

**Parents' Beliefs in the "American Dream" Affect Parental Investments in Children:
Evidence from an Experiment***

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Abstract: Research in economics and psychology shows that individuals are sensitive to cues about economic conditions in ways that affect attitudes, beliefs, and behavior. We provide causal evidence that parents' beliefs about economic mobility prospects shape parental investments of time and money in children. To do so we conduct an on-line information experiment with ~ 1,000 socioeconomically diverse parents of children ages 5-15. The information treatment aimed to manipulate parents' beliefs in the possibility for future upward (downward) economic mobility in US society. The experimental results yield three conclusions. First, parents are highly sensitive to signals about future economic mobility prospects. Second, parents who are induced to believe in the likely possibility of future upward mobility increase their beliefs about the return on their own investments of time and money. Using a novel measure of time investment we developed, these parents also increase their time investments in the service of boosting children's skill. Finally, they report being more willing to pay for resources that would boost their child's skill development. Third, these patterns are true for economically advantaged and disadvantaged families alike. We discuss the implication of these results in terms of reports showing that Americans are losing faith in "The American Dream."

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I. Introduction

A central feature of U.S. culture is the belief that through hard work and determination children can fare better than their parents economically. This is the “American Dream” -- the belief in the possibility for upward economic mobility. Today, many polls suggest that adults are losing faith in the American Dream. In a 2023 survey conducted by the National Opinion Research Center (NORC), half of adults agreed that “It’s hard for [families] to improve their standard of living these days,” while the majority reported believing that “it is unlikely that young people today will have a better standard of living than their parents.” Although there is robust debate about the implications of this pessimism for people’s political beliefs, policy views, and behavior, far less is known about the effect it might have on parents’ beliefs and behavior with respect to their children.

Parents’ time and money investments shape children’s futures (Fiorini & Keane, 2014; Garcia & Heckman, 2023; Price & Kalil, 2018) and the intergenerational transmission of economic opportunity (Bjorklund, Lindahl, & Lindquist, 2010). As such it is essential to understand how parents’ beliefs about their children’s economic prospects shape parents’ choices to invest in their children. Quantitative measures of economic beliefs, implemented in surveys and experiments, have substantially advanced our understanding of individual decision-making and choices (Chopra, Haaland, & Roth, 2024; Fuster & Zafar, 2023; Kreiner, Stantcheva, & Hvidberg, 2020; Kuziemko, Norton, Saez, & Stantcheva, 2015). This paper contributes to the existing literature in three ways. First, we show that parents’ beliefs about their children’s future economic mobility are malleable and that parents respond strongly to information signals about their children’s economic prospects. Existing experimental work on how people perceive, understand, and form attitudes and decisions about economic conditions and social mobility

focus on individuals in general (e.g., Destin & Williams, 2020; Kreiner et al., 2020; Roth, Haaland, Stantcheva, & Wohlfart, 2024) we know of no such study focused on parents.

Second, to our knowledge we present some of the first causal evidence of parents' beliefs in the American Dream on their decisions about time and money investments in children. Parents choices about investments in their children's human capital are influenced by many factors. Chief among these is parents' beliefs and perceptions, both about their child's individual characteristics and abilities (Dizon-Ross, 2019; Hsin & Felfe, 2014; Giannola, 2024; Attanasio, Boneva, & Rauh, 2024), and about broader economic and structural conditions, that might support or impede these investments. Experimental evidence shows that parents' perception of higher economic mobility prospects induces higher willingness to pay out of pocket for children's higher education (Wen & Witteveen, 2021). The same patterns apply to adolescents making their own decisions to invest in their human capital. Experimental studies show that when youth perceive better opportunities for economic mobility, they are more likely to persist in the face of academic challenges and they earn higher grades (Browman et al., 2019; Browman et al., 2017; Destin & Williams, 2020). This pattern may reflect that individuals think these positive structural features of the economy will complement their own efforts and investments. It could also be true that beliefs in upward mobility induce a greater sense of optimism and sense of control over the future, which predicts greater motivation and effort (To, Wiwad, & Kouchaki, 2023).

It is not however a foregone conclusion that parents who believe more strongly in their children's upward mobility prospects will invest more in building their child's skills. In contrast, it could be true that parents' perceptions of weak opportunity for their children's upward mobility spurs parents to compensate with greater time and money investments to mitigate this risky

economic context. In the US, low- and high-income alike parents have substantially increased their time and money investments in children over the past four decades and researchers suggest this represents a growing fear of an increasingly competitive and insecure education and job market (Ramey & Ramey, 2010; Furstenberg & Kornrich, 2013). Also consistent with this hypothesis, Doepke and Zilibotti (2019) show that in countries with higher levels of income inequality and relatively weak social safety nets (such as the United States), parents invest more time in and exert more control over children's behavior than in countries with lower inequality. Doepke and Zilibotti suggest this pattern reflects parents' efforts to maximize their child's chance of success in an economic context where the risk of downward mobility is perceived to be high.

