The Intergenerational Transmission of Time Preferences

Lukas Kampel

Dissertation written under the supervision of
Professor Anna Bernard

Dissertation submitted in partial fulfilment of requirements for the MSc in Economics at CATÓLICA-LISBON School of Business & Economics
March 2026.

Abstract

The Intergenerational Transmission of Time Preferences

by Lukas Kampel

March 2026

Supervisor: Professor Anna Bernard

A growing body of evidence shows that more patient individuals experience better life outcomes. Yet relatively little is known about how time preferences are formed. This study examines the intergenerational transmission of time preferences by linking parents' and children's measures of patience and impulsivity. We find that a 1 standard deviation increase in the mother's (father's) patience score is associated with a 0.07 (0.085) standard deviation increase in the child's patience score. Moreover, the findings suggest that intergenerational correlation is slightly stronger within same-sex parent-child pairs and that these correlations diminish as children grow older. Parental patience is positively associated with children's education, savings behavior, health, and negatively associated with the risk of unemployment, although the estimated effects are small. We provide evidence that not genetics but socialization within the broader context plays a central role in shaping children's attitudes. Our findings contribute to a better understanding of the persistence of key economic outcomes, such as income, by highlighting the channel of intergenerational transmission.

Keywords: Intergenerational transmission; Time preferences; Hyperbolic discounting; Behavioral Economics

Resumo

The Intergenerational Transmission of Time Preferences

by Lukas Kampel

March 2026

Supervisor: Professor Anna Bernard

A literatura sugere que os indivíduos mais pacientes tendem a obter melhores resultados ao longo da vida. No entanto, sabe-se relativamente pouco sobre a formação das preferências temporais. Esta dissertação analisa a transmissão intergeracional das preferências temporais, relacionando medidas de paciência e impulsividade entre pais e filhos. Constatamos que um aumento de 1 desvio-padrão no nível de paciência da mãe (pai) está associado a um aumento de 0.07 (0.085) desvios-padrão no nível de paciência do filho. Adicionalmente, os resultados demonstram que a transmissão intergeracional é mais forte entre pares de pais e filhos do mesmo sexo e que estas correlações intergeracionais diminuem à medida que os filhos envelhecem. A paciência parental está positivamente associada à educação dos filhos, a comportamentos de poupança, à saúde e a comportamentos relacionados com a saúde, e negativamente associada ao risco de desemprego, embora os efeitos estimados sejam pequenos. A análise indica que não é a genética, mas sim a socialização num contexto mais amplo que desempenha um papel central na formação das atitudes dos filhos. Este estudo contribui para uma melhor compreensão da persistência de resultados económicos fundamentais, como o rendimento, evidenciando a importância da transmissão intergeracional de preferências.

Keywords: Transmissão intergeracional; Preferências temporais; Desconto hiperbólico; Economia comportamental

Aknowledgement

I would like to express my sincere gratitude to Professor Anna Bernard for her valuable guidance and expertise from the beginning to the completion of this thesis. I have learned a lot along this process.

Contents

List of Figures

List of Tables

1 Introduction

A large body of economic research documents substantial persistence in economic outcomes across generations. Parents' and children's income, educational attainment, and even health are positively correlated across countries, contributing to limited social mobility and enduring inequality. As underlying causes of this persistence have been found core economic factors, such as parental income and education (Solon, 1992; Yang & Qiu, 2016). However, more recent research highlights the importance of individual characteristics in shaping economic outcomes. In particular, cognitive and non-cognitive skills, preferences, and personality traits have been identified as key determinants of educational success and earnings (Cobb-Clark et al., 2022).

These traits are not only important for individual decision-making but are also passed on from one generation to the other. As a result, the observed intergenerational correlations in economic outcomes, such as income, may in part be attributable to the intergenerational transmission of personality traits, rather than to economic constraints (Gauly, 2017). Existing studies provide evidence of intergenerational correlations in personality characteristics, such as risk attitudes, trust, reciprocity, and broader cognitive traits, suggesting that these dimensions play a meaningful role in the persistence of economic status across generations (Bisin & Verdier, 2001; Falk et al., 2021; Zumbuehl et al., 2021). Understanding the processes through which time preferences and other personality traits develop is therefore central to the study of social mobility.

Despite growing interest in this area, relatively little is known about how time preferences are formed. Existing research has predominantly focused on the intergenerational transmission of risk preferences, although evidence exists that time preferences are important predictors of economic outcomes. Addressing this gap is crucial for developing a more comprehensive understanding of intergenerational mobility.

This paper provides evidence on the intergenerational transmission of time preferences using survey questions on patience and impulsivity as proxies. Analyzing these traits is of central importance, as they shape individuals' decision-making in intertemporal contexts. We test the correlation of parental and children's attitudes by creating a dataset that links children with their parents. This allows us to examine whether the attitudes under investigation are similar across generations. The empirical analysis builds on the framework of Dohmen et al. (2012) who assess intergenerational transmission of risk and trust preferences. The theoretical foundations draw on the seminal paper by Bisin and Verdier (2001), which introduces a simple model of preference formation based on endogenous cultural transmission.

The analysis focuses on validated survey measures of two key behavioral economic attitudes related to time preferences, namely patience and impulsivity. In its most fundamental sense, "patience is the propensity of a person to wait calmly in the face of

frustration, adversity, or suffering" (Schnitker, 2012, p. 263). Impulsivity is understood as the tendency to engage in rapid and spontaneous responses to external stimuli, with limited consideration of potential negative consequences (DeYoung & Rueter, 2010). Both measures have been shown to be important predictors of various life outcomes, such as school performance, labor supply, lifetime income, unemployment duration, and overall well-being (Cobb-Clark et al., 2022; Daly et al., 2015; Golsteyn et al., 2014), as many economic decisions involve intertemporal trade-offs in which costs and benefits are realized at different points in time.

According to the theory of intertemporal choice, two broad types of intertemporal decisions can be distinguished. First, temptation goods, where the decision involves immediate benefits and deferred costs, and second, investment goods, where the decision involves immediate costs and deferred benefits (Cobb-Clark et al., 2024). For example, individuals with lower discount rates tend to place greater value on future outcomes and are therefore more likely to invest in goods that require immediate effort but yield benefits in the future, such as pursuing education. In other words, they are more patient. In contrast, individuals with higher discount rates derive greater utility from immediate gratification than from future outcomes. This reduces the attractiveness of long-term investments, such as pursuing education, and increases the likelihood of foregoing additional education in favor of options that generate immediate returns, such as entering the labor market.

The data used in this analysis are drawn from the 2008 to 2023 waves of the German Socio-Economic Panel Study (SOEP), a large, representative, and nation-wide panel study of private households and individuals in Germany. As the survey questions measuring the time-preferences of respondents are administered only at five-year intervals, the analysis is restricted to the corresponding survey waves from 2008, 2013, 2018 and 2023. To be able to assess the magnitude of intergenerational transmission of time preferences, we match children to their parents. The final sample consists of 17,092 children for whom information on time preferences is available and for whom at least one parent can be identified.

This study makes four main contributions. First, we contribute to the existing literature on the intergenerational transmission of behavioral preferences. Pre-existing research has focused on the intergenerational transmission of risk preferences (Brown & Van der Pol, 2015; Dohmen et al., 2012), trust (Wu, 2022), gender role attitudes (Dhar et al., 2019; Farré & Vella, 2013), and broader personality traits, such as human capital (Black et al., 2005) and economic preferences (Zumbuehl et al., 2021). We add to this the intergenerational transmission of patience and impulsivity by showing that a 1 standard-deviation increase in the mothers' (fathers') patience score is associated with a 0.07 (0.085) standard-deviation increase in the children's patience score. For the trait impulsivity, we find that a 1 standard-deviation increase in the mothers' (fathers') impulsivity score is

associated with a 0.084 (0.094) standard deviation increase in the children's impulsivity score. Our results suggest that parents who are more patient (less impulsive) tend to raise children with similar traits.

Second, we contribute to the discussion on the origins of intergenerational transmission of personality traits. While Penke and Jokela (2016) emphasize genetic inheritance as the primary driver of personality traits, our findings support the view of Dohmen et al. (2012) that socialization plays a central role in explaining the intergenerational correlation of behavioral attitudes between parents and children.

Third, our findings contribute to the literature on the determinants of intergenerational transmission. While Dohmen et al. (2012) show that the extent of intergenerational transmission depends on the degree of parental involvement and who served as primary socialization agent, Platt and Polavieja (2016) examine differences in intergenerational transmission across same-sex and cross-sex parent–child dyads. We contribute to this literature by documenting gender-specific patterns in the transmission of patience and impulsivity. Specifically, our results seem to suggest slightly stronger intergenerational transmission within same-sex dyads, however, the estimated differences are only small in magnitude.

