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Universität Zürich
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Are parents an obstacle to gender-atypical occupational choices?*

Stefan Wolter[1,2,3] and Thea Zöllner †[1]

[1] University of Bern
[2] Swiss Coordination Centre for Research in Education, Aarau
[3] CESifo IZA

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Abstract

Despite numerous measures intended to enhance gender equality, gender-specific study and career choices remain a persistent concern for policymakers and academics globally. We contribute to the literature on gendered career choices by focusing on explicitly stated parental preferences for their children's occupations, using a large-scale randomized survey experiment with adults (N=5940) in Switzerland. The focus on parents (and hypothetical parents) is motivated by the observation that adolescents consistently mention their parents as the single most important factor influencing their career choices. The surveyed adults are presented with a realistic choice situation, in which their hypothetical daughter or son has been proposed two different training occupations. The pair of occupations presented to the adults is drawn from a random sample of 105 pairs of occupations, and the respondents are not informed about the gender distribution of the two occupations. Results show that adults are gender-neutral when advising a daughter but have a pronounced preference for male-dominated occupations when advising sons. Preferences are almost identical for parents and non-parents and across age cohorts of adults.

Keywords: Gender, Occupational choice, Career advice, Vocational Education
JEL Classification: J24, J16

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†Communicating author: University of Bern, Department of Economics, Schanzeneckstrasse 1, CH-3001 Bern, Switzerland; thea.zoellner@unibe.ch.

1 Introduction

Gender-specific career and study choices have preoccupied politicians and academics for several decades and have led to a practically innumerable number of initiatives, programs, and studies. These initiatives and programs generally aim to achieve a balanced gender distribution in study subjects and occupations, while also seeking to attract women to STEM fields, which are considered promising and more financially rewarding (Hegewisch et al., 2010; Kirkeboen et al., 2016; Black et al., 2021; Carlana and Fort, 2022; Del Carpio and Guadalupe, 2022)). The academic literature on gendered career choices identifies a multitude of determinants (e.g., skills, personality traits, social environment Buser et al. (2017); Tungodden and Willén (2023)), making it illusory to expect a single measure to bring about significant changes. Therefore and not surprisingly, most of these programs cannot be described as successful if one analyzes the sometimes very slow changes in the career and study choices of women and men.

In this article, we examine a specific determinant that can encourage or discourage gender-specific career and subject choices and has not gotten the same attention in the past as other potential factors: parents. We investigate whether parents provide gender-blind career advice or whether parents introduce obstacles when their child wants to pursue gender-atypical occupations. In particular, we analyze, through a large-scale survey experiment in Switzerland involving almost 6,000 adults, the advice parents provide to their daughters or sons regarding which vocational education and training their children should opt for, i.e., which occupation or apprenticeship their child should learn. We use a hypothetical decision-making situation in the experiment. Although this situation is highly realistic for the respondents, there is still the potential limitation that the decisions "in the lab" do not always have to correspond to decisions in the real world. In our opinion, however, the advantage of the experimental setting outweighs this, as it enables causal statements to be made and various studies with choice experiments have also shown that these can be very well suited for breaking open the black box of decisions and gaining insights that help to better understand real decisions (Reuben et al., 2017; Quaife et al., 2018).

Two reasons motivate us for the focus on parents. First, parents play an important role in study and career decisions from early childhood to adolescence, either indirectly as role models or directly through advice and recommendations (Müller, 2021; Carlana and Corno, 2024)[1]. Second, and this is specific to our empirical setting in Switzerland, career choice decisions of two-thirds of an age cohort who opt for an apprenticeship, take place at an age at which the adolescents themselves cannot sign the employment and training contract with the training company. In other words, parents have a de facto right of co-decision or veto when their children choose an apprenticeship.

In a nutshell, the survey experiment used here is as follows: The adult respondents have to

[1] The Swiss State Secretariat for Education, Research and Innovation monitors annually the educational choices of students at the end of compulsory schooling with a survey of a representative sample of school-leavers. Among other things, these young people are also asked to rank the most important people who influenced their career choice. Parents consistently rank first every year, followed by teachers, classmates, and other groups of people (see e.g. Gfs (2023).

decide from a random pair of occupations which of the two occupations they recommend to a son or daughter. Respondents see one pair of occupations from a pool of 105 random pairs of occupations, each pair consisting of one male-dominated and one female-dominated occupation. However, the respondents are not informed about the gender distribution in the two occupations. While parents give advice to hypothetical sons or daughters, the decision-making situation for adults in Switzerland is a very realistic situation that a large majority of respondents have been, are, or will be confronted with. The career decision is high-stakes, given that over a span of three or four years, students invest not only in general skills but also in job-specific skills.

