Comparative Population Studies – Demographic Trends Around the Globe
Vol. 49 (2024): 297-316 (Date of release: 10.09.2024)

# Trust and Fertility Intentions in High-Trust Sweden: An Exploratory Analysis

**Mark Gortfelder, Gerda Neyer, Gunnar Andersson**

**Abstract:** Trust has recently received some attention in demographic literature as one potential factor for fertility considerations in post-industrial societies. It has been argued that trust is relevant in a number of different ways, including as a resilience mechanism against different perceived uncertainties that may affect childrearing decisions. Trust is also related to a host of positive political and economic outcomes, all of which enable childbearing. To date, studies have used macro-level or multilevel frameworks and a measure of social trust that focuses on confidence in fellow members of society. In our study, we use two novel modules of the Swedish Generations and Gender Survey 2021 (GGS2021) to study this relationship further. First, we analyse the associations between different measures of interpersonal and institutional trust on the one hand and individuals' fertility intentions on the other. Second, we examine whether either interpersonal or institutional trust acts as a resilience mechanism against various individual and global uncertainties. The results do not show trust to be a decisive factor behind fertility intentions in Sweden. The absence of strong associations may be attributable to Sweden's position as a notably high-trust society, with its inclusive labour markets and welfare services.

**Keywords:** Trust · Institutional trust · Uncertainty · Fertility intentions · Sweden

## 1 Introduction

The field of social sciences boasts a considerable degree of literature on social trust, and how it is correlated with a range of positive outcomes at the societal level (*Schilke et al.* 2021). A clear understanding has emerged that sees trust as a vital pillar for successful social relations and the functioning of social systems. However, only a few articles in recent years (*Aassve et al.* 2021, 2018, 2016) have dealt with the potential impact of trust on fertility. These papers focused on social trust only

* This article has an Online Appendix with supplementary material URL: https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/615/419

Federal Institute for Population Research 2024
CC BY-SA

URL: www.comparativepopulationstudies.de
DOI: https://doi.org/10.12765/CPoS-2024-12
URN: urn:nbn:de:bib-cpos-2024-12en3

and studied the link between this kind of trust and fertility in a cross-country or a single-country setting. For the latter, the spotlight was on Italy, in which both trust and family support are deemed to be low in a European comparison. These studies found social trust to be positively associated with fertility. As far as Sweden is concerned, a recent study uses municipal-level change in the vote share for an anti-establishment political party as a proxy for (decreasing) social trust, and links it with fertility developments (*Comolli/Andersson* 2021).

Researchers have linked social trust to fertility in a number of ways. First, a higher level of social trust would increase the likelihood of using non-familial day care, since greater social trust should also be correlated with trusting day care workers to take care of one's children (*Aassve et al.* 2016). Second, social trust can be interpreted as a mechanism that helps people to cope with risks and uncertainties, considering the long-term commitments of raising children (*Aassve et al.* 2021). Third, the effect of social trust can be implicitly linked to fertility through a number of variables, since greater social trust also benefits economic prosperity at the societal level, and the development of welfare states (*Lee* 2013).

This article contributes to the small body of literature that exists on the link between trust and fertility in four main ways. First, the study focuses on Sweden, which, by European and global standards, is a high-trust country with an economically thriving society that is both gender-equal and socially-equal, a welfare state offering comprehensive levels of family support, and high-quality, universal child care services for children of all ages. Second, we introduce institutional trust as an additional and thus far neglected trust dimension to fertility research. Third, we address employment-related and global uncertainties in order to measure linkages between perceived uncertainties, social and institutional trust, and fertility considerations (*Neyer et al.* 2024). We believe that it is important to include different dimensions of uncertainty in a trust-fertility study, given previous research findings on economic uncertainty and fertility (*Vignoli et al.* 2022) and the increasing global risks in a globalised world (*Beck* 1992). The use of institutional trust measures ought to be relevant when it comes to seeing trust as a coping mechanism against different forms of macro-level uncertainty. Fourth, we focus on fertility intentions, and, in particular, on intentions to have a(nother) child in the next three years. By adding institutional trust as well as uncertainties at the individual economy and global levels, and by looking at fertility intentions, we expand previous research perspectives on the role of trust and on the links between trust and fertility. By focusing on fertility intentions, we emphasise the association between trust and childbearing considerations, and thus on individuals' imaginations of the future.

## 2 Theory and background

### 2.1 Two types of trust

Social trust, often also called generalised social trust, can be conceptualised as *interpersonal trust*. It is social, generalised, and interpersonal in the sense that it

is not limited to the family, kin or friends. It is based on the assumption that an individual's own honest and fair behaviour towards others – including persons that one does not know or has previous personal connections to – is reciprocated. We will therefore use the term "interpersonal trust" in this study, in addition to "social trust". Societies vary widely on the level of social trust, as it is measured most frequently and relevantly by the World/European Values Surveys (*Atlas of European Values* 2023; *Bjørnskov* 2007). It is common for Nordic countries to display high social trust, while Southern European countries record low social trust levels. During the last decades for which we have such data, we do not see a convergence between countries in this respect. Indeed, many of the explanations for differences in patterns of social trust emphasise deep historical roots for observed cross-country differences. The country rankings in such surveys closely correlate with findings of cross-country differences in various trust games/experiments, such as returning found wallets or getting caught up in bribery (*Cohn et al.* 2019; *Rothstein/Eek* 2009). Hence, interpersonal trust is something both real and behavioural. Social trust is seen as a crucial positive factor behind the political and economic success of high-trust societies, because it enables collective functioning and increases cooperation (*Schilke et al.* 2021).

*Institutional trust* captures people's trust in the capacity of different institutions to provide conditions that reduce risks and enhance well-being. Thus, while social trust is related to individuals' trust in fellow citizens, institutional trust refers to individuals' reliance on (public) institutions. Countries also differ as regards confidence in different institutions. Similar to social trust, people in the Nordic countries are commonly found to have a high level of trust in their institutions, whereas in Southern European countries it is low (*Atlas of European Values* 2023). This interrelation between the two forms of trust is assumed to have contributed to the creation of different types of welfare state (*Ellingsæter/Pedersen* 2016; *Rothstein/Uslaner* 2005). Thus, populations that display both social and institutional trust are more likely to live in universal welfare states with extensive public services (for children and others in need) and more equal opportunities (e.g. through education and egalitarian labour market policies); in familistic welfare states, where there is reliance on the family as the provider of social services, a clientelist welfare system and a high degree of social and gender inequality, people tend to have low levels of social and institutional trust (*Bergh/Bjørnskov* 2011; *Delhey/Newton* 2005).

