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AIN'T GOT NO, I GOT LIFE: CHILDHOOD EXPOSURE TO WW2 AND FINANCIAL RISK TAKING IN ADULT LIFE

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Ain't got no, I got life:
Childhood exposure to WW2 and financial risk taking in adult life*

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Abstract

Childhood adverse experiences might have long-lasting effects on decisions under uncertainty in adult life. Merging the European Survey on Health, Ageing and Retirement with data on conflict events happened during Second World War, and relying on region-by-cohort variation in war exposure, we show that warfare exposure during childhood is associated with lower financial risk taking in later life. Individuals who experienced war episodes as children hold less – and are less likely to hold – stocks, but are more likely to hold life insurance, compared to non-exposed individuals. Effects are robust to the inclusion of potential mediating factors, and are tested for nonlinearity and heterogeneity. In addition, war-exposed respondents show higher resilience to financial shocks, as they react less dramatically to stock market losses. By shaping cognitive schemata, the experience of war might have increased the perception of uncertainty and uncontrollability of the environment, leading to an overestimation of risks and of the likelihood of negative events.

Keywords: financial risk taking; risk aversion; stocks; life insurance; life experiences; Second World War

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I ain't got no home, ain't got no shoes
Ain't got no money, ain't got no class [...]
Hey, what have I got? [...]
I've got life
(Nina Simone)

1. Introduction

Most financial decisions involve the individual propensity to take risks, and this propensity depends on several factors. Assuming that one has enough cognitive abilities and income or wealth to invest in the financial market, financial literacy is key: low levels of financial knowledge are still very common, and negatively associated with stock holding (Guiso & Jappelli, 2005; van Rooij, Lusardi, & Alessie, 2011). Another fundamental factor, related to both financial literacy and income, is the level of education of the investor: having a degree – especially one in economics (Christiansen, Joensen, & Rangvid, 2008) – increases the likelihood to invest in stocks (e.g., Guiso, Haliassos, & Jappelli, 2003; Hong, Kubik, & Stein, 2004).

Yet there are other individual characteristics contributing to financial risk aversion, thereby restraining or preventing financial investments by most European and US households (Breuer, Riesener, & Salzmann, 2014; Guiso et al., 2003). Some of them are biological or physical: a study using data from the Swedish Twin Registry showed that approximately 25% of individual variation in investment portfolio risk was due to genetic variation (Cesarini, Johannesson, Lichtenstein, Sandewall, & Wallace, 2010). Women have in general higher financial risk aversion, but the latter decreases at higher levels of circulating testosterone in women (Sapienza, Zingales, & Maestripieri, 2009). Other relevant individual factors deal with personality, attitudes and beliefs: lower extraversion and higher openness to experience are associated with a greater amount of financial assets (Brown & Taylor, 2014); individualism is related to stronger willingness to take financial risks (Breuer et al., 2014); participation to the stock market is associated with higher engagement in social activities (Christelis, Jappelli, & Padula, 2010) and with generalized trust (Guiso, Sapienza, & Zingales, 2008).

All these individual characteristics have something in common: they interact with – and are partially driven by – the environment (e.g., Gottlieb, 1997, 1998), i.e., the places, contexts, and experiences that shaped and shape one's life. As a matter of fact, research has shown that the formation of risk attitudes and the propensity to take financial risks are influenced by important negative life experiences, such as the loss of a child, having been victim of physical attack (Bucciol & Zarri, 2015), and having been exposed to natural calamities (Cameron & Shah, 2013), conflicts (Kim & Lee, 2014; Callen et al. 2014; Cassar et al. 2017), or macroeconomic shocks (Malmendier & Nagel, 2011).

These studies underlined the role of traumatic experiences in the formation of risk attitudes by means of lab-experiments in developing countries (Cameron & Shah, 2013; Callen et al. 2014; Cassar et al. 2017) or life-course analysis in more developed societies (Bucciol & Zarri, 2015; Malmendier & Nagel, 2011). However, endogeneity issues due to non-random exposure to shocks and concerns about external validity of single-country results leave the question of whether early-life hardships shape risk-based decisions in the long-run open.

We aim to provide an answer to this question by testing whether strong negative childhood experiences have a role in financial choices in adulthood. In particular, we examine if exposure to World War II (WW2) during infancy has effects on financial risk taking (stock ownership and stocks' share) and on financial choices protecting from life events (life insurance).

The region-by-cohort variation induced by WW2 events in Europe provides us with an ideal natural experiment to identify the impact of childhood hardships on risk attitudes in later life. In addition, since WW2 shocked a variety of European regions at different stages of development, our results benefit from a larger degree of external validity than those in previous studies based on a single, developing country.

By exploiting retrospective data about childhood conditions (hunger periods, parental absence, dispossession, health and socio-economic status of the family) and adulthood characteristics (income, education, job status, physical and mental health), we also test whether these factors affect the relation between war exposure and financial risk preferences. This allows us to investigate – and possibly rule out – their mediating role in the link between war and risk taking.

Our results show a negative impact of exposure to WW2 on stock-ownership and share of stock in financial portfolio, and simultaneously a positive effect on the probability of having a life insurance. We find no room for mediating effects of the aforementioned adulthood and childhood characteristics. However, by exploiting the panel structure of our data, we document that war exposure in childhood buffers respondents against the economic and financial downturn that affected Europe in 2009. This novel result suggests that, while being detrimental to risk propensity, childhood hardships might improve resilience to future financial shocks, probably because children exposed to WW2 witnessed not only the vulnerability of the socio-economic environment in which they grew up, but also its recovery capacity.

2. Background

2.1. Life shocks and risk preferences

Research on the effects of shocking life experiences on risk preferences has reported sometimes contradictory findings. Few studies documented an increase in risk-seeking attitudes and behaviors after dreadful life experiences, such as large losses in property values after the 2011 Australian floods (Page, Savage, & Torgler, 2014), community deaths due to civil conflict in Burundi (Voors et al., 2012), and evacuation immediately after Hurricane Katrina (Eckel, El-Gamal, & Wilson, 2009).

On the other hand, a larger amount of studies reported an increase in risk aversion after negative life shocks, such as recent exposure to floods and earthquakes in Indonesia (Cameron & Shah, 2015), the 2004 Asian tsunami (Cassar, Healy, & Kessler, 2017), health shocks – measured by extreme losses in hand grip strength – (Decker & Schmitz, 2016), and being 4 to 8 years old during the peak of Korean war (Kim & Lee, 2014). Malmendier and Nagel (2011) showed that the willingness to take financial risks was lower for people who experienced adverse financial market conditions in the early stages of their lives. Callen, Isaqzadeh, Long, & Sprenger (2014) found that individuals exposed to violence in Afghanistan, when primed to recall fear, exhibited an increased preference for certainty. More relevant to this paper is the work of Bucciol and Zarri (2015), showing that having been victim of a physical attack and the loss of a child are related to lower probability of holding stocks and lower share of stocks. As in the present paper, both outcomes are considered as two measures of risk taking in financial choices.

Against this backdrop, concluding that risk tolerance is decreased by life shocks may be too simplistic: first, the association between risk taking and life shocks may depend on the domain of risky choices, for instance gain vs. losses. Across two studies, Li, Li, Wang, Rao, and Liu (2011) found that people living in areas devastated by heavy snowstorms or a major earthquake in China, compared to people living in non-devastated areas, were more likely to prefer a sure loss to a larger loss with low probability, and to prefer a low-probability associated gain to a sure smaller gain. Thus, having experienced a natural disaster increased both risk aversion in the domain of losses and risk propensity in the domain of gains.

Second, the association between risk taking and life shocks may depend on the severity of the shocks. For instance, CEOs who experienced the extreme downsides of natural disasters tend to lead firms in a more conservative and less risky way compared to CEOs who experienced disasters without extremely negative consequences (Bernile, Bhagwat, & Rau, 2017). One possible channel may be the accessibility of events in memory: the more shocking, the more salient events are, and

events that are more accessible in memory are associated with increased risk aversion (Kusev, van Schaik, Ayton, Dent, & Chater, 2009).

Third, the same life shock may be more or less influential depending on the person's age when the shock occurred: memory and the stage of brain development play a huge role. Infants (1 to 18-24 months) are aware of their surroundings and possess a rudimental form of episodic memory, excluding the ability to consciously *remember* (Bauer & Dow, 1994), while long-term ordered recall emerges after around 12 months of life (Carver & Bauer, 2001), and between 3 to 6 years children become able to remember events as experienced (Perner & Ruffman, 1995). Moreover, neural circuits develop during sensitive periods along the course of one's life. Sensitive periods indicate the timing when (early) experiences have a major influence on brain development, including structures and functions (Fox, Levitt, & Nelson, 2010; Knudsen, 2004). Thus, life shocks occurred during the sensitive period of a certain brain area or neural circuit may affect the functions pertaining to that area or circuit. Consistent with this reasoning, Kim and Lee (2014) found that the impact of Korean war on risk aversion held mainly for respondents facing the shocking experience at 4 to 8 years old and who lived in provinces where conflict was more intense. No significant impacts were found at earlier or later ages. The authors explained these results with the overlap between those ages (4-8) and the developmental period of the prefrontal cortex, which is the main brain region managing risky decision-making.

As life shocks experienced before adulthood may have a long-term impact, the next section focuses on early life (infancy and childhood) major experiences and their associations with human capital outcomes.

2.2. Early life major experiences and adulthood outcomes

A growing number of economic, psychological and demographic results based on the life-course approach have shown that the type of childhood one has had well predicts the adult (s)he will be (e.g. Elder, 2018; Giuliano & Spilimbergo, 2014). A frequent finding in this literature is that early-life warfare exposure accounts for a large portion of the variation in health and economic outcomes as measured in adult life.

Experiencing WW2-related episodes in childhood have been shown to have detrimental effects on health, education and income of Europeans aged 50 or more (Kesternich, Siflinger, Smith, & Winter, 2014; Havari & Peracchi, 2016). Similarly, Ichino and Winter-Ebmer (2004) provided causal evidence that individuals who were ten years old during the WW2 period in Germany and Austria reached worse educational outcomes than their counterparts in Switzerland and Sweden, who were not directly hit by the conflict. Consistent with these findings, Akbulut-

Yuksel (2014) exploited region-by-cohort variation in WW2 intensity to document that the war produced negative consequences on human capital and labor market outcomes of the Germans who happened to be exposed to the war during childhood. With respect to non-EU countries, other studies (Akresh, Bhalotra, Leone, & Osili, 2012; Bundervoet, Verwimp, & Akresh, 2009) reported short- and long-term impacts of a civil war, which took place respectively in Nigeria and Burundi, on health outcomes.

Not only early-life exposure to conflict shapes human capital outcomes in later life, but it also affects social preferences in a persistent way: Conzo and Salustri (2017) and Grosjean (2014) found that WW2 left an enduring, negative mark on the trust of exposed individuals. Hörl, Kesternich, Smith, and Winter (2016) found similar effects of hunger episodes in German cohorts born after WW2 on trust. Moroever, lab-in-the-field experiments showed significant short-term effects of conflict on social preferences, with either positive or negative sign, depending on the peculiarity of the context. Some studies documented lower cooperation and trust among the victims of a conflict (e.g. Cassar et al., 2013; Becchetti et al., 2014), while others provided evidence of increased prosociality in the aftermath of a civil war (e.g. Voors et al., 2012; Bauer et al., 2017).