Finally, we investigate whether information signals and parental beliefs affect choices about investments in children differently for low-and high- income parents. It is well-known that high-income parents invest more than low-income parents in their children's skill development, and this fact is implicated in the pernicious inequality of opportunity for children from those respective backgrounds (Kalil, 2014; Kalil & Ryan, 2020; 2024). Wen and Witteveen (2021) and Browman et al. (2017, 2022) found that stronger beliefs in economic mobility increased the investment attitudes and behavior of parents and youth from low-socioeconomic status (SES) backgrounds but not their higher-SES counterparts. If lower SES parents feel that mobility is generally attainable, they may be more likely to internalize the possibility of economic success for their children and, as a result, invest more time and money in their children's achievement. In contrast the belief in economic mobility is possibly not necessary to motivate parents already at the top of the economic ladder. Parents from different socio-economic backgrounds may be differentially sensitive to signals about economic opportunity, may respond differently to those

signals, or both. Understanding these phenomena can provide new insights into broader questions about inequality and opportunity in the contemporary United States.

To answer these questions, we conducted an online survey experiment with a sample of 1,000 parents of children ages 5-15. Prior studies on the effects of the role of parental beliefs in shaping behaviors generally rely on a set of stylized questions and hypothetical scenarios that elicit parents' perceptions of the gain their child would enjoy in skill given a theoretical per unit increase in investment (Boneva & Rauh, 2018; Cunha, Elo & Culhane, 2022; Biroli, Boneva, Raja & Rauh, 2022; Attanasio, Cunha & Jervis, 2019). In contrast our paper adopts a simpler strategy that experimentally manipulates a concept (children's economic mobility prospects) that is "top of mind" for many parents through a video-based information provision treatment. We are interested in understanding how an exogenous shift in parental beliefs about their child's prospect of economic mobility affects parental beliefs and parental behavior in the domains of parental monetary and time investment.

Our results lead to three conclusions. First, parents are highly sensitive to signals about future economic mobility prospects of their children. Parents who were exposed to the information provision that highlights upward economic mobility perceive socioeconomic mobility as 0.17 SD more possible than parents who were exposed to information provision highlighting downward economic mobility. Second, parents who are induced to believe in the likely possibility of upward mobility for their children respond by making more investments of time in their children's skill and report being more willing to pay for resources that would boost their child's skill development. Third, we find no significant interaction by family socioeconomic status; these patterns are true for economically advantaged and disadvantaged families alike.

The remainder of this paper proceeds as follows. Section II introduces our methods and experimental paradigm. Section III reports the results. Section IV discusses the results and Section V offers concluding remarks.

II. Methods

Sample

The study was conducted online with parents recruited on Prolific Academic in October 2023 to January 2024. Most relevant to the current hypotheses, the study was designed to provide representative and generalizable insights into the psychological processes of interest through sampling parents evenly across U.S. income quintiles (17.6% first quintile, 20.4% second quintile, 19% third quintile, 22.5% fourth quintile, 20.5% fifth quintile). Parents were also well-balanced across genders (37.6% men, 61.1% women, 0.9% non-binary, 0.1% agender, 0.3% unspecified) relative to similar studies on parenting behaviors. Parents could participate in the survey if they had a child in the age group of interest 5-15 years old. The gender split for these children look the following: 51.9% boys, 46.6% girls, 0.3% non-binary, and 1.2% other. On average, parents have 2.25 children. Additionally, the samples were representative of the ideological leanings of American adults at large. On scales of political and economic conservatism (0 = *extremely liberal*, 10 = *extremely conservative*), parents reported having slightly more liberal attitudes though, on average, trended toward the midpoint on both scales ($M_s = 3.96-4.24$, $SD_s = 2.94-3.05$).

Experimental Design

The study uses an information provision experiment to exogenously shift parental beliefs about their child's prospect of economic mobility in US society to study the effect on parental

beliefs and parental behavior in the domains of parental monetary and time investment.¹ Parents were randomly assigned to either an *upward mobility condition* or *downward mobility condition*. The randomization was done using the software Qualtrics.

Both conditions utilized real-world data from the United States Census Bureau to describe trends indicating that more than 78 million Americans would experience upward (downward) mobility. This information was presented to participants in the form of videos embedded within the online survey (Haaland, Roth & Wohlfart, 2023). The videos included both graphical, textual, and audio representations of the information to foster parents' engagement with the manipulations.² After the information provision, parents answer a set of manipulation checks to control for the processing of information before moving to the outcome measures of interest: parental beliefs and behavior for monetary and time investment. The survey concludes with a set of demographic questions.