## 2.2 How may trust influence fertility?

The theoretical explanation of why trust would matter for fertility outcomes has touched on three main arguments. The *first* is that social trust increases the likelihood of using non-familial day care services, since greater social trust in general should also be correlated with trusting day care workers to take care of one's children (*Aassve et al.* 2016). This explanation is embedded in the wider framework of the gender revolution theory (*Esping-Andersen/Billari* 2015; *Goldscheider et al.* 2015), which claims that an easier combination of work and family life, of which outsourced child care is an important factor, is a prerequisite for realising positive fertility intentions and achieving higher fertility. In response to the rise in female

labour market participation, *Aassve et al.* (2016) argue that one of the main reasons why fertility rates have diverged in Western countries since approximately 1970 is that societies with a high level of social trust were better equipped for the need to outsource child-rearing in order that women may retain their employment and succeed in the workplace, despite motherhood. There is some empirical support for this at an individual as well as a country level (*de Ruijter/van der Lippe* 2009; *El-Attar* 2013).

The *second* argument sees social trust primarily as a coping mechanism that helps people deal with uncertainties (*Aassve et al.* 2021). This mechanism is linked to the "perceived uncertainty" or "imaginations of the future" literature that has emerged during the past decade to help make sense of persistently low and declining fertility rates (*Guetto et al.* 2023; *Matera et al.* 2023; *Vignoli et al.* 2022). This literature conceptualises uncertainty primarily in economic terms, related to issues of individuals' perceptions of employment security, income retention, and job scarcity. Uncertainty has indeed emerged as one of the most influential topics in recent literature on fertility (*Guetto et al.* 2023; *Matera et al.* 2023; *Vignoli et al.* 2022, 2020; *Neyer et al.* 2022). It can be conceptualised by objective measures of employment-related difficulties, or can be seen as an individual subjective perception. What is common is the notion that uncertainty makes people insecure about their own future. Given the long-term nature of child-rearing, it is obvious that (the feeling of) precariousness limits people's wish to commit to such a lasting task. Indeed, the lowest-low fertility in Southern and Eastern European countries is seen to be linked to the persistent economic difficulties in these countries (*Ahn/Mira* 2001; *Billingsley/Duntava* 2017; *Caltabiano et al.* 2017; *Tragaki/Bagavos* 2014). Especially in countries where there is little institutional support, the family often acts as one coping mechanism against uncertainty.

*Third*, *Aassve et al.* (2021) also see social trust as an indication of greater confidence in the wider community and its social networks, as a sign of greater social cohesion and civic engagement. This argument is more indirect in nature and related to the fact that higher levels of social trust are associated with a host of positive political and economic outcomes, all of which may enhance the feeling of individuals to be able to cope with uncertainties surrounding the future. This may be one reason why research finds higher fertility levels in those regions/countries in which social trust in the population is greater (*Aassve et al.* 2016, 2018, 2021).

*Fourth*, in modern societies, public institutions have resumed vital functions in protecting individuals against essential life-course risks by providing support to cope with uncertainties (e.g. unemployment, medical needs) (*Kumlin/Rothstein* 2005). Trust in institutions may thus be essential for fertility considerations, particularly in comprehensive, universal welfare states that provide extensive support for families and children. In Norway, it has been claimed that trust in public institutions helps young people to cope with uncertainty and avoid unrealised fertility outcomes (*Ellingsæter/Pedersen* 2016). Research has also found that social trust in institutions may vary depending on whether it concerns "selective institutions", i.e. institutions that either carry a stigma or with which any form of encounter may be perceived as stigmatising (e.g. the police or social services), or "universal institutions" with

which everyone interacts (e.g. medical services) (*Edlund* 2006; *Rothstein/Stolle* 2008). The association between institutional trust and fertility can therefore be expected to vary depending on whether trust concerns a selective or a universal institution. Trust in public institutions may also have become more important for fertility amid a growing perception of global uncertainties, such as climate change, war, and the prospects for future generations. This is true especially since the family or civil society has a limited ability to serve as a coping mechanism against such macro-level uncertainties (*Neyer et al.* 2022, 2024).

## 2.3 The Swedish context

This study focuses on Sweden, a universal welfare state with a gender-equal parental leave system, economic support for parents, and comprehensive public child care services. Within the Organisation for Economic Co-operation and Development (OECD), Sweden ranks among the leading countries when it comes to availability and use of day care (*OECD* 2023). In the latest round of the European Values Survey in 2017, Sweden had one of the highest results for both interpersonal as well as institutional trust (*Atlas of European Values* 2023), having also held top positions in all previous comparative trust studies (see, for example, *Delhey/Newton* 2005; *Lee* 2013). While it is true that trust in specific institutions (media, government, European Union) may be below 50 percent, it is still rather high relative to other countries. When it comes to objective economic uncertainty, Sweden is a nation of considerable economic success, as evidenced also by its experience in the Great Recession and its aftermath (*Comolli et al.* 2021). With respect to trust and economic performance, it should be noted that Sweden is clearly distinct from Italy, the country that has been the focus of most previous studies on the link between trust and fertility.

The recent decline in fertility in Sweden that began in the early 2010s was thus unexpected, and cannot be explained by persistent or newly occurring economic crises, cuts in family policies or welfare state support. Nor do previous or concurrent changes in the degree of social trust (at the national level) offer a satisfying explanation for the fertility decline, since yearly surveys do not reveal decreasing trust at the national level. This is the case for a variety of trust measures, both social and institutional (*Martinsson/Andersson* 2021). *Comolli* and *Andersson* (2021), however, find that there is a slightly negative relationship between aspects of declining trust, as reflected in rising votes for an anti-establishment party, and childbearing propensities, having factored in a host of individual and municipal-level variables.

## 2.4 Aims

The aim of this study is therefore to broaden the scope of the analysis on the link between trust and fertility considerations by focusing on fertility intentions. We do this in three ways, using new modules introduced in the Swedish GGS2021 (*Neyer et al.* 2024). First, we focus on universalistic, high-trust Sweden as a counter example to familistic, low-trust Italy. Second, we use survey items on trust in specific institutions,

in addition to the item of social (or interpersonal) trust as in the previous literature. Ultimately, the effect of social (interpersonal) trust in itself and as resilience against uncertainty may be channelled via the provision of better institutional support that provides protection against current and future insecurities.

Third, we also explore the mitigating role of trust on uncertainty. In other words, we ask if higher trust can moderate the negative effect of uncertainty on short-term fertility intentions. As well as considering employment-related uncertainty, a factor that concerns individuals directly, we also explore the role of wider national and global uncertainties in relation to trust and fertility considerations. The effects of such uncertainties (e.g. climate change) in relation to different aspects of trust may not be immediate, and do not only concern particular individuals specifically.

## 3 Data, variables and method

### 3.1 Data

The most recent Swedish GGS (GGS2021) and its sister projects in the other Nordic countries set out to test novel theoretical explanations of determinants of fertility in advanced post-industrial societies (*Andersson et al*. 2020; *Neyer et al*. 2022). The explicit understanding was that the fertility declines witnessed in the Nordic countries since the early 2010s could not be explained by prevailing explanations that emphasise economic aspects, gender issues or public policies. Fertility in the contemporary Nordic context was instead assumed to have become more influenced by subjective imaginations and perceived uncertainties surrounding national and global developments, rather than objective or structural conditions or changes in them.