Exposure to war during childhood may be a source of diverse experiences: hunger episodes, poverty, the absence of parents – especially the father –, the lack of resources, but especially a large increase in the perceived probability of risk and unexpected danger, leading to a general uncertainty of both present and future life (Barenbaum, Ruchkin, & Schwab-Stone, 2004; Jensen & Shaw, 1993). To assess the role of all these factors in explaining the association between WW2 and financial risk taking, we consider in the empirical models childhood characteristics and possible adult outcomes (e.g., mental health) stemming from war exposure.

3. Methods

3.1. Data and variables

The dataset we use in our study gathers four different sources of data. The main database is based on six waves (from 2004 to 2015) of the "Survey on Health, Ageing and Retirement" (SHARE)[1], where the third wave ("SHARELIFE") only collects retrospective information on past life events – hence the panel is actually composed of five waves. The combination of longitudinal and retrospective information allows us to investigate the effect of early life shocks on later socio-economic outcomes. Due to the high number of missing values, we impute socio-economic

[1] The SHARE project is the main longitudinal cross-national survey on European individuals aged 50 or older. More details at SHARE website.

variables and adulthood controls with information extracted from previous (or subsequent) waves, when possible, or with the median value at country level[2].

SHARE contains an entire section on financial and real assets, such as real estate properties, bank account, stocks, government bonds, firms' shares, mutual funds, retirement accounts and other forms of savings accounts. More specifically, it provides information about the amount of directly held stocks and the composition of mutual funds and third-party managed accounts. When such information is not available, we impute the missing values as in Christelis et al. (2010), based on the answer's range indicated by each respondent[3]. We reconstruct the monetary value of directly held stocks, resources invested in mutual funds and individual retirement account (IRA), and compute the composition of mutual funds and IRA using the self-reported fraction of accounts that are mostly invested in bond, stocks, or equally split (for which we assign value of 75%, 25% or 50%-50%).

We consider four different financial outcomes in our regressions. Three of them are dichotomous variables taking value one if the respondent respectively holds direct stocks, life insurance, and direct or indirect stocks. The fourth outcome is the share of directly held stocks with respect to the total amount of stocks, including those indirectly held through mutual funds and IRA. As stocks represent the riskiest financial instrument in SHARE, we use stock ownership and stocks' share as proxies for financial risk taking (Love & Smith, 2007)[4]. This practice, well established in the economic literature, has been adopted first by Cohn, Lewellen, Lease, and Schlarbaum (1975) and Friend and Blume (1975), and more recently by Malmendier and Nagel (2011) and Bucciol and Zarri (2015). Life insurance instead is mostly a financial tool to protect against unexpected negative life events, hence it can be considered as a financial by-product of risk aversion regarding life (Browne & Kim, 1993; Yaari, 1965).

As shown in Figure 1, panel A and panel B, stockowners in Europe are quite rare, except in Denmark and Switzerland, where the 15-20% of the total household financial wealth is held in stocks. Life insurance is more common across Europe, with Italy and Greece at the bottom of the ranking. Netting out country, cohort and period effects, individuals who were not exposed to WW2 tend to hold more – or are more likely to hold – stocks, compared to their exposed counterparts

[2] More details on the imputation strategy are available in Electronic Supplementary Material (ESM) 1.

[3] Despite data are less accurate, this approach has the advantage of inducing respondents to report much-closer-to-reality answers rather than completely faking them. This is not a minor improvement considering, for instance, how sensible questions about the financial situation are for respondents.

[4] The use of a dichotomous measure of stock market participation has two advantages. First, it allows to mitigate potential measurement error in reporting the exact portfolio share allocated to stocks. Second, it is less sensitive to the dynamics of market, which – since individuals might not promptly adjust their portfolio – could make it hard to disentangle whether the observed changes in shares are merely due to changes in stock prices or in underlying risk preferences (Bucciol & Zarri, 2015).

(Figure 2, panel A to C), while individuals exposed to war are more likely to have life insurance than their non-exposed counterparts.

The second source of data is a database we created on WW2 events. It collects detailed information on the full set of war episodes as reported by Ellis (1993), Davies (2006) and Collier (2004). For each war episode during WW2 (September 1939 - July 1945) we registered the date (month and year) and the region at NUTS2 level in which it occurred, collecting a total of 1512 war episodes. To determine respondents' war exposure, we first computed the number of war episodes occurred in each region in each month during the years of the war. We then classified each region as exposed to war within a given month of the year if at least one war episode occurred in that time-space window. In this way, exploiting time and space variations, each region within each country can be considered either exposed or non-exposed in the same year, depending on the timing of occurrence of the war episode. For example, Paris Basin region (FR2) was a war-exposed region in 1940 for four months since it suffered episodes in May, June, July and August of that year, but it was not a war-exposed region in March, April or September of the same year. We therefore obtain a measure that informs us on how many months of war (months with at least one war episode) there have been in a region in each year of WW2. We then combined this data with the information about year of birth and region of residence during WW2 of our respondents in order to calculate the number of months of war exposure for each respondent in each year of WW2. More specifically, at an extensive margin, we considered each respondent as exposed if he/she was living in the war region when the episode occurred. In this way, our war-exposed (treatment) group includes all individuals born after 1929 who experienced at least one month of war events, *vis-à-vis* the non-exposed (control) group, composed by all the individuals born after 1929 who did not suffer war episodes in the region where they were living during WW2, together with those born after the end of the war. At an intensive margin, we compute the overall median of months of war exposure across European countries in our sample, and classify individuals as highly exposed if the number of months of war they experienced is above that median. Figure 3A shows geographic distribution of months of war across European regions. On average, war exposure amounts at 3 months of war and the most affected region was North Rhine-Westphalia in western Germany, with 35 months of war exposure. Accordingly, respondents who on average suffered most WW2 live northern-west Germany (Figure 3B).

Given our focus on childhood experiences, we decided to exclude from the data individuals born before 1929, who might have actively participated to the war (e.g. because of conscription)[5].

[5] Different sources report Calvin Graham as the youngest soldier in WW2. US born, he participated actively at the age of twelve. Nazi army had Hitler Youth groups, composed by young male aged 10 to 14. Our exclusion limit the possibility to include young soldiers in our sample.

This exclusion allows us to eliminate the confounding effect of potential physical and mental injuries due to combat operations, which are not reported – hence cannot be controlled for – in our data. We also exclude Spain from the sample as it did suffer Civil War in the years preceding WW2 and remained under the Franco military regime until 1975. All the countries that did not experience war events within their territories, such as Sweden or Portugal, are not included in the analysis. Finally, although we restrict our sample to native respondents, we decide not to exclude from the sample those who changed region of residence during WW2[6].

The third database we used contains information about stock market return of the main European indices at country level. We used the website Investing.com[7] to extract monthly return rate from the year 2003 to the year 2015 and to calculate the seasonally-adjusted annual return rate relative to the twelve months before the interview date, exploiting in this way the heterogeneity across months of interview within the same country and the same year. We use this variable as additional regressor in our model when we estimate the effect of the financial crisis, proxied for by negative returns on the stock market, on financial behavior. In this respect, the deepest drop (-40,3%) has been recorded by the WIG20 (Poland stock market index) in 2006. FTSE-AT (Austria) in 2004 performed the best with an annual return of 43%[8].

The last source of data is the regional database of Eurostat, which provides us with the yearly measures of the real GDP growth rate per inhabitant in purchasing power standard (PPS) and the rate of unemployment of working age population (i.e. from 15 to 74 years old) at NUTS2 level. We use these variables as macroeconomic in the estimation of the financial-crisis effect. The region that experienced the strongest economic contraction (-15.7%), signaled by negative GDP growth rate, is Upper Norrland, northern Sweden, in 2009. The best performance in this respect (+16.9%) has been registered in Groningen region, northern Netherlands, in 2008. As for unemployment, Zeeland and Utrecht regions in western and central Netherlands enjoyed the lowest rate, 2.1%. The region that instead suffered the most was Calabria, southern Italy, in 2015 with one fourth of the working population unemployed[9].

[6] Less than 2% of the sample changed region during WW2. Our baseline findings are robust to exclusion of individuals who moved to other regions during WW2 (see Section 4.5).

[7] Investing.com is a global financial portal that provides data, news and statistics about the global financial markets. It covers a broad class of financial instruments, such as stocks, bonds or currencies. We considered FTSE-AT for Austria, DAX for Germany, AEX for Netherlands, FTSE-MIB for Italy, CAC40 for France, OMX20 for Denmark, FTSE-GR for Greece, SMI for Switzerland, BEL20 for Belgium, PX for Czech Republic, WIG20 for Poland.

[8] Figure SM1 in Electronic Supplementary Material 2 shows the annual return we computed for each country from 2004 to 2015.

[9] More details on the computation of the annual return and the extraction of the macroeconomic variables are available in the ESM 1.

All the variables employed in the models, and their construction, are described in the Variable legend in Table SM1, included in Electronic Supplementary Material (ESM) 2. Their descriptive statistics are instead included in Table 1.

3.2. Descriptive statistics

Table 1 reports the descriptive statistics (pooled over the waves) of the variables included in our econometric analyses. Around one third of our respondents experienced at least one month of war exposure. About 55% of the sample respondents are women, the average age is 66 years, and more than 70% of the pooled sample has a partner.

In accordance with the age composition of our sample, on average each respondent suffers from at least one chronic disease, and memory capacity is quite low (5.2 over 10), while numeracy and orientation are high. Average individual life expectancy, measured as the subjective probability to be alive in the ten years following the interview-date (independently from current age), is 64%. For what concerns body mass index (BMI), most respondents are overweight (44%) or obese (20%), while a minority has normal BMI (35%). Respondents on average have eleven years of education, and most of them (58%) are retired. The average logarithm of income is 9.9 (slightly more than 20,000€), while that of financial wealth is 2.6 (around 15,000€).

As for the retrospective variables, SES is measured with the first extracted component (Childhood SES) from a factor analysis on four childhood characteristics at age 10, i.e. main occupation of the breadwinner, number of books at home, number of rooms per capita, and number of services in the accommodation (Kesternich et al., 2014; Havari & Peracchi, 2017). We classify "high SES" all respondents in the 75th percentile of the distribution of Childhood SES. Almost 40% reported to live in rural areas at age 10, and almost the entire sample received immunization during childhood. Less than 10% lived without the father, and slightly more than 3% suffered from dispossession episodes.

We extract from SHARE three additional variables that capture the numeracy ability and financial literacy, memory capacity and orientation abilities. The main concern might be represented by memory capacity, as reflected in an average score of 5.2 over a maximum of 10. Numeracy and orientation record very close to 4, over a maximum score of 5 and 4, respectively.