Last, we contribute to the literature on the economic impact of individuals intertemporal preferences. Our approach is based on the findings of Cobb-Clark et al. (2022), which shows that individual time preferences are strongly associated with life outcomes, such as educational attainment and success in the labor market. We complement this set of findings by linking parental time preferences to children's later-life outcomes. Our results indicate that parental time preferences are related to a broad range of children's economic outcomes. In particular, greater parental patience is associated with higher educational attainment, stronger savings behavior, and better health and health-related behavior, while being negatively associated with the risk of unemployment. In contrast, higher parental impulsivity is negatively associated with these outcomes and positively associated with the risk of being unemployed.

The remainder of this study is organized as follows. Section 2 discusses the current stand of the literature and findings of previous research. Section 3 describes the data. Section 4 outlines the empirical strategy and methodology. Section 5 presents the main variables used in the analysis. Section 6 discusses the main findings regarding the study of the intergenerational transmission channel. Section 7 discusses the study's limitations and section 8 concludes.

2 Literature Review

In economic models, time preferences are key parameters determining consumption and savings over the lifecycle of individuals (Romer, 2018, pp. 50–59). By considering the be-

havioral concept of hyperbolic discounting (Laibson, 1997), researchers aim to understand the decision-making process of individuals in intertemporal choices. While neoclassical models assume that time preferences alongside other theoretical assumptions are constant, recent literature has shown that these parameters vary substantially across individuals and over time (O'Donoghue & Rabin, 1999). These findings have opened a new strand of literature examining the decision-making process where human behavior and its consequences appear in different points in time. A substantial body of research studying intertemporal choices indicates that patience and self-control are associated with higher educational attainment, lower criminal involvement, improved labor market outcomes, reduced digital addiction, and better health and health-related behaviors (Acland & Chow, 2018; Acland & Levy, 2015; Åkerlund et al., 2016; Allcott et al., 2022; Cobb-Clark et al., 2022; Kanfer et al., 2001; Kaur et al., 2015). Building on this line of research, a growing literature examines the effects of commitment devices, defined as tools that help time-inconsistent individuals align their actions with their long-term intentions. Cobb-Clark et al. (2024) show that individuals who are aware of their self-control problems are more likely to achieve long-term goals, as this awareness increases their use of commitment devices, compared with individuals who lack such awareness.

Overall, the emerging evidence suggests that individuals' time preferences, alongside other personality traits, play a significant role in shaping economic outcomes. This has sparked growing interest in personality endowments and the mechanisms through which they are formed. Nevertheless, the intergenerational transmission literature has predominantly examined central economic outcomes, such as income, education, and health (Bhalotra & Rawlings, 2011; Solon, 1992; Yang & Qiu, 2016), while leaving attitudinal endowments as black boxes. This study addresses this gap by examining the intergenerational transmission of a key behavioral attitude, namely time preferences, using a nationally representative panel survey in which both parents and children report their attitudes. The analysis builds on the framework of Dohmen et al. (2012), who were among the first to endogenize personality traits by documenting significant intergenerational correlations in risk and trust preferences. While the intergenerational transmission of risk preferences is already well established (Alan et al., 2017; Brown & Van der Pol, 2015; Necker & Voskort, 2014), evidence on the transmission of time preferences remains limited due to measurement difficulties. This study expands the literature by using survey measures on patience and impulsivity as proxies for time preferences and by exploiting a substantially larger sample of 17,092 parent–child pairs than previous studies (Cobb-Clark et al., 2022).

3 Data

For the following analysis, we are going to use the core study of the German Socio-Economic Panel (SOEP-Core), which is a nation-wide, representative and longitudinal study of residents and households in Germany. The panel study was first conducted in West Germany in 1984 and was expanded to the whole of Germany shortly after the reunification in 1990. Since then, participating households and all their members above the age of 17 have been surveyed individually and annually (Goebel et al., 2019). For this study, we are going to focus on the 2008, 2013, 2018 and 2023 waves, as individual time preferences were measured exclusively in five-year intervals. Each wave of the SOEP-Core includes roughly 22,000 individuals living in approximately 12,000 households.

The standard procedure of surveying respondents is that their responses are recorded by an interviewer who visits the household personally and surveys each member of the household individually. In cases where contact issues arise, SOEP also permits computer-assisted personal interviews, in which respondents provide their answers using a computer, while personal contact to the interviewer is ensured. Nevertheless, both interview methods are designed to make sure that responses are collected individually and independently of other household members. This guarantees that respondents' answers are not influenced by co-residents, which is crucial for our assessment of time preferences. The waves used for this study contain questions on time preferences, specifically on patience and impulsivity. These questions are measured on an 11-point Likert scale. The first question reads as follows: "Would you describe yourself as an impatient or a patient person in general?" while the second question asks "Do you generally think things over for a long time before acting – in other words, are you not impulsive at all? Or do you generally act without thinking things over for long – in other words, are you very impulsive?". Respondents were asked to select a value on the 11-point scale, where 0 corresponds to "Very impatient" (and for the impulsivity question "Not impulsive at all"), and 10 corresponds to "Very patient" (and for the other question "Very impulsive"). Note that the two questions are coded in opposite directions with respect to time preferences. Higher scores on the patience question correspond to lower subjective discount rates, implying that future outcomes are discounted less strongly and therefore are valued more highly relative to present outcomes. In contrast, higher scores on the impulsivity question correspond to higher subjective discount rates, indicating a stronger preference for immediate gratification over future outcomes. The study of patience and impulsivity is fundamentally important, as these character traits shape how individuals make intertemporal decisions and evaluate trade-offs between present and future outcomes. While patience captures how individuals approach long-term trade-offs and future-oriented decisions, impulsivity reflects how they respond in short-term intertemporal situations, where immediate rewards compete with benefits that are only slightly delayed. As most economic decisions involve trade-offs

across time, understanding the determinants of such preferences is crucial. For this reason, we focus on the transmission and formation of time preferences in this study. [1]

4 Methodology

In this paper, we estimate the extent to which parental time preferences are transmitted to their children. We do so by linking children to their parents and then assessing the correlation between parents' and children's responses in the self-reported attitude measures. Since our instruments on patience and impulsivity were collected at five-year intervals between 2008 and 2023, each child–parent pair can be surveyed on their time preferences up to four times. For children, we use all available observations of their attitude scores. If parents were surveyed multiple times on their time preferences, we compute the average of all reported scores separately for mothers and fathers. This yields a time-invariant measure of parental time preferences that is less affected by temporary shocks. Constructing such measure ensures consistent matching between parents and children's attitudes.

This data structure enables us to quantify the influence of parental time preferences on those of their children. In the empirical analysis, the dependent variable is the children's attitude toward patience and impulsivity. Our main variables of interest are maternal and paternal attitudes toward patience and impulsivity. For all regressions, we use heteroskedasticity-robust standard errors clustered at the household level to account for intragroup correlation of the error terms among individuals within the same household. This ensures that statistical inference remains valid despite potential within-household dependence. To account for the panel structure of our data and to control for unobserved time-invariant heterogeneity, we include time fixed effects for the survey waves in which attitudes were measured, as well as region fixed effects at the German state level. We follow the approach of Dohmen et al. (2012) by standardizing all attitude variables to have mean zero and unit variance. This common practice for Likert-scale measures ensures comparability across coefficients of different specifications and allows for clearer interpretability of the results. Equation (1) shows the most comprehensive model that we use:

$$\text{child\_patience}_{it} = \beta_1 \text{mom\_patience}_i + \beta_2 \text{dad\_patience}_i + \mathbf{X}_{it} + \mu_t + \lambda_j + \varepsilon_{it} \qquad (1)$$

[1] In addition to the SOEP-Core study, we initially intended to draw on data from the SOEP Innovation Sample (SOEP-IS), a complementary panel survey that surveys roughly 3,500 households and 5,000 individuals and consists of additional and novel survey content that is not included in the SOEP-Core (Goebel et al., 2019). The SOEP-IS includes the Brief Self-Control Scale (BSCS), a set of 11 questions designed to measure individuals' self-control and intertemporal decision-making. Our initial goal was to include the BSCS in our intergenerational analysis, but due to the limited sample size of the SOEP-IS we were only able to identify 264 parent–child pairs for our intergenerational transmission analysis. Performing any empirical analysis with this sample size did not yield additional relevant information, which is why we decided to leave the SOEP-IS sample out.

where $child\_patience_{it}$ refers to the self-reported, standardized patience score of child i at survey time t, $mom\_patience_i$ and $dad\_patience_i$ represent the self-reported, standardized patience scores of mother i and father i, X_{it} is a vector of time-varying individual-level control variables, μ_t denotes year fixed effects, and λ_j denotes region fixed effects at the German state level.