To explore this assumption, the Swedish GGS2021 incorporated specific modules into its questionnaire. Those modules relevant for our study touch upon issues of both individual (economic) and wider (global) uncertainties, trust as resilience against economic uncertainty, and institutional trust. The newly added trust modules complement the module on social trust included in the baseline GGS questionnaire. The new modules of the Swedish GGS2021 have now been selected to be incorporated into the Generations and Gender Programme (GGP) baseline questionnaire for the second wave of the international GGS (*GGP* 2023; for a detailed description of the Swedish GGS2021 and the new modules, see *Neyer et al*. 2024).

The Swedish GGS was carried out in the spring and summer of 2021 as a web survey with an option to respond by post. At 27 percent, the response rate for the Swedish GGS was somewhat higher than the corresponding response rate in other countries (*Neyer et al*. 2024). Non-response was higher among the less educated, the young, men, and immigrants, as is usually the case. Statistics Sweden computed weights based on sex, age, country of birth, education and residence (*Löfgren* 2021). Despite the low response rate, the representativeness of the data is deemed good in terms of various fertility measures (*Antunes Leocádio et al*. 2023; *Neyer et al*. 2024).

### 3.2 Dependent variable

The GGS has two questions regarding respondents' childbearing intentions, as posed to persons of childbearing age (18-49) who (and/or whose partner) are able to conceive, are currently not pregnant or are trying to get pregnant. Participants were first asked whether they intend to have a(nother) child in the next three years, with four possible response options: definitely not, probably not, probably yes, definitely yes. Those who did not intend to have a(nother) child in the next three years were asked whether they intend to have any (more) children at all, again with four response options. We will use the intention to have a(nother) child in the next three years[1] as the main dependent variable, and also as a binary variable by collapsing the definitely and probably yes or no responses to the question on fertility intentions. With regard to the intention to have a(nother) child within a time limit that is unspecified, all analyses were repeated, using the question posed to those who did not intend to have a(nother) child in the next three years.

The differences in outcomes for our main variables of interest are very small. We will therefore not show the latter results, but comment briefly on them whenever deemed necessary (results available on request).

### 3.3 Measures of trust

The baseline GGS questionnaire includes two questions on social trust similar to the European/World Values Surveys. These questions are: 1) "Generally speaking, would you say that most people can be trusted, or that you need to be very careful in dealing with other people?", for which possible answers are "most people can be trusted" and "need to be very careful"; 2) "Do you think that most people would try to take advantage of you if they got a chance, or would they try to be honest and fair?", with possible answers being "would take advantage" and "would try to be honest and fair". Following previous research (*Aassve et al*. 2021, 2016) we will use the first survey item, which we refer to as interpersonal trust, in order to emphasise the difference to institutional trust. We also ran the analyses with the second survey item with very similar results.

Additionally, the Swedish GGS introduced a question on institutional trust: "How much confidence do you have in the way the following institutions and groups do their job?", with six institutions included (government, police, medical services, civil service, media, European Union). There are five answer categories available, ranging from "very high" to "very low". This item was taken from the University of Gothenburg's yearly SOM survey that focuses on a wide range of issues concerning Sweden (*Martinsson/Andersson* 2021). In our analysis, we use the variables for each institution separately, but also combine the answers to create an index. When using

[1] As mentioned, respondents who were currently trying to have a child were not asked the questions on intentions to have a(nother) child. In the analysis, we have included those who are trying to conceive under the group that intends to have a child in the next three years.

the variables for each institution separately, we collapse the outer categories to create a three-level scale (high trust, neither, low trust). When creating the index, we use the full information with the five-level scale and compute a continuous variable with values ranging from 6 (maximum trust) to 30 (minimum trust). The Cronbach α parameter for the institutional trust variables at 0.765 can be seen as a reliable outcome.

**Tab. 1:** Distribution of the used variables

| Trust variables | N | % | Dependent and other variables | N | % |
|---|---|---|---|---|---|
| *Interpersonal trust* | | | *Three-year fertility intention* | | |
| Careful | 429 | 25.2 | Yes | 739 | 43.4 |
| Trustful | 1274 | 74.8 | No | 964 | 56.6 |
| *Institutional trust index* | | | *Sex* | | |
| 6-13 | 514 | 30.2 | Male | 676 | 39.7 |
| 14-17 | 599 | 35.2 | Female | 1027 | 60.3 |
| 18-30 | 590 | 34.6 | | | |
| *Trust in government* | | | *Age* | | |
| High | 717 | 42.1 | 20-29 | 568 | 33.4 |
| Neither | 445 | 26.1 | 30-39 | 1135 | 66.6 |
| Low | 541 | 31.6 | | | |
| *Trust in police* | | | *N of children* | | |
| High | 1134 | 66.6 | 0 | 921 | 54.1 |
| Neither | 340 | 20.0 | 1 | 277 | 16.3 |
| Low | 229 | 13.4 | 2+ | 505 | 29.7 |
| *Trust in medical service* | | | *Global uncertainty index* | | |
| High | 1307 | 76.7 | Low | 645 | 39.0 |
| Neither | 231 | 13.6 | Medium | 571 | 34.5 |
| Low | 165 | 9.7 | High | 438 | 26.5 |
| *Trust in civil service* | | | *Likeliness of losing employment* | | |
| High | 785 | 46.1 | Unlikely | 1072 | 86.8 |
| Neither | 578 | 33.9 | Unsure | 115 | 9.3 |
| Low | 340 | 20.0 | Likely | 48 | 3.9 |
| *Trust in media* | | | *Likeliness of new similar employment* | | |
| High | 543 | 31.9 | Unlikely | 94 | 7.6 |
| Neither | 610 | 35.8 | Unsure | 197 | 16.0 |
| Low | 550 | 32.3 | Likely | 944 | 76.4 |
| *Trust in the European Union* | | | | | |
| High | 604 | 35.5 | | | |
| Neither | 739 | 43.4 | | | |
| Low | 360 | 21.1 | | | |

Note: For the uncertainty variables, there are additional NAs which have been excluded from the calculation of shares.

Source: Swedish GGS2021, authors' calculations

### 3.4 Other variables

When it comes to individual-specific employment uncertainty and resilience, the Swedish GGS2021 has two questions: 1) "How likely is it that you will lose your job in the next twelve months?"; and 2) "If you did lose your job, how likely do you think it is that you would find an equivalent job within twelve months?". The first question is included in the baseline GGS questionnaire while the second is not. Both questions have five possible answers, ranging from "very unlikely" to "very likely". For the analysis, we again collapse the outer categories to create three levels for these variables (unlikely, unsure, likely). Table 1 confirms that only a small minority of Swedish residents perceive job loss as a likely occurrence, although anxiety about finding a new one with similar characteristics is somewhat more widespread.

