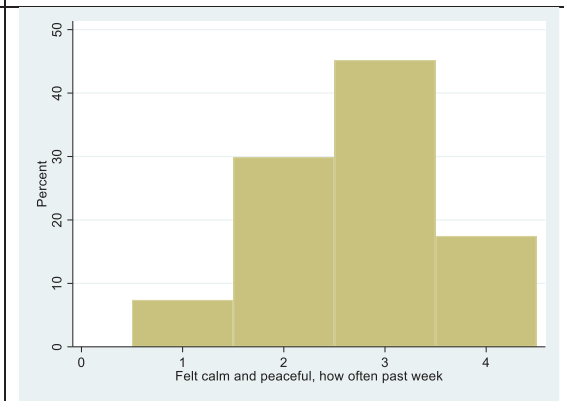
Calm and peaceful (1=non or almost none of the time, 2=some of the time, 3=most of the time, 4=all or almost all of the time)

Table 2 Descriptive findings

Variable	Obs	Mean	St. dev.	Min	Max
Vote	387607	0.774	0.418	0	1
Active citizenship	413378	0.380	0.485	0	1
Male	422985	0.461	0.498	0	1
Age class					
<20	422985	0.057	0.232	0	1
20-29	422985	0.136	0.343	0	1
30-39	422985	0.160	0.366	0	1
40-49	422985	0.169	0.374	0	1
50-59	422985	0.168	0.375	0	1
60-69	422985	0.153	0.360	0	1
70-79	422985	0.106	0.308	0	1
80-89	422985	0.041	0.199	0	1
>89	422985	0.009	0.092	0	1
Job status					
Student	422985	0.098	0.297	0	1
Unemployed active	422985	0.043	0.203	0	1
Uemployed inactive	422985	0.021	0.143	0	1
Retired	422985	0.261	0.439	0	1
Income decile					
1st decile	315788	0.060	0.238	0	1
2nd decile	315788	0.098	0.298	0	1
3rd decile	315788	0.105	0.307	0	1
4th decile	315788	0.121	0.326	0	1
5th decile	315788	0.117	0.321	0	1
6th decile	315788	0.107	0.309	0	1
7th decile	315788	0.101	0.302	0	1
8th decile	315788	0.095	0.293	0	1
9th decile	315788	0.100	0.301	0	1
10th decile	315788	0.075	0.263	0	1
N. of household members	422375	2.726	1.439	1	22
Education					
Not harmonised into EISCED categories	422985	0.173	0.379	0	1
Less than lower secondary	422985	0.082	0.274	0	1
Lower secondary	422985	0.147	0.354	0	1
Lower tier upper secondary	422985	0.151	0.358	0	1
Upper tier upper secondary	422985	0.169	0.375	0	1
Advanced vocational	422985	0.097	0.296	0	1
Lower tertiary education	422985	0.081	0.273	0	1
highest tertiary level	422985	0.095	0.293	0	1
Marital Status					
Married	422985	0.013	0.335	0	1

Civil Union	422985	0.009	0.093	0	1
Separated	422985	0.004	0.062	0	1
Divorced	422985	0.069	0.254	0	1
Widowed	422985	0.076	0.265	0	1
Never Married or in Civil Partnership	422985	0.218	0.413	0	1
Self-Assessed health					
Very good	422362	0.228	0.419	0	1
Good	422362	0.415	0.493	0	1
Fair	422362	0.269	0.443	0	1
Bad	422362	0.073	0.260	0	1
Very Bad	422362	0.016	0.124	0	1
Feeling about present income					
Living comfortably	414366	0.277	0.488	0	1
Copying	414366	0.447	0.497	0	1
Difficult	414366	0.192	0.394	0	1
Very Difficult	414366	0.079	0.269	0	1
Country					
Austria	422985	0.031	0.121	0	1
Belgium	422985	0.038	0.191	0	1
Bulgaria	422985	0.025	0.156	0	1
Switzerland	422985	0.036	0.187	0	1
Cyprus	422985	0.012	0.110	0	1
Czech Republic	422985	0.042	0.200	0	1
Germany	422985	0.061	0.239	0	1
Denmark	422985	0.029	0.169	0	1
Estonia	422985	0.036	0.187	0	1
Spain	422985	0.041	0.197	0	1
Finland	422985	0.042	0.202	0	1
France	422985	0.040	0.197	0	1
Great Britain	422985	0.047	0.211	0	1
Greece	422985	0.023	0.150	0	1
Croatia	422985	0.012	0.107	0	1
Hungary	422985	0.035	0.184	0	1
Ireland	422985	0.048	0.215	0	1
Israel	422985	0.035	0.184	0	1
Iceland	422985	0.007	0.085	0	1
Italy	422985	0.018	0.132	0	1
Lithuania	422985	0.024	0.152	0	1
Luxembourg	422985	0.008	0.086	0	1
Latvia	422985	0.007	0.082	0	1
Netherlands	422985	0.040	0.196	0	1
Norway	422985	0.035	0.183	0	1
Poland	422985	0.037	0.189	0	1
Portugal	422985	0.038	0.191	0	1
Russia	422985	0.029	0.169	0	1

Sweden	422985	0.038	0.190	0	1
Slovenia	422985	0.029	0.168	0	1
Slovakia	422985	0.023	0.151	0	1
Turkey	422985	0.010	0.100	0	1
Ukraine	422985	0.024	0.152	0	1
ESS wave					
1st wave	422985	0.100	0.300	0	1
2nd wave	422985	0.112	0.316	0	1
3rd wave	422985	0.102	0.302	0	1
4th wave	422985	0.129	0.335	0	1
5th wave	422985	0.124	0.330	0	1
6th wave	422985	0.123	0.329	0	1
7th wave	422985	0.095	0.293	0	1
8th wave	422985	0.105	0.306	0	1
9th wave	422985	0.109	0.312	0	1

