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Trust and fertility intentions in high-trust Sweden:

An exploratory analysis

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Abstract

Trust has recently received some attention in the demographic literature as one potential factor for fertility in post-industrial societies. The relevance of trust has been argued for in three ways. First, greater social trust is related to greater willingness of parents of young children to use daycare service. Second, trust acts as a resilience mechanism against different uncertainties and hence couples are less stressed about how uncertainties affect their ability of childrearing. Third, trust is related to a host of positive political and economic outcomes that all enable childbearing. So far studies have used macro-level or multilevel frameworks and a measure of social trust that is trustworthiness of fellow members of society. We use two novel modules of the Swedish Generations and Gender Survey 2021 to study this relationship. First, analyse the effect of interpersonal and institutional trust measures on individuals' fertility intentions. Second, we additionally inquire whether either interpersonal or institutional trust acts as a resilience mechanism against various individual but also global uncertainties. The results do not show trust to be an important factor behind fertility intentions in Sweden. This may be due to our focus on a high-trust economically successful welfare state with inclusive labour market and family services.

Keywords: Trust, institutional trust, uncertainty, fertility intentions, Sweden

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Introduction

In the social sciences there exists a large literature on trust and how it is correlated with a host 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 recent articles (Aassve et al. 2021, 2018, 2016) have focused on the possible impact of social trust on fertility. These papers have studied this link in a cross-country or a single-country setting – for the latter the spotlight has been on Italy, which can be termed a low-trust country in a European comparison. These studies found trust to be positively associated with fertility. With respect to Sweden, a focus of this present article, there exists a study that uses municipal-level change in the vote share for an anti-establishment political party as a proxy for the (decrease of) social trust and links it with municipal-level fertility rates (Comolli/Andersson 2021).

The theoretical explanation of why trust would matter for fertility has touched on two main arguments. The first one is that social trust, commonly also termed generalised (social) trust and defined as trust in other fellow humans, increases the likelihood of using non-familial daycare services since greater social trust in general should also be correlated with trusting daycare workers in particular 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 childcare is an important factor, is a prerequisite for achieving higher fertility.

The second argument sees social trust primarily as a coping mechanism that helps people to deal with uncertainty (Aassve et al. 2021). This mechanism is linked with the 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. 2022; Vignoli et al. 2022). This literature conceptualises uncertainty primarily in an economic sense related to issues of unemployment, underemployment, low wages, and job scarcity. However, recently the meaning of uncertainty has been broadened to include wider (global) uncertainties such as climate change or war. This development has happened especially with respect to economically successful countries such as Sweden, where the recent fertility decline could not readily be linked to economic troubles (Neyer et al. 2023).

This article contributes to the small literature on the link between trust and fertility in two main ways. First, the study focuses on Sweden, which, in a European and world comparison, is a high-trust, gender- and socially equal, economically thriving society with good and universal childcare services for children of all ages. Second, we use two novel modules of the recent Swedish Generations and Gender Survey (GGS2021) in order to not only measure generalised (interpersonal) trust but also trust in various institutions as well as both individual employment-related and global uncertainties (Neyer et al. 2023). By adding institutional trust and individual-economic as well as global uncertainties we considerably expand previous research perspectives on trust and on the links between trust and fertility. For, institutional trust may play a role in couples' childbearing considerations especially in countries with encompassing welfare-state systems and/or good childcare coverage. The use of institutional trust measures ought to be also relevant with respect to seeing trust as a coping mechanism against different forms of uncertainty. Furthermore, we consider it important to include global uncertainties in a trust-fertility study, given the context of a globalised world and of increasing global risks (Beck 1992).

Background

Generalised social trust can be conceptualised as interpersonal trustworthiness. It is social in the sense that it is not limited to the family or kin. It is based on the assumption that an individual's own honest and fair behaviour towards others is reciprocated and that this behaviour includes others that one does not know or has previous personal connections to. Societies widely vary in the level of generalised social trust as it is measured most frequently and relevantly by World/European Values Surveys (Athas of European Valeus 2023; Bjørnskov 2007). It is also relevant to note that during the last decades for which we have such data we do not see a convergence occurring in this respect. Indeed, many of the explanations emphasise deep historical roots for these cross-country differences. The country rankings in such surveys closely correlate with the cross-country differences in various trust games/experiments, such as returning found wallets or bribing (Cohn et al. 2019; Rothstein/Eek 2009). Hence, trust is something real and behavioural. Such social solidarity 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).

Naturally it is of high importance for parents that the people that look after their young children can be trusted. Hence, the argumentation presented by Aassve et al (2016) why fertility rates have diverged in Western countries since circa 1970 with female labour market participation becoming the norm everywhere is appealing. High trust societies were better equipped for the need to outsource childrearing in order for women to retain their employment and succeed at the workplace, despite motherhood. There is some empirical support for this at an individual as well as country level (de Ruijter/van der Lippe 2009; El-Attar 2013).