Measures

Socioeconomic Mobility: Parents beliefs that socioeconomic mobility was occurring in society was measured using a 5-item scale (Day & Fiske, 2017). Four of the five items were measured on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*) and captured parents' beliefs about both upward socioeconomic mobility (e.g., "There are a lot of opportunities for people to move up the social ladder.") and downward socioeconomic mobility (example item: "If you are born rich, it is very unlikely you will ever be poor."). The final item asked, "These days, how

¹ The name of parents' oldest child between the ages of 5-17 was entered into each survey question to provide a personalized and clear reference point.

² The upward mobility condition may be viewed at: <https://www.youtube.com/watch?v=muMaWTadhYg&t=39s>.

The downward mobility condition may be viewed at: <https://www.youtube.com/watch?v=id18dSsNz9o>.

easy is it to change one's social class?" and was rated on a scale of 1 (*very hard*) to 7 (*very easy*). The scale was coded such that higher values indicated that parents were more likely to believe that socioeconomic mobility—both upward and downward—occurred in society ($\alpha = 0.80$, $M = 3.96$, $SD = 1.31$).

Parental Beliefs: Monetary and Time Investment

The measurement of parental beliefs about the financial return on investing additional money in their child was conducted by asking parents whether they believe their child will be economically worse off, the same, or better off than themselves in the future if they were to invest an additional \$100/\$1,000 per year in the child. Answers were measured on a 11-item scale of 1 (*Much worse off economically than me*) to 11 (*Much better off economically than me*). In a similar manner, parents were asked regarding their beliefs about their child's economic future prospect if they invest daily 10 minutes/50 minutes into educational activities (e.g., reading to the child with the child). Two measures, varying the amount of time and monetary investment, were included to shed light on how parents perceive the returns to investment on the intensive margin.

Parental Behavior: Monetary and Time Investment

As a behavioral measure of time investment in their child, parents were presented with the possibility to opt-in to complete a questionnaire on their child and family. Parents were informed that they would receive a free parenting resource guide based on evidence from research studies at the end of the questionnaire.³ We consider both the decision to opt-in to complete the questionnaire and the time spent filling out the questionnaire as behavioral measures of time investment in the child.

³ For ethical considerations, all parents were given access to the resource at the end of the survey, irrespective of whether they opted in to complete the questionnaire or not. Parents were not informed about this ex-ante.

As a behavioral measure of monetary investment, we elicit parents' willingness to pay (WTP) for a monthly newsletter to help parents better understand what children need to learn to succeed in school and be financially secure in adulthood (*educational good*) and WTP for a streaming service (*non-educational good*) using the standard Becker-DeGroot-Marschak method. The WTP for the non-educational good (streaming service) can be considered as a placebo good that should not be affected by the information provision. Following Dizon-Ross/Jayachandran (2022), the WTP for the benchmark good can be also used as a control variable to reduce noise.

III. Results

Randomization Check

As evident in Table 1, the randomization was successful and pre-determined characteristics, except for slight imbalances for ethnicity, are balanced across the *upward* and *downward* mobility condition.

Manipulation Check

We first conducted a manipulation check to test whether the upward mobility condition increased parents' beliefs about socioeconomic mobility (Table 2). The manipulation was successful as parents who were randomly assigned to the upward mobility condition were significantly more likely to think that socioeconomic mobility was possible compared to parents who were randomly assigned to the downward mobility condition ($\beta = 0.170$, 95% CI [0.046, 0.294], $p = .007$).

Parental Beliefs: Monetary and Time Investment

Parents in the downward mobility condition perceive the returns to both monetary and time investment significantly lower than parents in the upward mobility condition. The effect holds for both amounts of time (10 minutes where $\beta = 0.265$, 95% CI [0.142, 0.389], $p = .00$, and

50 minutes where $\beta = 0.279$, 95% CI [0.156, 0.402], $p = .00$) and monetary investment (\$100 where $\beta = 0.245$, 95% CI [0.121, 0.368], $p = .00$ and \$1000 where $\beta = 0.22$, 95% CI [0.095, 0.343], $p = 0.001$). The effect is however decreasing with the intensity of the investment, indicating a decreasing relationship.

Overall, the observed pattern can be interpreted that parents perceive monetary and time investment in their children as complements rather than substitutes to the perceived economic mobility prospects of the children.

Parental Behavior: Monetary and Time Investment

Parents in both the upward and downward condition opt-in to partake in the questionnaire to access an educational resource to a large degree (64%) that statistically cannot be differentiated. However, parents in the upward mobility condition spent significantly more time filling out the questionnaire ($\beta = 13.43$, 95% CI [3.79, 23.07], $p = .006$).

Thus, the information provision does not lead to a shift in the extensive margin, but it leads to a shift in the intensive margin. In hindsight, the dimension of parental time investment could have been made more time intensive to create more variation in parental behavior, but the measure was difficult to calibrate ex ante.