As mentioned, we also use a question relating to a range of issues that are not specific to the respondent's own life and conditions but are instead broader in focus, the aim being to capture global uncertainties. The question was phrased as follows: "Thinking about the future, how much does the following worry you?", and listed thirteen potential threats (terrorism, climate change, overpopulation, economic crises, increased number of refugees, high unemployment, organised crime, military conflicts, global epidemics, weakened democracy, increased social inequality, political extremism, prospects of coming generations). The items and answer categories (very worrying, somewhat worrying, not particularly worrying, not at all worrying) were once again taken from the SOM survey. Given the numerous threats, we combine these into an index with three levels noting high, medium and low (global) uncertainty following *Neyer et al.* (2022), who also provide uncertainty-specific analyses. The Cronbach α for the global uncertainties is 0.828.

We include three basic control variables in the models, namely sex, age (20-29, 30-39) and the number of children (0, 1, 2+). Given the exploratory nature of this analysis, we did not want to add more complexity to the models, preferring instead to focus on the basic relationships between trust, uncertainty and fertility intentions.

Table 1 shows the distribution for all variables. Somewhat more than half of the GGS2021 respondents do not intend to have a child in the next three years. As expected, interpersonal trust among the respondents is high, with 75 percent saying that others can be trusted. The distributions for the trust in specific institutions vary considerably, with trust in medical services being the highest at 76 percent, and trust in media the lowest at 32 percent. The strong Swedish economy and welfare state support in the event of unemployment are reflected in the answers about economic uncertainty and resilience. Most of the respondents (87 percent) do not expect to lose their job, and if so, the vast majority (75 percent) believe that they will find a similar one soon. Likewise, with 25 percent being highly worried, feelings of uncertainties about global developments are not very widespread. The distribution of the other variables is as expected from the survey outcome and/or population register (e.g. age distribution).

### 3.5 Method

We limit our analysis to partnered individuals aged 20-39 at the start of 2021, with both the respondent and the partner able to have children, albeit not expecting children at the time of the survey. We chose to concentrate on partnered individuals, because most births in Sweden are to cohabiting or married couples, and the decline in fertility since 2010 is concentrated among (childless) couples (*Ohlsson-Wijk/ Andersson* 2022; *Neyer et al.* 2022). We leave aside 85 individuals with no answers in one or more of the trust variables. The analysis set is not restricted based on the existing number of children. This leads to our study population including 1703 individuals. The number of cases is smaller if uncertainty is also included in the model. The largest decline in the number of cases (N=468) is with respect to individual employment uncertainty, since naturally, only those currently in employment were asked these questions. The exact number of observations can be seen for each model in Appendices 1-3.

For the modelling, we use binary logistic regression (*glm* function in *R*), and we model the intention of having a(nother) child without distinguishing between women and men of different parities. First, we concentrate on how different measures of trust, both interpersonal and institutional, are related to the intention to have a child in the next three years. Second, we measure how the link between uncertainty and fertility intention is moderated by trust. To measure uncertainty, we use the individual-specific questions regarding employment-related uncertainty, as well as the global uncertainty index. For this analysis, we only use the institutional trust index, and not specific items separately as in the main analysis.

For the purpose of easing interpretation and comparison, we present the results of our analysis in the form of plots that show predicted probabilities with 95 percent confidence intervals (*predict* function in *R*) derived from the regression models. In the interest of transparency, the regression tables themselves are given in Appendices 1-3.

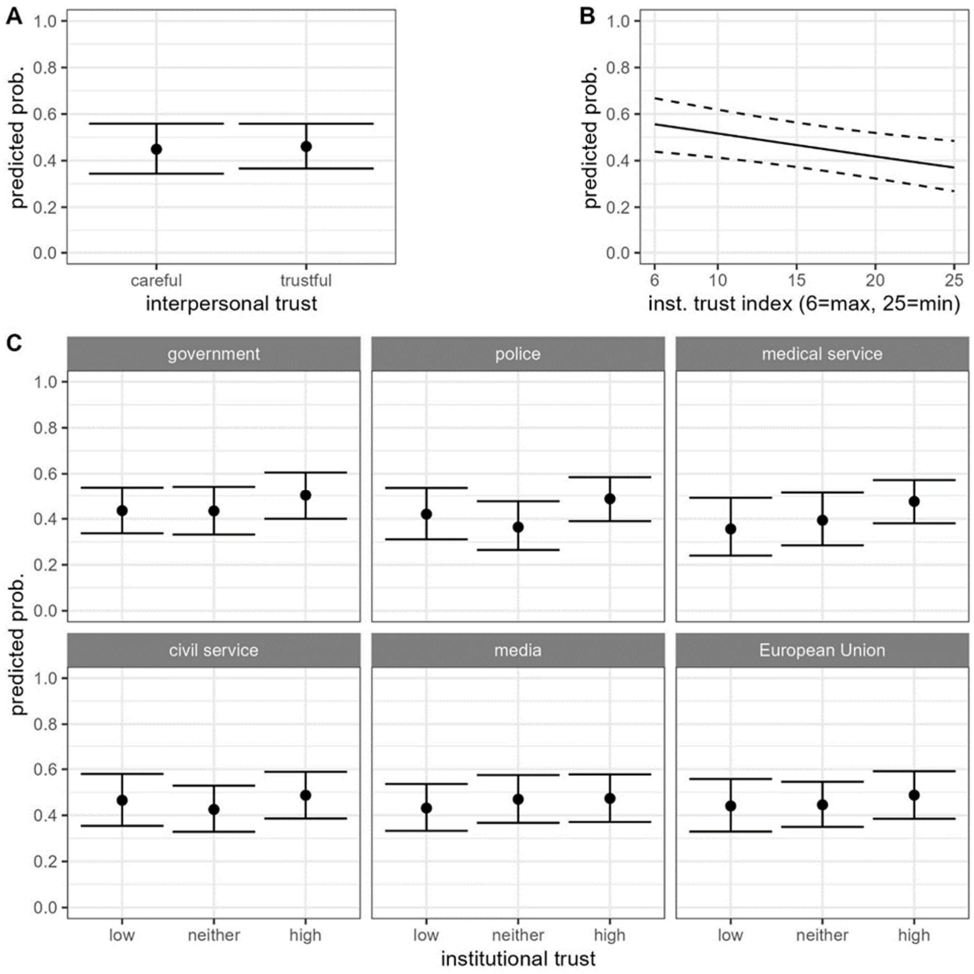
## 4 Results

### 4.1 The direct relationship of trust and fertility intentions

We begin the results section by focusing on the direct link between trust and the three-year fertility intention. This is plotted in Figure 1. On Panel A, the predicted probabilities for interpersonal trust show absolutely no difference in fertility intentions between trusting and untrusting individuals. This goes against previous results recorded for Italy and a cross-country analysis conducted for Europe, although one has to consider that these studies used macro-level and multilevel analysis with the fertility indicator showing actual births and not intended childbearing (*Aassve et al.* 2021, 2016).

