

The Influence of Parental Socioeconomic Status Characteristics on Children's Educational Outcomes in Kazakhstan

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ABSTRACT

This paper reviews the findings on relations between parents' socioeconomic status and children's educational outcomes in existing literature as well as assesses the validity of literature that analyzes Kazakhstan's case in this field. We examine and summarize the findings, measurements, data sources, and areas of similarity in the process of finding the relationship between parental socioeconomic status (SES) characteristics and children's academic outcomes in the available literature from around the world. As the paper will show, the available literature demonstrates a strong correlation between parental socioeconomic status (SES) factors and children's educational outcomes. Surprisingly, the available literature on Kazakhstan contradicts these claims. Therefore, this paper will analyze the validity of papers that assess the case of Kazakhstan and propose possible amendments in methodology, as well as suggest the reasons why the results are different from everywhere else.

Introduction

Education refers to the knowledge, skills, and abilities of individuals that contribute to their human capital and development (Sodirjonov, M. M., 2020). On a personal level, education may influence an individual's sense of achievement and happiness in life, whereas on a national level, it affects the quality and innovation of the labor force, further influencing a country's capacity for development. Children's education, in particular, is a core mechanism by which all the advantages and disadvantages are transmitted across generations, from early ages to adulthood (Hoover-Dempsey, Kathleen V., and Howard M. Sandler, 1995). Therefore, it is critical to pinpoint the external and internal elements that can disadvantage kids in the educational process.

Thus, several studies assessed the potential factors bearing an influence on children's educational outcomes. The mainstream factors affecting children's academic outcomes were found to be: parents' and children's own choices, parental socioeconomic factors, unobserved genetic cognitive abilities, public resources and public investment into education, as well as families' cultural backgrounds (Anders Björklund, Kjell G. Salvanes, 2010). Due to these factors, the main stakeholders impacting the educational outcomes of children are identified as the government, policymakers, parents, and community (Li, Xiaohui Sophie, 2021).

The focus of this paper is to review the influence of parental socioeconomic status (SES) factors on children's educational outcomes. More specifically, the paper reviews the influences of parental income, educational background, and occupation on children's academic scores in math and reading, standardized tests, school attendance, and choices to continue further education. Such narrowing of the main focus is applied because parents are considered the primary influences on children's upbringing and the main players in children's attitudes towards education and their outcomes, which is considered more important to explore by the author (Hampden-Thompson, 2013; Razza et al., 2010; Sektnan et al., 2010).

Moreover, the following research highlights a strong causal relationship found between parental SES and children's educational outcomes in different countries (Pamela E. Davis-Kean, 2005; Gordon B. Dahl, Lance Lochner, 2005; Tao Lin & Han Lv, 2017). Surprisingly, the papers analyzing the case of Kazakhstan have produced results that are at odds with the rest of the literature reviewed in this paper. The studies that analyzed Kazakhstan's case have concluded that there is no causal relationship between different parental SES factors and children's educational outcomes (Mariya Zdorovets 2017; Alyona Kaus 2018). Another study examining the same situation in Kazakhstan has produced mixed results, with only a minor impact from one parent's socioeconomic status and no effect from the other (Yelena Kalyuzhnova and Uma Kambhampati, 2007). Thus, it led to the main purposes of this paper: a) to analyze the existing literature of studies of parental SES on children's educational outcomes; b) to understand common methodologies used around the world; c) to conduct a critical analysis of Kazakhstan's existing papers; and d) to conclude with suggestions for improvement of the current studies about Kazakhstan.

Literature Review

Some studies have demonstrated that each SES component has its own distinct influence on overall parental SES, which has to be regarded separately from others (Bollen, Glanville, & Stecklov, 2001; Hauser & Huang, 1997). Therefore, in the literature review section, we will review each component of parental SES (parental income, education, and occupation) separately by looking at the magnitude and extent of the effect on children's educational outcomes, applied measurements, and data sources used for analysis in the reviewed literature. This method of review is used to present the importance of each parental SES factor and provide a detailed overview of how we should measure each relevant variable in the case of Kazakhstan.