Finally, for monetary investment, parents in the upward mobility condition show a significantly higher WTP to pay for the monthly newsletter than parents in the downward mobility condition ($\beta = 1.54$, 95% CI [0.27, 2.81], $p = .012$). Parents' WTP in the upward and downward condition are not statistically significantly different from each other for the streaming service ($\beta = 0.345$, 95% CI [-0.09, 0.78], $p = .125$). It is reassuring that the WTP for the placebo good that is non-educational is unaffected by the information provision and it speaks in favor that the observed effect for the educational good is not spurious.

Heterogeneity/Subgroup Models

The treatment impacts do not vary systematically with the parental socioeconomic status (SES). We constructed SES as a standardized composite of parents' current annual household income, the highest level of education that they or the other person who they considered their child's parent received, and their subjective beliefs about where they stood in the socioeconomic hierarchy. If parental SES is modeled by income alone there is also no systematic relationship present. In a similar manner, the outcome measures do not vary systematically with the gender of the child or the parent. For the latter, the analyses are also limited by the sample size. For an overview regarding the subsamples, please consider Figures 1 to 8.

IV. Conclusion

This is the first study to our knowledge showing the causal impact of parents' beliefs about future economic mobility prospects (awaiting their children) affect parents' beliefs about the return on their investments as well as their choices in how to investment their time and money. Overall, the observed pattern of these results can be interpreted that parents perceive monetary and time investment in their children as complements rather than substitutes to the perceived economic mobility prospects of the children. These findings could have important implications for understanding parents' decisions about child investments today. Not only is there evidence that Americans are losing faith in the American Dream, but, paradoxically, they are doing so at a time when unemployment rates are historically low (<https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.html>) and the economic returns to a college degree remain high. This suggests a meaningful mismatch between parents' economic perceptions and the stakes of their children's educational attainment. Given that we found pessimism about economic mobility leads parents to underestimate the returns on

their investments and invest less in their children's enrichment, it suggests current attitudes about the economy could jeopardize children's educational futures. The source of these erroneous beliefs is unknown, though some suggest the framing of economic data in the media as possibly relevant (Lowrey, 2024). Results from this study open up new directions for future research.

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Table 1: Balance Table

	(1) Full	(2) Downward	(3) Upward	(4) Difference
Parents				
Age	41.30 (8.56)	41.16 (8.58)	41.44 (8.54)	0.28 (0.55)
Indicator mother	0.62 (0.49)	0.62 (0.49)	0.62 (0.49)	-0.01 (0.03)
Both parents college	0.74 (0.44)	0.75 (0.43)	0.73 (0.44)	-0.02 (0.03)
Income (categorical)	9.97 (6.88)	10.08 (6.89)	9.87 (6.88)	-0.21 (0.44)
Income quintile	3.08 (1.39)	3.10 (1.36)	3.06 (1.42)	-0.05 (0.09)
Non-White	0.29 (0.45)	0.32 (0.47)	0.25 (0.44)	-0.06** (0.03)
Indicator Black	0.15 (0.35)	0.15 (0.35)	0.15 (0.35)	-0.00 (0.02)
Indicator Hispanic	0.06 (0.24)	0.07 (0.26)	0.05 (0.21)	-0.03* (0.02)
Indicator Asian	0.03 (0.16)	0.04 (0.19)	0.02 (0.13)	-0.02** (0.01)
Indicator Other Race	0.01 (0.07)	0.01 (0.09)	0.00 (0.04)	-0.01 (0.00)
Children				
Indicator boy	0.53 (0.50)	0.51 (0.50)	0.54 (0.50)	0.03 (0.03)
Age of child	11.78 (3.74)	11.66 (3.65)	11.89 (3.82)	0.23 (0.24)
Number of children	2.25 (1.14)	2.19 (1.10)	2.31 (1.18)	0.12 (0.07)
Indicator one child	0.27 (0.45)	0.29 (0.45)	0.26 (0.44)	-0.02 (0.03)
Public school	0.79 (0.41)	0.79 (0.41)	0.79 (0.41)	0.00 (0.03)
Survey duration (min.)	41.25 (388.43)	57.54 (549.07)	25.18 (46.59)	-32.37 (24.60)
N	997	495	502	997

Table 2: Treatment Effects

	(1) Full	(2) Downward	(3) Upward	(4) Difference
Manipulation Check				
Perceived Societal Social Mobility	3.95 (1.31)	3.84 (1.31)	4.06 (1.30)	0.22*** (0.08)
Parental Beliefs				
Money ROI 100 USD	6.89 (1.99)	6.64 (1.97)	7.13 (1.98)	0.49*** (0.13)
Money ROI 1000 USD	8.17 (1.85)	7.97 (1.84)	8.38 (1.84)	0.41*** (0.12)
Time ROI 10 Minutes	7.17 (1.94)	6.91 (1.87)	7.42 (1.97)	0.51*** (0.12)
Time ROI 50 Minutes	8.46 (1.82)	8.20 (1.82)	8.71 (1.78)	0.51*** (0.11)
Parental Behavior				
Opt-in time investment	0.64 (0.48)	0.64 (0.48)	0.64 (0.48)	-0.00 (0.03)
Duration on quest. (in seconds)	90.89 (61.92)	84.14 (48.18)	97.57 (72.46)	13.43*** (4.91)
WTP newsletter (USD)	13.53 (10.19)	12.76 (10.26)	14.30 (10.06)	1.54** (0.65)
WTP streaming (USD)	4.36 (3.52)	4.19 (3.55)	4.53 (3.48)	0.34 (0.22)
N	997	495	502	997