On Panel B, we display the predicted probability for the institutional trust index. Its relationship to the dependent variable is statistically significant in the model

**Fig. 1:** Predicted probabilities of trust measured for positive three-year fertility intention




Notes: Predicted probabilities computed based on logistic regression models with 95% confidence intervals. All models control for sex, age and number of children. For prediction, the values for the control variables are set to women, aged 20–29, with one child.

Source: Swedish GGS2021, authors' calculations

(p=0.006). The index value of 6 shows the maximum level of institutional trust, while the value 30 shows the minimum level. People with a higher degree of institutional trust are more likely to profess a positive fertility intention. The difference between the maximum and the minimum ranges from 0.56 to 0.33, although these values are rare. The more adequate measure of the difference of one standard deviation around the mean (index value 16) is 0.04, which is a rather constrained size. The predicted probability on Panel B is computed from a model with only the linear term

for the institutional trust index. When adding a non-linear term (index$^2$) to it, the coefficient of the linear index is smaller, and also statistically insignificant (p=0.211).

On panel C, we present the predicted probabilities for trust in each of the six specific institutions. For two of these institutions (media and the European Union), the differences are statistically insignificant. Two others (police, civil service) have a U-shaped relationship between trust and fertility intentions. Such a relationship is difficult to explain on the basis of our theoretical arguments. Previous research, however, showed that trust in such institutions is related to encounters with them (*Rothstein/Stolle* 2008). Experiences with both of these institutions – or lack thereof – may be mirrored in our results, so that fertility intention is highest among the most (and least) trusting individuals. With respect to the police, the predicted probability difference between the high trust and middle trust group is sizeable (0.36 vs. 0.48). The predicted probability for those whose response was that they do not trust the government is on the same level as for those who gave "neither" as their answer; but those with trust in government have greater childbearing intentions. However, the differences between the point estimates are not particularly large (0.43 vs. 0.50).

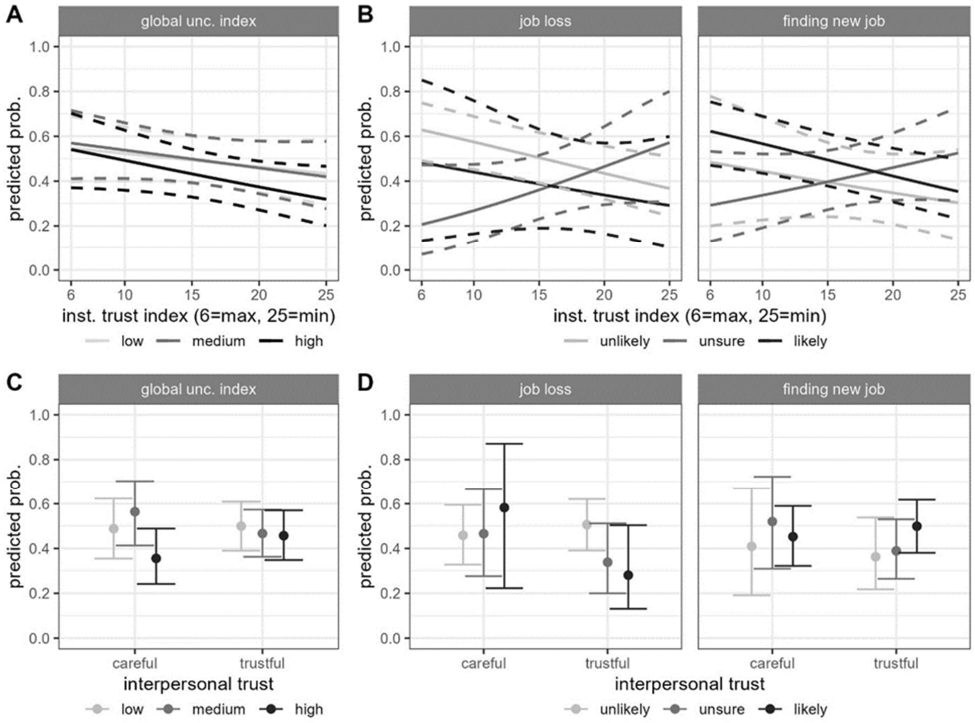
As far as trust in the medical service is concerned, the results show a linear and statistically significant pattern, with the predicted probabilities for the three groups being 0.36, 0.39 and 0.48. From Table 1, we can see that overall trust in the medical services is high, and those individuals who do not have a high degree of trust in the medical services are a rather select group. Given that childbirth is a medical procedure, the link to this institution is the most direct among the institutions listed in the questionnaire. An obvious hypothesis is that this relationship may be influenced by experiences during a previous birth. However, models that were run separately for childless individuals and parents (not shown here) do not support this hypothesis, showing almost identical results for the two groups.

As mentioned, we also ran identical models for the overall fertility intention (without a time constraint). The results (not shown here) are similar. The main difference is that the associations are smaller, as well as more frequently statistically insignificant. For instance, a standard deviation for the institutional trust index is 0.02 and not 0.04, as with the three-year intention. Additionally, the discrepancy in the predicted probabilities between high and low levels of trust in medical services is 0.07 rather than 0.12.

## 4.2 Trust as a coping mechanism against uncertainty

We also tested the extent to which we can detect interpersonal and/or institutional trust working as resilience factors in decreasing the effect of global or individual employment uncertainty on short-term fertility intentions. In a theoretical framework, a coping mechanism can be conceptualised as a moderator between two variables, as something that creates a heterogeneous treatment effect. This would mean that in our case, trust does not have any causal influence on uncertainty, but merely changes the impact of uncertainty on childbearing intentions. Moderators are included in the models as an interaction with the variable of interest. Figure 2 shows these results again as predicted probabilities.

**Fig. 2:** Predicted probabilities of trust and uncertainty interactions for positive three-year fertility intention




Notes: Predicted probabilities computed based on logistic regression models with 95% confidence intervals. All models control for sex, age and number of children. For prediction, the values for the control variables are set to women, aged 20-29, with one child. The global uncertainty index (Panels A and C) is computed as an index and categorised into three groups (low, medium, high global uncertainty). The labour market uncertainty variables (Panel B and D) are derived from two questions on whether the person thinks that losing their job and finding a new similar job is likely, unlikely or they are unsure.

Source: Swedish GGS2021, authors' calculations

If we interact global uncertainties and institutional trust (Panel A), we find decreasing predicted probabilities of positive childbearing intentions for those with lower levels of institutional trust. This is particularly the case for those with high levels of global uncertainty, as can be expected from the theoretical discussion. However, the confidence intervals around the estimates are wide.