Similar to other studies examining the intergenerational transmission of attitudes and personality traits, this study does not seek to identify the causal effects of parental attitudes on children's preferences. Instead, the regression analysis provides robust estimates of the association between parents' and children's time preferences using a set of controls and fixed effects. Thereby, these findings enhance our understanding on the statistical relationship between parental and children's attitudes. The challenge in establishing a causal effect with respect to personality traits and attitudes stems from their multifaceted and unobservable nature. Establishing a causal relationship would require controlling for unobserved, time-varying factors, such as external and environmental influences, and disentangling genetic from socialization effects. Instead, based on a thorough analysis, our results allow us to draw conclusion on both effects.

5 Descriptive Statistics

Table 1 reports descriptive statistics for the key variables used in the empirical analysis. As our objective is to analyze the intergenerational transmission of time preferences between parents and their children, we construct a dataset that identifies each child and links information on the child's patience and impulsivity to the corresponding measures of the parents. In doing so, the final dataset includes only individuals for whom both parents can be identified. This results in a total of 10,414 parent–child pairs.

Rows 1 to 6 show the variability in the reported patience and impulsivity scores between children, mothers, and fathers. Due to the nature of the measures, the question of patience and impulsivity are bound between 0 and 10. Children's exhibit an average patience score of 5.896, compared to a higher average patience score of 6.304 among mothers and 6.135 among fathers. This finding is consistent with previous evidence showing that younger individuals tend to exhibit higher discount rates than adults, with patience increasing with age (Bettinger & Slonim, 2007). A different pattern is visible for impulsivity, as children exhibit a slightly lower impulsivity score of 5.082 compared to mothers score (5.109) but a higher impulsivity score compared to fathers (4.885). Interestingly, male children indicate that they are more patient and less impulsive in contrast to female children. An important feature of the data is that an individual is defined as a "child" when both parents can be identified in the data, regardless of its own age. Therefore, the youngest child is 18 years and the oldest "child" identified in the data is 65. Nevertheless, the average age of children is roughly 28. The average age of mothers is 55, while

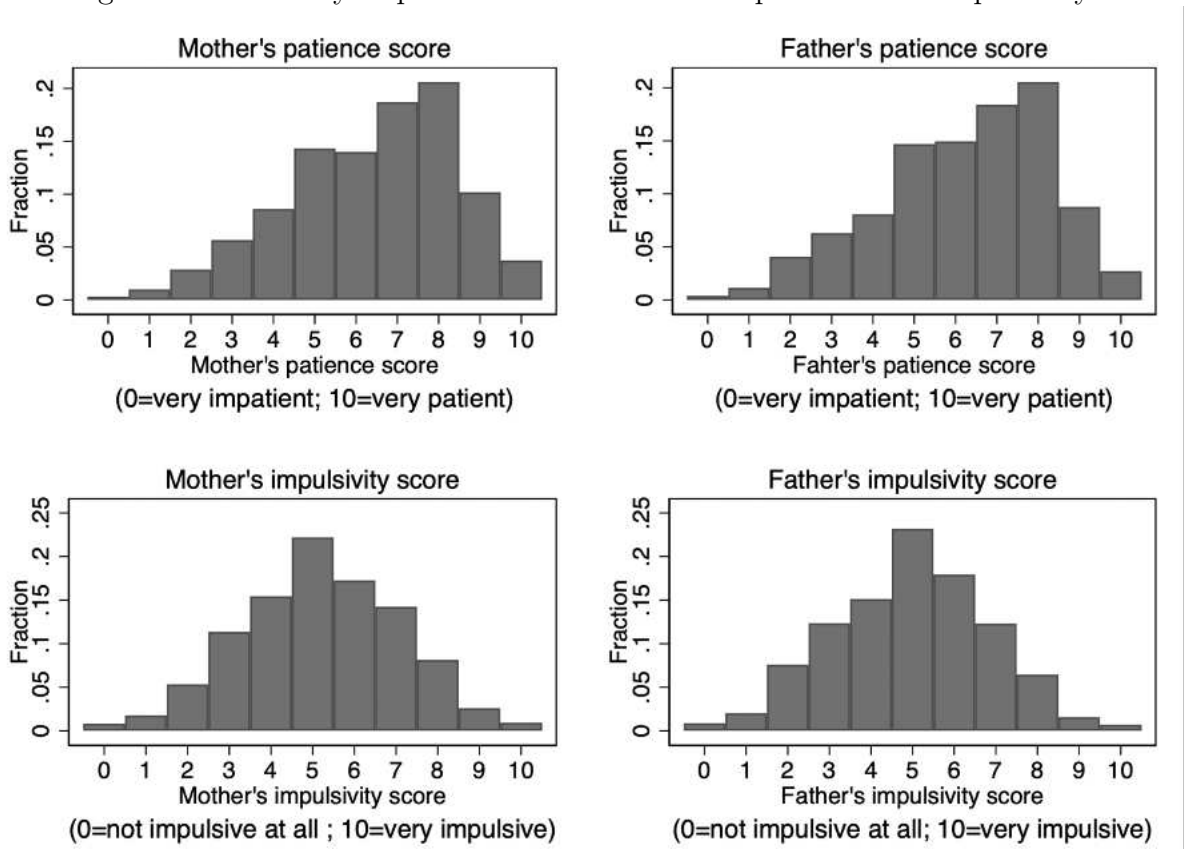
Table 1: Descriptive statistics

	Mean	Standard deviation	Median	Min	Max
Children's patience score (all)	5.896	2.345	6	0	10
Male	6.010	2.321	6	0	10
Female	5.781	2.364	6	0	10
Children's impulsivity score (all)	5.082	2.206	5	0	10
Male	5.014	2.189	5	0	10
Female	5.156	2.224	5	0	10
Mother's patience score	6.304	2.025	6.5	0	10
Mother's impulsivity score	5.109	1.906	5	0	10
Father's patience score	6.135	2.051	6.5	0	10
Father's impulsivity score	4.885	1.896	5	0	10
Children's age (at survey time)	27.521	8.764	25	18	65
Mother's age	54.673	8.802	53.5	27	86
Mother's age at first birth	29.326	6.163	29	16	49
Father's age	57.421	9.270	56.5	27	91
Father's age at first birth	32.068	6.685	31.75	18	56

Notes: The table reports descriptive statistics for the main variables used in the analysis. Patience and impulsivity scores are measured on a scale from 0 to 10, with higher values indicating greater patience or impulsivity, respectively. Children's measures are reported for the full sample and separately by gender. Age variables refer to the respondent's age at the time of the survey and the parents' age at the birth of the child. Observations: 10,414

the average age of women at the birth of their first child is roughly 29. For fathers, the corresponding ages are approximately 57 and 32. The dataset is balanced with respect to gender, as it includes 5,063 female and 5,314 male children.

Figure 1: Variability in parental attitudes toward patience and impulsivity



Notes: The upper panel illustrates the distribution of mothers' (left) and fathers' (right) attitudes toward patience. The lower panel shows the corresponding distribution for the personality trait impulsivity.

Identifying the effect of parental patience and impulsivity attitudes on children's preferences requires sufficient heterogeneity in parents' own attitudes. Figure 1 demonstrates that such heterogeneity is indeed present for both mothers and fathers by illustrating the distribution of patience and impulsivity scores separately by gender. On the x-axis is the fraction of overall answers of mothers/fathers for the patience measure (upper panel). The histograms in the second row (lower panel) correspond to the distribution on the impulsivity question. For both, mothers and fathers, the patience measure displays a right-skewed distribution, indicating that parents view themselves as being more patient rather than impatient. In contrast, the impulsivity measure is approximately normally distributed. Moreover, there appears to be only minor differences in the variation between maternal and paternal responses.