Uncertainty has emerged as one of the most influential topics in the recent fertility literature (Guetto et al. 2023; Matera et al. 2022; Vignoli et al. 2022, 2020). Uncertainty can be conceptualised by objective measures of employment related difficulties (employment status, type of contract, public/private sector) 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 childrearing it is obvious that (the feeling of) precariousness limits the wish of people to commit to such a lasting task. Indeed lowest-low fertility in southern and eastern European countries is seen to be related mostly to the economic difficulties in these countries (Ahn/Mira 2001; Billingsley/Duntava 2017; Caltabiano et al. 2017; Tragaki/Bagavos 2014). The family can act as one of the coping mechanisms against uncertainty. However, given the nature of modern societies the ability of families to do so is constrained. The society through welfare-state services and support can act as the main buffer (Kumlin/Rothstein 2005).

Ellingsæter/Pedersen (2016) also regard trust as pertinent to cope with uncertainties and to avoid low fertility. Their focus is on institutional trust, that is, people's trust in the state's capacity to provide conditions that reduce risks and uncertainties. Thus, while generalised social trust is related to individuals' trust in fellow citizens, institutional trust refers to individuals' reliance on (public) institutions. The two forms of trust are often found to be interrelated and assumed to create different types of welfare states (Ellingsæter/Pedersen 2016; Rothstein/Uslaner 2005). Both socially and institutionally trusting populations are more likely to create and be living in universal welfare states with encompassing public services (for children and others in need) and more equal opportunities (e.g. through education and egalitarian labour market policies (Bergh/Bjørnskov 2011; Delhey/Newton 2005).

For Aassve et al (2021) generalised social trust is an indication of greater confidence in the wider community (social network) and thus also greater social cohesion and civic engagement.

Thus, their argument is rather indirect and related to the fact that higher social trust is related to a host of positive political and economic outcomes, which all may enhance the feeling of individuals to be able to cope with uncertainties of the future. This may be a reason why research finds higher fertility levels in regions/countries with higher social trust in the population (Aassve et al. 2016, 2018, 2020).

This study focuses on Sweden, a universal welfare state with a gender-equal parental leave system, economic support of parents, and comprehensive public childcare services for children of all ages. Within the 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 social trust (Atlas of European Values 2023), and it had held top positions in all previous comparative trust studies (see, e.g., Delhey/Newton 2005; Lee 2013). 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. 2020)

The recent Swedish fertility decline starting in the early 2010s has thus come unexpected and cannot be explained by persistent or newly occurring economic crises, cut-backs in family policies, welfare-state support or decline in the availability and use of day care. 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 state level, and this holds for a variety of trust measures, both social as well as institutional (Martinsson/Andersson 2021). Comolli and Andersson (2021), however, find that increasing uncertainty and declining generalised trust, reflected in rising votes for an anti-establishment party, have a negative impact on women's childbearing propensity, net of a host of individual and municipal-level variables.

The aim of this paper is therefore to broaden the scope of the analysis on the link between trust and fertility. We do this in two ways using new modules introduced in the Swedish GGS2021. First, we do not only use the question of social (or interpersonal) trust as the previous literature but also questions on trust in specific institutions. This is theoretically more adequate, in particular in the case of a universal welfare state like Sweden. Ultimately the effect of social (interpersonal) trust in itself and as resilience against uncertainty may be indirect via better institutional support that provide higher economic well-being, higher-quality services and comprehensive social and economic coverage against current and future insecurities. Second, we do not only limit the analysis to employment-related uncertainty that concerns individuals directly, but we also explore wider national and global uncertainties. The effects of such uncertainties (e.g. climate change) may not be immediate and does not only concern particular individuals specifically. Here as well the questions on institutional trust ought to be more relevant than simply trust in other individuals, since institutions as collectives rather than individuals have to come up with solutions or at least mitigation measures.

Data, variables and method

The most recent Swedish GGS (GGS2021) and its sister projects in other Nordics set out to test novel theoretical explanations of determinants of fertility in advanced post-industrial societies (Andersson et al. 2020; Neyer et al. 2023). The explicit understanding was that the sudden fertility declines in the Nordic countries since 2010 could not be explained by prevailing explanations that either emphasise economic aspects, gender issues or policies. Fertility in the contemporary Nordic context was instead assumed to have become more influenced by subjective imaginations and understanding of the world, rather than objective or structural conditions (or changes in them). To explore this assumption the Swedish GGS2021

incorporated specific modules into its questionnaire. This was possible because the Swedish GGS2021 is a register-linked survey. Many questions of the GGP baseline questionnaire that concerned a respondent's life course could be dropped because the information could be retrieved from the Swedish population register (e.g. birthdates of children, questions on income). The new modules introduced in the Swedish GGS2021 touch upon issues of both individual (economic) and wider (global) uncertainties, institutional trust, as well as parenting norms. These modules have now been selected to be included in the 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. 2023).