The results are more mixed for individual-specific employment uncertainty and institutional trust (Panel B). Institutional trust affects only the two extremes (likely and unlikely), as expected by theoretical assumptions. Those who think it unlikely and those who think it likely that they will either lose their job or find a new one soon are more inclined to consider having a child in the next three years if they have a high degree of trust in institutions. This is not the case for those who answered "unsure"

to the question of their employment security or future employment options. Those with greater institutional trust show lower fertility intentions. Again, the confidence intervals are wide and the results need to be interpreted with the uneven distribution of individual-specific employment expectations in mind (Table 1).

Similar to institutional trust and in contrast to theoretical propositions, we also find no significant sign of moderation for interpersonal trust (Panel C). Among people who are very worried about global developments, those that are socially trusting do have marginally higher short-term fertility intentions than those who feel the need to be careful. However, we find the opposite relationship is true for those who are somewhat (medium) worried about the global situation.

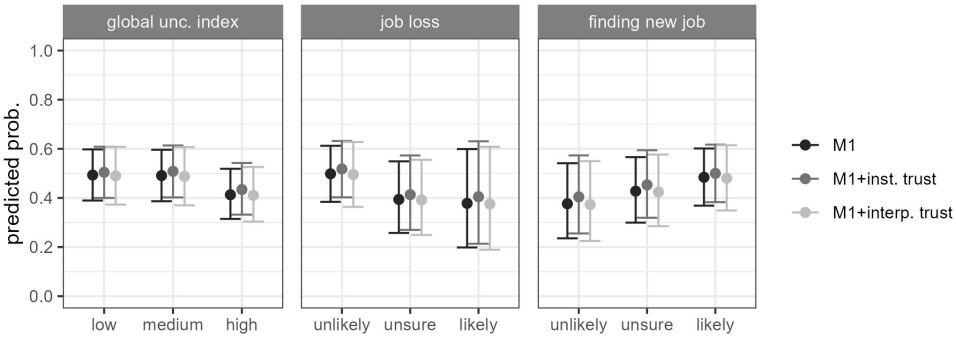
For employment-related uncertainty, the results are even messier (Panel D). Higher trust in others is associated with higher intentions to have a child in the next three years only for those with no employment worries, i.e. those who do not fear losing their job or are very confident of finding a similar one in the event of becoming unemployed. For those who are more anxious about their job security and employment prospects, greater interpersonal trust is associated with a lower childbearing intention. Given the small numbers here and the resulting high uncertainty, this outcome cannot be taken at face value. However, what is clear is that the empirical results go some way to supporting the existence of a moderating effect of trust only when it comes to global uncertainty.

Our interaction results may also be due to methodological issues. As mentioned above, a coping mechanism is conceptually a moderator that has no direct effect on the variable of interest (uncertainty, in our case). However, we use cross-sectional survey data, and can assume that in reality, trust would have an influence directly on the answers that people give concerning various uncertainty issues. This would mean that trust may also function as a confounder, and thus not including it would result in bias. Hence, we tested the degree to which the inclusion of trust measures influences the relationship between uncertainty and short-term childbearing intentions.

Figure 3 depicts the results of the regression models once again as predicted probabilities. We again model each uncertainty measure separately, and repeat this process for all three models. It is evident that both the global uncertainty index as well as the individual-specific employment uncertainties are to some extent related to the three-year fertility intention, although the size of the relationship is relatively constrained (0.1 between the extreme values). The inclusion of the two trust measures one by one as control variables, however, has no impact on the association of uncertainty and short-term fertility intention. This is true for all three uncertainty measures.

Similar models and calculations were also prepared using the overall childbearing intention without a time limit as the dependent variable (results available on request). The conclusions based on these models do not differ from those presented here.

**Fig. 3:** Predicted probabilities of uncertainty measures with the inclusion of trust variables for positive three-year fertility intention




Note: Predicted probabilities computed based on logistic regression models with 95% confidence intervals. M1 controls for sex, age, and number of children. For prediction, the values for the control variables are set to women, aged 20-29, with one child.

Source: Swedish GGS2021, authors' calculations

## 5 Conclusion and discussion

This study focused on the influence of interpersonal and institutional trust on three-year fertility intentions. It is a vital addition to a small body of literature that has concentrated on the intersection of the interpersonal trust and fertility outcome in Italy and in a country comparison (*Aassve et al.* 2021, 2018, 2016). This previous work focused on interpersonal (generalised social) trust, and put forward three reasons why trust would matter for fertility. First, trust enables parents of young children to use non-familial child care services since interpersonal trust would also be translated into specific trust in service providers. Second, trust functions as a coping mechanism that helps people to come to terms with uncertainty regarding their future, and thus would also benefit the long-term project of child-rearing. Third, there is an indirect effect given that social trust is correlated with (and possibly causally related to) better social and economic outcomes.

Our study focused on Sweden, which is commonly found to be a high-trust country with a universal welfare state that provides extensive individual and institutional support both to parents and to children. In this regard, it represents a counter example to familistic and low-trust country of Italy that was the focus of previous studies on trust and fertility. We were able to make use of novel questions included in the Swedish Generations and Gender Study aimed at finding new possible explanations for fertility behaviours in high-income societies. These questions related to institutional trust and global uncertainties. This is the first study relating to fertility intentions that examines the possibilities of including more broad-based concepts of trust. Crucially, we were able to consider the role of institutional trust and not only interpersonal trust. The former can be important given the theoretical arguments with respect to fertility, especially in universal welfare states with

comprehensive social protection and extensive family support and child care offers. We concentrated on the general relationship of interpersonal and institutional trust on the one hand and fertility intentions on the other, as well as their interlinkage with economic and global uncertainties.

The results of the analysis highlight the need to consider broader concepts of trust in order to understand its relevance for fertility. First, we find no statistical relationship between interpersonal trust on fertility intentions, neither on short-term intentions (as displayed in this paper), nor on long-term intentions (results upon request). Second, for the institutional trust index that uses information on the level of trust in six specific institutions (government, police, medical services, civil service, media, European Union), we do see a theoretically expected relationship, but it is comparatively small. For specific institutions, we find the strongest association for trust in medical services. Since women in Sweden generally give birth in hospitals, we would expect a direct association between trust in medical services and fertility intentions. The universality of medical services and the high trust of our respondents in it may further explain our findings.

We find little evidence that either institutional or interpersonal trust functions as a coping mechanism that decreases the negative effect of uncertainty on fertility intentions. We do find that both institutional and interpersonal trust are weakly associated with lower global uncertainties. For employment uncertainty at the respondent-specific level, such resilience cannot be found. However, given the well-functioning Swedish labour market and the country's active labour market policies, the share of people who expressed at least some concern about losing their current job is small, and trust that they will find a new, similar job if needed is high. Since interaction models demand a much higher statistical power, problems with detecting these relationships are thus to be expected.