3.3. Empirical strategy

Our baseline model captures the effect of war exposure (both at the intensive and extensive margin) on financial risk-taking. The estimating equation is reported below, for individual *i* at wave *t*.

$$Financial\ Instrument_{it} = \\ = \beta_0 + \beta_1 War_i + \beta_2 Log(Fin\ wealth)_{it} + \beta_3 Log(Income)_{it} + \sum_c \gamma_c\ Country_{it} \\ + \sum_d \lambda_d\ Year\ of\ birth_i + \sum_f \theta_f\ Wave_{it} + \varepsilon_{it}$$

Financial Instrument represents one of the four aforementioned financial variables and *War* captures war exposure, either as a dummy variable or expressed in terms of intensity (median and tertiles of months of exposure, with results on tertiles reported only in ESM 2). The two logarithmic regressors control for household wealth and income. All models include dummies for country of residence as well as for year of birth and wave participation, which account for cohorts and period effects respectively.

As second step, we investigate the possibility that the effect of war on financial risk-taking is conveyed by other variables that may be both affected by exposure to WW2 and related to risk propensity. If it were the case, including them as controls in additional models would weaken the effects of war compared to the baseline model, and they would be channels – mediators – of the relationship (Baron & Kenny, 1986). The first two sets of potential mediators we add to the baseline model are adult-age socio-demographic characteristics (marital and employment status, years of education, number of children, number of chronic diseases, BMI, smoke and alcohol consumption) and childhood characteristics (SES at age 10, immunization during infancy, and residence in rural areas). We first include one set of variables at a time, then both sets together. The other potential mediators we include as control variables are cognitive abilities (memory, numeracy, orientation), mental health (EURO-D depression scale score), and war-related hardships (absence of father at age 10, hunger episodes, dispossession). We include them one at a time, in models already containing adulthood and childhood controls.

As third step, we investigate nonlinearity and heterogeneity in the effect of war. We test nonlinearity by measuring war with tertiles of months exposure, and then with the number of months of war and its squared value, while we test heterogeneity with respect to gender and age.

Then, we explore how being exposed to WW2 during childhood affects reactions to the 2009 economic crisis. Lastly, we perform a number of robustness checks on the results.

Due to the panel structure of the dataset, we conduct random-effects probit (with dichotomous financial outcomes) and random-effects OLS (with share of stocks) regressions with robust standard errors[10]. We do not carry out fixed-effects panel regressions since our variable of

[10] Results are robust to random-effect panel OLS estimations with standard errors clustered by country of residence and year of birth (available upon request).

interest, i.e. war exposure, is time invariant, and thus its effects would be absorbed into the intercept jointly with all other fixed characteristics of the respondent. Fixed-effects panel regressions are instead used to estimate the differential impact by war exposure of recent financial downturns on respondents' stock-market participation.

To facilitate the interpretation of the results, we report average marginal effects.

4. Results

4.1. Baseline results

Table 2 reports results of the baseline model with war exposure expressed in extensive (dummy variable) and intensive margins (zero months of exposure, under or equal to the median, above the median). Having suffered at least one month of war during infancy significantly affects all the financial outcomes considered in our study. War exposure has a negative impact on risky assets holding and share, while affecting positively the probability to hold life insurance (columns 5 and 6), which is considered as a safe asset. The riskier the financial instrument (direct stocks ownership compared to indirect participation), the larger the effect of war (columns 1 -2 and 7-8). In line with previous findings in the economic literature (Croson & Gneezy, 2009; Sapienza et al., 2009), we find significant gender differences in risk-taking behavior. On average women have lower probability to hold both risky and safe asset (columns 1-2 and 5-6), confirming generalized higher risk aversion compared to men. The two controls of household wealth show effects in line with our predictions. Higher available resources are positively related to the probability of holding financial instruments. Results show that having suffered a larger amount of months of war than the median reduces the probability of holding stocks (Table 2, columns 2 and 8) and the share of stock (column 6), whereas in increases that of holding life insurance (column 4). In particular, with respect to the life insurance, we find that the marginal effect of above-median exposure (5 months of war or more) is 2 percentage points greater than that of below-median exposure (up to 4 months).

4.2. Investigating alternative explanations

In order to investigate the mediating role of adulthood and childhood characteristics, we assess whether our findings are robust to the inclusion of the aforementioned variables. Table 3 shows estimates of the baseline model with both adult and childhood characteristics, while models where these sets of controls are included separately are reported in ESM 2, respectively in Table SM2 and Table SM3. As for marital status (living with a partner is the omitted benchmark), we find that being divorced or separated is negatively associated with the probability of holding risky asset, and the effect is similar for the number of children. Health status, measured by the number of

chronic diseases respondents suffer from, does not yield statistically significant results. For what regards job status (being retired is the omitted benchmark), we find that being employed is the only category that increases the probability to hold life insurance. More educated individuals are more likely to hold financial instruments, either risky (stocks) or risk-free (life insurance) assets. Despite previous research showing that risky behaviors correlate positively with financial risk tolerance (Dave & Saffer, 2008), we find all categories of alcohol consumption (no consumption omitted category) positively associated with financial risk propensity, and smoking habits negatively associated with risky assets ownership, though the effect is not robust in all the specifications.

Moving to childhood controls, in line with the literature about parental transmission of risk preferences (Dohmen, Falk, Huffman, & Sunde, 2011), we find that those who had relatively higher socio-economic status in childhood are more likely to invest in risky instruments in adult age, and that those who received immunization are more prone to invest in life insurance (Table SM3 in ESM 2). The former result is not robust in the full specification model, when we jointly control for child and adulthood characteristics. This suggests that the effect of SES at the age of 10 may be absorbed by socio-demographic characteristics in adult age[11] (Table 3).

Then, we investigate the potential mediating role of cognitive abilities (Table SM4 in ESM 2), depression status (Table SM5 in ESM 2) and three experiences of hardship during childhood (Table 4). This allows us to rule out the possibility that the detrimental effect of war on financial risk taking is partly due to impaired cognitive abilities and mental health, or war-related hardships. Table SM4 shows that numeracy positively predicts financial risk taking in (columns 1, 2, and 4), as in Christelis et al. (2010). However, we do not find evidence of a mediating role played by the cognitive abilities, since the marginal effect of war exposure does not change in magnitude in comparison with the baseline specification with adult and childhood controls. In the same vein, mental depression is not able to explain variations in investment decisions in risky assets (Table SM5 in ESM 2). Results in Table 4 show that having had an absent father at age 10 is positively related to ownership of life insurance, and negatively related to the share of stocks, while dispossession is positively related to stock ownership. As the magnitude of the marginal effects of war exposure remains unaltered and statistically significant with respect to the each one of our four variables of interest, also war-related hardships do not appear as channels of the effects of war exposure on financial risk taking.

Taken together, these results suggest that WW2 exposure *per se* drives differences in financial allocation decisions and that the overall effect of war is not attributable to these channels.

[11] We do not find a statistically significant effect of the interaction term between war exposure and SES at the age of 10 (Table SM10 in ESM 2), thereby ruling out a moderating role of the familiar environment in childhood.

4.3. Addressing non-linearity and heterogeneity of the effects

Baseline models where war is measured with months of exposure below and above median (Table 2) yield monotonically increasing effects. To properly test the existence of non-linear effects between war exposure during childhood and risk aversion in adult age, we replicate our baseline model substituting median exposure first with tertiles of months of war (Table SM6 in ESM 2), then with the number of months and its squared value (Table 5). In each model, marginal effects do not seem different across tertiles, except for a stronger effect of the third tertile on the probability to buy life insurance (Table SM6, column 3). On the other hand, the effect of the squared value of the number of months was statistically significant, but very small. Thus, we find overall little support for the non-linearity hypothesis.

Then, we test the presence of heterogeneity in the effect of war exposure focusing on gender (Table SM7 in ESM 2) and age of exposure to war (Table SM8 in ESM 2). Women's higher risk aversion compared to men is a well-known finding in the economic literature. Table SM7 (in ESM 2) shows that war exposure has a larger impact for men than for women. Specifically, with respect to stock ownership, the marginal effect of having suffered a war exposure under the median exposure for men is almost 3 times as big as the marginal effects of women (-0.028 vs -0.011, columns 1 and 5). The same result holds considering the share of stock. The marginal effect of under-median exposure on male is sensibly higher with respect to the marginal effect for female (-0.024 vs -0.007, columns 2 and 6). As for life insurance, we find a similar pattern with males' marginal effect being relatively stronger. Results are unclear and mostly non-significant for total participation (columns 4 and 8). These results suggest the possible presence of a floor effect (Agresti, 2010): the probability of holding stocks may be so close to zero in women that being exposed to war cannot decrease further that probability.

For what regards age classes of exposure (Table SM8 in ESM 2) we find that being exposed to war at an age between 9 and 15 years has the most detrimental (and robust) effect on financial risk taking in adult age (columns 1 and 2), whereas it has a positive effect on the probability to hold life insurance. Moreover, being 0 to 3 years old during exposure to WW2 is negatively related to stock ownership and positively related to life insurance ownership, while being 4 to 8 years old seems to have no effect. Wald tests between coefficients of the classes 0-3 and 9-15 reveal that the difference is statistically different from zero with respect to stock ownership, the share of stock, and life insurance. Thus, the effect of war on financial risk taking is heterogeneous for age, with stronger effects for respondents aged 9 to 15 years old during WW2. The effect is stronger for older children because during the period of WW2 they were most likely helping the family in adverse

conditions, and they were more aware of – and hence to remember – the war-related hardships (Werner, 2000).

4.4. Resilience to the economic crisis

We proceed with our analysis by investigating the role of war exposure during childhood on financial decisions in periods of financial crisis. We start the analysis by observing the role of war exposure across the years of the survey, restricting the sample to those who participated, at least, to 4 waves. Table SM9 (in ESM 2) reports results from a pooled OLS estimation of the interaction between war exposure and wave dummies. In spite of a negative time-trend, proved by the negative and significant coefficients of the wave dummies, especially in the years after financial crisis (i.e. from wave 4 onwards[12]), those who were exposed to war episodes during childhood react less negatively to such a shock, as evidenced by the positive coefficients of the interaction terms.

To better understand the undergoing dynamics, we perform an OLS panel regression with fixed effects including a dummy variable that captures negative annual return of the stock market index at country level, its interaction with the dummy variable of war exposure, and two additional control variables for GDP growth rate per inhabitant in PPS and unemployment rate of the working age population[13]. Since we are interested in differential portfolio adjustments to time-varying financial shocks by war exposure, we can perform fixed-effects panel regressions. This approach would deliver estimates that are less subject to unobserved heterogeneity. More specifically, it allows to net out individual-specific unobserved traits that are time-invariant, which could affect war exposure, financial risk taking and/or reactions to stock market downturns. Results are reported in Table 6a. As dependent variables, we keep only stock ownership and the share of stocks since these variables are more closely connected to financial shocks. In this specification, we include interview year dummies, instead of waves, to capture more precisely period effects, and age and age squared to replace year of birth dummies (which would be otherwise absorbed in the intercept).