The paper contributes to three different but related strands of literature. First, it contributes to the literature on the determinants of gender-stereotypical choices. A large literature on occupational choice determinants examines gender differences in innate abilities, comparative advantage or preferences (Baron-Cohen, 2005; Breda and Napp, 2019; Kuhn and Wolter, 2022), or the impact of culture (Guiso et al., 2008), exposure to stereotypes (Carlana, 2019), and the social environment (Bursztyn and Jensen, 2015; Brenøe and Zölitz, 2020; Canaan and Mouganie, 2023), including parents (Tungodden and Willén, 2023). Addressing the persistent gender gap in educational and occupational choices (Altonji et al., 2012; Blau and Kahn, 2017) and recognizing the diverse determinants of occupational choices, a number of empirical studies assess numerous measures and initiatives, such as girls' coding clubs, support networks (Carlana et al., 2022) or the influence of role models (Breda et al., 2020; Porter and Serra, 2020). Despite some exceptions (Delfino, 2021), this literature has primarily focused on attracting girls to atypical occupations, particularly to STEM fields. However, studying women alone does not provide a comprehensive understanding of non-gendered occupational choices; an examination of men's study and career choices is also necessary. We contribute to the literature by developing a survey experiment that allows us to measure gender bias in parental career advice for sons and daughters.

Second, the paper contributes to the literature investigating the decision process of occupational choice, i.e what sort of information students receive on occupations. Students can receive through various channels information on occupations or study fields, such as career events (Goller and Wolter, 2023), online platforms (Palffy et al., 2023) or personal conversations (Gallen and Wassermann, 2021). A growing literature investigates the effect of information provision on career choices, including career advice from teachers (Carlana, 2019) and working professionals (Gallen and Wassermann, 2021), which are shown to be gender-biased. We extend the literature by investigating whether career advice from parents is gender-biased.

By this, the paper contributes, third, to the small but emerging literature concerning the impact of parental influence on the preferences and decisions of children. Parents may shape students' occupational preferences indirectly by, for instance, the intercultural transmission (Doepke and Zilibotti, 2017; Kuhn and Wolter, 2023; Fontenay and González, 2024) or directly, for instance, through adjustments of students' choices due to (perceived) parental preferences (Müller, 2021; Brenøe and Rutnam, 2024; Carlana and Corno, 2024). We contribute to the literature by analyzing parental advice in an experimental setting that allows us to causally investigate gender differences in parental career advice.

Our empirical results show two things; first, the preferences of fathers and mothers are only gender-stereotypical for sons, i.e. they recommend sons the male-dominated occupation more often than the female-dominated occupation. Contrary to this, the career recommendations for daughters are almost equally divided between typical female or male occupations. Second, we find no differences in these patterns between i) adults who are or have been parents and those who are not or have not yet become parents and ii) age cohorts.

The remainder of the paper is structured as follows: After briefly describing the Swiss education system, we describe our experimental setting. Subsequently, we describe our data sources and present first descriptive evidence. Following this, we present our empirical approach and our results. We conclude by summarizing and discussing our results.

2 The Swiss setting

In Switzerland, after completing eleven years of schooling (K+9), students have the choice to continue a three to four years post-compulsory education either in a vocational education and training program or general education, which leads to a university entrance diploma. Two-thirds of students transitioning to upper-secondary education opt for the vocational education and training (VET) path, and almost ninety percent of these choose a firm-based version of VET-training, an apprenticeship (SERI, 2022).

The apprenticeship system possesses four specific features that create an inherently ideal environment for analyzing parental career advice: First, students pursuing an apprenticeship can choose from a large variety of around 240 occupations, occupations that vary in their aggregate and skill-specific (mathematics, science, school language, foreign language) cognitive requirements. The large variety of occupations accommodates students with diverse academic performances across all fields of study.

Second, as in other countries, also the Swiss apprenticeship market is shaped by strong gender-typical occupational choice (SCCRE, 2023). That is, women typically are underrepresented in STEM occupations, more specifically in math-intensive occupations and men are underrepresented in health, services, and social work.

Third, parents wield substantial influence over their children, given the children's young age when deciding on an apprenticeship (Gfs, 2023). Parents legally must sign the apprenticeship contract of their underage children, providing parents with a veto right.