This study has some limitations. First, it is exploratory and uses simple models to look at basic relationships. Second, it is based on cross-sectional data, which severely limits the interpretation of relationships as causal, and requires the focus to be on fertility intentions rather than fertility outcomes. With a register-based follow-up, one could in future analyse the relationship between trust and actual childbearing behaviour during the period following the survey. Third, the study is based on just one country, because some survey items were only available in the Swedish GGS. We hope that with the coming survey waves, similar information from a greater number of countries will be available. Fourth, the GGS was carried out in late spring of the second year of the COVID-19 pandemic. This period was related to the onset of further fertility postponement (*Bujard/Andersson* 2024) and may not reflect the situation that is seen during more normal circumstances. However, no trend breaks in measurements of trust have been observed in other survey data collected in Sweden (*Martinsson/Andersson* 2021).

How do we interpret the results of our study? To some extent, the lack of significant associations may be due to Sweden being an economically stable country characterised by high levels of trust and its all-encompassing, universal, and well-established welfare state. Swedish women and men may take institutional support for child-rearing for granted, and do the same for reintegration into the labour

market in the event of unemployment. Unlike in research on Italy, we find no direct link between interpersonal trust and fertility. This could be explained by the fact that Italy is a context where people have to rely on the support of other family members to a large extent, whereas in Sweden people can rely more readily on institutional support offered by the welfare state. The differences we find between the associations of interpersonal and institutional trust on fertility underline that the impact of trust on fertility is not universal, but depends on the country context. In another European or advanced post-industrial country, the results could be substantially different, as one would expect from previous research on Italy (*Aassve et al.* 2021), or from our research on Sweden. It also highlights the need to consider different dimensions of trust when studying the role of trust in fertility considerations.

**Acknowledgements**
We would like to thank the following for their financial support: the Swedish Research Council for Health, Working Life and Welfare (FORTE), grant number 2020-00639, and the Riksbankens Jubileumsfond for project P20-0517.

## References

*Aassve, Arnstein et al.* 2018: Trustlab Italy: A New Dataset for the Study of Trust, Family Demography and Personality. Working Papers No. 115. Milan: Centre for Research on Social Dynamics and Public Policy (Dondena).

*Aassve, Arnstein; Billari, Francesco C.; Pessin, Léa* 2016: Trust and Fertility Dynamics. In: Social Forces 95,2: 663-692. https://doi.org/10.1093/sf/sow080

*Aassve, Arnstein; Le Moglie, Marco; Mencarini, Letizia* 2021: Trust and Fertility in Uncertain Times. In: Population Studies 75,1: 19-36. https://doi.org/10.1080/00324728.2020.1742927

*Ahn, Namkee; Mira, Pedro* 2001: Job Bust, Baby Bust?: Evidence from Spain. In: Journal of Population Economics 14,3: 505-521. https://doi.org/10.1007/s001480100093

*Andersson, Gunnar; Dahlberg, Johan; Neyer, Gerda* 2020: New Sub-Module on Uncertainties and Resilience in the Swedish GGS2020. Technical working paper. The Hague: Netherlands Interdisciplinary Demographic Institute.

*Antunes Leocádio, Victor et al.* 2023: The Quality of Fertility Data in the Web-Based Generations and Gender Survey. In: Demographic Research 49: 31-46. https://doi.org/10.4054/DemRes.2023.49.3

*Atlas of European Values* 2023: [https://www.atlasofeuropeanvalues.eu/maptool.html, 01.05.2024].

*Beck, Ulrich* 1992: Risk Society: Towards a New Modernity. 1st edition. London: SAGE Publications Ltd.

*Bergh, Andreas; Bjørnskov, Christian* 2011: Historical Trust Levels Predict the Current Size of the Welfare State. In: Kyklos 64,1: 1-19. https://doi.org/10.1111/j.1467-6435.2010.00492.x

*Billingsley, Sunnee; Duntava, Aija* 2017: Putting the Pieces Together: 40 Years of Fertility Trends across 19 Post-Socialist Countries. In: Post-Soviet Affairs 33,5: 389-410. https://doi.org/10.1080/1060586X.2017.1293393

*Bjørnskov, Christian* 2007: Determinants of Generalized Trust: A Cross-Country Comparison. In: Public Choice 130,1: 1-21. https://doi.org/10.1007/s11127-006-9069-1

*Bujard, Martin; Andersson, Gunnar* 2024: Fertility Declines Near the End of the COVID-19 Pandemic: Evidence of the 2022 Birth Declines in Germany and Sweden. In: European Journal of Population 40. https://doi.org/10.1007/s10680-023-09689-w

*Caltabiano, Marcantonio; Comolli, Chiara Ludovica; Rosina, Alessandro* 2017: The Effect of the Great Recession on Permanent Childlessness in Italy. In: Demographic Research 37: 635-668. https://doi.org/10.4054/DemRes.2017.37.20

*Cohn, Alain et al.* 2019: Civic Honesty around the Globe. In: Science 365,6448: 70-73. https://doi.org/10.1126/science.aau8712

*Comolli, Chiara; Andersson, Gunnar* 2021: Partisan Fertility in the Aftermath of the Great Recession. In: Stockholm Research Reports in Demography 2021,25. https://doi.org/10.17045/sthlmuni.16587173.v1

*Comolli, C.L. et al.* 2021: Beyond the Economic Gaze: Childbearing During and After Recessions in the Nordic Countries. In: European Journal of Population 37: 473-520. https://doi.org/10.1007/s10680-020-09570-0

*de Ruijter, Esther; van der Lippe, Tanja* 2009: Getting Outside Help: How Trust Problems Explain Household Differences in Domestic Outsourcing in the Netherlands. In: Journal of Family Issues 30,1: 3-27. https://doi.org/10.1177/0192513X08324579

*Delhey, Jan; Newton, Kenneth* 2005: Predicting Cross-National Levels of Social Trust: Global Pattern or Nordic Exceptionalism? In: European Sociological Review 21,4: 311-327. https://doi.org/10.1093/esr/jci022

*Edlund, Jonas* 2006: Trust in the Capability of the Welfare State and General Welfare State Support: Sweden 1997-2002. In: Acta Sociologica 49,4: 395-417. https://doi.org/10.1177/0001699306071681

*El-Attar, Mayssun* 2013: Trust, Child Care Technology Choice and Female Labor Force Participation. In: Review of Economics of the Household 11,4: 507-544. https://doi.org/10.1007/s11150-013-9202-0

*Ellingsæter, Anne Lise; Pedersen, Eirin* 2016: Institutional Trust: Family Policy and Fertility in Norway. In: Social Politics: International Studies in Gender, State & Society 23,1: 119-141. https://doi.org/10.1093/sp/jxv003

*Esping-Andersen, Gøsta; Billari, Francesco C.* 2015: Re-Theorizing Family Demographics. In: Population and Development Review 41,1: 1-31. https://doi.org/10.1111/j.1728-4457.2015.00024.x

*GGP* 2023: Call for survey questions for the follow-up (wave 2) questionnaire [https://www.ggp-i.org/call-for-survey-questions-for-the-follow-up-wave-2-questionnaire/, 01.05.2024].