Parental Income

Parental income is considered an important measure of parental socioeconomic status (SES) since it shows the possibility of social and economic resources that are accessible to the student, such as the capacity to participate in academic extracurricular activities, receive tutoring outside of the classroom, or send a child to superior private schools (Susan E. Mayer, 2002)¹.

Some evidence suggests that the effect of parental income may be greater for low-income children than for high-income children. For instance, an elastic relation between educational achievements and parental income was discovered, and it was estimated that a \$1,000 increase in income raises math test scores by 2.1% and reading test scores by 3.6% of a standard deviation (Daron Acemoglu and J.-S. Pischke, 2001). The results of the study were stronger when looking at the children from disadvantaged families who are most impacted by the high changes in the earned income tax credit (EITC)².

However, it was demonstrated that this is not always the case. Through their research, psychologists and sociologists have concluded that low-income is considered a mediator of the effect of income on children's outcomes as opposed to a proxy for income (Conger and Elder 1994; Conger et al. 1992; Elder et al. 1985).

The specific variables being examined are the length of time used to measure parental income and the types of control variables employed, both of which affect the impact of parental income. In models that account for

¹ This report examines the effect of parental income on a range of child outcomes, including cognitive development, educational attainment, health, socio-emotional functioning and behavior, teenage childbearing, and economic outcomes in adulthood, based on a review of research studies on these topics.

² The Earned Income Tax Credit (EITC) is a federal tax credit for working individuals with modest or low incomes in the United States. It increases the earnings of low-wage workers while offsetting federal payroll and income taxes.

exogenous family background factors³, the effect of parental income tends to decrease (Mayer, S.E., 1997; Hanson, T.L., McLanahan, and Thomson, 1997). However, in models that employ methods to control for all observed and unobserved family background characteristics, the effect typically, but not always, declines further. When family background factors are taken into account, the impact of parental income on children's outcomes is typically minimal to modest (Elstad, Jon Ivar, and Anders Bakken, 2015; Blau, David M., 1999).

When calculating parental income, many studies average long-term and transient income over the previous ten years (Blau, David M., 1999; Corak, Miles, and Andrew Heisz, 1999; Benzeval, Michaela, and Ken Judge, 2001). However, all of the information that is currently available indicates that, for the analysis of children's outcomes, permanent income is more important than short-term income. This is because the estimates based on permanent income are more representative of parents' long-term financial situation because families can smooth consumption over a brief period of low income by borrowing, using savings, or relying on family, friends, charities, or the government for assistance (Susan E. Mayer, 2002).

Some of the research also takes into account the average income over at least three years since parental income yields estimates that are two to five times bigger than those from studies that simply take into account income over a single year. As discovered in some studies, income averaged over many years has a bigger impact than income measured in a single year and may be influenced by the same short-term parental decision as for short-term income (Mayer, S.E., 1997; Korenman, S., and Miller, J.E., 1997).

Unlike other papers, however, one particular study has looked at different literature addressing the impact of parental SES characteristics on children's educational outcomes (Arnaud Chevalier and Gauthier Lanot, 2002). The paper proposes a different method that separates the effect of family income and other family characteristics on a child's educational outcomes by holding the family characteristics constant while allowing for changes in income to obtain more accurate results. The conclusion was that family characteristics, such as parental education, the father's socio-economic group, the number of siblings, and dummies for the presence of natural parents and race, are important factors and conditions that need to be held constant to accurately analyze how the change in family income impacts a child's schooling attainment.

The data sets used in the studies were primarily derived from very long-term longitudinal data and national panel studies, such as the National Child Development Study (NCDS) and British Cohort Study (BCS)⁴, Labour Force Survey (LFS)⁵, the Child Development Supplement of the Panel Study of Income Dynamics (PSID)⁶, etc.(Chevalier, Arnaud, and Gauthier Lanot, 2002; Jacquelynne S. Eccles and Pamela E. Davis-Kean, 2005; Chevalier, Arnaud, et al., 2005; Jiang, Yuchen, 2021).

³ Exogenous factors include parental education, age, and race, which affect parental income and correlate with children's outcomes.