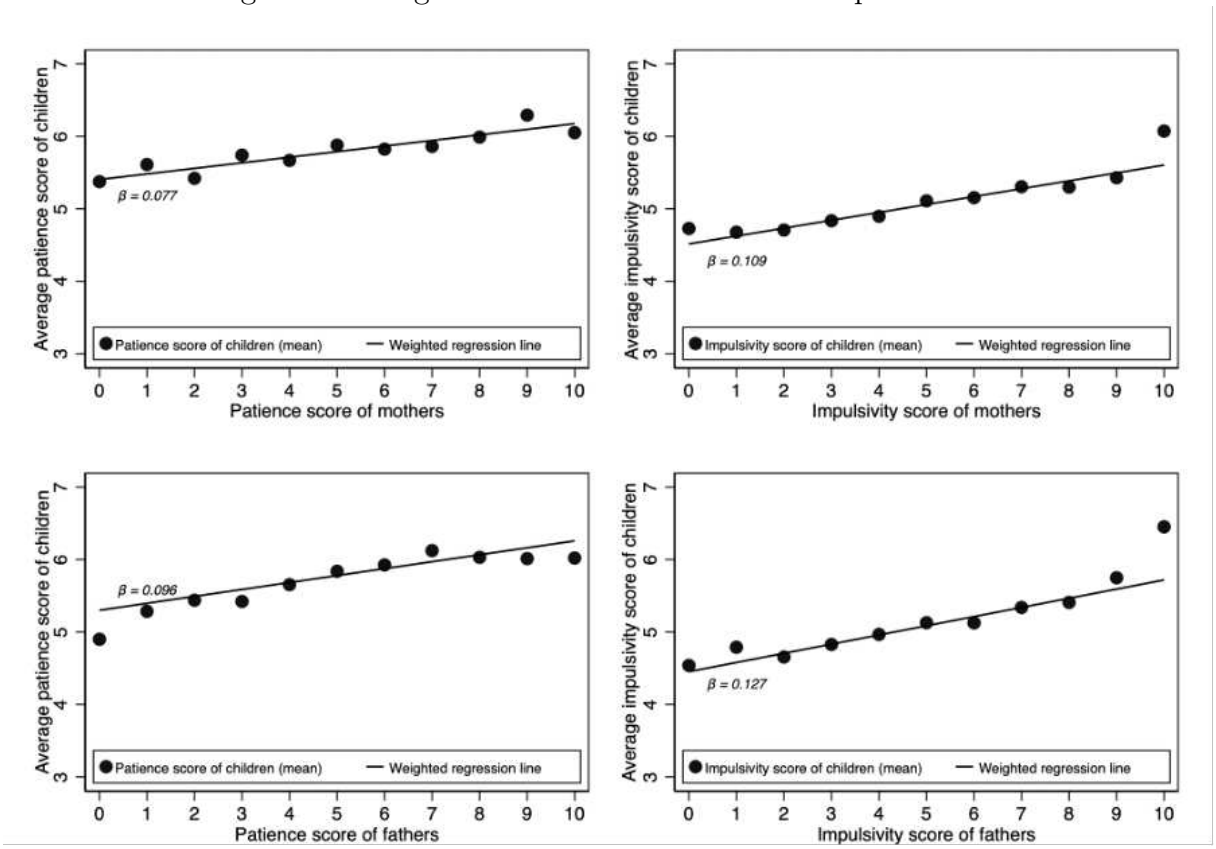
6 Results

6.1 The intergenerational transmission channel

We begin the analysis by examining the intergenerational correlation in parents' and children's attitudes related to time preferences. Figure 2 provides a first insight into the relationship between parents' and children's attitudes. Each dot represents the average attitude score of children, given the score that mothers (upper row) and fathers (bottom row) reported on the 11-item Likert-scale question. The weighted regression line accounts for the frequency of answers given, ensuring that observations with rare or extreme patience/impulsivity scores receive less influence in the estimation than those that occur more frequently.

As shown in Figure 2, both maternal and paternal attitudes are positively correlated with those of their children. This is reflected by the positive slope of the estimated regression line. This suggests that parents tend to raise children, who have similar traits with respect to time preferences as their parents. This positive correlation therefore supports the hypothesis of intergenerational transmission of time preferences. Additionally, as indicated by the slope coefficients displayed in the graph, the intergenerational correlation appears to be slightly stronger for the personality trait of impulsivity, suggesting that more severe traits are transmitted more strongly.

Figure 2: Intergenerational correlation of time preferences



Notes: Children's attitudes given their mother's and father's self-reported attitudes. The upper graphs document the children's self-reported patience/impulsivity score given their mother's patience/impulsivity score. The graphs below report the average children's scores given their father's self-reported scores. The weighted regression line includes all observations.

Next, we move beyond simple intergenerational correlation and conduct a regression analysis to estimate the predictive power of parental time preferences for children's time preferences. Table 2 reports the estimated relationship between parent's and children's attitudes. In columns (1) to (4), the dependent variable is the children's self-reported patience score, whereas in columns (5) to (8) the dependent variable is the self-reported impulsivity score of children. To account for the non-linear nature of the Likert-scale and to ensure comparability between our results, we standardize the dependent variables by subtracting the mean and dividing by the standard deviation. Since both attitudes were surveyed in several years, we use heteroskedastic standard errors clustered on the household level to account for intragroup correlation on the household level.

[2]The low R^2 values are typical for regressions examining the intergenerational transmission of preferences and are broadly in line with the existing literature. For example, Dohmen et al. (2012) and Gauly (2017) report similarly low explanatory power in comparable specifications.

[3]The reduction in observations is driven by data availability. While at least one parent can be identified for 17,092 observations, both parents are identified for only 10,414 observations. Additional reductions in the sample size arise from missing information on control variables. All regressions are estimated using observations with complete data for the variables included in the respective specification.

Table 2: Relationship between parents' and children's attitudes

	Child's patience score				Child's impulsivity score			
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Std_mom_patience	0.075***	0.071***	0.070***	0.070***				0.020
	[0.012]	[0.012]	[0.013]	[0.013]				[0.013]
Std_dad_patience	0.088***	0.088***	0.087***	0.085***				0.016
	[0.012]	[0.012]	[0.013]	[0.013]				[0.012]
Std_mom_impulsivity				0.010	0.092***	0.086***	0.083***	0.084***
				[0.013]	[0.012]	[0.012]	[0.013]	[0.012]
Std_dad_impulsivity				0.004	0.108***	0.106***	0.096***	0.094***
				[0.013]	[0.012]	[0.012]	[0.012]	[0.012]
Std_child_patience								-0.174***
								[0.013]
Std_child_impulsivity				-0.178***				
				[0.013]				
Female		-0.091***	-0.092***	-0.073***		0.084***	0.104***	0.088***
		[0.024]	[0.025]	[0.024]		[0.024]	[0.024]	[0.024]
Child's Age		0.002	0.001	-0.001		-0.011***	-0.014***	-0.014***
		[0.002]	[0.002]	[0.002]		[0.002]	[0.002]	[0.002]
Mom's_age		0.006**	0.008***	0.008***		-0.002	0.002	0.003
		[0.003]	[0.003]	[0.003]		[0.003]	[0.003]	[0.003]
Dad's_age		-0.005*	-0.006**	-0.005*		0.003	0.003	0.002
		[0.003]	[0.003]	[0.003]		[0.003]	[0.003]	[0.003]
BMI		-0.001	-0.003	-0.001		0.014***	0.012***	0.011***
		[0.003]	[0.003]	[0.003]		[0.003]	[0.003]	[0.003]
Constant	-0.017	0.006	-0.144	-0.113	-0.020*	-0.101	0.152	0.127
	[0.012]	[0.123]	[0.242]	[0.236]	[0.011]	[0.119]	[0.234]	[0.229]
Additional controls	No	No	Yes	Yes	No	No	Yes	Yes
Observations [2]	10,414	10,244	9,265	9,265	10,414	10,244	9,265	9,265
R-squared[3]	0.012	0.016	0.023	0.053	0.021	0.033	0.054	0.083

Notes: In Columns (1)–(4), the dependent variable captures children's self-reported patience, measured on an 11-point scale from 0 (very impatient) to 10 (very patient). In Columns (5)–(8), the dependent variable captures children's self-reported impulsivity, measured on an 11-point scale from 0 (not impulsive at all) to 10 (very impulsive). All outcome variables are standardized prior to estimation. Reported coefficients are obtained from OLS regressions. Robust standard errors clustered at the household level are reported in brackets. Additional controls include years of schooling for both children and parents, gross annual household income, childhood residence, current place of residence (big city, city, small town, or rural area), religion of both children and parents, migration background, as well as time and region fixed effects. *Significance levels:* *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The coefficients illustrated in Column (1) are estimated by the basic regression that includes no explanatory variables other than the standardized patience scores of the respective father and mother. This baseline specification serves as a preliminary assessment of the relationship of interest before controlling for additional covariates. Column (2) reports estimates from the same specification but includes additional controls for gender, the age of both children and parents, and respondents' body mass index (BMI). The BMI measure is constructed based on the general formula using information on respondents' height and weight. Following Dohmen et al. (2012), who show that height is predictive of individuals' willingness to take risks, we include the BMI as an additional control variable. This is motivated by the possibility that higher BMI could be associated with differences in intertemporal decision-making. As we can see, controlling for these factors that were previously found to affect respondents' time preferences, our coefficients remain highly significant at a significance level of 1 percent. Thus, the results support the view that parents play a significant role in shaping children's time preferences. Column (3) and (4) contain an additional set of controls. We control for children's and parental educa-

tion, household income, region of residence, religion, location of childhood, and migration background. Column (4) extends the specification by including the other personality trait under investigation as an additional control variable, thereby serving as a proxy for other attitude endowments that may influence our dependent variable. Columns (5) to (8) follow the same specification strategy, with impulsivity as the dependent variable. Again, Column (8) includes children's standardized patience score as a proxy for other personality traits.