Figures 3A-3E Generativity, subjective wellbeing and resilience
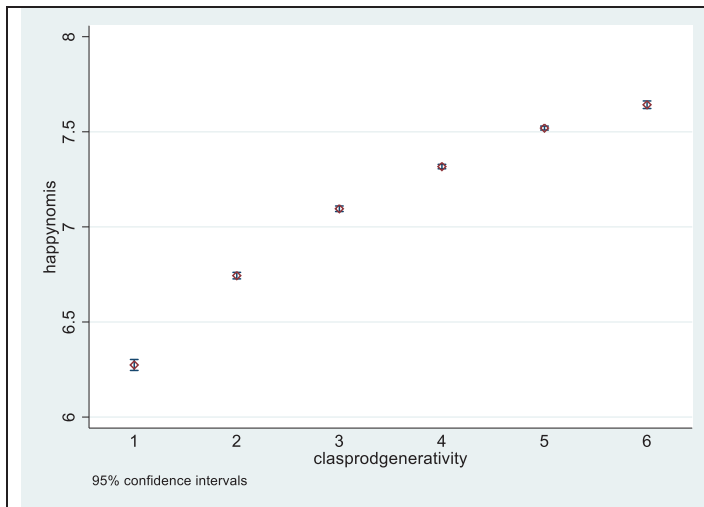
Y axis: life satisfaction; X axis: ClasProdGenerativity
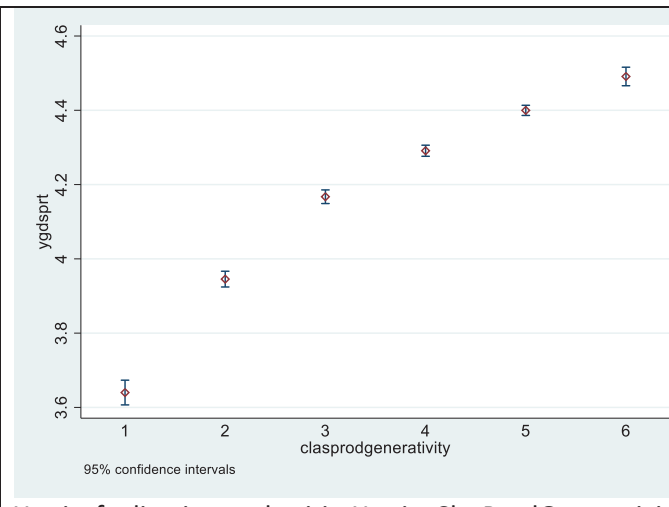
Y axis: feeling in good spirit; X axis: ClasProdGenerativity
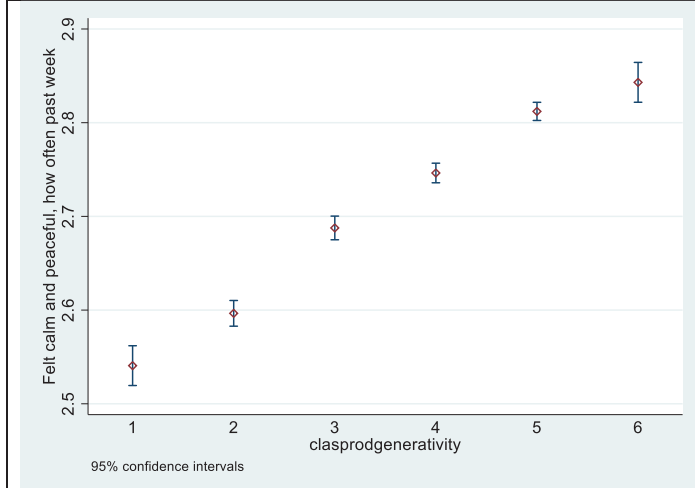
Y axis: calm and peaceful; X axis: ClasProdGenerativity
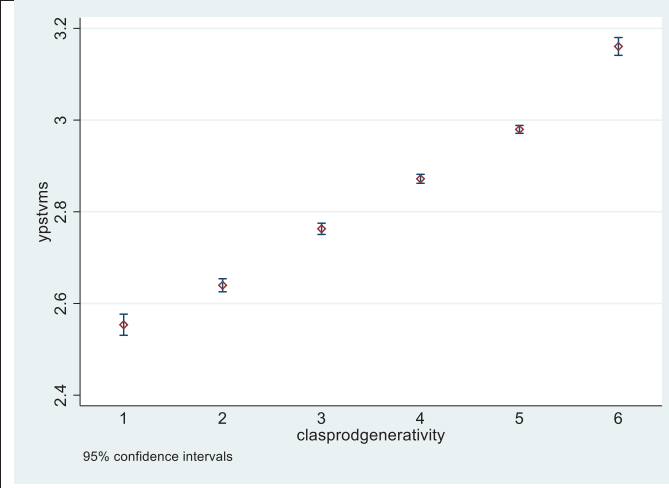
Y axis: positive about myself; X axis: ClasProdGenerativity
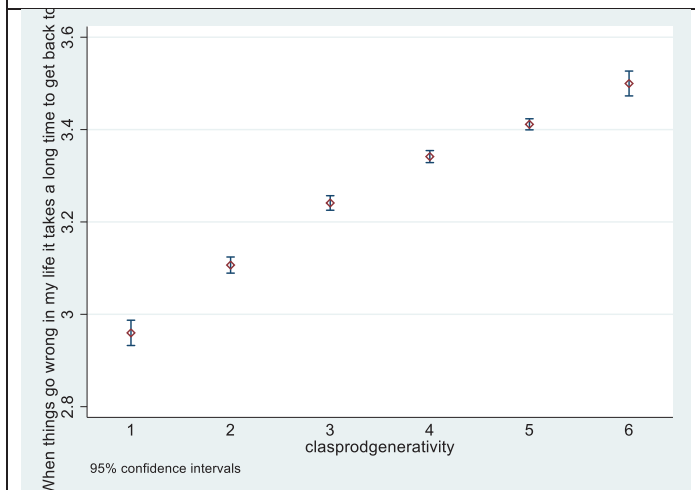
Y axis: resilience; X axis: ClasProdGenerativity

ClasProdGenerativity: 1 if generativity<7; 2 if generativity between 7 and 12, 3 if generativity between 13 and 18, 4 if generativity between 19 and 24, 5 if generativity between 25 and 30, 6 if generativity between 31 and 36.

