From Roots to Riches: Unraveling the Impact of Parental Education on a Child's Learning Odyssey and Future Finances*

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This study investigates the empowering impact of parents' level of education on their child's academic success and as a result the child's household net income. Taking advantage of a large dataset from the European Social Survey and specifically looking at French data gathered in 2020, this study dives into the relationships of these variables to determine the correlation between parental education, the child's education as well as income levels. The headline result demonstrates a positive correspondence between years of parental education on a greater chance the child strives for higher education after high school and this is linked to an increase in income in the career path of their choice. The implications of these findings embellish the effect parents' education and outlook on learning on their child's academic and workplace success.

1 Introduction

A study done on tenth graders in the Mardan district of Pakistan showed that children with educated parents have notably greater academic success and go onto higher levels of education as compared to children with uneducated parents (Idris, Hussain, and Ahmad 2020). The authors explain that parents have a great deal of influence on their child's knowledge, vocabulary and values. Parents with higher education promote meaningful discussion at home, social skills, give advice based on their experiences and encourage their children to put in the effort to learn. Additionally, parents' level of education corresponds to their attitude toward education thus their goals for their children. These factors are all positively correlated with students' academic success. Parents without post-secondary education are less likely to have discussions and create learning opportunities in the household (Idris, Hussain, and Ahmad 2020). Thus

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parents with more years of education are found to aspire their children to have higher skills, better equipping them for post-secondary education.

Another study done in Vietnam used a mean and quantile regression approach to observe the effect of household income on higher levels of education (Vu 2020). The key finding highlighted that higher levels of education are positively correlated with earning higher income. This was very clear when put into the context of Vietnam as a country. Vietnam was known as one of the poorest countries in the world but in the last few decades has worked its way up to a lower-middle income country. The economy was greatly enhanced by refining the education systems as well as access to tertiary levels (Vu 2020). This also boosted poverty levels and increased opportunities for children to engage in higher levels of learning. The regression analysis proves that it pays off to pursue higher education as it provides a positive return for all income groups. Overall, the findings of the study explain that additional years of education results in higher income households as compared to households with fewer years of education who are subject to lower levels of income (Vu 2020).

In this paper, we examine the relationship between one's parents' level of education, their level of education as well as their income. More specifically we are looking at data from France taken from a European Union Survey in the year 2018. The variables of interest include both the mothers, fathers and childs highest level of education which is ranked on a rating scale from zero through seven. The fourth variable is the child's household net income based on the head of the household. We are interested in whether there is a correlation between parents' level of education and their child's level of education. Specifically, we are curious as to whether our data has the same trends as the study done in Pakistan, in that parents with high levels of education raise their children to also complete higher education. Furthermore, we are interested in the relationship between one's level of education and their income. Explicitly, we are keen to understand whether our data and that of the Vietnam study are positively correlated, indicating higher levels of education are analogous to higher income.

To better visualize the data, we created figures illustrating different categories of education and where the mother, father and child fit in as well as the childs net household's income. This was best represented using line plots to analyze the relationship between each variable. Our results indicate that the France data showed similar trends to both Pakistan and Vietnam. Thus we were able to conclude that children with mothers and fathers that have higher levels of education are more likely to themselves engage in higher levels of education. Moreover, it was observed that more years of education are affiliated with higher levels of education. This investigation is captivating as one of the big decisions upon completing secondary school is whether to pursue higher education or enter straight into the workforce. This decision is highly affected by the mother and fathers level of higher education. These two paths yield very different salaries and hence lifestyles therefore highlighting the weight parents' education holds on a child's future finances.

The remainder of this paper is structured as follows: Section 2 discusses the data, Section 3 presents the results and lastly Section 4 discusses our findings as well as areas of weaknesses and improvements.

2 Data

We retrieved the dataset from the European Social Survey (ESS) data portal, a source which reflects a wide array of social, political, and demographic variables collected across Europe. After downloading the dataset, We cleaned and analyzed via open source statistical programming language R (R Core Team 2022), using functions from libraries tidyverse (Wickham et al. 2019), dplyr (Wickham et al. 2023), knitr (Xie 2014), and ggplot2 (Wickham 2016).

Our analysis concentrates on the 2020 dataset, which comprises responses from over 37,000 individuals across various European countries. This paper focuses specifically on approximately 1,400 respondents from France.