⁴ These two surveys were designed to observe the development of a cohort of children at different points in time. They also contain extensive information on schooling achievements and various ability measures and are therefore particularly appropriate for our analysis. The main data collection methods used during the studies have included questionnaires, cognitive assessments, clinical assessments, and nurse measurements.

⁵ The Labour Force Survey is a survey of households living at private addresses in the UK. Its purpose is to provide information on the UK labor market, which can then be used to develop, manage, evaluate, and report on labor market policies. The LFS is intended to be representative of the whole population of the UK, and the sample design currently consists of around 36,000 responding households in every quarter.

⁶ The PSID is the premier ongoing longitudinal survey of a representative sample of U.S. men, women, children, and the families in which they reside. Data on employment, income, wealth, housing, food expenditures, transfer income, and marital and fertility behavior have been collected annually since 1968. One of the major uses of the Panel Study of Income Dynamics in recent years has been to examine the consequences of family events and circumstances, such as family structure and income during the years children are living with their parents for their educational and economic successes as young adults

Longitudinal cohort studies have many advantages, especially when they are carried out prospectively in their purest form. These advantages include:

- “1. The ability to identify and relate events to particular exposures and to further define these exposures concerning presence, timing, and chronicity;
2. establishing a sequence of events;
3. Following changes over time in particular individuals within the cohort,
4. Excluding recall bias in participants by collecting data prospectively and before knowledge of a possible subsequent event occurs;
5. Ability to correct for the “cohort effect”—that is, allowing for analysis of the individual time components of cohort (range of birth dates), period (current time), and age (at point of measurement)—and to account for the impact of each individually.” (J Thorac Dis., 2015)

The advantages of these data sources are also in their in-depth data on academic accomplishments and numerous ability measures from respondents at different ages, which have been developed to examine the growth of a cohort of kids at various points in time. For example, numerous papers have examined the influence of parental traits on the educational outcomes of children by using the Child Development Supplement of the Panel Study of Income Dynamics (PSID-CDS)⁷ (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Duncan, Brooks-Gunn, & Klebanov, 1994; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Haveman & Wolfe, 1994; McLanahan & Sandefur, 1994). The use of this study was stated to be particularly useful since it includes extensive information on family members (both parents and children), including data on education, labor market experience, and other demographic characteristics.

The National Longitudinal Survey of Youth (NLSY) is a collection of surveys created to gather comprehensive data on respondents' behaviors in the labor market and educational experiences. The survey also includes information on the family and community backgrounds of the youths to assist researchers in determining the impact of education and other environmental factors on these new entrants to the labor market. Using the NLSY dataset in some of the research allowed the authors to deal with problems like unobserved heterogeneity, endogenous transitory income shocks, and measurement error in income by using statistical and instrumental variable techniques (Gordon B. Dahl and Lance Lochner, 2005; Acemoglu, Daron, and J. S. Pischke, 2001).

Parental education

The second traditional SES component, parental education, is considered one of the most stable aspects of SES because it is typically established at an early age and tends to remain the same over time. In a number of studies, researchers discovered that parental education should have an effect on parents' understanding of the educational system, their own educational practices, and the skills they should be modeling for their children. For example, parents who are more educated talk to and interact with their kids in a more sophisticated and varied way and are predicted to have greater language and reading skills throughout childhood (Hoff, 2003). Higher-educated parents are also more demanding of their children's education, which suggests that those children will perform better academically

⁷ The Child Development Supplement (CDS) was initiated in 1997 to collect data on children and caregivers in American families that participated in the Panel Study of Income Dynamics (PSID), a national longitudinal household survey that began in 1968. In order to study the dynamic process of children's health and development, CDS was established with the aim of building a comprehensive, nationally representative, prospective database of young children and their families. Every five years, up to three waves of interviews with the same kids and their caregivers were conducted (1997, 2002–03, and 2007–08), with the most recent wave's child-based response rate reaching 90%.

(Alexander et al., 1994). Last but not least, parents with advanced degrees ensure that their kids are exposed to a variety of educational activities in their neighborhoods (Furstenberg et al., 1999).