The baseline GGS questionnaire includes two questions on social trust similar to 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?" and 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?". Following previous research (Aassve et al. 2021, 2016) we will use the first and to emphasise the difference to institutional trust we shall call it interpersonal trust. We also ran the analyses with the second question and the results do not differ. Table 1 shows that Sweden is a country of high interpersonal trust with three quarters of the analysis set believing that most people can be trusted.

Additionally, the Swedish GGS asks about institutional trust: "How much confidence do you have in the way the following institutions and groups do their job?" with six institutions inquired about (government, police, medical services, civil service, media, European Union). There are five answer categories available ranging from "very high" to "very low". This item is taken from the University of Gothenburg's yearly SOM survey that focuses on a wide range of issues concerning Sweden (Martinsson/Andersson 2021). In this analysis we use the variables separately for each institution but also combine the answers to create an index. If we are using the variables for each institution separately, we are collapsing the outer categories together to create a three-level category (high trust, neither, low trust). When creating the index, we use the full information given with the five-scale and compute a continuous variable with values ranging from 6 (maximum trust) to 30 (minimum trust). It should be said that the value of Cronbach α parameter for institutional trust variables is 0.765 which can be seen as a reliable result. The distributions for the trust in specific institutions varies considerably as can be seen from Table 1 with trust in medical services being the highest at 76% and trust in media the lowest at 32%.

When it comes to subjective uncertainty the Swedish GGS2021 has two questions on perceived individual employment uncertainty: 1) "How likely is it that you will lose your job in the next twelve months?", 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 questionnaire while the second is additional. Both questions have five answer options 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 again 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 make use of a question on a range of issues that are not specified to be about the respondent's own life and condition but have a broader if not global focus – we shall term these global uncertainties. The question was phrased as: "Thinking about the future, how much does the following worry you?" and asked about 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 taken again from the SOM survey. Given the numerous threats we combine these into an index with three categories 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. Table 1 also includes the distribution for the global uncertainty index.

Table 1. Distribution of the variables used.

Trust variables	N	%	Other variables	N	%
Interpersonal trust			Three-year fertility intention		
Trustful	429	25.2	Yes	739	43.4
Careful	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
		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 NA-s which have been excluded from the calculation of shares.

We will use the intention to have (the next) child in three years ¹ as the main dependent variable, which we shall use as a binary variable by collapsing definitely and probably yes or no together. We can see that the distribution for the dependent variable is almost fifty-fifty. All analysis was also done with the overall intention. ² The differences are very small. We will therefore not show the results, but will comment briefly on them (results available on request). Based on the theoretical arguments we regard it as more founded to use the fertility intention with the time-

¹ The Swedish GGS2021 first asked about whether the respondent was currently trying to have a child. Those that answered positively were not asked the specific question on three-year intentions. In the analysis we have put those trying to conceive under the group that intends to have a child in the next three years.

² Respondents that had previously answered that they probably or definitely intend to have a (next) child in three years were not asked the subsequent question without the time limit.

limit assuming that feelings of uncertainty and trust (at an individual level) are to a certain extent time-dependent.

The Swedish GGS was carried out in spring and summer of 2021 as a web survey with an option for postal respondence. The response rate of the Swedish GGS is at 27% and thus somewhat higher than the response rate in other countries (Neyer et al. 2023). 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 good in terms of various fertility measures (Antunes Leocádio et al. 2023; Neyer et al. 2023).

We limit our analysis to partnered individuals aged 20–39 at the start of 2021 with both the respondent as well as the partner having the ability to have children and not expectant at the time of the survey. Also, we leave aside 85 individuals with NA-s in one or more of the trust variables. We do not restrict the analysis set based on the existing number of children. This means that our study set includes 1703 individuals. The number of cases is smaller if uncertainty is also included in the model. The largest decline is in the number of cases (N=468) with respect to individual employment uncertainty, since, naturally, only those currently working 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 and we model the intention of a(nother) birth without distinguishing parity. 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 affected by trust. For uncertainty we use the individual-specific employment related uncertainty questions 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.

We include three basic control variables into the models. Sex, age (20-29, 30-39) and the number of children (0,1,2+), the distributions are given in Table 1. Given the exploratory nature of this analysis we did not want to add more complexity into the models to be able to detect basic relationships between trust, uncertainty and fertility intentions.

We present the results of our analysis in the form of plots that show predicted probabilities derived from the regression models to ease interpretation and comparison. In the interest of transparency, the regression tables themselves are given in Appendices 1–3.