Figures 4A-4C Generativity, active citizenship and social capital
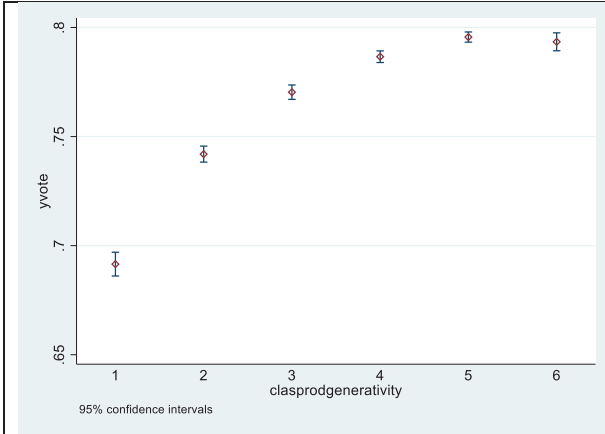
Y axis: voting in last national elections; X axis: ProdGenerativity divided in six classes
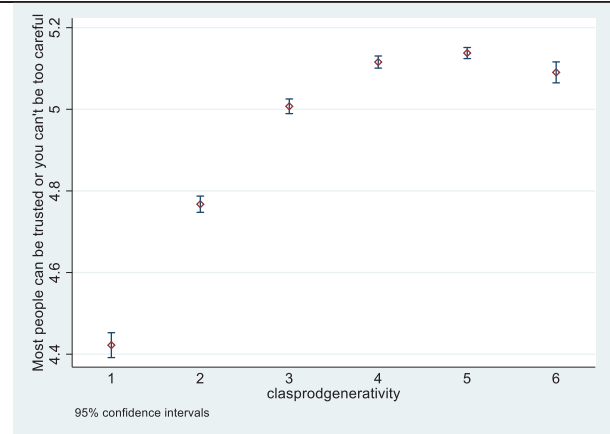
Y axis: most people can be trusted; X axis: ProdGenerativity divided in six classes
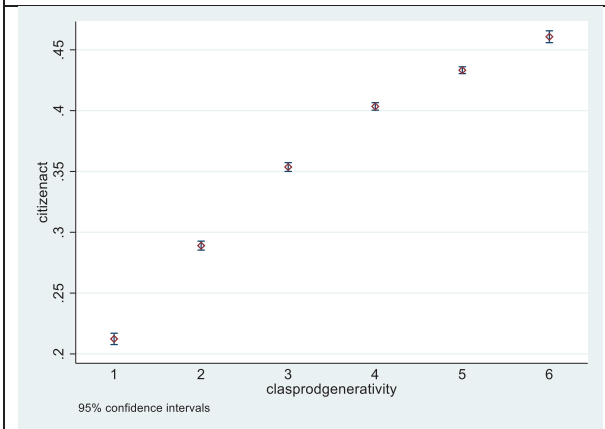
Y axis: active citizenship; X axis: ProdGenerativity divided in six classes

Table 3.1 The impact of generativity on subjective wellbeing, resilience and social capital (OLS estimates)

VARIABLES	(1) Life satisfaction	(2) Positive about myself	(3) In good spirit	(4) Calm and peaceful	(5) Resilience	(6) People have to be trusted	(7) Voting in last national elections
Generativity	0.022***	0.018***	0.015***	0.007***	0.010***	0.004***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.151***	0.083***	0.026	0.123***	0.120***	0.030	-0.001
	(0.014)	(0.020)	(0.016)	(0.016)	(0.011)	(0.022)	(0.013)
Age class							
(>89 omitted benchmark)							
<20	0.306***	0.021	0.294***	-0.043	-0.017	-0.136**	-1.461***
	(0.038)	(0.034)	(0.039)	(0.032)	(0.034)	(0.060)	(0.096)
20-29	0.220***	0.019	0.176***	-0.028	0.008	-0.256***	-0.470***
	(0.022)	(0.017)	(0.021)	(0.018)	(0.017)	(0.032)	(0.030)
30-39	0.120***	0.003	0.058***	-0.045***	0.001	-0.174***	-0.253***
	(0.015)	(0.010)	(0.016)	(0.011)	(0.013)	(0.013)	(0.023)
40-49	0.053**	0.015	0.017	0.062***	0.012	0.049***	0.196***
	(0.021)	(0.013)	(0.021)	(0.015)	(0.014)	(0.015)	(0.014)
50-59	0.207***	0.030*	0.122***	0.131***	0.040**	0.097***	0.332***
	(0.037)	(0.017)	(0.021)	(0.026)	(0.019)	(0.025)	(0.023)
60-69	0.338***	0.017	0.101***	0.198***	0.034	0.180***	0.402***
	(0.044)	(0.026)	(0.034)	(0.029)	(0.027)	(0.039)	(0.032)
70-79	0.407***	0.070**	0.139***	0.269***	0.070*	0.275***	0.263***
	(0.048)	(0.030)	(0.040)	(0.031)	(0.034)	(0.062)	(0.049)
80-89	0.373***	0.139***	0.175**	0.173**	0.077	0.210***	-0.081
	(0.088)	(0.037)	(0.077)	(0.066)	(0.058)	(0.071)	(0.083)
Student	0.086***	0.018	0.010	-0.022	0.060**	0.348***	0.099***
	(0.026)	(0.018)	(0.024)	(0.020)	(0.023)	(0.030)	(0.024)
Unemployed active	-0.361***	-0.032	-0.220***	-0.033	-0.110***	-0.102***	-0.139***
	(0.035)	(0.023)	(0.033)	(0.020)	(0.018)	(0.026)	(0.024)
Uemployed inactive	-0.271***	-0.057	-0.092**	-0.056**	-0.130***	-0.052	-0.156***
	(0.036)	(0.040)	(0.041)	(0.027)	(0.027)	(0.043)	(0.026)
Retired	0.078***	0.045***	0.034*	0.045**	-0.031	0.005	0.129***
	(0.023)	(0.012)	(0.019)	(0.017)	(0.022)	(0.025)	(0.020)
Income decile							
(1st decile omitted benchmark)							
2nd decile	0.061*	0.028	0.084*	-0.009	0.012	0.027	0.011
	(0.032)	(0.028)	(0.045)	(0.022)	(0.026)	(0.026)	(0.019)
3rd decile	0.095**	0.040	0.070	0.018	0.052**	0.023	0.038**
	(0.037)	(0.029)	(0.042)	(0.025)	(0.023)	(0.034)	(0.020)
4th decile	0.096**	0.057*	0.103**	0.017	0.037	0.061	0.063***
	(0.038)	(0.030)	(0.045)	(0.028)	(0.026)	(0.042)	(0.024)
5th decile	0.121***	0.027	0.112***	-0.014	0.040	0.064	0.075***
	(0.038)	(0.026)	(0.039)	(0.026)	(0.027)	(0.040)	(0.021)
6th decile	0.157***	0.029	0.105**	0.019	0.096***	0.137***	0.092***
	(0.044)	(0.029)	(0.043)	(0.032)	(0.024)	(0.048)	(0.025)
7th decile	0.161***	0.022	0.102**	-0.022	0.075**	0.178***	0.132***
	(0.042)	(0.033)	(0.045)	(0.036)	(0.028)	(0.047)	(0.031)
8th decile	0.182***	0.015	0.157***	-0.019	0.123***	0.204***	0.158***