Parental education is measured in different ways in various papers. For example, in one paper it is measured through the highest degree of the individual education of the parent, which allows the use of data on education for almost all family structures and thus reduces missing data (Pamela E. Davis-Kean, 2005). Other papers utilized the years of schooling of both the mother and father to estimate the total parental educational level (Chevalier, Arnaud, et al., 2005; Björklund, Anders, et al., 2010). This method allows them to assess the impact of both parents separately. Finally, authors of another paper decided to divide educational levels into five categories: compulsory education (1 – Basic), vocational track (2 – Lower secondary), matriculation (3 – Higher secondary), lower tertiary education in universities or polytechnics (4 – Lower tertiary), and higher tertiary education in universities (5 – Higher tertiary), (Jani Erola, Sanni Jalonen, and Hannu Lehti, 2016).

However, differently from previously mentioned papers, the authors of this study have used different methods to assess a parent's educational attainment level (Sandra Hofferth et al. 1997). The paper has measured the primary caregiver's educational level using the Woodcock-Johnson Revised (WJ-R) Tests of Achievement⁸, also used to assess the educational achievements of children. In some instances, obtaining accurate and detailed information regarding parental education can be difficult or time-consuming. As a result, to approximate parental education levels, researchers may use indirect measures like the WJ-R, which can provide a reliable estimation of parental education, further enabling comparative analysis and statistical modeling.

Parental education was observed to have mixed effects in the papers we have studied. However, all the papers find some sort of causal impact of parental education on children's educational outcomes. For instance, the authors of some papers revealed stronger effects of maternal than paternal education (Chevalier, Arnaud, et al., 2005; James J. Heckman and V. Joseph Hotz, 1986; T. Paul Schultz, 1993; Robert Haveman and Barbara Wolfe, 1995; Anne M. Hill and Elizabeth M. King, 1995; and Duncan Thomas et al., 1996). However, the authors of other papers proved the opposite effect, stating that the father's education is more influential on children's educational outcomes (Karaaslan, Abdulkerim, and Hasan Hüseyin Tekmanli, 2022; Behrman, Jere R., and Mark R. Rosenzweig, 2005). Moreover, the effects of parental education were also considered to be higher than the effects of income in several papers (Erola, Jani, et al., 2016; Lingxin Hao & Wei-Jun Jean Yeung, 2015).

Different from previous literature, Jacquelynne S. Eccles and Pamela E. Davis-Kean (2005) have considered parental education and other parental characteristics as distal characteristics to examine the effect of parental education on children's educational outcomes. As a result, the relationship between parental education and the educational expectations that parents have for their children, as well as the types of intellectual stimulation that parents provide at home, mediates the direct impact of parental education on children's educational attainment. Thus, the authors have demonstrated that the effect of parent's education on their children's academic achievements is primarily mediated by parental beliefs and behaviors. As a result, the author identifies this as a significant pathway for understanding the children's actual academic achievements.

The data about parental education is extracted from different sources in the reviewed papers. Most of them used national panels as well as longitudinal data sources. As an illustration, Erola, Jani, et al. (2016) used the longitudinal Finnish Census Panel (FCP), a register-based panel dataset made available by Statistics Finland⁹ that contains a variety of socioeconomic and demographic variables, including occupational status, income, educational attainment, sex, and year of birth. According to the author, "The major strength of register-based data is that they

⁸ It is a standardized assessment instrument used to measure an individual's academic achievement. It is intended to evaluate a person's skills and knowledge across multiple academic domains. The WJ-R evaluates a variety of academic disciplines, including reading, writing, mathematics, language, and academic knowledge. Additionally, it provides a comprehensive evaluation of a student's performance in these areas and can be used to identify strengths and weaknesses, diagnose learning disabilities, and track growth over time.

⁹ Finland's national statistical institute

suffer less from missing data, measurement bias, and response bias or attrition than do survey data," making these sources of information more trustworthy for this specific question.

Similarly, Acemoglu, Daron, and J. S. Pischke (2001) used nationwide studies, including data from the National Educational Longitudinal Study, the National Longitudinal Study of Youth, and the Longitudinal Study of American Youth. These surveys roughly span two decades, thus allowing for the collection of information about parental educational backgrounds and income changes. This information is then used to see how changes in family SES characteristics impact a child's college attendance.