Fourth, young adults realistically receive several training offers in different occupations. Career counseling is mandatory in schools providing students with possibilities to get to know different apprenticeship and get in touch with prospective employers. Prospective apprentices usually visit career fairs and do trial apprenticeships before deciding on a specific occupation and employer. Because, for several years now, the amount of open training places has exceeded demand (Gfs, 2023), it is even quite common for young people to be offered a training place by an employer without having formally applied for it. Regardless of the important role that parents play in the decision-making process of young people, it is therefore quite realistic that a

daughter or son will come home with one or more training offers that have come about through one of these channels (career guidance, careers fairs or trial apprenticeships).

3 Experimental Design

Our goal is to study whether parents give gender-blind career advice to their children or whether parents introduce obstacles into their child's path when pursuing atypical occupations. To causally analyze the effect of a child's gender on parental career advice, participants give occupational advice in a hypothetical parent-child scenario. Specifically, parents advise their daughter or son on which vocational education training their child should opt for, i.e., which occupation/ apprenticeship their child should learn. We introduce exogenous variation in the gender of the respondent's (hypothetical) child, as well as in the child's career choices. First, participants are randomized at the individual level into two groups: (1) group 1 is assigned to a hypothetical female child, and (2) group 2 is assigned to a hypothetical male child. We stratify randomization on gender, language region, and sex. Half of the participants are randomized into group 1 and the other half into group 2. Second, participants are presented with a random draw of two occupations (job offers of their hypothetical child), always including one female-dominated occupation and one male-dominated occupation. Both occupations are similar in their aggregate cognitive skill requirements (mathematics, science, language).

Prior to giving advice, respondents receive the information (see Figure A1b, A1d) that their son or daughter has applied for various apprenticeships and has been accepted for two positions in companies of comparable quality. Both occupations require similar cognitive requirements, and the child expresses equal interest and feels equally well-prepared for both apprenticeships. Importantly, one apprenticeship is female-dominated, and the other is male-dominated. However, we deliberately withhold information regarding which occupation falls into each category.

Our design has four distinct methodological advantages: First, our choice question, closely mirroring the transition from compulsory schooling to apprenticeship, is realistic and widely known among Swiss residents: Given the prominent role of apprenticeships in the Swiss labor market (SERI, 2022; Gfs, 2023), the choice question is arguably familiar to respondents, both those with and without children. Approximately two-thirds of parents find themselves in a situation where their child pursues an apprenticeship, seeking advice and, potentially, requiring them to sign the apprenticeship contract and many parents and non-parents have experienced the same situation with their parents in their adolescence.

Second, the setting allows us to analyze career advice patterns of a representative sample of the Swiss population (language regions, age, sex) and across almost the complete spectrum of gender-stereotypical occupations, for instance, in terms of sectors, skill requirements, type of work, and degree of familiarity. We include 118 female- (female-share greater than 60 percent) and male-dominated (female share lower than 40 percent) occupations, and randomly create 105 choice pairs[2]. Each occupation pair consists of one female-dominated and one male-dominated

[2]We include all apprenticeships for which we have data on the cognitive skill requirements. We exclude occupations with a female share between 41 and 59 percent.

occupation with similar overall cognitive requirements.

Third, our sample includes both respondents with and without children. By including respondents with and without children, we can analyze a broader picture of career advice. Including respondents who do not (yet) have children allows us to include what respondents would advise their child in the future. While respondents with children may potentially rationalize past choices they made for their children.

Fourth, we actively choose to mirror the scenario in which children seek advice after applying for an occupation, as opposed to the prior stage of exploring various occupational options. Consequently, our selected setting facilitates an examination of whether parents might actively introduce obstacles into their child's path when pursuing gender-atypical occupations.

4 Data

Administered through a survey institute, about 6000 respondents between the ages of 25 and 60 participated in the online survey experiment between September and October 2023. The respondents are representative for the country in terms of language regions, age, and sex. Table 1 reports summary and balance statistics of the survey data. The gender of the respondents is perfectly balanced with 50% men and 50% women. Column 2 shows the means for respondents who were assigned a hypothetical son, and column 3, respectively, shows the mean values for respondents with a hypothetical daughter. Column 4 reports p-values for the two-sided test of equivalence in means (sons/daughters). Overall, the sample is well-balanced.

To create occupation pairs that are equally demanding in their cognitive skills, we use a composite index of cognitive skill requirements in language, foreign language, science, and maths. For each occupation and within each category, skills range from a scale between 1 to 100, where 1 is the least demanding and 100 the most demanding[3].

Furthermore, we supplement our survey data with Federal Statistical Office data on occupational characteristics (female share, entrants) and salary data from the Swiss Earnings Structure Survey[4]. The salary data includes the median monthly salary of a 30-year-old person with a vocational education and training background and 10 years of working experience in the canton of Berne. For eight occupations we had to impute the salary by using the median salary from their respective occupational groups.