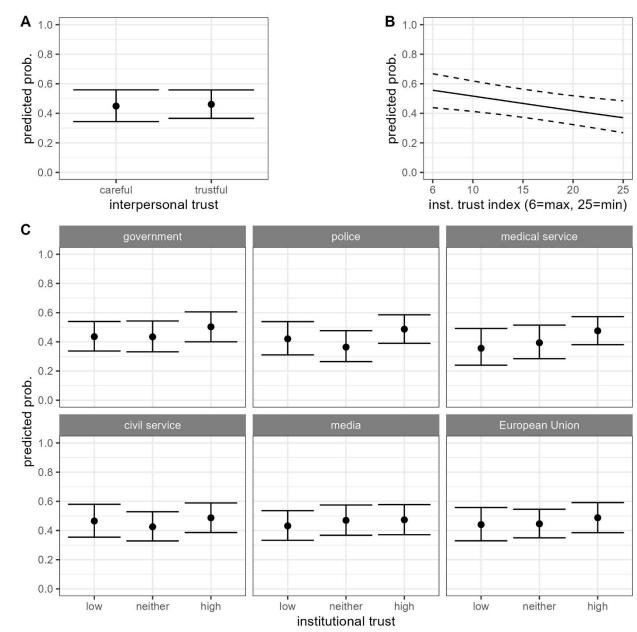
Results

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

On Panel B the predicted probability for the institutional trust index is displayed and its relationship to the dependent variable is statistically significant in the model (p=0.006). The index value of 6 shows the maximum level of institutional trust while the value 30 shows the minimum. People with higher institutional trust are more likely to profess to have 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 effect size. The predicted probability on Panel B is computed from a model with only the linear term for the institutional trust index. When adding to it also a non-linear term (index²) then the impact of the linear index is smaller and also statistically insignificant (p=0.211).

Figure 1. Predicted probabilities of trust measures for positive three-year fertility intention.



Note: Computed based on logistic regression models. All models control for sex, age and number of children.

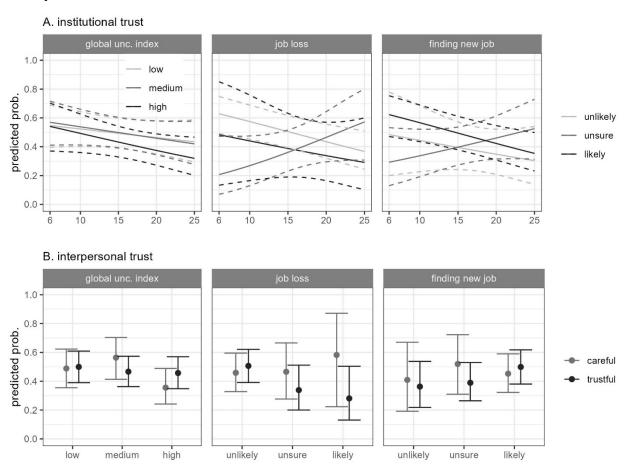
On panel C the predicted probabilities for trust in each of the six specific institutions are presented. For two (media and the European Union) the differences are statistically insignificant. For two (police, civil service) a U-shaped relationship between trust and fertility intentions is evident. Such a relationship cannot in our view be explained by sound theoretical arguments. Still, it is true for both of these institutions that the fertility intention is the highest among the most trusting individuals and with respect to police the predicted probability difference between the high trust and middle trust group is sizable (0.36 and 0.48). The

predicted probability for those who answered that they do not trust the government is on the same level as for those who answered neither; but again, those with trust in government have greater childbearing intention. However, the differences between the point estimates are not that great (0.43 to 0.5).

For trust in the medical service 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 the overall trust in the medical services is high and the individuals who do not have a high 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 asked about. An obvious hypothesis is that this relationship may be influenced by experiences with a previous birth. Models ran separately for childless and parents (not shown here) do not support this with almost identical results for the two groups.

As mentioned, we ran identical models also for the overall fertility intention (without a time constraint). The results (not shown here) are similar. The main difference is that the effect size is smaller and also 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. Also, the discrepancy in the predicted probabilities between high and low trust for medical services is 0.07 and not 0.12.

Figure 2. Predicted probabilities of an uncertainty and trust interaction for positive three-year fertility intention.



Note: Computed based on logistic regression models. All models control for sex, age and number of children.

Next, we will focus on the question to what extent can we detect interpersonal and/or institutional trust to work as resilience factors in decreasing the effect of global or individual employment uncertainty on short-term fertility intentions. In a statistical 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 change 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.

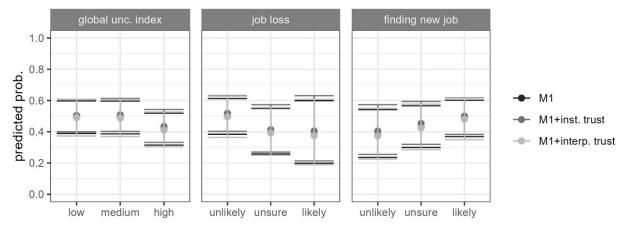
Panel A depicts interaction between one uncertainty measure and the institutional trust index. For all three values of the global uncertainty index, we can see that the predicted probabilities are decreasing for those with lower levels of institutional trust. However, the intervals around the estimate are also large. Trust has the largest effect for those with high levels of global uncertainty as can be expected from the theoretical discussion. Still the effect is not extensive.