Table 3: Pairwise correlations

Variable	Money ROI 100\$	Money ROI 1000\$	Time ROI 10 Minutes	Time ROI 50 Minutes	Opt-In Quest.	Duration Quest.	WTP Newsletter	WTP Streaming
Money ROI 100\$	1.000							
Money ROI 1000\$	0.617*	1.000						
Time ROI 10 Minutes	0.704*	0.528*	1.000					
Time ROI 50 Minutes	0.477*	0.709*	0.630*	1.000				
Opt-In Quest.	-0.027	0.012	-0.046	0.031	1.000			
Duration Quest.	0.007	0.047	0.053	0.081*		1.000		
WTP Newsletter	0.050	0.192*	0.085*	0.198*	0.315*	0.088*	1.000	
WTP Streaming	0.061	0.221*	0.071*	0.180*	0.186*	0.011	0.499*	1.000

*Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Heterogeneity: Interactions with SES and Subsamples

Figure 1: Monetary ROI 100 USD

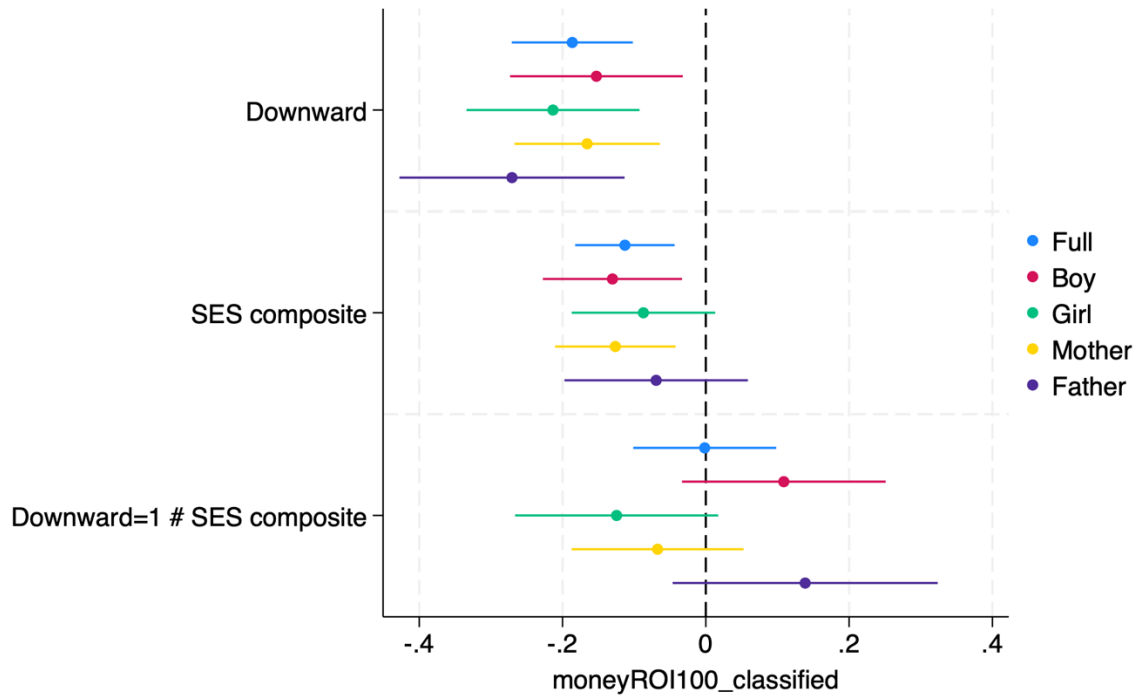


Figure 2: Monetary ROI 1000 USD

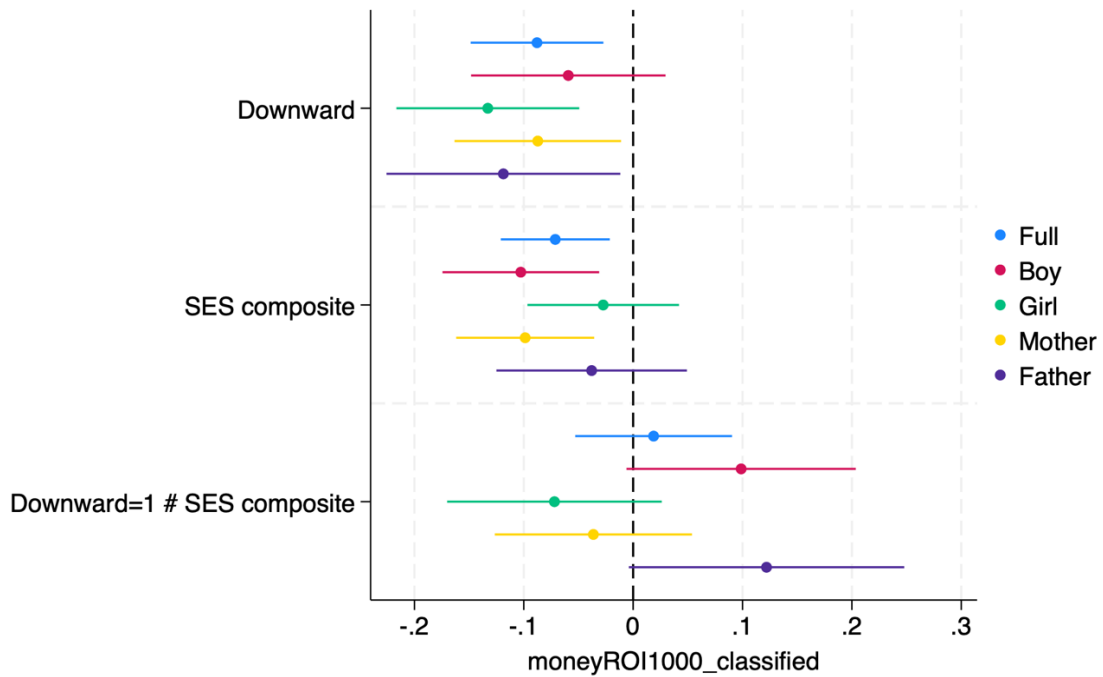