Comparing coefficients of Table 6a, column 5 and 6, shows that those who were exposed to war episodes react less negatively to stock market index downturn. Experiencing negative returns reduces by 1.1% the probability to hold stocks for the group of not exposed to war respondents, leaving unaffected the counterfactual group (exposed to war). The same result holds with respect to the share of stock, column 6. Negative returns reduce, on average, by 1% the share of risky assets in the group of not-exposed respondents. Those who instead suffered war episodes show higher resilience with respect to negative economic fluctuations, being 0.2% the average drop. We further proceed along this line of analysis by investigating the effect of negative returns on the two groups

[12] Wave 4 was conducted from year 2010 to 2012.
[13] See ESM 1 for further details.

of individuals separately. Table 6b reports the results of the sample split regressions. Negative returns have a statistically significant effect, in the predicted direction, on both dependent variables (i.e. stock ownership and stock share) only for those who were not exposed to war. WW2 affected individuals, instead, do not seem to be influenced to the same extent by financial downturns.

It is likely that adult respondents who directly suffered war episodes exhibit higher resilience during periods of economic distress, i.e. they are less responsive to negative economic fluctuations. Despite the long length of time it takes for the economy to recover after financial crisis (Hall, 2010; Reinhart & Regoff, 2009, 2014), perhaps individuals who also suffered civil and political crisis, as WW2 was, are more confident in the recovery of the system, or are less vulnerable to economic shocks (Cerra & Saxena, 2009). For this reason, negative return in the stock market does not lead them to dismiss stock ownership or to reduce dramatically the share of financial wealth held in stocks.

4.5. Robustness checks

Although SHARE informs us about the region of residence during each year of WW2 and permits us to track respondents' migration, it does not contain detailed information about the month in which respondents started living in a new residence[14]. Hence, we could not be sure about whether respondents arrived in a war region before, or just after, the war episode occurred. We addressed this issue by re-estimating our baseline model without individuals who migrated during the WW2 period. Furthermore, to rely on a control group that is more similar to our treatment group (composed by war-exposed respondents), we excluded individuals born after the end of WW2. Results remain consistent with our previous findings with respect to all our outcome variables under both robustness checks (available upon request). War exposure has a detrimental effect on risk propensity, also controlling for adult and childhood characteristics, and the marginal effects remain of the same magnitude as in our baseline findings.

So far, we relied on the *year* of birth and region of residence to merge retrospective information with WW2 data. To identify more precisely war exposure for each respondent, we exploited the within-region variation stemming from *months* of respondents' birth and *months* of war episodes occurrence. To this purpose, we restricted the sample to individuals born during the WW2 period (i.e. 1939-1945) and classified as exposed those who were born in a region of war, at

[14] Migration within country during WW2 can be a concern because selective targeting of industrialized or dense regions would have pushed individuals to emigrate. Controlling for region fixed effects permits us to mitigate potential endogeneity driven by non-random war targeting of regions and differential migration induced by war operations.

least one month before a war event occurring in that region[15]. By exploiting within-region variation in war exposure, we could also net out the effects of time-invariant institutional, geographical, and macroeconomic features at the regional level, which might affect both war exposure (and its intensity) and local recovery capacity. If, through this identification strategy, we gained in terms of causal interpretation of results, we admittedly lost generalizability of results to other cohorts. Results reported in Table SM11 in ESM 2 confirms our previous findings with respect to stock ownership and the share of stock. Although positive, the marginal effect relative to life insurance loses statistical significance at conventional levels.

5. Discussion

This paper investigates the long-term effect of WW2 on financial risk taking (stock ownership and stocks' share) and on financial choices protecting from life events (life insurance), through a tight identification strategy based on region-by-cohort variation in war exposure. Results show that exposure to WW2 in childhood decreases the probability of holding direct and indirect stocks, and the share of stocks in later life. Exposure to WW2 also increases the likelihood of having a life insurance, especially when months of exposure exceed the median value. These results are robust to the inclusion of classic socio-economic controls, childhood and adulthood characteristics, war-related hardships, and cognitive abilities and mental health at the time of the interview, leaving the effects of war almost unchanged. Thus, we may conclude that such effects are not conveyed by impaired cognitive abilities and mental health, or other individual variables affected by war and potentially related to financial choices. War has a direct, persistent – and mainly linear – negative effect on financial risk taking.

Moreover, results show that individuals exposed to war in the past are more resilient to financial downturns, such as the economic crisis affecting Europe in 2009. Negative returns on stocks negatively impact financial risk taking, yet to a lesser extent for respondents exposed to WW2 than for those who were not exposed.

The negative relationship between financial risk taking and exposure to WW2 is consistent with results from previous research (Bucciol & Zarri, 2015; Cameron & Shah, 2015; Kim & Lee, 2014), suggesting that life shocks may be able to change cognitive schemata (beliefs) in subtle ways, not captured by an individual's physical, psychological, and socio-economic conditions. Cognitive schemata stem from the generalization of past experiences into cognitive structures that

[15] Our control group, in this case, is composed by individuals who were born and grew up in no-war regions and by those who were born in war regions but at least a month after the WW2 events occurring in those regions. See Conzo and Salustri (2017) for more details about this identification strategy.

in turn guide the processing of new information and experiences (Stotland & Canon, 1972). Thus, schemata influence how reality is perceived, and because they are rigid, individuals tend to fit reality into schemata, rather than adapting them to new information.

In this perspective, the experience of WW2 during childhood would be a fundamental constituent of exposed individuals' cognitive schemata. In particular, exposure to conflict could increase the perception of uncertainty and uncontrollability of the environment (Barenbaum et al., 2004), leading to an overestimation of risks and of the likelihood of (unexpected) negative events in exposed individuals, compared to non-exposed ones. Hence the lower propensity to invest in stocks, and the higher propensity to buy life insurance. The amount of risk characterizing stocks may be perceived unmanageable, whereas life insurance may be considered necessary to counteract life adverse conditions and negative events.

The same schemata may influence the appraisal of the financial crisis, hence perceived vulnerability to economic shocks. Individuals whose cognitive schemata include the direct experience of WW2 may consider financial crises as only one of the many possible shocks, thereby increasing confidence in the recovery of the system (Cerra & Saxena, 2009).

Our results are also consistent with Kim & Lee (2014) in showing that exposure to war during childhood is detrimental to risk taking during adulthood. The effect of strong and negative early life experiences on risk propensity is enduring. This may occur because the shock could alter not only the development of the prefrontal lobe (Kim & Lee, 2014), which is one of the main brain regions involved in risk-related decision-making (Figner et al., 2010), but also cognitive schemata, especially in ages beyond the sensitive period of the prefrontal lobe.

We also acknowledge the possible presence of war-related traumas captured neither by our childhood and adulthood controls, nor by mental health and cognitive skills variables. Adults who were exposed to war as children may suffer from Post-Traumatic Stress Disorder (PTSD) symptoms (Macksoud & Aber, 1996) that are not fully captured by the depression scale in SHARE. WW2 caused an unprecedented amount of civilian losses, which, for the first time in history, were more than military ones (Werner, 2000). Bombardments, explosions, and related injuries were so widespread that people who witnessed these events as children still remember them, even under age 8 (Berntsen & Rubin, 2006). Such experiences may be the ones increasing the perception of risk (for instance in stocks), and the willingness to reduce or control life risks (stimulating the purchase of life insurance).

We also have to acknowledge several limitations in this paper. First, when we measure the months of war of each region in each year of WW2, we do not distinguish between regions with one, five, or ten episodes of war in the same month. This approach overlooks the intensity of

conflict based on the number of war episodes, and the possible differences in the intensity of single war episodes. However, this does not appear as a severe concern since baseline results hold also when considering number of WW2 events instead of months of exposure[16]. Second, there might be small inaccuracies on the number of months of exposure to war because we use the region of residence during WW2, but we cannot check when respondents started living in that region. This issue was partly addressed through a robustness check on the sample of individuals who did not relocate during WW2. Third, the estimated magnitude of the WW2-effect might appear negligible. However, it is very close to the effect of income and other important controls.

Despite these limitations, our paper finds robust effects of exposure to WW2 on financial risk taking. Exposed individuals prefer to avoid risky financial instruments, while purchasing life insurance. Increasing wealth by investing in stocks may not be alluring to them, compared to keeping safe what they already possess. The experience of war, with its dangers and uncertainty, could yield a strong willingness to protect life and avoid risk when possible, as life might become highly valuable for those who once thought they could lose everything.

[16] Available upon request.

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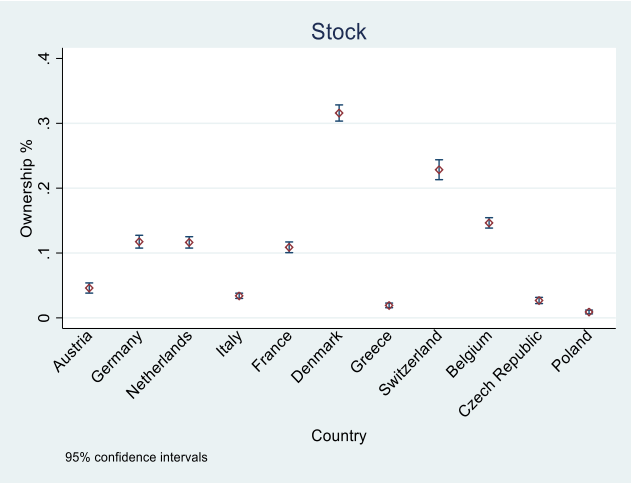
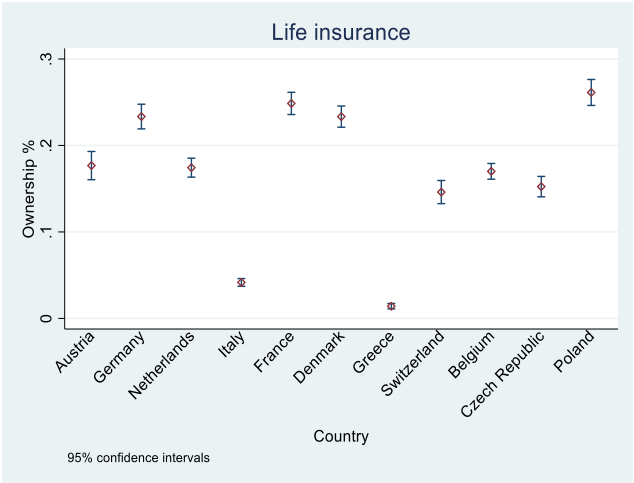
Figure 1. Financial risk taking by country