[3] https://www.anforderungsprofile.ch/?content=home&spr=fr
[4] https://www.lohnrechner.ch

Table 1: **Descriptives and balancing table for gender treatment**

	Full Sample	Sons	Daughters	p-Value
Respondents characteristics				
Male	0.50	0.50	0.50	0.94
	(0.50)	(0.50)	(0.50)	
D-CH	0.71	0.71	0.71	0.77
	(0.45)	(0.45)	(0.4)5	
W-CH	0.25	0.25	0.25	0.85
	(0.43)	(0.43)	(0.43)	
I-CH	0.04	0.04	0.04	0.86
	(0.20)	(0.20)	(0.20)	
No Children	0.48	0.47	0.49	0.09
	(0.50)	(0.50)	(0.50)	
Age	43.12	43.12	43.13	0.88
	(10.23)	(10.22)	(10.24)	
Swiss Born	0.72	0.71	0.72	0.30
	(0.45)	0(.45)	(0.45)	
Vocational educ.	0.66	0.65	0.66	0.26
	(0.47)	(0.48)	(0.47)	
Academic educ.	0.27	0.28	0.27	0.14
	(0.44)	(0.45)	(0.44)	
Other educ.	0.07	0.07	0.07	0.61
	(0.26)	(0.25)	(0.26)	
Occupational characteristics				
Entrants share fem. occ.	0.49	0.50	0.49	0.84
	(1.07)	(1.08)	(1.06)	
Entrants share male. occ.	0.44	0.44	0.44	0.85
	(0.65)	(0.66)	(0.65)	
Observations	5,940	2,969	2,971	

Note: Mean values of respondents and occupational characteristics. Column 4 reports p-values for the two-sided test of equivalence in means (son/daughters). D-CH = German-speaking; W-CH = French-speaking; I-CH = Italian-speaking Switzerland. Standard deviations are in parentheses.

5 Results

In this section, we first show descriptive evidence followed by detailed information on our empirical approach. In the analyses, we first analyze whether the recommendations differ by the gender of the hypothetical child as well as whether the recommendations differ across occupations with different characteristics (see section 5.3). Second, we analyze variations in recommendations among surveyed adults based on personal characteristics. Specifically, we examine interaction effects between the gender of the hypothetical child and the respondent's characteristics (see section 5.4).

5.1 Descriptive results

Table 2 shows how many respondents advise their sons/daughters to learn the female- and male-dominated occupation in percent. Parents recommend sons less often the female-dominated occupation (39.7 percent) compared to daughters (48.7 percent) and respectively, respondents recommend less often a male-dominated occupation to daughters (51,3 percent) compared to sons (60.3 percent). While respondents recommend sons more often recommended the male-dominated occupation (60.3 percent) compared to the female-dominated occupation (39.7 percent), respondents nearly equally often recommend the female- (48.7 percent) or the male-dominated (51,3 percent) occupation to daughters. These results suggest, that parental career advice is gendered

Table 2: **Descriptives**

	Career Advice [%]	
	Female-dominated occupation	Male-dominated occupation
Son	39.66	60.34
Daughter	48.70	51.30

Note: The table shows how many respondents advise their sons/daughters to learn the female- or male-dominated occupation in percent.

only for boys but not for girls.

5.2 Empirical Strategy

To assess the impact of the child's gender on parental career advice further, we estimate the following OLS regression:

$$OccAdvice_i = \alpha_0 + \alpha_1 GenderChild_i + X_i + \epsilon_i$$

where $OccAdvice_i$ is a dummy variable equal to zero if respondent i recommends the female-dominated occupation and equal to one if the respondent recommends the male-dominated occupation. $GenderChild_i$ is the gender of the hypothetical child and is zero if respondents advise a daughter and one if respondents advise a son. X_i are control variables, including respondents' characteristics (gender, age, type of education, political affiliation, language region, birth country), characteristics of the occupations (math-requirement, quintile of overall cognitive requirement, sector, entrants share of female occupation and male occupation), and order of display. ϵ_i is an error term. We estimate robust standard errors and apply population weighting, given that the Italian-speaking language region is proportionally oversampled in our survey sample.