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(0.041)	(0.028)	(0.053)	(0.032)	(0.027)	(0.051)	(0.037)
9th decile	0.191***	0.017	0.091*	-0.026	0.151***	0.233***	0.200***
	(0.048)	(0.031)	(0.046)	(0.036)	(0.034)	(0.049)	(0.045)
10th decile	0.220***	0.067*	0.091*	-0.000	0.181***	0.199***	0.178***
	(0.051)	(0.036)	(0.052)	(0.042)	(0.038)	(0.061)	(0.053)
N. household members	0.066***	0.003	0.004	0.000	0.005	0.002	0.021***
	(0.008)	(0.003)	(0.004)	(0.006)	(0.004)	(0.007)	(0.006)

Education
(highest tertiary level omitted benchmark)

Not Harmonised into EISCED categories	0.180***	0.070	0.066	0.014	-0.100**	-0.395***	-0.367***
	(0.061)	(0.044)	(0.046)	(0.035)	(0.044)	(0.069)	(0.054)
Less than lower secondary	0.093*	0.100*	0.041	0.032	-0.152***	-0.854***	-0.607***
	(0.050)	(0.051)	(0.048)	(0.026)	(0.034)	(0.068)	(0.055)
Lower secondary	0.017	0.021	0.062**	0.038*	-0.138***	-0.800***	-0.546***
	(0.038)	(0.022)	(0.030)	(0.020)	(0.023)	(0.067)	(0.057)
Lower tier upper secondary	0.032	0.057**	0.102***	0.044**	-0.057*	-0.651***	-0.399***
	(0.032)	(0.024)	(0.028)	(0.020)	(0.030)	(0.054)	(0.043)
Upper tier upper secondary	-0.019	0.026	0.057**	0.050***	-0.038	-0.454***	-0.259***
	(0.028)	(0.024)	(0.025)	(0.016)	(0.024)	(0.051)	(0.034)
Advanced vocational	0.028	0.046**	0.010	0.032**	-0.010	-0.348***	-0.161***
	(0.027)	(0.019)	(0.034)	(0.014)	(0.019)	(0.046)	(0.034)
Lower tertiary education	0.001	-0.002	-0.020	0.019	0.010	-0.064	-0.015
	(0.023)	(0.017)	(0.026)	(0.017)	(0.027)	(0.046)	(0.034)

Marital Status
(Married omitted benchmark)

Civil Union	-0.208***	-0.022	0.133**	-0.102***	-0.054	-0.064	-0.210***
	(0.066)	(0.022)	(0.059)	(0.031)	(0.045)	(0.039)	(0.071)
Separated	-0.582***	0.057	-0.224***	-0.161***	-0.132*	-0.106*	-0.130***
	(0.069)	(0.049)	(0.065)	(0.043)	(0.074)	(0.060)	(0.047)
Divorced	-0.403***	-0.025	-0.101***	-0.064***	-0.037*	-0.109***	-0.238***
	(0.030)	(0.020)	(0.032)	(0.010)	(0.021)	(0.020)	(0.021)
Widowed	-0.506***	0.001	-0.165***	-0.085***	-0.064***	0.033	-0.136***
	(0.039)	(0.014)	(0.041)	(0.018)	(0.021)	(0.023)	(0.022)
Never Married or in Civil Partnership	-0.347***	-0.036***	-0.035*	-0.042***	-0.035***	-0.006	-0.146***
	(0.023)	(0.012)	(0.020)	(0.014)	(0.012)	(0.015)	(0.017)

Self-Assessed health
(very good omitted benchmark)