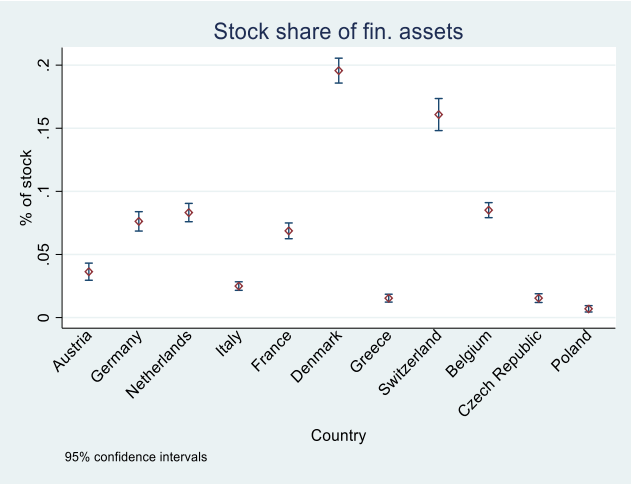
Panel A



Panel C



Panel B



Panel D

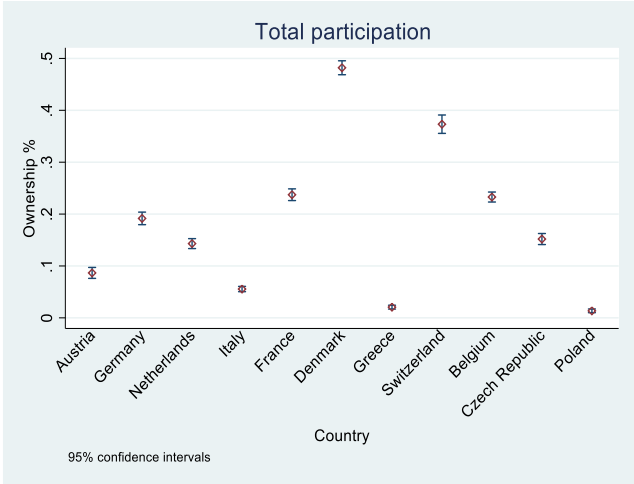
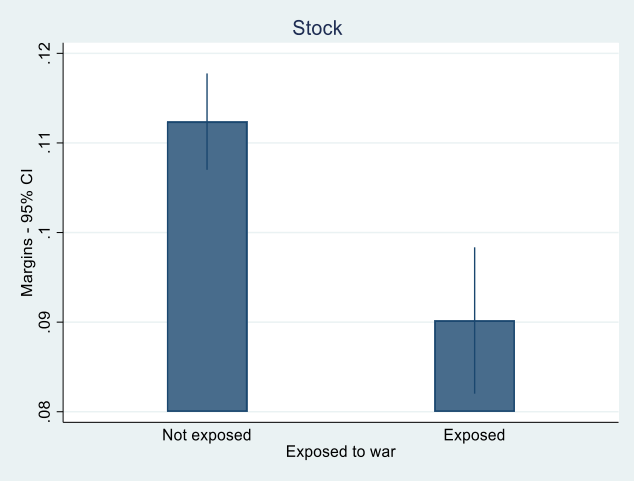
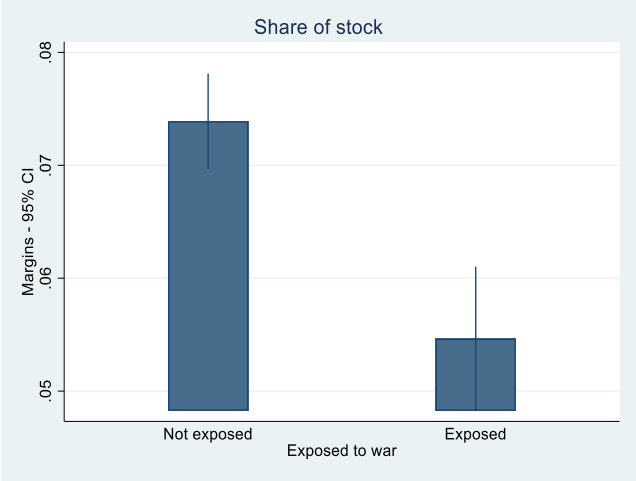


Figure 2. Financial risk taking by war exposure

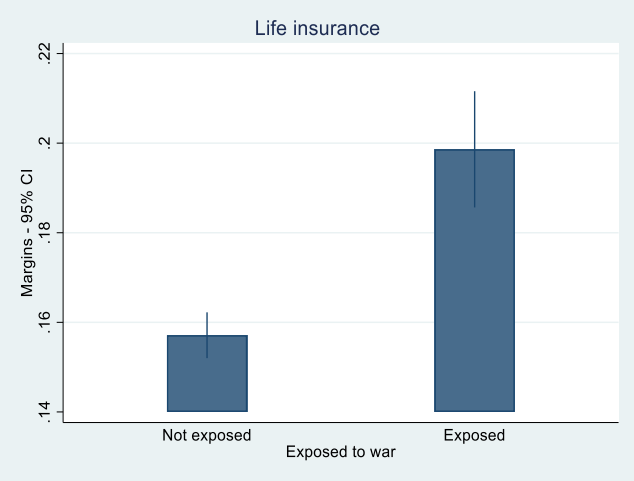
Panel A



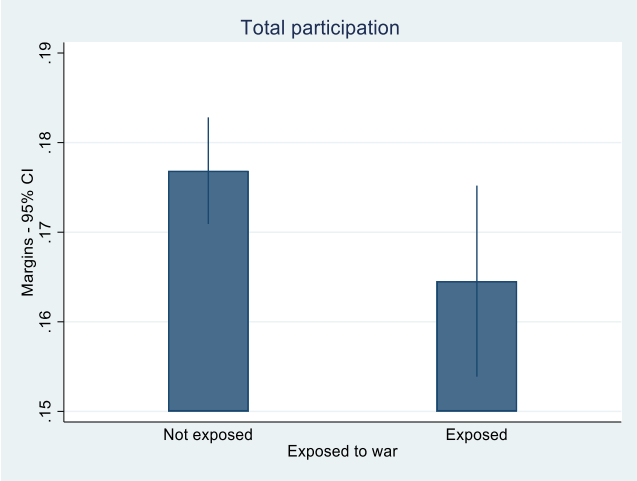
Panel B



Panel C



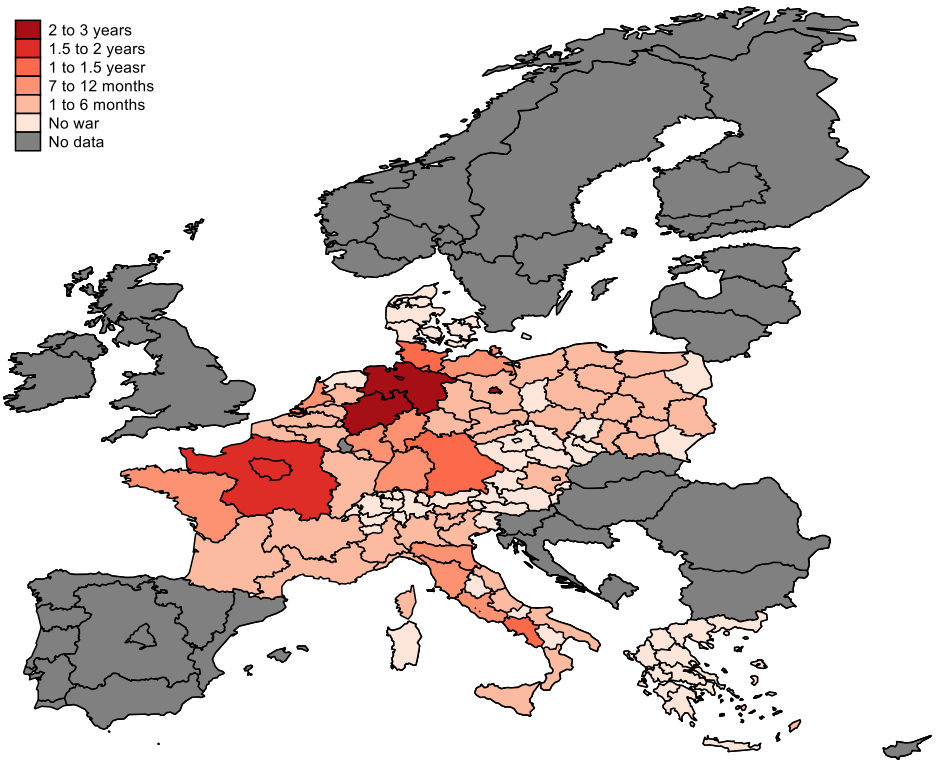
Panel D



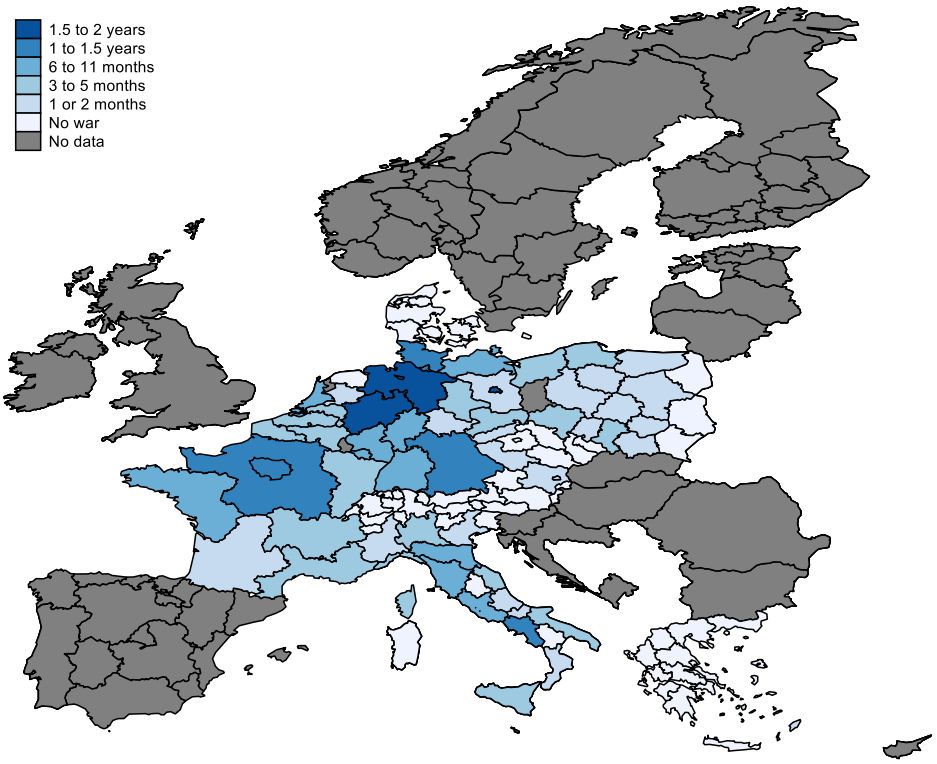
Notes: The figures report predictive margins from panel probit (Panels A, C and D) or OLS (Panel B) random-effects regressions controlling for wave, country and year of birth.

Figure 3 – War exposure by NUTS2 regions

A – average months of war exposure across EU regions



B – Respondents' average months of war exposure



Notes: The figures report the distribution of WW2 events in selected European countries. Figure A refers to European regions in our sample across the years 1939-1945. Figure B shows the average number of months of war exposure of our sample respondents.