5.3 Child gender, occupational and respondents characteristics

The main results of our experiment are presented in Table 3. The result in column 2 suggests that having a son as opposed to a girl increases the probability of parents recommending a male-dominated occupation by 9 percentage points, similar to the averages presented in Table 2. Our results are, therefore, robust to including controls. For instance, although showing the male-dominated occupation first increases the probability of recommending male-dominated occupations, including the randomization order does not affect the coefficient of interest α_1. Given that differences in salaries between occupations could be a major predictor for career advice, we test whether differences the current salaries between the two career choices of the child affect career advice. Differences in monthly salaries do not explain the gendered career advice. While an increase in the difference in monthly salary favoring the male-dominated occupation increases the probability of advising the male-dominated occupation, the effect is not robust to including controls (see Table A3).

Furthermore, we find socially stable preferences. That is, respondents with children may

Table 3: **Result: Parental career advice**

	Full sample		Split Sample	
	(1)	(2)	Son (3)	Daughter (4)
Son	0.09**	0.09**		
	(0.013)	(0.013)		
Respondents characteristics				
Male		0.04**	0.05*	0.04*
		(0.013)	(0.019)	(0.019)
Having children		0.00	0.02	-0.02
		(0.014)	(0.019)	(0.020)
41-50 years		0.00	0.00	-0.00
		(0.017)	(0.023)	(0.024)
51-60 years		-0.02	-0.02	-0.02
		(0.016)	(0.023)	(0.023)
Occupational characteristics				
Share entrants female occupation		-0.00	-0.00	-0.00
		(0.008)	(0.012)	(0.012)
Share entrants male occupation		0.06**	0.06**	0.07**
		(0.011)	(0.015)	(0.015)
Other				
Male-dominated occ first		0.03*	0.02	0.04*
		(0.013)	(0.018)	(0.019)
Constant	0.51	0.27	0.18	0.44
	(0.010)	(0.079)	(0.110)	(0.113)
Controls: Respondents	No	Yes	Yes	Yes
Controls: Occupation	No	Yes	Yes	Yes
Controls: Other	No	Yes	Yes	Yes
Observations	5,940	5,940	2,969	2,971

Note: Columns (1) and (2) present the estimation results of having a son as opposed to a girl on parental career advice. The dependent variable career advice is zero if parents recommend the female-dominated occupation, one for the male-dominated occupation. Column (3) and (4) present split samples: (3) boys, (4) girls. Control variables include respondents' characteristics (political affiliation, language region, birth country, type of education), characteristics of the occupations (math-requirements, quintile of overall cognitive requirement, sector). The baseline age category is 25-40. Robust standard errors are in parentheses. The sample is weighted with population weights. Significance levels: * p<0.05, ** p<0.01.

systematically differ in their responses from respondents without children. However, we do not find any significant effect suggesting that having children affects whether respondents recommend a female- or male-dominated occupation (see Table 3, Column 2)[5]. Further, we find no effect of age on occupational advice (see Table 3 and Table A2), but significantly stronger effects in the Italian-speaking part of Switzerland for sons and male-dominated occupations (see Table A1).

Parental recommendations are, however, partially influenced by specific occupational characteristics. For our analyses we use occupations with varying levels of familiarity and popularity among students, as indicated by the share of entrants in both the male-dominated and female-dominated occupation. We find that while the share of entrants of the female-dominated occupation does not significantly affect the career advice of the hypothetical parents, more frequently chosen male-dominated occupations increase the probability that respondents recommend the male-dominated occupation both for sons and daughters (see Table 3, Column 3,4).

[5]The interaction effect between gender of the hypothetical child and the indicator variable whether respondents have children or not is insignificant at the 1 and 5 percent-level (see Appendix, Table A2).

5.4 Interaction effect of child's gender with parents' gender and education

Both mothers and fathers give gendered occupational advice (see Table 6). Mothers and fathers recommend more often the male-dominated occupation to sons (see Table 6). Fathers recommend the male-dominated occupation significantly more often to sons and daughters (see Table 3), whereas mothers nearly equally often recommend the male- and female-dominated occupation to daughters (see Table 4).

Furthermore, our results suggest that parents' education significantly affects the advice they provide. While parents with a vocational education give highly gender-biased recommendations, parents with an academic education do not discriminate between sons and daughters (see Table 6). Parents with vocational education recommend the female-dominated occupation less often to sons than to daughters, parents with academic education recommend the male-dominated occupation as opposed to the female-dominated occupation slightly more often to both daughters and sons (see Table 5).

Table 4: **Descriptives: Parental Gender**

	A: Career Advice of Fathers [%]	
	Female-dominated occupation	Male-dominated occupation
Son	37.46	62.54
Daughter	46.70	53.30
	B: Career Advice of Mothers [%]	
	Female-dominated occupation	Male-dominated occupation
Son	41.89	58.11
Daughter	50.73	49.27

Note: The table shows how many fathers (A) and mothers (B) advise their sons/daughters to learn the female- or male-dominated occupation in percent.