Good	-0.443***	-0.219***	-0.288***	-0.200***	-0.183***	-0.219***	-0.012
	(0.021)	(0.015)	(0.023)	(0.015)	(0.017)	(0.024)	(0.014)
Fair	-0.936***	-0.384***	-0.642***	-0.405***	-0.375***	-0.514***	-0.074***
	(0.035)	(0.019)	(0.026)	(0.027)	(0.021)	(0.027)	(0.019)
Bad	-1.604***	-0.595***	-1.187***	-0.648***	-0.553***	-0.734***	-0.213***
	(0.050)	(0.032)	(0.037)	(0.032)	(0.039)	(0.035)	(0.024)
Very Bad	-2.398***	-0.741***	-1.731***	-0.782***	-0.794***	-1.003***	-0.405***
	(0.075)	(0.062)	(0.079)	(0.037)	(0.046)	(0.065)	(0.037)

Feeling about present income
(living comfortably omitted benchmark)

Copying	-0.328***	-0.027**	-0.142***	-0.071***	-0.081***	-0.263***	-0.099***
	(0.024)	(0.010)	(0.018)	(0.012)	(0.015)	(0.025)	(0.022)
Difficult	-0.852***	-0.096***	-0.415***	-0.205***	-0.219***	-0.508***	-0.218***
	(0.051)	(0.018)	(0.027)	(0.020)	(0.024)	(0.037)	(0.024)
Very Difficult	-1.499***	-0.221***	-0.720***	-0.375***	-0.357***	-0.760***	-0.251***
	(0.068)	(0.046)	(0.060)	(0.025)	(0.030)	(0.052)	(0.028)
Country							
(Austria omitted benchmark)							
Belgium	0.327***	-0.205***	0.068**	-0.024	0.013	-0.256***	0.197***
	(0.029)	(0.035)	(0.027)	(0.031)	(0.027)	(0.030)	(0.025)
Bulgaria	-1.026***	0.167***	-0.168***	0.117***	-0.221***	-1.391***	-0.276***
	(0.036)	(0.027)	(0.041)	(0.019)	(0.021)	(0.035)	(0.028)
Switzerland	0.412***	-0.000	0.147***	0.051	0.073**	0.417***	-0.757***
	(0.026)	(0.035)	(0.028)	(0.033)	(0.028)	(0.028)	(0.026)
Cyprus	-0.049**	0.005	-0.097***	-0.082***	-0.126***	-1.436***	-0.101***
	(0.022)	(0.015)	(0.024)	(0.017)	(0.013)	(0.028)	(0.021)
Czech Republic	-0.251***	-0.317***	-0.083***	0.310***	-0.084***	-0.392***	-0.775***
	(0.031)	(0.034)	(0.030)	(0.032)	(0.024)	(0.030)	(0.025)
Germany	0.141***	0.174***	0.101***	0.245***	0.122***	-0.229***	-0.176***
	(0.029)	(0.034)	(0.030)	(0.032)	(0.027)	(0.029)	(0.027)
Denmark	0.665***	0.003	0.280***	0.270***	0.280***	1.473***	0.384***
	(0.028)	(0.036)	(0.029)	(0.033)	(0.027)	(0.030)	(0.029)
Estonia	0.056*	0.153***	-0.052*	0.241***	0.058**	0.393***	-0.574***
	(0.029)	(0.036)	(0.027)	(0.031)	(0.025)	(0.029)	(0.025)
Spain	0.302***	0.132***	0.138***	0.002	-0.003	-0.021	-0.104***
	(0.034)	(0.032)	(0.026)	(0.031)	(0.026)	(0.032)	(0.026)
Finland	0.666***	0.042*	-0.006	0.047**	0.306***	1.319***	-0.182***
	(0.013)	(0.021)	(0.013)	(0.019)	(0.015)	(0.011)	(0.011)
France	-0.055*	-0.325***	-0.063**	-0.114***	0.020	-0.683***	-0.512***
	(0.029)	(0.034)	(0.027)	(0.031)	(0.026)	(0.029)	(0.022)
Great Britain	0.031***	-0.141***	0.069***	-0.135***	0.084***	-0.032***	-0.507***
	(0.010)	(0.016)	(0.016)	(0.015)	(0.012)	(0.009)	(0.009)
Greece	-0.813***		-0.488***			-1.134***	0.138***
	(0.024)		(0.019)			(0.025)	(0.025)
Croatia	-0.239***		-0.388***			-0.810***	-0.411***
	(0.034)		(0.028)			(0.036)	(0.032)
Hungary	-0.557***	-0.332***	0.038	0.149***	0.108***	-0.511***	-0.306***
	(0.035)	(0.035)	(0.031)	(0.031)	(0.025)	(0.034)	(0.028)
Ireland	-0.144***	-0.047**	0.238***	0.045**	0.035**	0.018	-0.341***
	(0.014)	(0.020)	(0.019)	(0.018)	(0.015)	(0.015)	(0.011)
Israel	0.167***	0.116***	-0.106***	0.035	0.082***	-0.000	-0.131***
	(0.024)	(0.031)	(0.025)	(0.028)	(0.023)	(0.028)	(0.020)
Iceland	0.522***	-0.043	0.143***	0.291***	0.127***	0.801***	0.262***
	(0.024)	(0.034)	(0.032)	(0.028)	(0.025)	(0.030)	(0.020)
Italy	-0.186***	-0.083**		-0.027	-0.049*	-0.341***	-0.147***
	(0.030)	(0.033)		(0.028)	(0.025)	(0.033)	(0.023)
Lithuania	-0.450***	-0.102**	-0.150***	0.081**	-0.130***	-0.183***	-0.884***
	(0.028)	(0.037)	(0.032)	(0.032)	(0.026)	(0.026)	(0.023)
Luxembourg	0.260***		0.122***			-0.086*	-0.406***
	(0.058)		(0.028)			(0.047)	(0.039)
Latvia	-0.073					-0.750***	-0.681***
	(0.050)					(0.039)	(0.039)
Netherlands	0.358***	-0.176***	0.020	0.141***	0.076**	0.660***	-0.106***
	(0.028)	(0.036)	(0.029)	(0.033)	(0.028)	(0.028)	(0.025)