With the two individual-specific employment uncertainty measures we see a more mixed picture. A theoretically expected effect of institutional trust is only present for the two extremes (likely and unlikely). Among those who answered unsure about employment, those with greater institutional trust have lower fertility intentions. However, bearing in mind the distributions of the employment uncertainty variables (Table 1) the intervals are large for those with greater levels of scepticism with respect to their likelihood of job loss or finding a new similar job if necessary.

Panel B shows the results for the models with interpersonal trust. Here as well we struggle to see significant moderation effects as expected by theory. The most concrete is the result for those with high global uncertainty. The difference between the generally trusting and the not-trusting is 0.1 on the predicted probability of a positive childbearing intention.

For employment related uncertainty the results are messier. An expected effect of higher trust can only be seen for those with little or no employment uncertainty (job loss – unlikely; finding a new job – likely). For those with greater anxiety greater interpersonal trust would seem to have a negative influence on their childbearing intention. Given the small numbers here and high uncertainty this result cannot be taken at face value. However, what is clear is that the empirical results provide some support for the existence of a moderating effect of trust only when it comes to global uncertainty.

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



Note: Computed based on logistic regression models. M1 controls for sex, age and number of children.

Such results can also be due to methodological issues. As said 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 we 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 also may function as a confounder and thus not including it would result in bias. Hence, as the last step we focus on the question how much does the inclusion of trust measures influence the relationship between uncertainty and childbearing intentions.

Figure 3 depicts the results of the regression models once again as predicted probabilities. We again model each uncertainty measure separately and do this with 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 effect size 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 effect of uncertainty on short-term fertility intention and this is true for all three uncertainty measures.

Similar models and calculations were also done with the overall childbearing intention without a time limit as the dependent variable (results available on request). The conclusions do not differ.

Conclusion and discussion

This study focused on the influence of interpersonal and institutional trust on three-year fertility intentions. It is a vital enlargement to a small literature that has concentrated on the intersection of interpersonal trust and fertility in Italy and in a country comparison (Aassve et al. 2021, 2018, 2016). This previous work has focused only on interpersonal (generalized social) trust and brought out three reasons why trust would matter for fertility. First, trust enables parents of young children to use non-familial childcare services because the general trust would also be translated into specific trust with respect to service providers. Second, trust would function 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 childrearing. Third, there exists an indirect effect given that trust is correlated (and possibly causally related) to better social and economic outcomes.

Here we have focused on Sweden that is commonly found to be a high-trust country with a universal welfare state that provides extensive individual and institutional family policy support to parents and to children. We also were able to make use of novel questions included in the Swedish Generations and Gender Study that aimed at finding new possible explanations for fertility behaviours in high-income societies. These questions concerned institutional trust and future (global) uncertainties. This paper is the first one that has used the possibilities of a more encompassing concept of trust. Crucially, we were able to also consider institutional trust and not merely interpersonal trust. The former can be expected to matter more given the theoretical arguments with respect to fertility, especially in welfare states with comprehensive social protection and extensive family policy and childcare offers. We have not focused on the issue of pre-school childcare alone given the Swedish context of accessible and high-quality daycare but have rather concentrated to the general effect of trust as well as the interaction with uncertainty.

The results of the analysis do not support the theoretical arguments for the relevance of trust to fertility. For interpersonal trust there exists no hint of an effect on fertility intentions. 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 effect but it is comparatively small. For specific institutions the effect is the largest for trust in medical services which we cannot readily explain.

Additionally, 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. Crucially this only seems to work with respect to wider global uncertainties. For the respondent-specific employment precariousness such a resilience cannot be found. However, given the well-functioning Swedish labour market and the Swedish active labour-market policies the share of people who have expressed at least some concern about losing their current job or finding a similar new one if needed is small. Since interaction effects demand a much higher statistical power problems with detecting these are thus to be expected.

How to interpret these results? To some extent the lack of significant effects may be due to the high-trust and economically successful context of Sweden and the encompassing and well-established welfare state. Swedish women and men may take institutional support for childrearing and in case of unemployment for re-integration into the labour market for granted. It is therefore quite probable 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).

Acknowledgements

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Appendix 1. Model results for Figure 1.