From the over 600 variables available, we chose the four variables of interest: Highest level of education, Mother's highest level of education, Father's highest level of education, and Households Total Net Income. These variables were chosen for their direct relevance to our papers focus.

Due to the monopoly the ESS holds over social data collection in Europe, no comparable alternative data sources were seriously considered.

The selected variables were cleaned and prepared for analysis. This included removing non-French data points and non-responses. This was done for the sake of ensuring the data accurately represented the survey's findings while also allowing robust analysis.

The education level mentioned in the data ranges from numerical values 1 through 26, each representing a different educational milestone. Please refer to Table 1 for a detailed description of each education level integer and its corresponding educational milestone [Translated from the original French].

Table 1: Education Levels and Their Descriptions

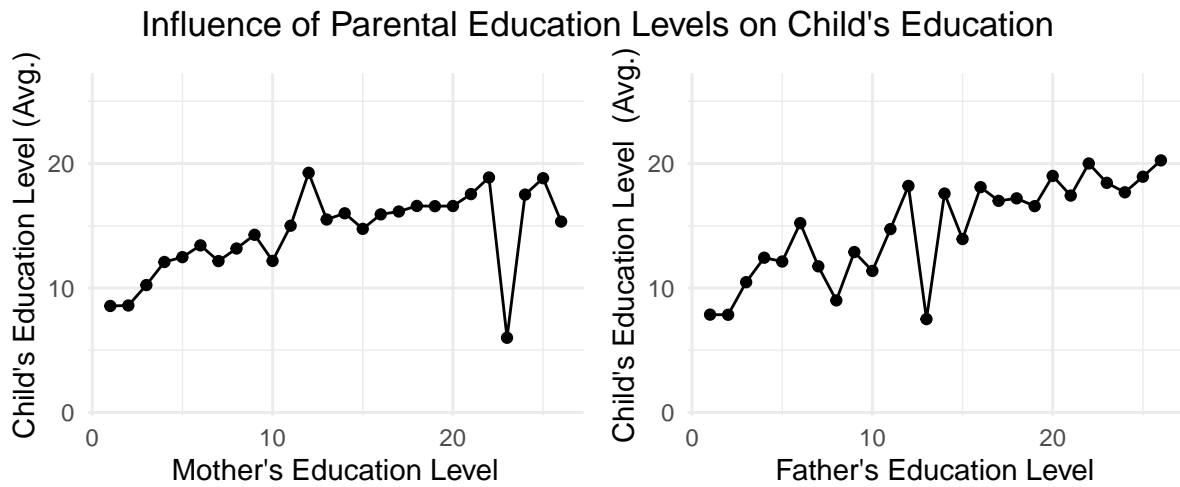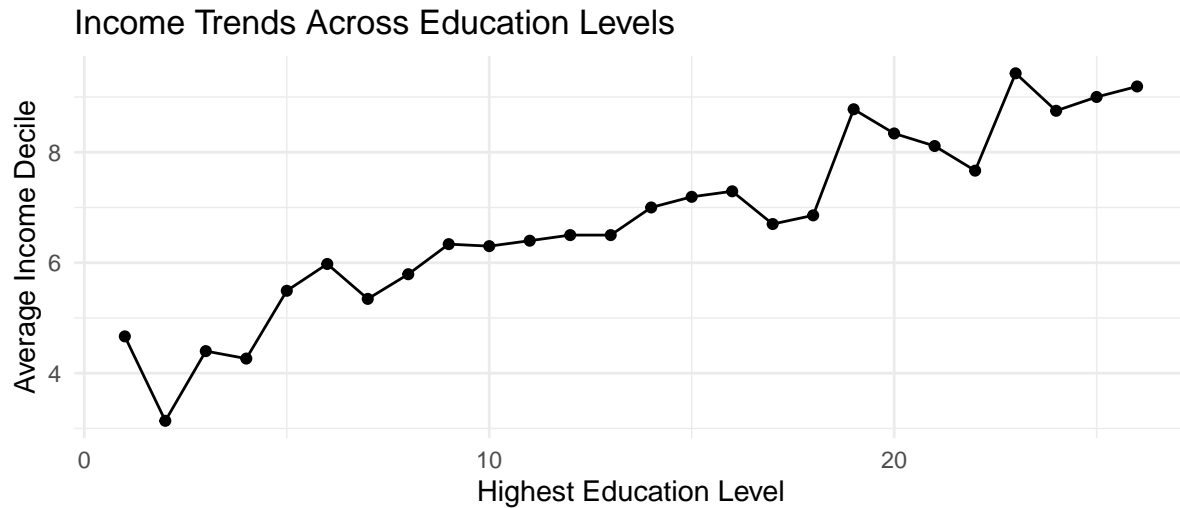| Code	Description
1	Not schooled or did not complete primary school
2	Primary school only
3	Primary studies certificate
4	Education followed from 6th to 9th grade
5	Elementary certificate, First cycle studies certificate, Middle school certificate
6	Education followed from 10th to 12th grade
7	Vocational training certificate, Vocational study certificate, End of apprenticeship examination
8	Nursing assistant diploma, Childcare assistant, Special education assistant, Homecare assistant
9	Vocational baccalaureate, Technician certificate
10	Technological baccalaureate, Technician's baccalaureate, Various technical certificates
11	General baccalaureate, Advanced certificate
12	Law capacity diploma, University studies access diploma (DAEU)
13	Youth worker diploma, Specialized technical educator, Professional certificate
14	First cycle university diploma (DEUG), Preparatory classes for elite schools
15	University technology diploma (DUT), Advanced technician certificate (BTS)
16	Teaching aptitude certificate, Special education diploma, Social worker diploma
17	Professional license
18	Bachelor's degree
19	Engineering school diploma
20	Advanced studies diploma, Professional master's degree (second year)
21	Master's degree, Teaching certification for secondary education, Elementary school teacher certification
22	Advanced studies diploma, Research master's degree (second year), Teaching aggregation
23	Various higher professional diplomas (notary, architect, veterinarian, journalist, etc.)
24	Grandes écoles diploma (excluding engineering schools)
25	Doctorate in medicine or equivalents (Medicine, Dental, Pharmacy, Veterinary)
26	Doctorate