Moreover, PSID-CDS is another widely used study in numerous papers (Hofferth, 2003; Hofferth & Anderson, 2003; McBride, Schoppe, Ho, & Rane, 2003). Since 1968, this data source has gathered annual data on employment, income, wealth, housing, food expenses, transfer income, and marital and fertility practices. thus leaving researchers with comprehensive and nationally representative information about children and their families to study how economic and social differences affect child development.

Parental occupation

Parental occupation is the third traditional SES component, according to the education and salary of certain occupations (Hauser, 1994). The importance of these factors lies in their encompassing both the income and educational attainment of parents. The occupational status reflects the level of education necessary to find employment and the wage ranges. When parents have better jobs, they can afford to give their kids a good education. The type of work a parent performs influences both his or her income and social standing, resulting in different parenting practices, approaches to child discipline, and reactions to their children. One study has concluded that parents with a high occupational class or prominent employment give their children a sense of security by being able to handle emergencies, withstand economic shocks, and provide the means to live comfortably, which may encourage good academic performance (Gachathi, 1976). However, another study has discovered that parents with less prestigious occupations are unable to provide their children with adequate modern facilities to improve their education due to instability and financial difficulties (Memo et al., 2010) .

Various papers indicate that parental occupation has variable effects on children's educational outcomes. For instance, Qaiser Suleman (2012) found a significant effect of the father's and mother's occupational level on the academic achievement of secondary school students. Students whose father's and mother's occupations were better as compared to those whose father's occupation was not better. Furthermore, the results of Akinsanya, Omolade O. et al provide evidence that students whose parents belong to high-ranking occupational status might get better grades in Mathematics than their counterparts whose parents belong to low-ranking occupational status (Akinsanya, Omolade O. et al., 2011). The outcomes of numerous papers supported this finding (Jaffe, 1985; Rain, 1998; Simon, 2004; Teese, 2004; Sharma, 2004; Dubey, 1999; and Crane, 1993). Additionally, Suleman, Qaiser, and Akinsanya, Omolade O. claim that parental education and parental occupation in combination play a more significant influence on children's academic outcomes than family income alone (Suleman, Qaiser, et al., 2014; Akinsanya, Omolade O. et al., 2011).

The data about the parent's occupations was mainly collected through in-person surveys and questionnaires asked directly from parents or children. Then, the collected data about parental occupation was classified into different categories. For example, ranging from office jobs to joblessness (Akinsanya, Omolade O. et al., 2011) or differentiating between professional levels, i.e., higher professional, lower professional, routine non-manual, etc. (Odoh, Longinus Chukwudi, Uche Boniface Ugwuanyi, Ben E. Odigbo, and Nnenna Victoria Chukwuani, 2017).

Children's educational outcomes

Measuring children's educational outcomes is important in communicating student's acquired knowledge, reflecting what is and isn't working well for a child in the process of gaining academic knowledge, and influencing their academic decisions. Taking into account the parental SES factors, it gives a clear idea of how parental SES impacts children's

choices and attainment in education, which may further suggest to policymakers what demographic issues to address in society to ensure better educational outcomes for children.

The children's educational achievements are evaluated through different standardized tests, such as the standardized Woodcock-Johnson—Revised Tests of Achievement (WJ-R) in (Pamela E. Davis-Kean, 2005), The China Education Panel Survey (CEPS), which is based on standardized students' examination results (Yuchen Jiang, 2021), math and reading test scores, and grade repetition in (Carneiro, Meghir, and Parey, 2007). Using standardized tests ensures that each child is evaluated under comparable conditions, minimizing potential biases and variations. Furthermore, standard tests are frequently administered at regular intervals, allowing for the longitudinal tracking of educational progress over time. This, in turn, enables the researchers to assess growth, identify trends, and determine the efficacy of educational interventions or strategies. Numerous additional studies assess other educational outcomes, such as the number of years spent in school (Peters and Mullis, 1997), enrollment in higher education programs (Chevalier, Arnaud, et al., 2005), college attendance rates (Ellwood and Kane, 2000) and (Cameron and Heckman, 1999).