*Goldscheider, Frances; Bernhardt, Eva; Lappegård, Trude* 2015: The Gender Revolution: A Framework for Understanding Changing Family and Demographic Behavior. In: Population and Development Review 41,2: 207-239. https://doi.org/10.1111/j.1728-4457.2015.00045.x

*Guetto, Raffaele et al.* 2023: Fertility and Media Narratives of the Economy: Evidence From Italian News Coverage. In: Demography 60,2: 607-630. https://doi.org/10.1215/00703370-10607928

*Kumlin, Staffan; Rothstein, Bo* 2005: Making and Breaking Social Capital: The Impact of Welfare-State Institutions. In: Comparative Political Studies 38,4: 339-365. https://doi.org/10.1177/0010414004273203

*Lee, Cheol-Sung* 2013: Welfare States and Social Trust. In: Comparative Political Studies 46,5: 603-630. https://doi.org/10.1177/0010414012463878

*Löfgren, Johan* 2021: Logistisk regressioon av bortfall: GGS2021. Solna: Statistika Centralbyran.

*Martinsson, Johan; Andersson, Ulrika* 2021: Swedish Trends 1986-2021. Gothenburg: University of Gothenburg.

*Matera, Camilla et al.* 2023: Perceived Economic Uncertainty and Fertility Intentions in Couples: A Dyadic Extension of the Theory of Planned Behaviour. In: Journal of Family and Economic Issues 44: 790-806. https://doi.org/10.1007/s10834-022-09872-x

*Neyer, Gerda et al.* 2022: Fertility Decline, Fertility Reversal and Changing Childbearing Considerations in Sweden: A Turn to Subjective Imaginations? In: Stockholm Research Reports in Demography 2022,08. https://doi.org/10.17045/sthlmuni.19698442.v2

*Neyer, Gerda; Andersson, Gunnar; Dahlberg, Johan* 2024: The Swedish Generations and Gender Survey 2021. Forerunner of new modules for the Generations and Gender Programme. In: Finnish Yearbook of Population Research 57: 145-164. https://doi.org/10.23979/fypr.137453

*OECD* 2023: Enrolment in childcare and pre-school [https://www.oecd.org/els/soc/PF3_2_Enrolment_childcare_preschool.pdf, 01.05.2024].

*Ohlsson-Wijk, Sofi; Andersson, Gunnar* 2022: Disentangling the Swedish Fertility Decline of the 2010s. In: Demographic Research 47: 345-358. https://doi.org/10.4054/DemRes.2022.47.12

*Rothstein, Bo; Uslaner, Eric M.* 2005: All for One: Equality, Corruption, and Social Trust. In: World Politics 58,1: 41-72. https://doi.org/10.1353/wp.2006.0022

*Rothstein, Bo; Eek, Daniel* 2009: Political Corruption and Social Trust: An Experimental Approach. In: Rationality and Society 21,1: 81-112. https://doi.org/10.1177/1043463108099349

*Rothstein, Bo; Stolle, Dietlind* 2008: The State and Social Capital: An Institutional Theory of Generalized Trust In: Comparative Politics 40,4: 441-459.

*Schilke, Oliver; Reimann, Martin; Cook, Karen S.* 2021: Trust in Social Relations. In: Annual Review of Sociology 47: 239-259. https://doi.org/10.1146/annurev-soc-082120-082850

*Tragaki, Alexandra; Bagavos, Christos* 2014: Male Fertility in Greece: Trends and Differentials by Education Level and Employment Status. In: Demographic Research 31,6: 137-160. https://doi.org/10.4054/DemRes.2014.31.6

*Vignoli, Daniele et al.* 2022: Narratives of the Future Affect Fertility: Evidence from a Laboratory Experiment. In: European Journal of Population 38,1: 93-124. https://doi.org/10.1007/s10680-021-09602-3

*Vignoli, Daniele et al.* 2020: Uncertainty and Narratives of the Future: A Theoretical Framework for Contemporary Fertility. In: *Schoen, Robert* (Ed.): Analyzing Contemporary Fertility. The Springer Series on Demographic Methods and Population Analysis. Cham: Springer International Publishing: 25-47. https://doi.org/10.1007/978-3-030-48519-1_3

*Date of submission: 04.01.2024* *Date of acceptance: 15.07.2024*

Mark Gortfelder (✉). Stockholm University, Demography Unit (SUDA). Stockholm, Sweden. Tallinn University, Estonian Institute for Population Research. Tallinn, Estonia.
E-mail: mark.gortfelder@sociology.su.se; mark.gortfelder@tlu.ee
URL: https://www.su.se/english/profiles/mago6392-1.625702
https://www.tlu.ee/en/node/108862

Prof. Dr. Gerda Neyer, Prof. Dr. Gunnar Andersson. Stockholm University, Demography Unit (SUDA). Stockholm, Sweden.
E-mail: gerda.neyer@sociology.su.se; gunnar.andersson@sociology.su.se
URL: https://www.su.se/english/profiles/gneye-1.186882
https://www.su.se/english/profiles/gande-1.184639

**Comparative Population Studies**

*www.comparativepopulationstudies.de*

ISSN: 1869-8980 (Print) – 1869-8999 (Internet)

**Published by**
Federal Institute for Population Research (BiB)
65180 Wiesbaden / Germany

**Managing Publisher**
Dr. Nikola Sander

CC BY-SA 2024

**Editor**
Prof. Dr. Roland Rau
Prof. Dr. Heike Trappe

**Managing Editor**
Dr. Katrin Schiefer

**Editorial Assistant**
Beatriz Feiler-Fuchs
Wiebke Hamann

**Layout**
Beatriz Feiler-Fuchs

E-mail: cpos@bib.bund.de

**Scientific Advisory Board**
Kieron Barclay (Stockholm)
Karsten Hank (Cologne)
Ridhi Kashyap (Oxford)
Natalie Nitsche (Canberra)
Alyson van Raalte (Rostock)
Pia S. Schober (Tübingen)
Rainer Wehrhahn (Kiel)

**Board of Reviewers**
Bruno Arpino (Barcelona)
Laura Bernardi (Lausanne)
Gabriele Doblhammer (Rostock)
Anette Eva Fasang (Berlin)
Michael Feldhaus (Oldenburg)
Alexia Fürnkranz-Prskawetz (Vienna)
Birgit Glorius (Chemnitz)
Fanny Janssen (Groningen)
Frank Kalter (Mannheim)
Stefanie Kley (Hamburg)
Bernhard Köppen (Koblenz)
Anne-Kristin Kuhnt (Rostock)
Hill Kulu (St Andrews)
Nadja Milewski (Wiesbaden)
Thorsten Schneider (Leipzig)
Tomas Sobotka (Vienna)
Jeroen J. A. Spijker (Barcelona)
Helga de Valk (The Hague)
Sergi Vidal (Barcelona)
Michael Wagner (Cologne)