Column (1) reports a positive intergenerational transmission of parental time preferences on children's time preferences. We observe this based on the positive coefficient. This suggests that parents tend to raise children that have similar time preferences. Both coefficients of interest, mother's and father's patience scores, are highly significant at the 1 percent level, thus, indicating a statistically relevant intergenerational transmission of time preferences from parents to children. As we go from column (1) to column (4) we can observe that the estimated coefficients become slightly smaller once additional control variables are added. Therefore, we can infer that the coefficients estimated in column (1) were originally overestimated. The coefficients in column (4) are interpreted as follows. A one standard-deviation increase in the mother's patience score (father's patience score) is associated with a 0.07 (0.085) standard-deviation increase in the children's patience score, holding all other variables constant. Column (4) further controls for the child's impulsivity score. The negative coefficient indicates that higher impulsivity is associated with lower patience. Interestingly, female children exhibit slightly lower levels of patience than male children.

Consistent with prior studies on the intergenerational transmission of personality traits, we find statistically significant intergenerational correlation, but the effects are only modest in terms of magnitude (Necker & Voskort, 2014). This suggests that parents are not the only important factor in habit formation, but factors beyond direct intergenerational transmission, such as socialization processes and the environment in which a child grows up, also play a central role in shaping children's time preferences (Dohmen et al., 2012).

Columns (5) to (8) follow the same structure but use the child's impulsivity score as the dependent variable. This set of specifications also supports the significant influence of parental attitudes on children's. Interestingly, the coefficients are larger in magnitude, indicating stronger intergenerational transmission of this personality trait from parents to children. Parental influence varies across different types of attitudes, with some traits exhibiting stronger intergenerational transmission than others.

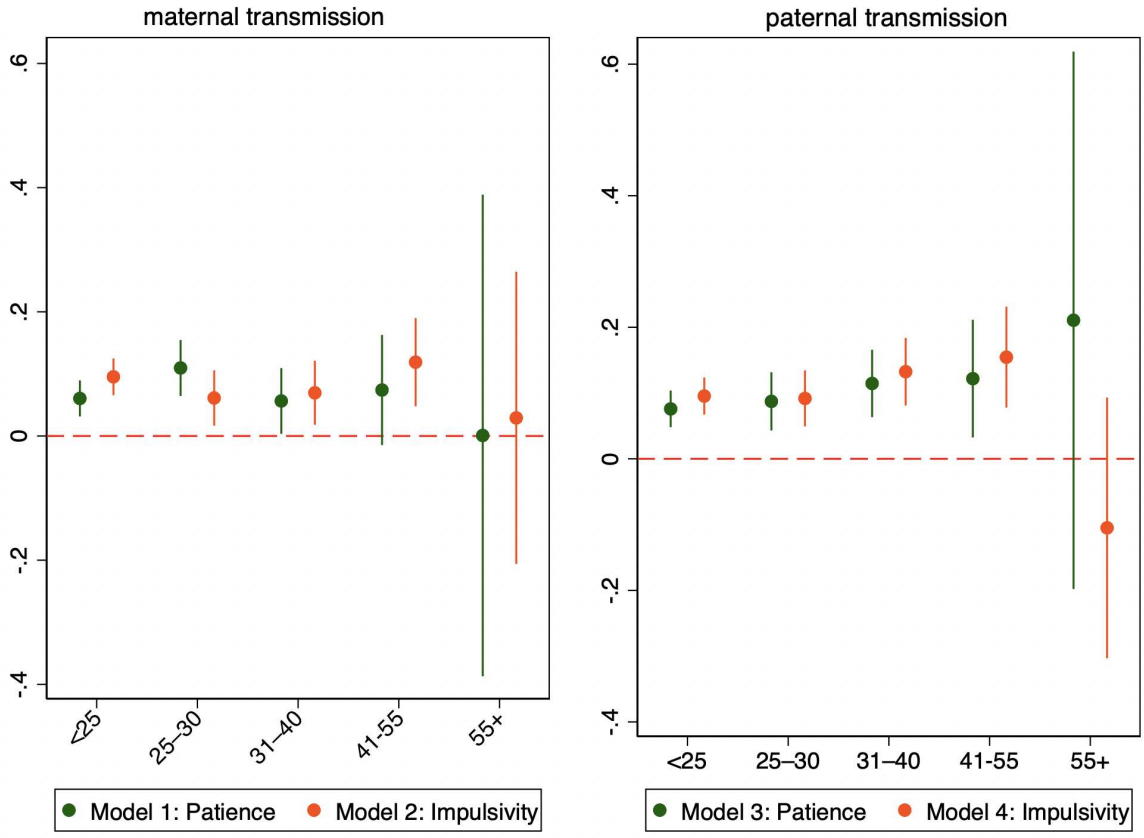
Last, our results indicate that fathers' attitudes are more influential in shaping children's time preferences than mothers' attitudes, as indicated by the larger estimated coefficient. This points to the fact that fathers play a more predictive role in shaping their children's attitudes toward time than mothers. Related studies on the intergenerational

transmission of risk, trust, and reciprocity find that mothers play a more influential role in shaping children's preferences toward trust and positive as well as negative reciprocity, whereas the effect for risk taking is shared across parents (Dohmen et al., 2012; Gauly, 2017). This evidence of gender differences in intergenerational transmission implies that socialization processes and parental involvement play a crucial role in shaping a child's character, rather than genetics alone. This is because only genetic transmission would not be sufficient to explain these gender differences in intergenerational transmission (Dohmen et al., 2012).

6.2 Intergenerational correlation and age

After having documented the significant intergenerational correlation of key economic attitudes between parents and their children, we proceed by analyzing the intergenerational correlation of time preferences over children's lifetimes. Figure 3 shows two coefficient plots, one that depicts the interdependence between maternal transmission and children's age groups (left panel) and one that depicts the same interdependence between paternal transmission and children's age groups (right panel). By doing this, we can assess the presence of intergenerational correlation for different age groups of children. One important feature of the SOEP data is that individuals are surveyed only from age 17 onwards, implying that intergenerational correlations between children's and parents' attitudes can be analyzed from this age. Accordingly, the youngest age group shown in the figure is 17-24. Respondents are defined as children if at least one parent is identified in the dataset. Consequently, individuals classified as children are observed up to the age group of 55 and above.

Figure 3: Intergenerational correlation over children's lifetime



Notes: The figure displays the marginal effect of parental preferences on children's preferences across age groups. The coefficients are obtained from a pooled regression that includes interaction terms between parental preferences and age-groups. The left panel reports estimates for mother–child pairs, and the right panel for father–child pairs. Green markers correspond to patience, and orange markers to impulsivity. Points represent estimated effects and vertical bars indicate 95% confidence intervals.

As the previous findings already suggested, we observe a positive intergenerational transmission of both attitudes, indicating that mothers and fathers tend to raise children with similar time preferences. What's new is that maternal transmission is statistically significant only up to the child's age group of 31-40 for patience and 41-55 for impulsivity. In contrast, paternal transmission of patience and impulsivity is statistically significant until the child reaches the age group 41-55. Therefore, in both cases, we document that this positive intergenerational transmission from parents to children is only observable up to a certain age group and attenuates after that. For children being 55 and older, the intergenerational transmission channel for both parents is no longer statistically significant and thus, cannot be observed. This diminishing effect motivates the question why intergenerational correlations of these attitudes toward time tend to fade away with age, especially, as one could argue that these preferences are formed in early childhood

and are then kept for the rest of their life. One possible explanation is that, as individuals grow older, and assume greater responsibility, they gradually diverge from their parent's attitudes, reducing the intergenerational correlation of parental preferences over time. Another plausible explanation is that individual time preferences change over the life course as individuals age. Life events, such as bearing and raising children may shift preferences toward longer-term considerations, thereby potentially weakening the intergenerational link at this age group. This would also be supported by our previous finding where we noticed that patience increases with age.

6.3 Intergenerational correlation and gender

We now turn to the analysis of sex-dependent intergenerational transmission. Specifically, we are interested in examining whether the channel of intergenerational transmission depends on gender. Previously, we have shown that paternal attitudes are slightly more predictive for children's time preferences. Now we will build upon this finding and analyze whether the intergenerational transmission channel is stronger for boys or girls. Dohmen et al. (2012) hypothesize that intergenerational transmission of risk attitudes may vary depending on factors such as whether the parents were perceived as role models, their socioeconomic status etc. We decided to test whether differences exist in the magnitude of intergenerational transmission depending on the gender of the child. We assess whether same-sex parental transmission of time preferences (mothers–daughters and fathers–sons) is stronger than cross-gender transmission (mothers–sons and fathers–daughters).