Table 1. Descriptive statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
Risk taking					
Stock	55,280	0.103	0.304	0	1
Share of stock	54,625	0.067	0.235	0	1
Life insurance	53,068	0.164	0.370	0	1
Total participation	59,083	0.173	0.378	0	1
Exposure to WW2					
N. of months	59,083	1.866	4.060	0	35
Exposed	59,083	0.344	0.475	0	1
Demographic characteristics					
Female	59,083	0.549	0.498	0	1
Age	59,083	65.784	8.233	50	87
Years of schooling	59,083	10.864	4.000	0	25
Has a partner	59,083	0.720	0.449	0	1
Divorced/separated	59,083	0.089	0.285	0	1
Never married	59,083	0.051	0.220	0	1
Widowed	59,083	0.140	0.347	0	1
Nr. of children	59,083	2.158	1.307	0	17
Current job status and wealth					
Retired	59,083	0.584	0.493	0	1
Employed	59,083	0.230	0.421	0	1
Unemployed	59,083	0.023	0.150	0	1
Permanently sick or disabled	59,083	0.033	0.179	0	1
Homemaker	59,083	0.115	0.320	0	1
Other	59,083	0.014	0.119	0	1
Log income (hh)	59,083	9.954	1.147	-5.5	14.9
Log financial wealth (hh)	59,083	2.640	4.494	0	23.7
Health status					
Nr. of chronic diseases	59,083	1.101	1.161	0	10
Smoker	59,083	0.166	0.372	0	1
Depression scale index	58,109	2.255	2.181	0	12
Body Mass Index					
Underweight	59,083	0.011	0.102	0	1
Normal	59,083	0.350	0.477	0	1
Overweight	59,083	0.441	0.497	0	1
Obese	59,083	0.198	0.398	0	1
Alcohol consumption					
No alcohol consumption	59,083	0.235	0.424	0	1
Low alcohol consumption	59,083	0.249	0.433	0	1
Medium alcohol consumption	59,083	0.298	0.457	0	1
High alcohol consumption	59,083	0.218	0.413	0	1
SES in childhood					
High SES at age 10 (75th percentile)	57,338	0.254	0.435	0	1
Lived in rural area when child	59,078	0.395	0.489	0	1
Received vaccination when child	58,629	0.960	0.196	0	1
Father absent at age 10	58,114	0.087	0.282	0	1
Hunger episode when child	59,041	0.060	0.237	0	1
Ever dispossessed when child	59,030	0.032	0.176	0	1
Cognitive abilities					
Numeracy	58,712	3.882	1.302	0	5
Memory	58,381	5.238	1.694	0	10
Orientation	36,447	3.855	0.480	0	4
Country					
Austria	59,083	0.047	0.212	0	1
Germany	59,083	0.076	0.264	0	1
Netherlands	59,083	0.095	0.294	0	1
Italy	59,083	0.144	0.351	0	1
France	59,083	0.096	0.295	0	1
Denmark	59,083	0.101	0.302	0	1
Greece	59,083	0.100	0.300	0	1

Switzerland	59,083	0.056	0.229	0	1
Belgium	59,083	0.141	0.348	0	1
Czech Republic	59,083	0.075	0.263	0	1
Poland	59,083	0.069	0.254	0	1
Wave					
1	59,083	0.163	0.370	0	1
2	59,083	0.270	0.444	0	1
4	59,083	0.211	0.408	0	1
5	59,083	0.170	0.375	0	1
6	59,083	0.187	0.390	0	1
Macroeconomic characteristics					
Real GDP growth % NUTS2	48,023	2.293	2.290	-6.9	14.6
Unemployment rate (15-74) NUTS2	52,081	7.450	3.786	2.1	23
Annual return stock index	59,083	-11.810	15.103	-40.31	43.11

Table 2. **The effect of war exposure on portfolio diversification (baseline models)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Stock		Share stock		Life insurance		Total participation	
Female	-0.017***	-0.017***	-0.015***	-0.015***	-0.012***	-0.012***	-0.008***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
Exposed to war	-0.020***		-0.017***		0.035***		-0.010***	
	(0.004)		(0.004)		(0.007)		(0.003)	
Under median exposure		-0.018***		-0.016***		0.030***		-0.014***
		(0.004)		(0.004)		(0.007)		(0.004)
Above median exposure		-0.022***		-0.017***		0.051***		-0.002
		(0.005)		(0.005)		(0.009)		(0.005)
Log financial wealth	0.015***	0.015***	0.022***	0.022***	0.020***	0.020***	0.026***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.015***	0.015***	0.006***	0.006***	0.010***	0.010***	0.004***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)
Observations	55,379	55,379	54,625	54,625	53,331	53,331	59,083	59,083
Dummy Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3. The role of adulthood and childhood controls

VARIABLES	(1) Stock	(2) Share stock	(3) Life insurance	(4) Total participation
Female	-0.013***	-0.013***	-0.006	-0.006***
	(0.003)	(0.003)	(0.004)	(0.002)
Under median exposure	-0.018***	-0.016***	0.027***	-0.014***
	(0.004)	(0.004)	(0.007)	(0.004)
Above median exposure	-0.018***	-0.015***	0.049***	0.000
	(0.005)	(0.005)	(0.009)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003**
	(0.001)	(0.001)	(0.002)	(0.001)
High SES at age 10	0.002	0.001	0.002	0.002
	(0.003)	(0.003)	(0.004)	(0.002)
Lived in a rural area when child	0.001	0.003	-0.005	-0.003
	(0.003)	(0.002)	(0.004)	(0.002)
Received vaccination when child	0.003	0.003	0.030**	-0.014**
	(0.007)	(0.004)	(0.012)	(0.007)
Divorced or separated	-0.016***	-0.012***	0.002	-0.005
	(0.004)	(0.004)	(0.006)	(0.003)
Never married	-0.001	-0.001	-0.020***	-0.005
	(0.006)	(0.006)	(0.008)	(0.005)
Widowed	0.006	0.002	0.009	0.007**
	(0.004)	(0.003)	(0.006)	(0.003)
Employed or self-employed	0.003	0.002	0.035***	0.004
	(0.003)	(0.003)	(0.005)	(0.003)
Unemployed	-0.005	-0.008	0.009	0.002
	(0.006)	(0.006)	(0.009)	(0.006)
Permanently sick or disabled	0.002	0.000	0.010	-0.004
	(0.007)	(0.005)	(0.008)	(0.006)
Homemaker	0.001	0.003	0.002	0.000
	(0.005)	(0.003)	(0.006)	(0.004)
Other	0.005	0.003	0.061***	-0.013
	(0.008)	(0.007)	(0.012)	(0.008)
Number of children	-0.004***	-0.001*	0.002	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Years of education	0.004***	0.002***	0.001**	0.001***
	(0.000)	(0.000)	(0.001)	(0.000)
Nr. of chronic diseases	-0.000	0.001	0.002	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Normal	0.018*	0.005	0.005	0.024**
	(0.010)	(0.009)	(0.015)	(0.010)
Overweight	0.013	0.001	0.016	0.022**
	(0.010)	(0.009)	(0.015)	(0.010)
Obese	0.011	0.001	0.023	0.020*
	(0.010)	(0.009)	(0.015)	(0.011)
Low alc. consumption	0.013***	0.005**	0.021***	0.011***
	(0.004)	(0.002)	(0.004)	(0.003)
Medium alc. consumption	0.015***	-0.002	0.029***	0.012***
	(0.003)	(0.003)	(0.004)	(0.003)
High alc. consumption	0.019***	0.012***	0.021***	0.014***
	(0.004)	(0.003)	(0.005)	(0.003)
Smoke at the present time	-0.009***	-0.005*	0.009**	-0.004
	(0.003)	(0.003)	(0.004)	(0.003)
Observations	53,336	52,610	51,396	56,931
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4. The role of war-related hardships

VARIABLES	(1) Stock	(2) Share stock	(3) Life insurance	(4) Total participation
Female	-0.013***	-0.013***	-0.006	-0.006***
	(0.003)	(0.003)	(0.004)	(0.002)
Under median exposure	-0.018***	-0.016***	0.027***	-0.014***
	(0.004)	(0.004)	(0.007)	(0.004)
Above median exposure	-0.018***	-0.015***	0.048***	-0.000
	(0.005)	(0.005)	(0.009)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003**
	(0.001)	(0.001)	(0.002)	(0.001)
Father absent at age 10	-0.007	-0.007*	0.013**	0.002
	(0.005)	(0.004)	(0.006)	(0.004)
Hunger episodes	-0.002	0.000	0.002	0.004
	(0.006)	(0.004)	(0.008)	(0.005)
Dispossession	0.012*	0.006	0.003	0.007
	(0.007)	(0.006)	(0.010)	(0.005)
Observations	53,309	52,584	51,367	56,901
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5. Non-linearity, number of months of war squared

VARIABLES	(1) Stock	(2) Share stock	(3) Life insurance	(4) Total participation
Female	-0.012***	-0.013***	-0.005	-0.006***
	(0.003)	(0.002)	(0.004)	(0.002)
Number of months of war	-0.002***	-0.002***	0.005***	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Number of months of war squared	0.000**	0.000***	-0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003***
	(0.001)	(0.001)	(0.002)	(0.001)
Observations	55,379	54,625	53,331	59,083
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6a. Resilience to financial crisis: negative returns and war exposure

VARIABLES	(1) Stock	(2) Share of stock	(3) Stock	(4) Share of stock	(5) Stock	(6) Share of stock
Negative return	-0.012***	-0.010***	-0.006*	-0.007**	-0.011**	-0.010***
	(0.003)	(0.002)	(0.004)	(0.003)	(0.004)	(0.003)
GDP in PPS per inhab gr.rate			-0.003***	-0.003***	-0.003***	-0.003***
			(0.001)	(0.001)	(0.001)	(0.001)
Unemployment rate 15-74 NUTS2			0.001	0.000	0.001	0.000
			(0.001)	(0.001)	(0.001)	(0.001)
Exposed to war*Negative return					0.012**	0.008*
					(0.006)	(0.005)
Log financial wealth	0.020***	0.017***	0.019***	0.016***	0.019***	0.016***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Log income	0.008***	0.005***	0.008***	0.005***	0.008***	0.005***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)
Observations	46,324	45,656	39,379	38,784	39,379	38,784
Adulthood controls	Yes	Yes	Yes	Yes	Yes	Yes
Dummy interview years	Yes	Yes	Yes	Yes	Yes	Yes
Age and age squared	Yes	Yes	Yes	Yes	Yes	Yes

Fixed effects estimation - Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6b. Resilience to financial crisis: exposed vs. non-exposed respondents