Norway	0.444***	-0.197***	0.259***	0.233***	0.278***	1.233***	-0.057**
	(0.026)	(0.036)	(0.029)	(0.032)	(0.027)	(0.028)	(0.025)
Poland	0.004	0.109***	-0.083**	-0.007	0.107***	-0.969***	-0.468***
	(0.038)	(0.033)	(0.030)	(0.030)	(0.028)	(0.036)	(0.031)
Portugal	-0.146***	0.147***	-0.040***	0.049***	0.180***	-0.910***	-0.333***
	(0.024)	(0.022)	(0.010)	(0.014)	(0.013)	(0.016)	(0.020)
Russia	-0.413***	0.218***	0.059*	0.169***	0.038	-0.751***	-0.590***
	(0.044)	(0.035)	(0.030)	(0.032)	(0.029)	(0.037)	(0.033)
Sweden	0.205***	-0.020	0.159***	0.192***	0.167***	0.767***	0.314***
	(0.012)	(0.019)	(0.014)	(0.016)	(0.014)	(0.012)	(0.012)
Slovenia	-0.078**	0.130***	-0.059*	0.201***	-0.124***	-0.938***	-0.486***
	(0.032)	(0.032)	(0.030)	(0.031)	(0.026)	(0.034)	(0.026)
Slovakia	-0.335***	-0.031	-0.035	0.266***	0.002	-0.866***	-0.362***
	(0.035)	(0.033)	(0.030)	(0.031)	(0.026)	(0.040)	(0.032)
Turkey	-1.092***		-0.602***			-2.409***	0.053
	(0.034)		(0.013)			(0.032)	(0.045)
Ukraine	-0.449***	0.184***	0.090**	0.388***	-0.080***	-0.623***	-0.235***
	(0.050)	(0.037)	(0.036)	(0.032)	(0.027)	(0.039)	(0.038)
ESS wave							
(first wave omitted benchmark)							
2nd wave	0.091*					0.079*	-0.052
	(0.050)					(0.044)	(0.040)
3rd wave	0.173***					0.159***	0.047
	(0.053)					(0.038)	(0.034)
4th wave	0.139**					0.136***	0.079**
	(0.058)					(0.045)	(0.036)
5th wave	0.257***		0.105***			0.212***	-0.009
	(0.064)		(0.015)			(0.046)	(0.039)
6th wave	0.326***	0.049***		0.128***	0.117***	0.228***	-0.027
	(0.075)	(0.017)		(0.020)	(0.025)	(0.046)	(0.033)
7th wave	0.298***					0.134***	-0.056
	(0.061)					(0.046)	(0.050)
8th wave	0.409***					0.290***	-0.030
	(0.071)					(0.043)	(0.054)
9th wave	0.485***					0.252***	-0.012
	(0.066)					(0.053)	(0.049)
Constant	7.226***	2.620***	4.266***	2.646***	3.247***	5.822***	1.375***
	(0.078)	(0.059)	(0.081)	(0.044)	(0.066)	(0.080)	(0.063)
Observations	300,123	67,923	66,825	67,739	67,637	300,677	281,268
R-squared	0.269	0.132	0.221	0.124	0.120	0.190	

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The omitted benchmark is female, married, with lowest income decile

Table 4.1. Robustness check on the impact of generativity on life satisfaction

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education
Generativity	0.024***	0.021***	0.020***	0.024***	0.023***	0.022***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)

ESTIMATES	(1) Resilience 1	(2) Resilience 2	(3) Resilience 3	(4) Resilience 4	(5) Resilience 5
Generativity	0.038***	0.026***	0.019***	0.018***	0.023***
	(0.005)	(0.003)	(0.003)	(0.002)	(0.004)

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity	0.017***	0.019***	0.021***	0.022***	0.024***	0.027***	0.023***	0.022***	0.022***
	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.023***	0.013***	0.036***	0.018***	0.033***	0.026***	0.022***	0.015***	0.032***
	(0.003)	(0.002)	(0.004)	(0.002)	(0.005)	(0.003)	(0.002)	(0.002)	(0.003)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.025***	0.016***	0.012***	0.015***	0.022***	0.030***	0.020***	0.027***	0.019***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.005)	(0.003)	(0.002)	(0.003)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	0.012***	0.035***	0.036***	0.002	0.036***	0.014***	0.017***	0.019***	0.037***
	(0.004)	(0.004)	(0.004)	(0.008)	(0.006)	(0.002)	(0.002)	(0.002)	(0.003)

ESTIMATES	(1) Russia	(2) Sweden	(3) Slovenia	(4) Slovakia	(5) Turkey	(6) Ukraine
Generativity	0.025***	0.016***	0.023***	0.032***	0.003	0.024***
	(0.003)	(0.002)	(0.003)	(0.004)	(0.006)	(0.005)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.2. Robustness check on the impact of generativity on "feeling positive about myself"

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education
Generativity	0.017***	0.019***	0.017***	0.019***	0.018***	0.018***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

ESTIMATES	(1) Resilience 1	(2) Resilience 2	(3) Resilience 3	(4) Resilience 4	(5) Resilience 5
Generativity	0.025***	0.018***	0.016***	0.014***	0.017***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.002)

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity			0.017***			0.018***			
			(0.001)			(0.001)			

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.021***	0.014***	0.028***	0.010***	0.025***	0.022***	0.017***	0.017***	0.016***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.014***	0.010***	0.022***	0.015***			0.011***	0.021***	0.021***
	(0.002)	(0.002)	(0.002)	(0.002)			(0.003)	(0.002)	(0.003)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	0.016***	0.025***	0.022***			0.014***	0.018***	0.017***	0.026***
	(0.004)	(0.005)	(0.003)			(0.002)	(0.002)	(0.002)	(0.003)