Table 3: Sex-dependent intergenerational transmission

	Mother_patience	Father_patience	Mother_impulsivity	Father_impulsivity
Son_patience	0.060***	0.104***		
Daughter_patience	0.084***	0.073***		
Son_impulsivity			0.069***	0.122***
Daughter_impulsivity			0.103***	0.090***
Observations	10,414	10,414	10,414	10,414

Notes: Marginal effects of parental attitudes on children's attitudes separated by gender. Marginal effects are calculated from OLS estimation of the relationship between parental and children's attitudes. *Significance levels:* *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3 reports the marginal effects of the intergenerational transmission channel separated for mothers and fathers and the gender of the child. Based on this table, the findings suggest that same-sex transmission is stronger for both patience and impulsivity. If a mother's patience score increases by one standard-deviation the expected increase in the children's patience score is 0.060 standard deviations for sons and 0.084 standard

deviations for daughters. In contrast, a one-standard deviation increase in the father's patience score is associated with an increase in the children's patience score of 0.104 standard-deviations for sons and 0.073 standard deviations for daughters. The findings suggest that mothers' time preferences are more strongly correlated with those of their daughters, while fathers' time preferences show a stronger correlation with those of their sons.

Using a pooled regression with interaction terms, we formally test whether parental effects differ by the child's gender. The joint Wald test of the interaction coefficients is not statistically significant, with a p-value of 0.3069 for patience and 0.1275 for impulsivity. This test indicates that we cannot reject the null hypothesis that the effects of maternal and paternal traits are the same for sons and daughters. Although the point estimates for same-sex transmission are larger than those of cross-sex, these differences are not statistically distinguishable from zero.

As indicated by the slightly higher coefficients of the fathers' standardized patience and impulsivity scores, the findings further support our earlier result that fathers' time preferences more strongly predict children's time preferences, especially when they are the same sex. All estimated effects are highly significant at a significance level of 1 percent. One possible explanation that is in line with previous findings of Dohmen et al. (2012) is that children identify more strongly with the parent of the same sex, viewing them more closely as role models and thus adopting more character traits of them. In addition, gender-specific socialization, meaning the expectations society places on children to behave in certain ways based on their gender, may help explain why children are more likely to adopt certain traits of the same-sex parent rather than those of the opposite-sex parent. Last, differences in parental time investment might reinforce this pattern. These results point to a socialization mechanism through which parents influence children's time preferences in an unequal way. The stronger transmission observed between parents and children of the same gender suggests that the formation of attitudes cannot be explained by genetic inheritance alone but is also shaped by socialization processes (Dohmen et al., 2012). If intergenerational transmission were driven solely by genetics, no systematic differences between same-sex and opposite-sex transmission would be expected.

6.4 Economic implications

Intertemporal decisions play an important role in everyday life. They affect whether individuals choose to pursue further education or enter the labor market right away, whether a person decides to invest in their long-term health by working out or stays at home, and whether income is saved for retirement or spent right away. In all these situations, individuals face a trade-off between immediate costs and delayed benefits, or immediate benefits and future costs. This intertemporal trade-off is captured by individuals' time preferences,

which, as shown earlier, are to a large extent shaped by parents' own attitudes. Therefore, in this final section we turn to the question whether parents' time preferences affect their children's life outcomes, particularly in contexts that involve intertemporal trade-offs. We do this by regressing children's life outcomes on parental attitudes toward patience and impulsivity. Previous research has established a link between time preferences and life outcomes (Cobb-Clark et al., 2022) but evidence on the impact of parental preferences on children's life outcome has not been studied explicitly.

Therefore, in this final section, we discuss the predictive power of parental time preferences on children's life outcomes. Our approach is to examine the association between parental attitudes and children's life outcomes. We control for a rich set of individual characteristics and include time and region fixed effects at the German state level. Importantly, we do not aim to establish a causal relationship but rather to document a robust association between the variables. Table 4 reports the point estimates of three different specifications. The first two columns report the estimated coefficients from the specification that include only maternal and paternal patience scores, without additional control variables. This specification serves as a first indication of the relationship between parental attitudes and the outcome variables. In the second specification, we implement a set of individual control variables and estimate the relationship. In the third specification, in addition to the control variables added in column 3 and 4, we include time and year fixed effects and estimate the specification again. In all specifications we use heteroskedasticity-robust standard errors to account for intragroup correlation on the household level. To capture a broad range of individuals' economic decisions in everyday life, we are analyzing the effect of parental time preferences on a set of dependent variables covering education, income, savings, labor market outcomes, and health.

Table 4: Conditional relationship between parents' time preferences and children's life outcomes

		Point estimates		**PE + controls**		**PE + controls + FE**	
Dependent variable		Patience	Impulsivity	Patience	Impulsivity	Patience	Impulsivity
Elementary school							
	Mother	0.011**	-0.009*	0.01**	-0.004	0.01**	-0.004
	Father	0.004	-0.004	0.003	-0.001	0.003	-0.001
Secondary education							
	Mother	0.009	-0.008	0.01	-0.005	0.007	-0.006
	Father	0.001	-0.002***	0.002	-0.023**	0.002	-0.02**
Tertiary education							
	Mother	0.015*	-0.009	0.016*	-0.002	0.015*	-0.002
	Father	0.001	-0.002**	0.002	-0.001*	0.004	-0.001
Net household income							
	Mother	0.011	-0.023**	0.009	-0.021**	0.007	-0.015**
	Father	-0.011	-0.015**	-0.01	-0.013*	-0.013*	-0.012*
Savings							
	Mother	0.027*	-0.024*	0.028*	-0.014	0.027*	-0.018
	Father	0.043*	-0.041**	0.043**	-0.03**	0.046**	-0.028**
Unemployment							
	Mother	-0.012	0.013	-0.001	0.002	-0.001	0.001
	Father	-0.027	0.046	-0.017	0.028	-0.003	0.003
Physical activity							
	Mother	0.009	0.009	0.007	-0.004	0.005	-0.006
	Father	-0.001	0.005	0.003	-0.004	0.008	-0.001
Body-Mass Index							
	Mother	0.044	0.048	0.03	0.111*	0.024	0.11*
	Father	0.103	0.134*	0.082	0.179**	0.088	0.169*

Notes: Calculations are based on SOEP-Core waves 2008–2023. Columns (1) and (2) report baseline estimates of the association between patience and impulsivity, respectively, and the outcome variable. Columns (3) and (4) add controls for the child's age, mother's age, father's age, gender, and body mass index (BMI). Columns (5) and (6) additionally include time and region fixed effects. The binary education and unemployment outcomes are estimated using a probit model; all other outcomes are estimated by OLS. Robust standard errors are used. *Significance levels:* *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The first three rows of Table 4 report the relationship between parental attitudes and educational choices of their children. Based on the positive coefficient, we find that maternal and paternal patience are positively correlated with children's educational choices. If a mother's patience score increases, the child is more likely to attain higher levels of education. Specifically, a one-standard deviation increase in a mother's patience score is associated with a 1.1 percentage point increase in the probability that the child attains an elementary college degree, a 0.9 percentage point increase in the probability of obtaining a secondary school leaving degree, and a 1.5 percentage point increase in the likelihood of pursuing tertiary education. A similar positive relationship between fathers' patience and children's outcomes is observable. However, the influence of paternal time preferences

on children's educational choices is substantially lower. This contrasts with our earlier findings, which suggested that fathers' time preferences are more predictive of children's preferences than those of mothers.

We also observe a negative relationship between parental impulsivity and educational outcomes, suggesting that higher parental impulsivity is associated with lower levels of educational attainment of the child. Specifically, a one-standard deviation increase in the mother's (father's) impulsivity score is associated with a 0.9 (0.4) percentage point decrease in the probability that the child attains an elementary schooling degree, a 0.8 (0.2) percentage point reduction in the probability of obtaining a secondary school leaving certificate, and a 0.9 (0.2) percentage point decrease in the likelihood of pursuing tertiary education.

The results for household income are mixed. While maternal patience is positively associated with household income, paternal patience is negatively associated with household income. One possible explanation is that higher patience among men may be associated with lower risk tolerance. If higher-paying occupations for men often involve greater income risk, more patient fathers may sort into more stable but lower-paying jobs. In contrast, the estimated coefficients for impulsivity indicate the expected negative association with household income. This finding is consistent with the idea that higher impulsivity can negatively affect labor market outcomes, for example through weaker planning abilities or less stable employment. As a result, higher impulsivity may lead to lower earnings and consequently lower household income.

Higher levels of parental patience are associated with greater net savings among children, suggesting that patient parents may transmit more forward-looking financial behaviors or norms that encourage saving. In contrast, higher parental impulsivity is associated with lower levels of children's net savings, which may reflect the intergenerational transmission of more present-oriented preferences and weaker saving habits. These findings are in line with hyperbolic discounting theory, as greater patience implies lower discounting of future utility, stronger future orientation, and consequently higher savings rates. In contrast, greater impulsivity is associated with stronger present bias and thus lower savings.