Table 5: **Descriptives: Parental Education**

	A: Parents with VET Education [%]	
	Female-dominated occupation	Male-dominated occupation
Son	37.74	62.26
Daughter	49.43	50.57
	B: Parents with Academic Education [%]	
	Female-dominated occupation	Male-dominated occupation
Son	44.67	55.33
Daughter	46.55	53.45
	C: Parents with Sek II Education [%]	
	Female-dominated occupation	Male-dominated occupation
Son	38.09	61.91
Daughter	50.60	49.40
	D: Parents with Tertiary Education [%]	
	Female-dominated occupation	Male-dominated occupation
Son	41.95	58.05
Daughter	46.21	53.79

Note: The table shows how many respondents with (A) vocational education or (B) academic education advise their sons/daughters to learn the female- or male-dominated occupation in percent.

Table 6: **Result: Parental Gender and Education**

	Parental Gender (1)	Parental Education (2)
Son	0.08**	0.02
	(0.019)	(0.025)
Parental gender		
Male	0.04*	0.04**
	(0.019)	(0.014)
Son × Male	0.01	
	(0.026)	
Parental education		
VET Education		-0.03
		(0.022)
Son × VET Education		0.10**
		(0.030)
Constant	0.27	0.31
	(0.079)	(0.082)
Controls: Respondents	Yes	Yes
Controls: Occupation	Yes	Yes
Controls: Other	Yes	Yes
Observations	5,940	5,542

Note: The table presents the estimation results of having a son as opposed to a girl on parental career advice. Career advice is zero if parents recommend the female-dominated occupation, one for the male-dominated occupation. Control variables include respondents' characteristics (age, political affiliation, language region, birth country, having children, type of education), characteristics of the occupations (math-requirements, quintile of overall cognitive requirement, sector of the female and male occupation, entrants share of female occupation and male occupation), and other (order of display). Robust standard errors are in parentheses. The sample is weighted with population weights. Significance levels: * $p<0.05$, ** $p<0.01$.

6 Discussion and Conclusion

In this paper, we use a large-scale survey experiment with adults to investigate whether they promote gender-typical career choices when giving advice, recommendations, and counseling to their children. We investigate this experimentally for hypothetical but realistic decision situations. While the experimental set-up can potentially limit the relevance of the observed behaviors for real decisions, it has the advantage that we can both abstract from retrospective rationalizations of decisions already made and at the same time are able to prove and disprove possible explanations for observed decision patterns.

We find that parents promote gender-typical career choices to sons only, but not to daughters. This preference for male-dominated occupations for sons is robust to the inclusion of controls for occupation characteristics such as occupational fields, skill requirements, popularity and familiarity of occupations as well as salary differences. We find, however, noteworthy differences between hypothetical fathers and mothers and people with different educational levels. Fathers tend to advice male-dominated occupations more often than mothers. But as the fathers show their preference for male-dominated occupations for both sons and daughters, this does not reinforce the gender-stereotypical patterns between sons and daughters. As far as the level of education of the interviewees is concerned, we see a clear difference between those who have a vocational qualification as their highest level of education and those who have a university degree. The latter are practically gender-neutral in their advice, while the former have a pronounced preference for male-dominated occupations - especially for sons.

Firstly, this observation complements a result from an experiment with adolescents in the career choice phase (Palffy et al., 2023), also in Switzerland, which shows that while counter-stereotypical information can be used to encourage girls to take an interest in male occupations, this is not the case for boys. Combined with our results, this means that if a daughter were to confront her parents with an atypical career choice, they would probably not oppose such a decision, while in the less likely case that a son would like to work in a gender-atypical occupations, parents would steer their sons to a gender-typical occupation. Our results also allow the interpretation that the difficulties in convincing men of typical female professions, as they occurred in the experiment of Palffy et al. (2023), could be related to the fact that the young men already anticipate resistance to such a choice on the part of their parents when making their decision. But if a more balanced gender ratio in the occupations is the goal, this could only be achieved, if both women and men would have to be moved in their preferences. Therefore, the focus of politics and also academia would probably have to move somewhat away from the question of why women do not choose male occupations towards the question of how men could be interested in typical female occupations.

Secondly, the absence of statistically significant differences in adult preference patterns among parents, non-parents, and various age cohorts suggests a socially stable preference structure. This, in turn, may suggest that, on the one hand, preference structures are difficult to break and, on the other hand, because of their uniformity, they have a major influence on the actual decisions of young people today and in the near future.