3 Results

Figure 1.

Figure 2.

The outcome of the analysis was to understand how charges for running a red light change every year. I was interested in whether there would be a decrease in charges across all locations because of the $325 fee if you were issued a ticket. I wondered whether proximity to what I consider more downtown Toronto or the CN tower compared to in North York would make a difference as to the number of red light charges given.

4 Discussion

Academic success is closely linked to what is happening at home which is linked to the parent's level of education. The study done in Pakistan concludes that in order for the child to be properly set up and prepared for higher levels of education, it's imperative for the parents to be highly educated (Idris, Hussain, and Ahmad 2020). Likewise, the study done in Vietnam explains that a household's economic welfare is positively correlated to higher levels of education (Vu 2020). With the data we analyzed on France as well as the supportive trends in the other two other studies, we were able to conclude that it is beneficial to have educated parents. Parents with higher levels of education are positively correlated with children who go on to seek higher education, which is tied to higher salaries.

This analysis is interesting as attending post secondary education and beyond has a large cost to it in terms of money spent on tuition, accommodation as well as time that could be spent going straight into the workforce. Thus this study can be helpful in proving that it is more beneficial in the long run to spend the time and money to be well educated due to the increased likelihood that with the education, one will make more money than those who decide not to attend post-secondary education. Upon completion of secondary school, it may seem overwhelming and costly to embark in more schooling, certainly when you do not have a clear idea as to the end career goal. However this data clearly conveys the importance of higher education for higher success and higher earnings.

Further research could inspect the effect of socio-economic status on parental and children's level of education. Moreover, the Pakistan study explains how the mothers level of education plays a more substantial role than the fathers in the child's likelihood of pursuing higher education. The explanation for this is that the mother often takes more responsibility in nourishing the child in the sense of providing meals as well as connecting with the child on a deeper emotional level (Idris, Hussain, and Ahmad 2020). It would be intriguing to look at the mothers and fathers education level separately rather than combined. Although the level of parental education completed is the most consequential contributor of the child's academic achievement, there are many other factors that play a role and influence their choice to proceed with higher levels of education after secondary school. Possible further research could include diving deeper into the role of the child's home environment and access to educational facilities on the child level of education (Idris, Hussain, and Ahmad 2020).

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