Higher parental patience is associated with a lower probability of being unemployed, whereas higher parental impulsivity is associated with a higher risk of unemployment. Quantitatively, the regression results indicate that a one-standard deviation increase in the mother's patience score is associated with a 1.2 percentage point decrease in the probability of the child being unemployed. Conversely, a one–standard deviation increase in the mother's impulsivity score is associated with a 1.3 percentage point increase in unemployment risk. While the effect sizes are only small in magnitude, their direction is consistent with theoretical expectations that patience supports favorable labor market outcomes, whereas more impulsive character traits may hinder them (Daly et al., 2015).

Interestingly, fathers' attitudes tend to be more predictive of children's employment status than mothers' attitudes. This pattern may reflect a stronger role of paternal characteristics in shaping labor market-related behaviors or expectations. However, these estimates are small in magnitude and statistically insignificant at conventional significance levels, suggesting that the relationship should be interpreted with caution.

In addition to labor market and other economic outcomes, the analysis also examines potential effects on children's health behaviors and physical well-being. The first health measure captures the frequency of physical activities per week. The results suggest that parental patience is generally associated with a higher number of physical activities undertaken per week. In contrast, the estimated effects of impulsivity are less clear. The positive association between parental patience and physical activity can be interpreted in line with earlier results, as more patient individuals may be better able to commit to regular, health-enhancing behaviors that yield long-term benefits. The ambiguous results of impulsivity may reflect competing forces. On the one hand, impulsivity could hinder sustained exercise routines, on the other hand, it may capture a higher desire for impulsive physical engagement, which could translate into a higher frequency of physical activity. The final dependent variable considered is the children's Body Mass Index (BMI). For this outcome, both parental patience and impulsivity appear to be positively correlated with children's BMI. The positive association with parental impulsivity may indicate the transmission of less structured health or dietary habits that could contribute to higher BMI. Nevertheless, these results should be interpreted with caution, as the coefficients are not statistically significant at conventional significance levels.

Overall, the table seems to indicate that parental time preferences are predictive of some of the children's life outcomes. Particularly, we find evidence that higher parental patience seems to be positively related to investment goods such as pursuing education and savings behavior and negatively related to the risk of being unemployed. In contrast, higher parental impulsivity is negatively related to economic outcomes of children such as savings behavior. Specifically, higher parental impulsivity tends to be negatively correlated with children's life outcomes such as education, household income, savings, and positively correlated with the risk of being unemployed. These findings are in line with theoretical predictions of hyperbolic discounting models. Individuals with greater patience discount future utility less strongly and are therefore more willing to incur short-term costs in order to obtain long-term benefits, such as investing in education or accumulating savings. Conversely, more impulsive individuals exhibit stronger present bias, which reduces incentives to save or invest. Our findings therefore document the positive effect of parental patience and the negative effect of parental impulsivity on children's life outcomes.

Despite the documented relationship between parental time preferences and children's life outcomes, the findings indicate that this influence is only small in magnitude. This

suggests that parental time preferences are predictive of children's long-term outcomes only to a limited extent. Their modest explanatory power implies that children's life outcomes are shaped not only by parental characteristics, but also by broader environmental factors and socialization processes. Therefore, while parents matter in shaping children's life outcomes, the wider social context also plays a crucial role.

In several specifications, the estimated coefficients are not statistically significant, suggesting that parental time preferences do not exert a relevant effect across all dimensions of children's life outcomes. This implies that, although parental time preferences contribute to shaping children's behavior, they are insufficient to explain any single outcome on their own. Instead, children's life outcomes are likely influenced by a broader set of character traits beyond parental time preferences alone. Accordingly, time preferences cannot be interpreted as the sole predictor of children's behavior. It might be the case that other preference dimensions, such as risk preferences, add additional explanatory power. Therefore, when seeking to explain the root causes of intergenerational persistence of economic outcomes, time preferences capture an important relationship but must be considered alongside other personality traits.

7 Limitations

7.1 Survey Data

A key disadvantage of survey-based measures is their exposure to measurement error. While survey questions offer a convenient way to collect information on individuals' self-reported preferences, responses may suffer from systematic bias and measurement error. Self-reported attitudes may, to some extent, deviate from individuals' true underlying preferences (Bertrand & Mullainathan, 2001). For instance, individuals might report a certain level of patience but behave differently in situations that actually require it. To mitigate the risk of measurement error, in this study we rely on two validated survey questions that diminish the risk of systematic response bias. Vischer et al. (2013) validate the survey question on patience by comparing responses to the SOEP measure with experimentally elicited time preferences for the same individuals. They find that the self-reported patience score included in the SOEP strongly correlates with the behavior elicited in the experimental setting, thereby supporting the validity of the measure used in this analysis. For this reason, the survey-based measures used in our study serve as a practical and representative proxy for individuals' time preferences.

7.2 Reverse Causality

Another potential concern for our analysis is reverse causality. In principle, one could argue that the observed intergenerational correlation in time preferences reflects children's

attitudes influencing those of their parents rather than the other way around. One way to test for reverse causality is to examine the correlation between parents' time preferences measured before the birth of their child and the child's time preferences measured later in the survey. The idea is to use parental preferences that were recorded at a time when the child could not yet have influenced them. If a strong correlation is still observed between parents' pre-birth preferences and the child's later preferences, this indicates that the relationship cannot be driven by children affecting their parents' attitudes. Since the parents' preferences were measured before the child existed, the direction of influence must run from parents to children. However, this test is not feasible due to data limitations. In the SOEP, children are only surveyed once they reach the age of 17. For example, for a child born in 2023, parental time preferences would need to have been measured in 2006 to conduct such a test, yet time preferences were first surveyed in the SOEP only in 2008.

Although we cannot perform this empirical check, reverse causality appears highly unlikely in this context. Because this would mean that children's preferences would have to systematically shape parental attitudes across households. This seems implausible, as core preferences are typically formed early in life and tend to remain relatively stable over time (Breitkopf et al., 2025). Moreover, parents generally act as the primary agents of socialization, transmitting attitudes and behaviors to their children rather than the reverse (Dohmen et al., 2012). Parental decision-making and attitudes therefore shape children's environments and choices to a much greater extent than children influence those of their parents. While small feedback effects, for instance, parents adjusting their behavior or preferences in response to pregnancy or childrearing, cannot be entirely ruled out, such effects are unlikely to drive the main relationship examined in this study.

8 Conclusion

Recent literature highlights that time preferences significantly influence a broad range of life outcomes, including labor market success, health outcomes, criminal behavior, and other socioeconomic outcomes (Åkerlund et al., 2016; Golsteyn et al., 2014; Moffitt et al., 2011). Nevertheless, how these preferences are formed and what role parents play in shaping these attitudes has been widely neglected. Addressing this gap is important, as intergenerational transmission might be a central mechanism driving intergenerational persistence of key economic outcomes.

The present study provides empirical evidence on the intergenerational transmission of key behavioral preferences by linking children's time preferences to their parents'. We find that time preferences of children and parents are significantly correlated. Parents who have higher levels of patience or impulsivity tend to raise children with similar traits. This is because they act as primary socialization agents, shaping children's preferences through role modeling, the norms they transmit, and the everyday decisions and experiences they

expose their children to. Our results indicate that fathers' time preferences are more predictive of children's time preferences than those of mothers. This pattern is particularly interesting when compared with evidence from other strands of the literature on the intergenerational transmission of personality traits. For instance, Dohmen et al. (2012) find that mothers play a more prominent role in shaping children's trust preferences, whereas our findings point to a stronger paternal influence in the transmission of time preferences. This suggests that the relative influence of mothers and fathers may vary across different traits. Understanding the mechanisms underlying these differences could be an interesting direction for future research.

We examine the effect of parental time preferences on life outcomes of children. We find that patience is positively associated with children's education, savings behavior, and health outcomes and negatively associated with the risk of being unemployed. In contrast, higher impulsivity seems to affect these outcomes negatively, while being positively associated with the risk of being unemployed. This is in line with predictions of hyperbolic discounting models which state that more impatient or highly impulsive individuals place excessive weight on immediate rewards relative to future benefits. As a result, they tend to underinvest in long-term payoff activities, such as education or sustained job search efforts, which worsens outcomes and increases the risk of unemployment.

Exploring the intergenerational transmission of behavioral traits is important as it allows us to deeper understand the root causes of intergenerational persistence of economic outcomes, such as income. Intergenerational persistence in income may be present because of the transmission of underlying values, character traits, and economic preferences, such as time preferences and attitudes toward risk. For example, a child raised by highly educated parents may learn to adopt a more long-term perspective in decision-making and to be less risk-seeking than a child raised by parents with lower levels of education. These differences in behavior may shape income and other economic outcomes and therefore ultimately being a central cause of intergenerational persistence of income.