ESTIMATES	(1) Russia	(2) Sweden	(3) Slovenia	(4) Slovakia	(5) Turkey	(6) Ukraine
Generativity	0.013***	0.015***	0.012***	0.020***		0.020***
	(0.002)	(0.002)	(0.002)	(0.003)		(0.003)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.3. Robustness check on the impact of generativity on being in good spirit

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education			
Generativity	0.014***	0.015***	0.012***	0.016***	0.014***	0.015***			
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)			

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity		0.014***			0.015***				
		(0.002)			(0.001)				

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.025***	0.015***	0.015***	0.009***	0.029***	0.018***	0.013***	0.012***	0.015***
	(0.004)	(0.003)	(0.004)	(0.003)	(0.006)	(0.003)	(0.002)	(0.003)	(0.004)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.010***	0.016***	0.013***	0.007***	0.013***	0.007	0.013***	0.010***	0.019***
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.006)	(0.004)	(0.003)	(0.004)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	0.020***		0.021***	0.005		0.008***	0.010***	0.012***	0.037***
	(0.007)		(0.006)	(0.005)		(0.003)	(0.003)	(0.003)	(0.005)

ESTIMATES	(1) Russia	(2) Sweden	(3) Slovenia	(4) Slovakia	(5) Turkey	(6) Ukraine			
Generativity	0.015***	0.009***	0.019***	0.024***	0.013***	0.022***			
	(0.003)	(0.002)	(0.003)	(0.004)	(0.005)	(0.004)			

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.4. Robustness check on the impact of generativity on feeling calm and peaceful in the last week

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education
Generativity	0.008***	0.007***	0.006***	0.008***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
	(1)	(2)	(3)	(4)	(5)	

ESTIMATES	Resilience 1	Resilience 2	Resilience 3	Resilience 4	Resilience 5			
Generativity	0.006**	0.006***	0.005***	0.004***	0.009***			
	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)			

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8	Wave 9
Generativity			0.007***			0.008***			
			(0.001)			(0.001)			

	(1)	(2)	(3)	(4)	(5)	(6) Czech Repubblic	(7)	(8)	(9)
ESTIMATES	Austria	Belgium	Bulgaria	Switzerland	Cyprus		Germany	Denmark	Estonia
Generativity	0.006	0.001	0.011***	0.006**	0.018***	0.011***	0.008***	0.008***	0.009***
	(0.004)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)

	(1)	(2)	(3)	(4) Great Britain	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Spain	Finland	France		Greece	Croatia	Hungary	Ireland	Israel
Generativity	0.009***	0.003*	0.009***	0.008***			0.004	0.011***	0.009***
	(0.002)	(0.002)	(0.002)	(0.002)			(0.003)	(0.002)	(0.003)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Iceland	Italy	Lithuania	Luxembourg	Latvia	Netherland	Norway	Poland	Portugal
Generativity	0.002	0.009	0.010***			0.001	0.007***	0.006**	0.004
	(0.004)	(0.006)	(0.003)			(0.002)	(0.002)	(0.002)	(0.003)

	(1)	(2)	(3)	(4)	(5)	(6)			
ESTIMATES	Russia	Sweden	Slovenia	Slovakia	Turkey	Ukraine			
Generativity	0.002	0.008***	0.008***	0.015***		0.001			
	(0.002)	(0.002)	(0.002)	(0.003)		(0.003)			

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.5. Robustness check on the impact of generativity on resilience

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education			
Generativity	0.010***	0.010***	0.010***	0.010***	0.012***	0.008***			
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)			

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity			0.009***			0.011***			
			(0.002)			(0.001)			

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.004	0.012***	0.015***	0.008***	0.018***	0.011***	0.016***	0.006**	0.011***
	(0.005)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.013***	0.007***	0.017***	0.005**			0.001	0.013***	0.017***
	(0.003)	(0.002)	(0.003)	(0.002)			(0.004)	(0.003)	(0.004)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	-0.002	0.009	0.011***			0.005*	0.004*	0.007**	0.012***
	(0.005)	(0.006)	(0.003)			(0.003)	(0.002)	(0.003)	(0.004)

	(1)	(2)	(3)	(4)	(5)	(6)
ESTIMATES	Russia	Sweden	Slovenia	Slovakia	Turkey	Ukraine
Generativity	0.001	0.012***	0.013***	0.014***		0.005
	(0.002)	(0.002)	(0.003)	(0.003)		(0.003)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.6. Robustness check on the impact of generativity on trust versus other people

	(1)	(2)	(3)	(4)	(5)	(6)
ESTIMATES	Male	Female	High Income	Low Income	High education	Low education
Generativity	0.005***	0.004***	0.003*	0.006***	0.004**	0.004***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)

	(1)	(2)	(3)	(4)	(5)
ESTIMATES	Resilience 1	Resilience 2	Resilience 3	Resilience 4	Resilience 5
Generativity	-0.002	0.005*	0.000	0.005***	0.006
	(0.006)	(0.003)	(0.004)	(0.002)	(0.005)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8	Wave 9
Generativity	0.004	0.001	0.011***	0.005*	0.007***	-0.000	0.008***	0.005**	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Austria	Belgium	Bulgaria	Switzerland	Cyprus	Czech Repubblic	Germany	Denmark	Estonia
Generativity	0.027***	0.002	0.012**	0.009***	0.003	0.006	0.005*	0.003	0.000
	(0.004)	(0.003)	(0.005)	(0.003)	(0.007)	(0.004)	(0.003)	(0.003)	(0.003)