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Table A1: **Parental characteristics - Language region**

	Language region		
	D-CH	W-CH	I-CH
	(1)	(2)	(3)
Son	0.09**	0.07**	0.18**
	(0.016)	(0.026)	(0.032)
Constant	0.26	0.30	-0.08
	(0.096)	(0.151)	(0.190)
Controls: Respondents	Yes	Yes	Yes
Controls: Occupation	Yes	Yes	Yes
Controls: Other	Yes	Yes	Yes
Observations	3,562	1,493	885

Note: The table presents the estimation results of having a son as opposed to a girl on parental career advice by language region (D-CH = German-speaking; W-CH = French-speaking; I-CH = Italian-speaking Switzerland). Career advice is zero if parents recommend the female-dominated occupation, one for the male-dominated occupation. Control variables include respondents' characteristics (gender, age, type of education, political affiliation, birth country, having children), characteristics of the occupations (math-requirements, quintile of overall cognitive requirement, sector of the female and male occupation, entrants share of female occupation and male occupation), and other (order of display). Robust standard errors are in parentheses. The sample is weighted with population weights. Significance levels: * p<0.05, ** p<0.01.

Table A2: **Parental Characteristics - Age and Parenthood**

	Parental age	Parenthood
	(1)	(2)
Son	0.08**	0.07**
	(0.020)	(0.019)
Parental age		
41-50 years	-0.01	0.00
	(0.023)	(0.017)
51-60 years	-0.03	-0.02
	(0.023)	(0.016)
Son × 41-50 years	0.02	
	(0.032)	
Son × 51-60 years	0.02	
	(0.032)	
Parenthood		
Having children	0.00	-0.02
	(0.014)	(0.019)
Son × Having children		0.04
		(0.026)
Constant	0.27	0.28
	(0.079)	(0.079)
Controls: Respondents	Yes	Yes
Controls: Occupation	Yes	Yes
Controls: Other	Yes	Yes
Observations	5,940	5,940

Note: The table presents the estimation results of having a son as opposed to a girl on parental career advice. Career advice is zero if parents recommend the female-dominated occupation, one for the male-dominated occupation. Control variables include respondents' characteristics (gender, type of education, political affiliation, language region, birth country), characteristics of the occupations (math-requirements, quintile of overall cognitive requirement, sector of the female and male occupation, entrants share of female occupation and male occupation), and other (order of display). Baseline age category is 25-40 years. Robust standard errors are in parentheses. The sample is weighted with population weights. Significance levels: * p<0.05, ** p<0.01.

Table A3: **Occupational Characteristics - Monthly Salary**

	Differences in monthly salary		
	(1)	(2)	(3)
Son	0.103**	0.102**	0.102**
	(0.014)	(0.014)	(0.014)
Salary difference	0.061**	0.024*	0.016
	(0.009)	(0.010)	(0.010)
Quintiles			
Quintile 2		-0.064**	-0.055*
		(0.023)	(0.024)
Quintile 3		0.031	0.056*
		(0.024)	(0.026)
Quintile 4		-0.141**	-0.129**
		(0.022)	(0.024)
Quintile 5		0.067**	0.092**
		(0.024)	(0.027)
Math requirements			
Male-dom. occ.			-0.000
			(0.000)
Female-dom. occ			-0.002**
			(0.001)
Constant	0.450	0.507	0.560
	(0.013)	(0.018)	(0.025)
Controls	Yes	Yes	Yes
Observations	5,494	5,494	5,494

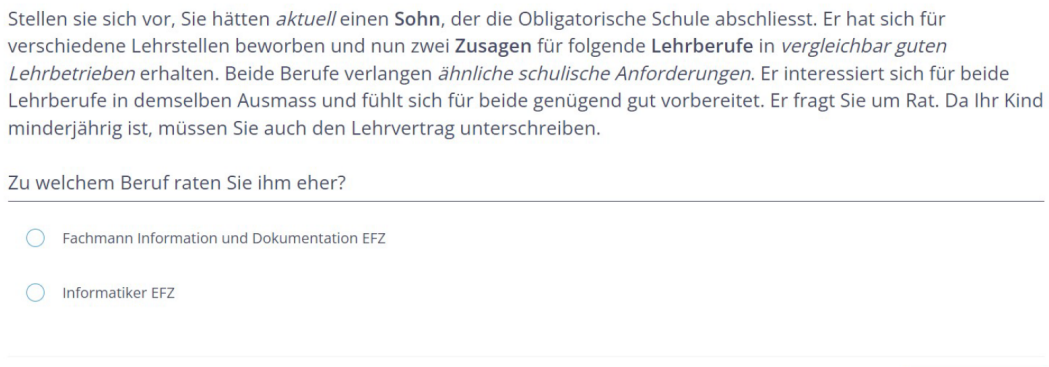
Note: The table presents the estimation results of having a son as opposed to a girl on parental career advice. Career advice is zero if parents recommend the female-dominated occupation, one for the male-dominated occupation. Salary difference [in 1000 CHF] is computed by substracting the monthly salary in the female-dominated occupation from the monthly salary of the male-dominated occupation. Controls include imputed salary for occupations. For imputed salary, we use the median salary from the respective occupational groups. Robust standard errors are in parentheses. The sample is weighted with population weights. Significance levels: * $p<0.05$, ** $p<0.01$.