Importantly, intergenerational transmission should not be understood as a fixed process determined by immutable parental endowments. Instead, by documenting that same-sex intergenerational transmission is stronger than cross-sex intergenerational transmission, we provide evidence that socialization plays an important role in shaping these traits. Our findings therefore suggest that behavioral traits are largely shaped through early childhood socialization rather than being genetically determined.

This finding is especially relevant for policymakers because it implies that intergenerational persistence of economic outcomes is not predetermined and therefore leaves scope for policy interventions. In particular, policies targeting early childhood, the period during which behavioral preferences are still developing, appear especially promising. Such policies can operate through different channels. One approach is to support parents by providing them with the resources needed to foster their children's cognitive development.

Another approach is to create environments that promote learning and skill formation, for example through investments in schools and early childhood education. While parents clearly serve as the primary agents of socialization, there remains substantial scope for policy to complement their role. As an additional side-benefit, such policies also contribute to greater social mobility.

9 References

Acland, D., & Chow, V. (2018). Self-control and demand for commitment in online game playing: Evidence from a field experiment. Journal of the Economic Science Association, 4(1), 46–62. https://doi.org/10.1007/s40881-018-0048-3

Acland, D., & Levy, M. R. (2015). Naiveté, projection bias, and habit formation in gym attendance. Management Science, 61(1), 146–160. https://doi.org/10.1287/mnsc.2014.2091

Åkerlund, D., Golsteyn, B. H. H., Grönqvist, H., & Lindahl, L. (2016). Time discounting and criminal behavior. Proceedings of the National Academy of Sciences, 113(22), 6160–6165. https://doi.org/10.1073/pnas.1522445113

Alan, S., Baydar, N., Boneva, T., Crossley, T. F., & Ertac, S. (2017). Transmission of risk preferences from mothers to daughters. Journal of Economic Behavior & Organization, 134, 60–77. https://doi.org/10.1016/j.jebo.2016.12.014

Allcott, H., Gentzkow, M., & Song, L. (2022). Digital addiction. American Economic Review, 112(7), 2424–2463. https://doi.org/10.1257/aer.20210867

Bertrand, M., & Mullainathan, S. (2001). Do people mean what they say? implications for subjective survey data. American Economic Review, 91(2), 67–72. https://doi.org/10.1257/aer.91.2.67

Bettinger, E., & Slonim, R. (2007). Patience among children. Journal of Public Economics, 91(1–2), 343–363. https://doi.org/10.1016/j.jpubeco.2006.05.010

Bhalotra, S., & Rawlings, S. B. (2011). Intergenerational persistence in health in developing countries: The penalty of gender inequality? Journal of Public Economics, 95(3–4), 286–299. https://doi.org/10.1016/j.jpubeco.2010.10.016

Bisin, A., & Verdier, T. (2001). The economics of cultural transmission and the dynamics of preferences. Journal of Economic Theory, 97(2), 298–319. https://doi.org/10.1006/jeth.2000.2678

Black, S. E., Devereux, P. J., & Salvanes, K. G. (2005). Why the apple doesn't fall far: Understanding intergenerational transmission of human capital. American Economic Review, 95(1), 437–449. https://doi.org/10.1257/0002828053828635

Breitkopf, L., Chowdhury, S. K., Kamhöfer, D. A., Schildberg-Hörisch, H., & Sutter, M. (2025). The right timing matters: Sensitive periods in the formation of socio-emotional skills (Discussion Paper No. 422). Düsseldorf Institute for Competition Economics (DICE), Heinrich Heine University Düsseldorf. Düsseldorf.

Brown, H., & Van der Pol, M. (2015). Intergenerational transfer of time and risk preferences. Journal of Economic Psychology, 49, 187–204. https://doi.org/10.1016/j.joep.2015.06.003

Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2022). The predictive power of self-control for life outcomes. Journal of Economic Behavior & Organizat 197, 725–744. https://doi.org/10.1016/j.jebo.2022.02.028

Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2024). Sophistication about self-control. Journal of Public Economics, 238, 105196. https://doi.org/10.1016/j.jpubeco.2024.105196

Daly, M., Delaney, L., Egan, M., & Baumeister, R. F. (2015). Childhood self-control and unemployment throughout the life span: Evidence from two british cohort studies. Psychological Science, 26(6), 709–723. https://doi.org/10.1177/0956797615569

DeYoung, C. G., & Rueter, A. R. (2010). Impulsivity as a personality trait. In K. D. Vohs & R. F. Baumeister (Eds.), Handbook of self-regulation: Research, theory, and applications (2nd ed., pp. 485–502). Guilford Press.

Dhar, D., Jain, T., & Jayachandran, S. (2019). Intergenerational transmission of gender attitudes: Evidence from india. The Journal of Development Studies, 55(12), 2572–2592. https://doi.org/10.1080/00220388.2018.1520214

Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2012). The intergenerational transmission of risk and trust attitudes. Review of Economic Studies, 79(2), 645–677. https://doi.org/10.1093/restud/rdr027

Falk, A., Kosse, F., Pinger, P., Schildberg-Hörisch, H., & Deckers, T. (2021). Socioeconomic status and inequalities in children's iq and economic preferences. Journal of Political Econo 129(9), 2504–2545. https://doi.org/10.1086/714992

Farré, L., & Vella, F. (2013). The intergenerational transmission of gender role attitudes and its implications for female labour force participation. Economica, 80(318), 219–247. https://doi.org/10.1111/ecca.12008

Gauly, B. (2017). The intergenerational transmission of attitudes: Analyzing time preferences and reciprocity. Journal of Family and Economic Issues, 38(2), 293–312.

Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The german socio-economic panel (soep). Jahrbücher für Nationalökonomie und Statistik 239(2), 345–360. https://doi.org/10.1515/jbnst-2018-0022

Golsteyn, B. H. H., Grönqvist, H., & Lindahl, L. (2014). Adolescent time preferences predict lifetime outcomes. The Economic Journal, 124(580), F739–F761. https://doi.org/10.1111/ecoj.12095

Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality–motivational analysis and meta-analytic review. Journal of Applied Psychology, 86(5), 837–855. https://doi.org/10.1037/0021-9010.86.5.837

Kaur, S., Kremer, M., & Mullainathan, S. (2015). Self-control at work. Journal of Political Economy, 123(6), 1227–1277. https://doi.org/10.1086/683822

Laibson, D. (1997). Golden eggs and hyperbolic discounting. Quarterly Journal of Economics, 112(2), 443–478. https://doi.org/10.1162/003355397555253

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. Proceedings of the National Academy of Sciences, 108(7), 2693–2698. https://doi.org/10.1073/pnas.1010076108

Necker, S., & Voskort, A. (2014). Intergenerational transmission of risk attitudes–a revealed preference approach. European Economic Review, 65, 66–89. https://doi.org/10.1016/j.euroecorev.2013.10.005

O'Donoghue, T., & Rabin, M. (1999). Doing it now or later. American Economic Review, 89(1), 103–124. https://doi.org/10.1257/aer.89.1.103

Penke, L., & Jokela, M. (2016). The evolutionary genetics of personality revisited. Current Opinion in Ps 7, 104–109. https://doi.org/10.1016/j.copsyc.2015.08.021

Platt, L., & Polavieja, J. G. (2016). Saying and doing gender: Intergenerational transmission of attitudes towards the sexual division of labour. European Sociological Review, 32(6), 820–834. https://doi.org/10.1093/esr/jcw037

Romer, D. (2018). Advanced macroeconomics (5th ed.). McGraw-Hill Education.

Schnitker, S. A. (2012). An examination of patience and well-being. The Journal of Positive Psychology, 7(4), 263–280. https://doi.org/10.1080/17439760.2012.697185

Solon, G. (1992). Intergenerational income mobility in the united states. American Economic Review, 82(3), 393–408.

Vischer, T., Dohmen, T., Falk, A., Huffman, D., Schupp, J., Sunde, U., & Wagner, G. G. (2013). Validating an ultra-short survey measure of patience. Economics Letters, 120(2), 142–145. https://doi.org/10.1016/j.econlet.2013.04.007

Wu, C. (2022). Intergenerational transmission of trust: A dyadic approach. Socius: Sociological Research 8, 1–15. https://doi.org/10.1177/23780231221124402

Yang, J., & Qiu, L. (2016). The impact of education on income inequality and intergenerational mobility. China Economic Review, 37, 110–125.

Zumbuehl, M., Dohmen, T., & Pfann, G. (2021). Parental involvement and the intergenerational transmission of economic preferences, attitudes and personality traits. The Economic Journal, 131(638), 2642–2670. https://doi.org/10.1093/ej/ueaa141