Figure 3: Monetary ROI 10 Minutes

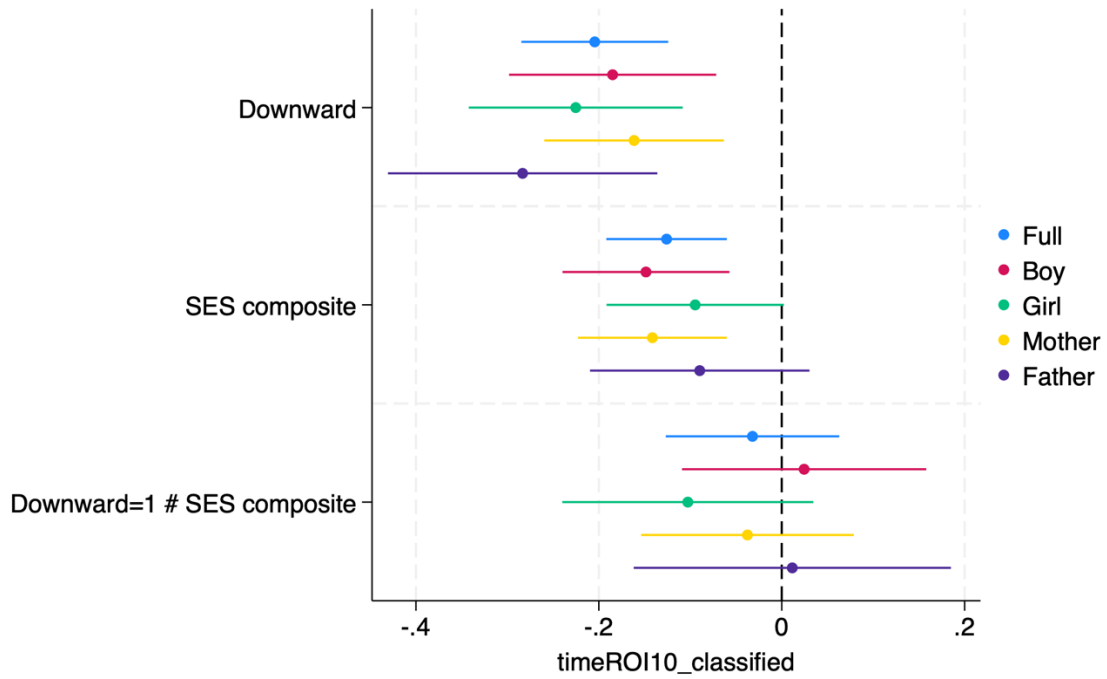


Figure 4: Monetary ROI 50 Minutes

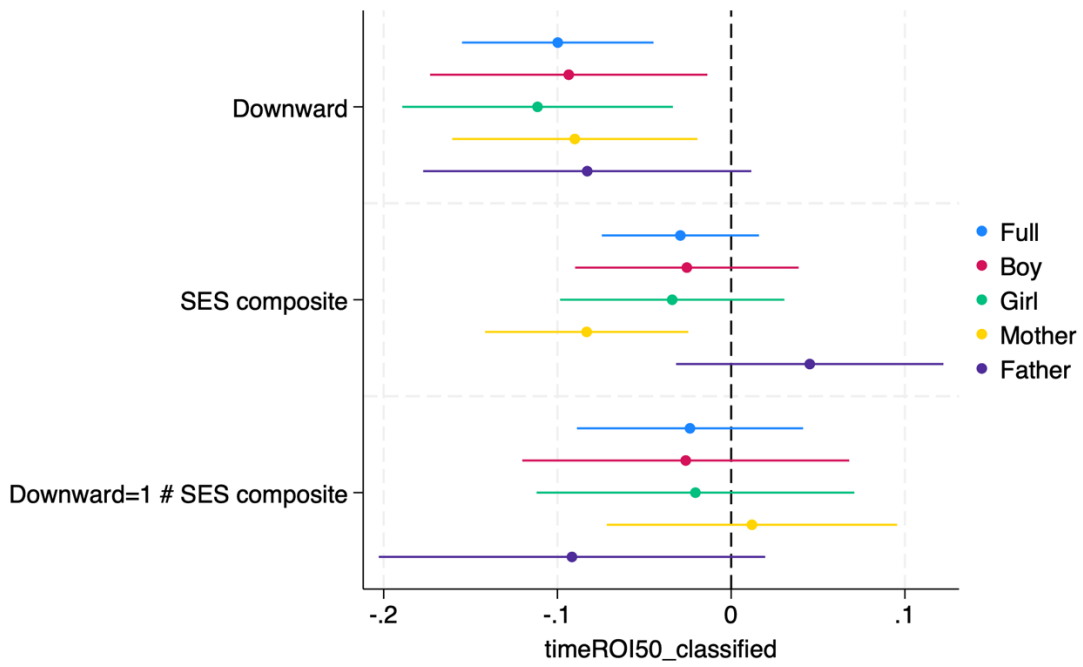


Figure 5: Parental Behavior: Time investment – Extensive margin: Opt-in to fill out questionnaire

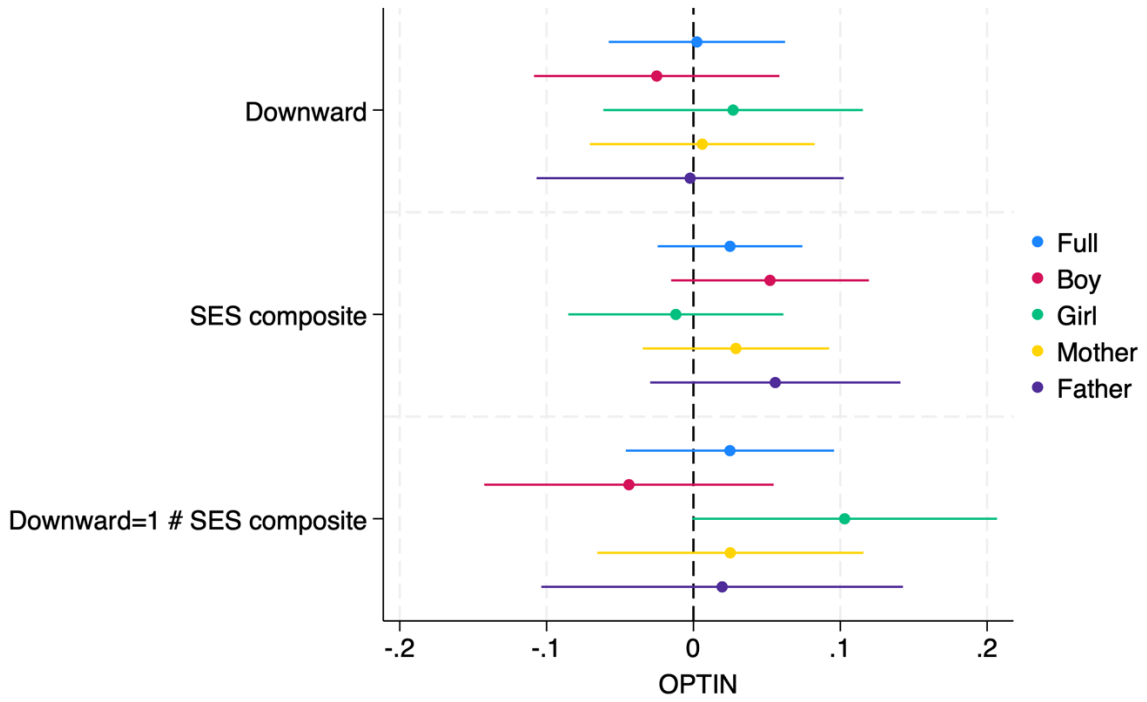


Figure 6: Parental Behavior: Time investment – Intensive margin: Time spent to fill out questionnaire