	(1)	(2)	(3)	(4) Great Britain	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Spain	Finland	France	Great Britain	Greece	Croatia	Hungary	Ireland	Israel
Generativity	0.001	0.010***	-0.002	0.003	0.002	0.012*	0.010***	0.003	0.007**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.005)	(0.006)	(0.004)	(0.003)	(0.003)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ESTIMATES	Iceland	Italy	Lithuania	Luxembourg	Latvia	Netherland	Norway	Poland	Portugal
Generativity	-0.004	0.016***	0.021***	-0.008	0.012	0.003	-0.002	0.007**	0.012***
	(0.006)	(0.005)	(0.004)	(0.013)	(0.008)	(0.003)	(0.002)	(0.003)	(0.004)

	(1)	(2)	(3)	(4)	(5)	(6)
ESTIMATES	Russia	Sweden	Slovenia	Slovakia	Turkey	Ukraine
Generativity	0.001	0.003	-0.006	-0.003	-0.023***	0.012**
	(0.004)	(0.003)	(0.004)	(0.006)	(0.006)	(0.006)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.7. Robustness check on the impact of generativity on voting decision in last national elections

	(1)	(2)	(3)	(4)	(5) High education	(6) Low education
ESTIMATES	Male	Female	High Income	Low Income	High education	Low education
Generativity	0.001***	0.001***	0.001**	0.002***	0.001**	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

	(1)	(2)	(3)	(4)	(5)
ESTIMATES	Resilience 1	Resilience 2	Resilience 3	Resilience 4	Resilience 5
Generativity	0.002**	0.002***	0.002***	0.000	0.001
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity	0.001**	0.001*	0.001**	0.002***	0.001***	0.001***	0.001*	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.002***	-0.000	0.001*	0.001	0.001	0.004***	0.001	-0.000	0.003***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.001*	0.001*	0.002***	0.000	0.001**	0.001	0.003***	0.001**	0.001***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	-0.000	0.002**	0.004***	-0.000	0.001	-0.001	-0.001**	0.002***	0.003***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)

ESTIMATES	(1) Russia	(2) Sweden	(3) Slovenia	(4) Slovakia	(5) Turkey	(6) Ukraine
Generativity	0.002***	0.000	0.001	0.004***	0.001	0.003***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 4.8. Robustness check on The impact of generativity on Active Citizenship

ESTIMATES	(1) Male	(2) Female	(3) High Income	(4) Low Income	(5) High education	(6) Low education			
Generativity	0.005***	0.004***	0.005***	0.005***	0.004***	0.005***			
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)			

ESTIMATES	(1) Resilience 1	(2) Resilience 2	(3) Resilience 3	(4) Resilience 4	(5) Resilience 5				
Generativity	0.006***	0.004***	0.003***	0.004***	0.004***				
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)				

ESTIMATES	(1) Wave 1	(2) Wave 2	(3) Wave 3	(4) Wave 4	(5) Wave 5	(6) Wave 6	(7) Wave 7	(8) Wave 8	(9) Wave 9
Generativity	0.006***	0.005***	0.004***	0.004***	0.004***	0.004***	0.005***	0.005***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)

ESTIMATES	(1) Austria	(2) Belgium	(3) Bulgaria	(4) Switzerland	(5) Cyprus	(6) Czech Repubblic	(7) Germany	(8) Denmark	(9) Estonia
Generativity	0.009***	0.007***	0.002***	0.004***	0.001	0.004***	0.007***	0.006***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

ESTIMATES	(1) Spain	(2) Finland	(3) France	(4) Great Britain	(5) Greece	(6) Croatia	(7) Hungary	(8) Ireland	(9) Israel
Generativity	0.004***	0.007***	0.005***	0.005***	0.005***	0.004***	0.002***	0.004***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)

ESTIMATES	(1) Iceland	(2) Italy	(3) Lithuania	(4) Luxembourg	(5) Latvia	(6) Netherland	(7) Norway	(8) Poland	(9) Portugal
Generativity	0.002**	0.002**	0.004***	0.004*	0.000	0.006***	0.005***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)

ESTIMATES	(1) Russia	(2) Sweden	(3) Slovenia	(4) Slovakia	(5) Turkey	(6) Ukraine
Generativity	0.000	0.005***	0.003**	0.004***	0.001*	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

Resilience: When things go wrong it takes a long time to get back to normal (1=agree strongly, 2=agree, 3=neither agree nor disagree, 4=disagree, 5=disagree strongly)

Table 5. Instrumental variable estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DEP VARIABLES	Life satisfaction	Positive about myself	In good spirit	Calm and peaceful	Resilience	People have to be trusted	Voting in last national elections	Active citizenship
Instrument type	(a)	(a)	(c)	(a)	(c)	(d)	(b)	(a)
Second stage								
Generativity (instrumented)	0.029***	0.025***	0.020***	0.017***	0.021***	0.111**	0.021***	0.021**
	(0.005)	(0.005)	(0.007)	(0.045)	(0.007)	(0.050)	(0.004)	(0.004)
Instrument significance in First stage	0.948***	0.896***	0.920***	0.889***	0.892***	0.405***	0.894***	0.948***
	(0.020)	(0. 042)	(0.047)	(0.042)	(048)	(0.065)	(0.020)	(0.020)
Falsification test								
Instrument in the non instrumented standard regression	0.008	0.007	0.006	0.0086	0.010	0.041	0.015	0.006
	(0.007)	(0.005)	(0.007)	(0.005)	(0.007)	(0.022)	(0.014)	(0.005)

Instruments

(a) Average ProdGenerativity of 30 year elder individuals of the opposite sex in the same country
(b) Average ProdGenerativity of individuals of the opposite sex in the same country
(c) Average ProdGenerativity of 30 year elder individuals of the opposite sex in the same country
(d) dummy taking value one if the father of the respondent was self-employed or high skilled when the respondent was 14th (only respondents who are 60 or older are included in the estimate)

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