Table A1. Results for the model presented in Figure 1A.

	exp(Est.) S.E. t val. p
(Intercept)	0.843 0.150 -1.134 0.257
trust_generaltrustful	$1.048\ 0.141 0.335\ 0.738$
sexMale	0.854 0.119 -1.327 0.185
age_cat230-39	2.511 0.147 6.247 0.000
children_cat21	0.966 0.172 -0.199 0.843
children_cat22+	0.092 0.195 -12.202 0.000
N	1703

Table A2. Results for the model presented in Figure 1B.

	exp(Est.) S.E.	t val. p
(Intercept)	1.632 0.244	2.004 0.045
trust_inst	0.961 0.014	-2.764 0.006
sexMale	0.903 0.122	-0.835 0.404
age_cat230-39	2.511 0.148	6.237 0.000
children_cat21	0.975 0.172	-0.147 0.883
children_cat22+	0.091 0.196	-12.280 0.000
\mathbf{N}	1703	

Table A3.1. Results for the model presented in Figure 1C. Trust in government.

	exp(Est.) S.E.	t val. p
(Intercept)	1.018 0.126	0.142 0.887
trust_gov3neither	0.759 0.150	-1.838 0.066
trust_gov3low	0.763 0.141	-1.925 0.054
sexMale	0.876 0.121	-1.091 0.276
age_cat230-39	2.480 0.148	6.143 0.000
children_cat21	0.994 0.172	-0.037 0.971
children_cat22+	0.093 0.195	-12.202 0.000
N	1703	

Table A3.2. Results for the model presented in Figure 1C. Trust in police.

	exp(Est.) S.E. t val.	p
(Intercept)	1.003 0.116 0.022	0.982
trust_police3neither	0.602 0.156 -3.255	0.001
trust_police3low	0.763 0.173 -1.560	0.119
sexMale	0.881 0.120 -1.060	0.289
age_cat230-39	2.511 0.147 6.254	0.000
children_cat21	0.947 0.173 -0.314	0.753
children_cat22+	0.090 0.196 -12.281	0.000
N	1703	

Table A3.3. Results for the model presented in Figure 1C. Trust in medical services.

	exp(Est.) S.E.	t val. p
(Intercept)	0.960 0.113	-0.366 0.714
trust_medical3neither	0.716 0.170	-1.968 0.049
trust_medical3low	0.609 0.215	-2.302 0.021
sexMale	0.858 0.119	-1.280 0.201
age_cat230-39	2.587 0.149	6.375 0.000
children_cat21	0.945 0.172	-0.329 0.742
children_cat22+	0.089 0.197	-12.307 0.000
N	1703	

Table A3.4. Results for the model presented in Figure 1C. Trust in the civil service.

	exp(Est.) S.E.	t val. p
(Intercept)	0.976 0.127	-0.188 0.851
trust_civil3neither	0.780 0.135	-1.843 0.066
trust_civil3low	0.916 0.160	-0.546 0.585
sexMale	0.854 0.121	-1.297 0.195
age_cat230-39	2.485 0.148	6.168 0.000
children_cat21	0.973 0.172	-0.162 0.872
children_cat22+	0.092 0.194	-12.320 0.000
N	1703	

Table A3.5. Results for the model presented in Figure 1C. Trust in media.

	exp(Est.) S.E. t val.	p
(Intercept)	0.927 0.136 -0.559 0	0.576
trust_media3neither	0.985 0.141 -0.106 0	0.915
trust_media3low	0.844 0.151 -1.118 0	0.264
sexMale	0.869 0.121 -1.159 ().247
age_cat230-39	2.486 0.147 6.182 0	0.000
children_cat21	0.971 0.172 -0.174 (0.862
children_cat22+	0.093 0.194 -12.259 (0.000
N	1703	

Table A3.6. Results for the model presented in Figure 1C. Trust in the European Union.

	exp(Est.) S.E.	t val. p
(Intercept)	0.972 0.130	-0.222 0.824
trust_eu3neither	0.845 0.131	-1.286 0.199
trust_eu3low	0.828 0.166	-1.142 0.254
sexMale	0.859 0.122	-1.239 0.215
age_cat230-39	2.506 0.148	6.227 0.000
children_cat21	0.980 0.172	-0.117 0.907
children_cat22+	0.094 0.194	-12.222 0.000
N	1703	

Appendix 2. Model results for Figure 2.

Table A4.1. Results for the model presented in Figure 2A. Global uncertainty index.

	exp(Est.) S.E.	t val. p
(Intercept)	1.389 0.384	0.857 0.392
unc_together_indexmedium	1.150 0.562	0.249 0.803
unc_together_indexhigh	1.132 0.582	0.212 0.832
trust_inst	0.976 0.023	-1.017 0.309
sexMale	0.890 0.124	-0.938 0.348
age_cat230-39	2.386 0.150	5.808 0.000
children_cat21	1.003 0.175	0.018 0.986
children_cat22+	0.089 0.198	-12.222 0.000
unc_together_indexmedium:trust_inst	0.992 0.034	-0.231 0.818
unc_together_indexhigh:trust_inst	0.976 0.035	-0.700 0.484
N	1654	