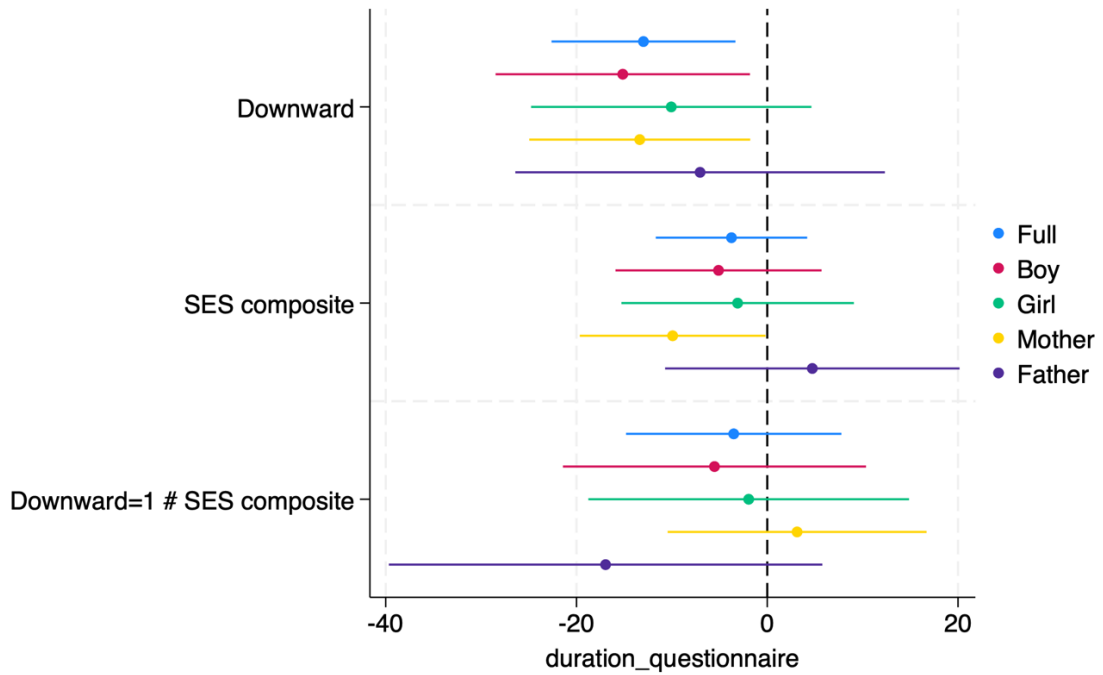


Figure 7: Parental Behavior: Monetary investment – WTP educational newsletter

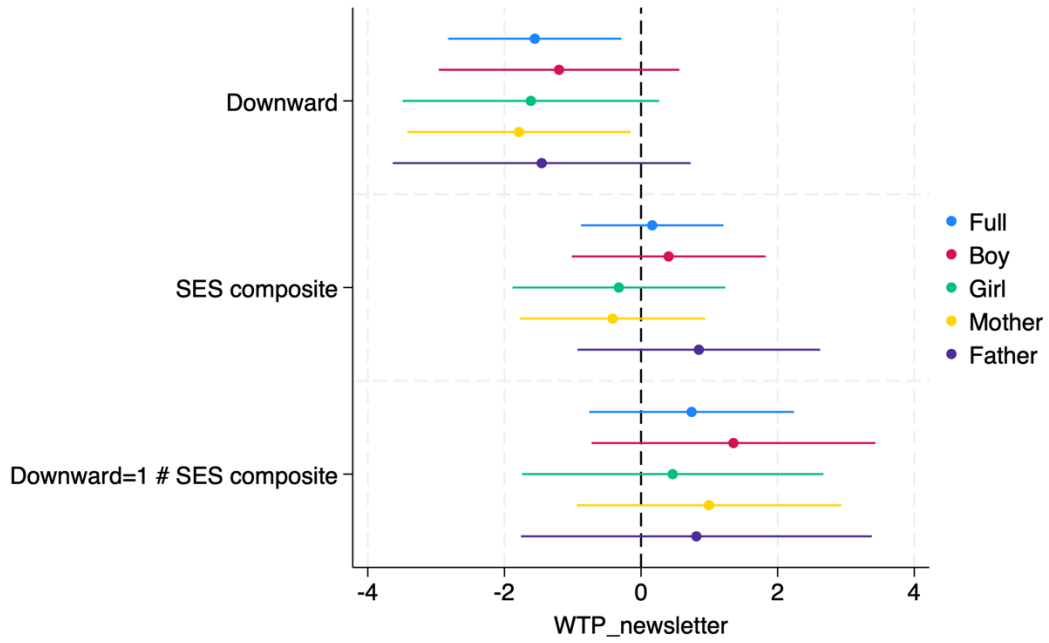


Figure 8: Parental Behavior: Monetary investment – WTP streaming service