Table A4: **Characteristics of the occupation pairs**

	All	Male-dominated	Female-dominated
Overall	31.95	31.78	32.11
	(8.81)	(9.55)	(7.97)
School language	40.71	32.25	48.51
	(16.68)	(8.87)	(18.32)
Foreign language	10.28	5.31	15.23
	(13.38)	(7.58)	(15.83)
Math	34.30	42.08	26.60
	(18.97)	(18.23)	(16.45)
Science	39.88	41.89	38.07
	(13.76)	(14.04)	(13.25)
Things vs People	-0.11	0.75	-0.91
	(1.40)	(0.73)	(1.41)
Female share	46.53	12.16	80.73
	(36.10)	(10.70)	(11.43)
Male share	53.47	87.84	19.27
	(36.10)	(10.70)	(11.43)
Share entrants	0.47	0.44	0.49
	(0.89)	(0.66)	(1.06)
Observations	5,940	2,969	2,971

Note: Mean values of occupational characteristics. Cognitive skills range from a scale between 1 to 100, where 1 is the least demanding and 100 the most demanding. "Overall" is the weighted composite index of all cognitive skill requirements (school language, foreign language, science, maths). "Things vs people" measures the degree to which occupations require to work with things vs people. Negative values indicate more work with people, positive values indicate more work with things (Kuhn and Wolter, 2022). "Share entrants" is the share of students starting the particular occupation between 2017 and 2021. Standard deviations are in parentheses.

Figure A1: Choice question

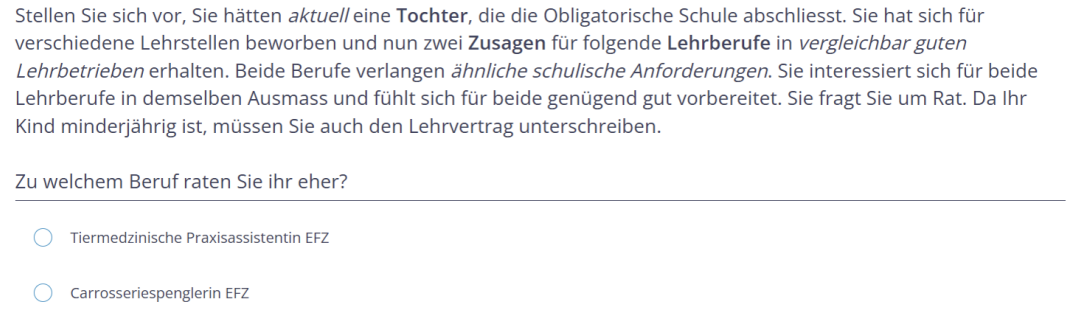


(a) Example of a choice question for respondents with a hypothetical son.

Imagine you currently have a **son** who is completing compulsory schooling. He has applied for various apprenticeships and has now received two **acceptances** for the following **apprenticeships** in *companies of comparable quality*. Both occupations require *similar academic qualifications*. He is interested in both apprenticeships to the same extent and feels sufficiently well-prepared for both. He asks you for advice. As your child is a minor, you must also sign the apprenticeship contract. Which profession would you advise him to choose?

- Occupation A
- Occupation B

(b) Choice question for respondents with a hypothetical son. English translation.



(c) Example of a choice question for respondents with a hypothetical daughter.

Imagine you currently have a **daughter** who is completing compulsory schooling. She has applied for various apprenticeships and has now received two **acceptances** for the following **apprenticeships** in *companies of comparable quality*. Both occupations require *similar academic qualifications*. She is interested in both apprenticeships to the same extent and feels sufficiently well-prepared for both. She asks you for advice. As your child is a minor, you must also sign the apprenticeship contract. Which profession would you advise her to choose?

- Occupation A
- Occupation B

(d) Choice question for respondents with a hypothetical daughter. English translation.