Table A4.2. Results for the model presented in Figure 2A. Employment uncertainty.

	exp(Est.) S.E. t val. p
(Intercept)	3.324 0.318 3.779 0.000
unc_empunsure	0.065 0.934 -2.918 0.004
unc_emplikely	0.511 1.287 -0.522 0.602
trust_inst	0.945 0.019 -3.030 0.002
sexMale	0.828 0.147 -1.280 0.201
age_cat230-39	2.164 0.173 4.455 0.000
children_cat21	0.714 0.196 -1.719 0.086
children_cat22+	0.056 0.229 -12.539 0.000
unc_empunsure:trust_inst	1.153 0.056 2.537 0.011
unc_emplikely:trust_inst	1.013 0.069 0.190 0.850
N	1235

Table A4.3. Results for the model presented in Figure 2A. Uncertainty about finding a new job.

	exp(Est.) S.E. t val. p
(Intercept)	1.631 0.928 0.527 0.598
unc_emp_newunsure	0.253 1.157 -1.187 0.236
unc_emp_newlikely	1.955 0.984 0.681 0.496
trust_inst	0.960 0.050 -0.804 0.422
sexMale	0.871 0.147 -0.940 0.347
age_cat230-39	2.217 0.172 4.619 0.000
children_cat21	0.733 0.200 -1.553 0.121
children_cat22+	0.059 0.224 -12.648 0.000
unc_emp_newunsure:trust_inst	1.097 0.065 1.421 0.156
unc_emp_newlikely:trust_inst	0.982 0.054 -0.330 0.742
N	1235

Table A5.1. Results for the model presented in Figure 2B. Global uncertainty index.

	exp(Est.)	S.E.	t val.	p
(Intercept)	0.948	0.226	-0.234	0.815
unc_together_indexmedium	1.355	0.313	0.968	0.333
unc_together_indexhigh	0.578	0.297	-1.846	0.065
trust_generaltrustful	1.046	0.241	0.187	0.852
sexMale	0.843	0.122	-1.392	0.164
age_cat230-39	2.370	0.150	5.767	0.000
children_cat21	1.006	0.175	0.036	0.972
children_cat22+	0.089	0.195	12.392	0.000
$unc_together_index medium: trust_general trustful$	0.647	0.349	-1.248	0.212
unc_together_indexhigh:trust_generaltrustful	1.457	0.347	1.085	0.278
N	1654			

Table A5.2. Results for the model presented in Figure 2B. Employment uncertainty.

	exp(Est.) S.E.	t val. p
(Intercept)	1.178 0.205	0.798 0.425
unc_empunsure	1.029 0.395	0.073 0.942
unc_emplikely	1.645 0.784	0.635 0.525
trust_generaltrustful	1.211 0.198	0.964 0.335
sexMale	0.773 0.143	-1.803 0.072
age_cat230-39	2.186 0.172	4.538 0.000
children_cat21	0.719 0.199	-1.659 0.097
children_cat22+	0.057 0.231 -	-12.388 0.000
unc_empunsure:trust_generaltrustful	0.485 0.496	-1.460 0.145
unc_emplikely:trust_generaltrustful	0.232 0.906	-1.615 0.107
N	1235	

Table A5.3. Results for the model presented in Figure 2B. Uncertainty about finding a new job.

	exp(Est.) S.E.	t val. p
(Intercept)	1.631 0.928	0.527 0.598
unc_emp_newunsure	0.253 1.157	-1.187 0.236
unc_emp_newlikely	1.955 0.984	0.681 0.496
trust_inst	0.960 0.050	-0.804 0.422
sexMale	0.871 0.147	-0.940 0.347
age_cat230-39	2.217 0.172	4.619 0.000
children_cat21	0.733 0.200	-1.553 0.121
children_cat22+	0.059 0.224	-12.648 0.000
unc_emp_newunsure:trust_inst	1.097 0.065	1.421 0.156
unc_emp_newlikely:trust_inst	0.982 0.054	-0.330 0.742
N	1235	

Appendix 3. Model results for Figure 3

Table A6.1. Results for the model presented in Figure 3. Global uncertainty M1.

	exp(Est.) S.E.	t val. p
(Intercept)	0.979 0.136	-0.159 0.874
unc_together_indexmedium	0.991 0.140	-0.065 0.948
unc_together_indexhigh	0.723 0.153	-2.115 0.035
sexMale	0.845 0.122	-1.381 0.167
age_cat230-39	2.372 0.149	5.812 0.000
children_cat21	0.995 0.173	-0.031 0.975
children_cat22+	0.090 0.196	-12.249 0.000
N	1654	

Table A6.3. Results for the model presented in Figure 3. Global uncertainty M1+inst. trust.