	Exposed				Not exposed			
VARIABLES	(1) Stock	(2) Share of stock	(3) Stock	(4) Share of stock	(5) Stock	(6) Share of stock	(7) Stock	(8) Share of stock
Negative return	-0.007	-0.005	-0.002	-0.002	-0.017***	-0.014***	-0.010**	-0.010***
	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.003)	(0.005)	(0.004)
GDP in PPS per inhab gr.rate			-0.003***	-0.003***			-0.003***	-0.003***
			(0.001)	(0.001)			(0.001)	(0.001)
Unemployment rate 15-74 NUTS2			0.001	0.001			0.001	-0.000
			(0.001)	(0.001)			(0.001)	(0.001)
Log financial wealth	0.019***	0.018***	0.019***	0.018***	0.020***	0.017***	0.018***	0.015***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Log Income	0.009***	0.007***	0.009***	0.007***	0.008***	0.005***	0.008***	0.004***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Observations	16,000	15,791	15,344	15,139	30,313	29,855	24,024	23,635
Adulthood controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Interview years	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age and age squared	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Fixed effects estimation - Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Electronic Supplementary Material 1

1. Methodology

1.1 SHARE missing values imputation

Notwithstanding the richness of the SHARE database, our primary source of data, given the high number of missing values, we decide to impute socio-demographic and adulthood controls, in order not to lose many observations in our estimation models. The imputation strategy is twofold. First, when data are inferable from other (or previous) waves, or from other subjects within the same household, we replace the missing value with the last available and coherent information. This procedure is applicable under some conditions and with respect to a subset of variables only. For example, as number of children and years of education remain constant across waves, when missing, we replace them with the last available value from previous (or subsequent) wave. In the same vein, an individual reporting to be married in wave 4 and widowed in wave 5, we consider him/her to be married in wave 2 and widowed in wave 6 also. Going further, as financial wealth and income are computed at household level and vary across waves, we replace all the missing values with the information available from another member within the same household and the same wave. Second, in the case in which information are not deducible from other waves or other members within the same household, we impute the missing values with the median value computed at country level across waves. In this case we also construct dummies for each imputed variables (flags), equal to 1 if the value is imputed and 0 otherwise. We include the flags as additional regressors in each estimation.

1.2 Annual return of the stock market index

In order to study the resilience effect to economic downturn of our respondents we compute the seasonally adjusted annual returns of the stock market index of the reference country following equations [1] and [2]. First, we compute the seasonally adjusted monthly returns [1]. This variable captures the percentage variation of the value of the stock market index in a month with respect to same month of the previous year. Second, we average the seasonally adjusted monthly returns over the twelve months before the interview. In this way we are able to exploit the month-year variation of the interview date for each respondent. As such, individuals share the same annual returns *only* if interviewed in the same country, in the same year and in the same month.

[1] $$Seasonally\ Adjusted\ Monthly\ Return_t = \left(\frac{Stock\ Market\ Value_t}{Stock\ Market\ Value_{t-12}} - 1\right) * 100$$

[2] $$Annual\ Return_t = \frac{\sum_{t=0}^{-12} SAMR_t}{12}$$

where, *t= month of interview.*

1.3 Macroeconomic variables

The growth rate of the GDP per inhabitant in PPS and the unemployment rate of the working age population, (i.e. from 15 to 74 years) are extracted from the EUROSTAT regional variables database. Both variables are measured by year and NUTS2 region. Eurostat clarifies that "the purchasing power standard, abbreviated as PPS, is an artificial currency unit. Theoretically, one PPS can buy the same amount of goods and services in each country. However, price differences across borders mean that different amounts of national currency units are needed for the same goods and services depending on the country. PPS are derived by dividing any economic aggregate of a country in national currency by its respective purchasing power parities.

Electronic Supplementary Material 2

Table SM1. Variable legend

Variable	Description
Exposed to war	Dummy for exposure to at least 1 war episode (equivalent to 1 month of war) during the WW2.
Under/Above median	Categorical variable measuring the number of months of war exposure during the WW2, where 0 = Never exposed; 1 = Under median exposure (up to 4 months of war); 2 = Above median exposure (from 5 to 35 months of war).
First/ Second/ Third tertile of war exposure	Categorical variable measuring the number of months of war exposure during the WW2, where 0 = Never exposed; 1 = First tertile of exposure (1 to 3 months of war); 2 = Second tertile of exposure (from 4 or 5 months of war); 3= Third tertile of exposure (from 6 to 35 months of war)
Number of months of war exposure	Continuous variable reporting the number of months of war exposure of each respondent, based on the year of birth and the region of residence during WW2 period, varying from 0 to 35 months.
Number of months of war exposure squared	Square of the number of months of war exposure, varying from 0 to 1225.
Stock	Dummy for stock ownership, where 0= Do not have stocks; 1= Have stocks.
Share of stock	Percentage of directly held stocks with respect to the total amount of stocks held, including indirectly held stocks through mutual funds and individual retirement account.
Life insurance	Dummy for life insurance, where 0= Do not have life insurance; 1= Have life insurance.
Total participation	Dummy for participation in the financial market, either through direct stocks or indirect stocks held through mutual funds and individual retirement account; 0= Do not have any stocks; 1= Have direct or indirect stocks.
Female	Dummy for gender, where 0= Male; 1= Female.
Log (Financial Wealth)	Logarithm of household financial wealth. It is the sum of direct and indirect stock amount, amount in bond, amount in life insurance, amount in contractual savings, mutual funds and investment account.
Log(Income)	Logarithm of net household income. It is constructed by aggregating all net incomes of individual within the same household.
Age	Age of respondents at the time of interview.
Childhood SES (*High*)	Dummy for high SES at age of 10, where 0= for values of *Childhood SES* below the 75th percentile of the country of residence; 1= for values of *Childhood SES* values above or equal to the 75th percentile of the country of residence. *Childhood SES* is the first factor of a principal component analysis (PCA) on four childhood socio-economic characteristics at age 10: logged number of books in household; logged number of rooms and persons in household (i.e. no. of rooms per capita); features of the accommodation; occupation of main breadwinner.
Lived rural	Dummy variable for rural area of residence during whole life, where 0= Never lived in rural area; 1= Lived in a rural area at least once in life.
Immunization	Dummy variable for vaccination during childhood up to age 15, where 0= did not receive vaccination when child; 1= Received at least one vaccination when child.
Marital status	Categorical variable for the marital status of respondents (1 = Living with a partner, 2 = Never married, 3 = Divorced,4= Widowed).

(*Ref = Married*)	
Job (*Ref = Retired*)	Categorical variable for job status (Retired, Employed or Self employed, Unemployed, Sick or Disabled, Homemaker).
Nr of children	Number of respondent's children.
Years of education	Number of respondent's years of education completed.
No. Chronic diseases	Number of chronic diseases diagnosed by doctors (among the following 12: Heart attack, High blood pressure or hypertension, High blood cholesterol, Stroke or Cerebral Vascular Disease, Diabetes or High Blood Sugar, Chronic Lung Disease, Cancer or Malignant Tumour, Stomach or Duodenal Ulcer, Peptic Ulcer, Parkinson, Cataracts, Hip Fracture or Femoral Fracture).
Bmi class (*Ref = Normal*)	Categorical variable for the Body Mass Index (BMI) class (1 = Underweight, 2 Normal, 3 = Overweight, 4 = Obese).
Alcohol consumption (*Ref = Never*)	Categorical variable for the days of alcoholic drinks consumption (1 = Never, 2 = Up to twice a month, 4 = Up to four days a week, 6 = almost every day).
Smoker	Dummy for smoking habit, where 0= Do not smoke; 1= Smoke.
Father at age 10	Dummy for father alive at age of 10, where 0=Father was not alive when 10; 1= Father alive
Hunger	Dummy for hunger episodes during life, where 0= Never hunger; 1= Suffered from hunger at least once in life.
Dispossession	Dummy for dispossession episodes, where 0= Never dispossessed; 1= Suffered from dispossession at least once in life.
EUROD depression scale index	Measure of depression constructed over 12 questions, where 0= Not depressed; 12= Very depressed.
Numeracy	Score of the mathematical performance varying from 0 to 5. It is constructed using 4 questions in which respondents are asked to compute percentages.
Memory	Score for memory capacity, varying from 0 to 10. It is constructed using 1 question in which respondents are asked to write a list of 10 words previously read. Each correct guess is worth 1 point.
Orientation	Score for orientation in time capacity, from 0 to 4. It is constructed using 4 questions in which respondents are asked to report date.
Annual return	Annual rate of return of the main European stock market indices at country level. It is constructed by averaging the seasonally adjusted monthly return of the twelve months prior to the interview.
Real GDP growth rate per inhabitant in PPS	Annual real GDP growth rate per inhabitant in purchasing power standard at NUTS2 level.
Unemployment rate age 15 - 74	Rate of unemployment at NUTS2 level of working age population, i.e. from 15 to 74 years
Year of birth	Year of birth of the respondent.
Country	Country of residence of the respondent.
Wave	Wave of interview (1, 2, 4, 5, 6)
Interview Year	Year in which the interview is taken, from 2004 to 2015

Table SM2. The role of adulthood controls

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.012***	-0.013***	-0.005	-0.006***
	(0.003)	(0.002)	(0.004)	(0.002)
Under median exposure	-0.018***	-0.017***	0.028***	-0.014***
	(0.004)	(0.004)	(0.007)	(0.004)
Above median exposure	-0.021***	-0.017***	0.050***	-0.001
	(0.005)	(0.005)	(0.009)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.025***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003***
	(0.001)	(0.001)	(0.002)	(0.001)
Divorced or separated	-0.015***	-0.011***	0.001	-0.003
	(0.004)	(0.004)	(0.006)	(0.003)
Never married	0.001	0.001	-0.020**	-0.004
	(0.006)	(0.006)	(0.008)	(0.004)
Widowed	0.006	0.002	0.008	0.007**
	(0.004)	(0.003)	(0.006)	(0.003)
Employed or self-employed	0.004	0.002	0.034***	0.004
	(0.003)	(0.003)	(0.005)	(0.003)
Unemployed	-0.005	-0.007	0.009	0.003
	(0.006)	(0.005)	(0.009)	(0.006)
Permanently sick or disabled	0.003	0.001	0.011	-0.003
	(0.007)	(0.005)	(0.008)	(0.006)
Homemaker	0.002	0.003	0.002	0.001
	(0.005)	(0.003)	(0.006)	(0.004)
Other	0.007	0.003	0.058***	-0.013
	(0.008)	(0.007)	(0.012)	(0.008)
Number of children	-0.004***	-0.001	0.002	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Years of education	0.004***	0.002***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Nr. of chronic diseases	-0.001	0.001	0.002	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Normal weight	0.018*	0.005	0.005	0.018*
	(0.010)	(0.009)	(0.015)	(0.011)
Overweight	0.014	0.001	0.015	0.016
	(0.010)	(0.009)	(0.015)	(0.011)
Obese	0.012	0.000	0.023	0.014
	(0.010)	(0.009)	(0.015)	(0.011)
Low alc. consumption	0.012***	0.005**	0.020***	0.012***
	(0.003)	(0.002)	(0.004)	(0.003)
Medium alc. consumption	0.015***	-0.001	0.030***	0.013***
	(0.003)	(0.003)	(0.004)	(0.003)
High alc. consumption	0.019***	0.012***	0.022***	0.014***
	(0.003)	(0.003)	(0.005)	(0.003)
Smoke at the present time	0.009***	0.005*	0.009**	0.004
	(0.003)	(0.003)	(0.004)	(0.003)