	exp(Est.) S.E.	t val. p
(Intercept)	1.632 0.254	1.927 0.054
unc_together_indexmedium	1.016 0.141	0.112 0.911
unc_together_indexhigh	0.754 0.154	-1.827 0.068
sexMale	0.888 0.124	-0.956 0.339
age_cat230-39	2.372 0.149	5.795 0.000
children_cat21	1.000 0.174	0.003 0.998
children_cat22+	0.089 0.198	-12.212 0.000
trust_inst	0.967 0.015	-2.282 0.023
N	1654	

Table A6.3. Results for the model presented in Figure 3. Global uncertainty M1+interp. trust.

	exp(Est.) S.E.	t val. p
(Intercept)	0.965 0.175	-0.203 0.839
unc_together_indexmedium	0.992 0.139	-0.058 0.954
unc_together_indexhigh	0.725 0.154	-2.085 0.037
sexMale	0.846 0.122	-1.375 0.169
age_cat230-39	2.371 0.149	5.811 0.000
children_cat21	0.995 0.173	-0.030 0.976
children_cat22+	0.090 0.198	-12.161 0.000
trust_generaltrustful	1.018 0.143	0.125 0.900
N	1654	

Table A7.1. Results for the model presented in Figure 3. Unemployment uncertainty M1.

	exp(Est.) S.E.	t val. p
(Intercept)	1.353 0.143	2.109 0.035
unc_empunsure	0.655 0.236	-1.796 0.073
unc_emplikely	0.613 0.407	-1.205 0.228
sexMale	0.774 0.143	-1.793 0.073
age_cat230-39	2.158 0.173	4.444 0.000
children_cat21	0.734 0.199	-1.552 0.121
children_cat22+	0.059 0.226	-12.533 0.000
N	1235	

Table A7.2. Results for the model presented in Figure 3. Unemployment uncertainty M1+inst. trust.

	exp(Est.) S.E. t val.
(Intercept)	2.492 0.297 3.075 0.002
unc_empunsure	0.655 0.242 -1.745 0.081
unc_emplikely	0.633 0.416 -1.098 0.272
sexMale	0.829 0.147 -1.280 0.201
age_cat230-39	2.134 0.173 4.387 0.000
children_cat21	0.746 0.200 -1.468 0.142
children_cat22+	0.058 0.226 -12.574 0.000
trust_inst	0.962 0.017 -2.278 0.023
N	1235

Table A7.3. Results for the model presented in Figure 3. Unemployment uncertainty M1+interp. trust.

	exp(Est.) S.E.	t val. p
(Intercept)	1.337 0.200	1.455 0.146
unc_empunsure	0.656 0.239	-1.766 0.078
unc_emplikely	0.613 0.407	-1.203 0.229
sexMale	0.775 0.143	-1.782 0.075
age_cat230-39	2.155 0.173	4.439 0.000
children_cat21	0.734 0.199	-1.551 0.121
children_cat22+	0.059 0.227	-12.459 0.000
trust_generaltrustful	1.016 0.179	0.089 0.929
N	1235	

Table A8.1. Results for the model presented in Figure 3. Uncertainty about finding a new job M1.

	exp(Est.) S.E.	t val. p
(Intercept)	0.834 0.278	-0.654 0.513
unc_emp_newunsure	1.238 0.311	0.688 0.492
unc_emp_newlikely	1.556 0.263	1.680 0.093
sexMale	0.802 0.143	-1.545 0.123
age_cat230-39	2.225 0.172	4.637 0.000
children_cat21	0.723 0.201	-1.614 0.107
children_cat22+	0.061 0.222	-12.575 0.000
N	1235	

Table A8.2. Results for the model presented in Figure 3. Uncertainty about finding a new job M1+inst. trust.

	exp(Est.) S.E.	t val. p
(Intercept)	1.552 0.406	1.083 0.279
unc_emp_newunsure	1.221 0.313	0.637 0.524
unc_emp_newlikely	1.473 0.265	1.461 0.144
sexMale	0.856 0.147	-1.053 0.292
age_cat230-39	2.197 0.172	4.566 0.000
children_cat21	0.732 0.200	-1.554 0.120
children_cat22+	$0.060\ 0.222$	-12.625 0.000
trust_inst	0.964 0.017	-2.118 0.034
N	1235	

Table A8.3. Results for the model presented in Figure 3. Uncertainty about finding a new job M1+interp. trust.

	exp(Est.) S.E.	t val. p
(Intercept)	0.822 0.305	-0.641 0.521
unc_emp_newunsure	1.238 0.311	0.687 0.493
unc_emp_newlikely	1.553 0.263	1.674 0.094
sexMale	0.803 0.143	-1.535 0.125
age_cat230-39	2.222 0.173	4.627 0.000
children_cat21	0.724 0.201	-1.613 0.107
children_cat22+	0.061 0.224	-12.464 0.000
trust_generaltrustful	1.022 0.176	0.125 0.901
N	1235	

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