Observations	55,379	54,625	53,331	59,083
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM3. The role of childhood controls

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.018***	-0.014***	-0.013***	-0.008***
	(0.002)	(0.002)	(0.003)	(0.002)
Under median exposure	-0.019***	-0.017***	0.030***	-0.014***
	(0.004)	(0.003)	(0.008)	(0.004)
Above median exposure	-0.021***	-0.017***	0.049***	-0.001
	(0.005)	(0.004)	(0.009)	(0.005)
Log financial wealth	0.015***	0.024***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.015***	0.006***	0.010***	0.004***
	(0.001)	(0.001)	(0.002)	(0.001)
High SES at age 10	0.011***	0.004*	0.005	0.006**
	(0.003)	(0.002)	(0.004)	(0.002)
Lived in a rural area when child	-0.002	0.003	-0.006*	-0.004*
	(0.003)	(0.002)	(0.004)	(0.002)
Received vaccination when child	0.006	0.003	0.031***	-0.013*
	(0.007)	(0.003)	(0.012)	(0.007)
Observations	53,336	52,610	51,396	56,931
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM4. The role of cognitive abilities

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.012***	-0.013***	-0.006	-0.006***
	(0.003)	(0.003)	(0.004)	(0.002)
Under median	-0.018***	-0.016***	0.029***	-0.014***
	(0.004)	(0.004)	(0.008)	(0.004)
Above median	-0.019***	-0.015***	0.049***	0.000
	(0.005)	(0.005)	(0.010)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003**
	(0.001)	(0.001)	(0.002)	(0.001)
Memory	0.001*	0.000	0.001	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)
Numeracy	0.007***	0.002**	-0.000	0.003**
	(0.001)	(0.001)	(0.001)	(0.001)
Orientation	-0.001	0.000	0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Observations	52,680	51,957	50,856	56,218
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM5. The role of mental health

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.012***	-0.014***	-0.008**	-0.006**
	(0.003)	(0.003)	(0.004)	(0.002)
Under median exposure	-0.018***	-0.016***	0.029***	-0.014***
	(0.004)	(0.004)	(0.008)	(0.004)
Above median exposure	-0.019***	-0.015***	0.050***	-0.001
	(0.005)	(0.005)	(0.009)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003***
	(0.001)	(0.001)	(0.002)	(0.001)
EURO-D Depression	-0.001	0.001	0.002***	-0.000
	(0.001)	(0.000)	(0.001)	(0.000)
Observations	52,499	51,778	50,682	56,034
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM6. The effect of tertiles of months of war (baseline model)

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.017***	-0.015***	-0.012***	-0.008***
	(0.002)	(0.002)	(0.003)	(0.002)
First tertile	-0.022***	-0.015***	0.033***	-0.013***
	(0.004)	(0.004)	(0.008)	(0.004)
Second tertile	-0.017***	-0.026***	0.037***	-0.017***
	(0.005)	(0.005)	(0.009)	(0.005)
Third tertile	-0.019***	-0.012**	0.043***	0.002
	(0.005)	(0.005)	(0.010)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.015***	0.006***	0.010***	0.004***
	(0.001)	(0.001)	(0.002)	(0.001)
Observations	55,379	54,625	53,331	59,083
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM7. Heterogeneous impact of WW2 by gender

	Male				Female			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Stock	Share stock	Life insurance	Total participation	Stock	Share stock	Life insurance	Total participation
Under median exposure	-0.028***	-0.024***	0.035***	-0.010	-0.011**	-0.007	0.022**	-0.016***
	(0.008)	(0.006)	(0.012)	(0.006)	(0.005)	(0.005)	(0.010)	(0.005)
Above median exposure	-0.018*	-0.016*	0.045***	0.004	-0.019***	-0.013**	0.052***	-0.001
	(0.010)	(0.008)	(0.014)	(0.007)	(0.005)	(0.006)	(0.012)	(0.006)
Log financial wealth	0.020***	0.024***	0.022***	0.029***	0.011***	0.019***	0.018***	0.023***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.010***	0.001	0.012***	0.005***	0.008***	0.004***
	(0.002)	(0.001)	(0.003)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)
Observations	24,239	23,902	22,910	25,639	28,580	28,708	28,483	31,239
Adulthood controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM8. Heterogeneous impact of WW2 by age

VARIABLES	Stock	Share stock	Life insurance	Total participation
Female	-0.013***	-0.013***	-0.006	-0.006***
	(0.003)	(0.003)	(0.004)	(0.002)
Exposed to war at age 0 to 3	-0.015***	-0.007	0.028***	-0.008*
	(0.005)	(0.004)	(0.007)	(0.004)
Exposed to war at age 4 to 8	-0.000	-0.004	0.013	-0.004
	(0.005)	(0.004)	(0.008)	(0.004)
Exposed to war at age 9 to 15	-0.022***	-0.024***	0.040***	0.001
	(0.006)	(0.005)	(0.011)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003**
	(0.001)	(0.001)	(0.002)	(0.001)
Observations	53,336	52,610	51,396	56,931
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM9. Wave and war exposure interaction

VARIABLES	Stock	Share stock	Life insurance	Total participation
Exposed to war	-0.032***	-0.030***	0.015	-0.007
	(0.006)	(0.006)	(0.009)	(0.006)
Exposed to war*Wave 2	0.010	0.007	0.014	-0.000
	(0.007)	(0.007)	(0.010)	(0.007)
Exposed to war*Wave 4	0.013*	0.008	0.015	-0.005
	(0.008)	(0.007)	(0.011)	(0.007)
Exposed to war*Wave 5	0.004	0.017**	0.031***	-0.005
	(0.008)	(0.007)	(0.011)	(0.007)
Exposed to war*Wave 6	0.015*	0.020***	0.059***	-0.004
	(0.009)	(0.006)	(0.011)	(0.007)
Wave 2	0.011**	-0.019***	-0.027***	-0.011***
	(0.004)	(0.005)	(0.006)	(0.004)
Wave 4	-0.006	-0.023***	-0.058***	-0.000
	(0.005)	(0.005)	(0.006)	(0.004)
Wave 5	-0.032***	-0.054***	-0.066***	0.002
	(0.005)	(0.005)	(0.007)	(0.004)
Wave 6	-0.042	-0.016	-0.103**	0.065**
	(0.040)	(0.016)	(0.047)	(0.027)
Log financial wealth	0.018***	0.023***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.016***	0.005***	0.012***	0.002**
	(0.002)	(0.001)	(0.002)	(0.001)
Observations	46,269	45,656	44,813	49,433
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM10. The role of SES as a moderator

VARIABLES	Stock	Share stock	Life insurance	Total participation
Exposed to war	-0.021***	-0.017***	0.031***	-0.010***
	(0.005)	(0.004)	(0.007)	(0.004)
Exposed to war*High SES	0.009	0.005	0.010	0.004
	(0.006)	(0.006)	(0.009)	(0.005)
Log financial wealth	0.015***	0.022***	0.020***	0.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Log income	0.013***	0.005***	0.009***	0.003**
	(0.001)	(0.001)	(0.002)	(0.001)
High SES at age 10	-0.000	-0.001	-0.001	0.001
	(0.003)	(0.004)	(0.005)	(0.003)
Observations	53,336	52,610	51,396	56,931
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy Country	Yes	Yes	Yes	Yes
Dummy wave	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table SM11. Identification of war exposure through month-year of birth

VARIABLES	Stock	Share of stock	Life insurance	Total participation
Exposed to war	-0.024**	-0.027***	0.026	0.000
	(0.012)	(0.010)	(0.016)	(0.010)
Log financial wealth	0.018***	0.024***	0.017***	0.026***
	(0.001)	(0.001)	(0.001)	(0.001)
Log income	0.018***	0.012***	0.005	0.008***
	(0.003)	(0.002)	(0.004)	(0.003)
Observations	10,659	11,811	10,801	12,141
Adulthood controls	Yes	Yes	Yes	Yes
Childhood controls	Yes	Yes	Yes	Yes
Dummy region of birth	Yes	Yes	Yes	Yes
Year of birth	Yes	Yes	Yes	Yes

Marginal effects - Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Figure SM1. Growth rate of GDP per inhabitant in PPS

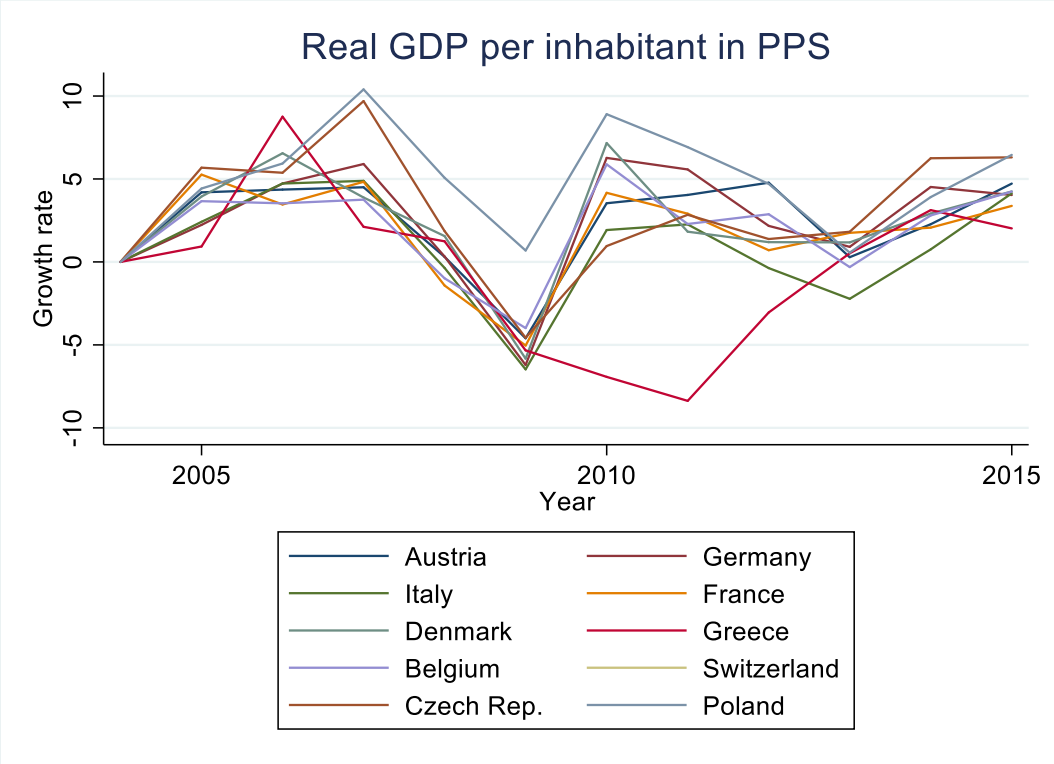


Figure SM2. Annual return of stock market index by country