However, Jacquelynne S. Eccles and Pamela E. Davis-Kean(2005) measure children's educational achievements differently through participation in extracurricular activities, which is not considered in other papers. The paper argues that “distal characters, like parents' education, jobs, and education, influence parents beliefs and behaviors, which, in turn, influence the children's perception of their ability and the value the children attach to various achievement-related tasks. These self- and task-based beliefs, in turn, influence the children's engagements in various activities, which in turn should directly influence the children's actual achievements”.

The data on children's educational outcomes, similar to parental income data sources, are extracted mainly from Household panels of study and longitudinal studies of households: such as the Labor Force Survey (LFS), the Child Development Supplement of the Panel Study of Income Dynamics (PSID-CDS), The National Longitudinal Study of the High School Class of 1972 (NLS-72), the High School and Beyond Survey (HSB), which started with high school seniors and sophomores in 1980, and the National Educational Longitudinal Study (NELS), which started with a class of 8th graders in 1988, and the British Cohort Survey (BCS) and the British Household Panel Survey (BHPS). These data have different strengths and weaknesses, but all sets offer the possibility of examining the relationship between family income variations and the child's educational outcomes.

The Case of Kazakhstan

In terms of the literature that assesses Kazakhstan's case, not much research and data analysis is done on the topic of parental SES influences on children's educational outcomes. Overall, we have found three papers that have looked at this topic: (Mariya Zdorovets, 2017; Alyona Kaus, 2018; Yelena Kalyuzhnova and Uma Kambhampati, 2007). The first two papers were similar in their conclusion that parental SES factors, whether it is income, educational background, or occupation, do not influence children's educational outcomes at school or their choices to continue higher education. Although the third study also confirmed that parental income has no effect on a child's educational choices, it ultimately concluded that parental education has a significant impact on the educational decisions their children make. These results were completely different from the international papers that we had previously presented.

Alyona Kaus (2018) has investigated the impact of parent involvement practices on elementary school students' academic achievements, including the impact of parents' socioeconomic status on children's general academic achievements in math and reading and generalized tests in elementary school. The sample for the paper consisted of 172 parents with children in 1st and 4th grade from four elementary schools in Semey. The selected schools varied in location(SES-advantaged or SES-disadvantaged areas) and school language (Kazakh or Russian). The variations were purposely chosen to ensure “maximum” variations of the characteristics represented.

To analyze the collected data, a non-experimental, exploratory survey research design was employed, with a self-reported paper-based questionnaire to collect the data. The purpose of this research design, according to the author, was to investigate the nature of parental involvement in Kazakhstan, the relationship between parental

involvement and students' academic achievement, and the mediators of these relationships. In conclusion, the paper found that students' academic achievements did not yield strong connections between parental income, educational level, and occupational schedule.

To address the same topic but at higher educational stages, Maria Zdorovets (2017) analyzed the effect of demographic, family, and school-related variables on the academic performance of high school students in Kazakhstan. This paper used a sample of 240 participants taken from the two urban mainstream secondary schools in Astana. To gather the data about gender, age, ethnicity, and family, a SES survey questionnaire was used.

To analyze the collected data, an explanatory research approach was used without control or manipulation of the variables. According to the author, such a method "enables us to predict scores and explain the relationship between two or more variables, which is particularly suitable for the purposes of the proposed study." The result of the study identified that family income level is negatively related to students' educational expectations. Thus, the lower the family income level, the higher the educational expectations students have, rather than other factors. Moreover, the student also found that only the father's educational background was evident as a significant predictor of the highest level of education students hope to achieve.

Finally, another paper analyzed a similar relationship in Kazakhstan's case (Yelena Kalyuzhnova and Uma Kambhampati, 2007). This paper, in contrast to the two papers mentioned earlier, uses a sample of 12 000 Kazakhstani households from the Agency of the Republic of Kazakhstan on Statistics' 2001–2002 Kazakh household survey. The collected data was further analyzed by multiple logit frameworks¹⁰, which allow several non-ordered binary choices to be considered. Moreover, the paper has also taken into account the regional differences in the country, which, according to the analysis of the paper, significantly "determine the availability of employment and therefore determine the opportunity cost of any decision to continue in education". According to the findings of the study, a family's income has no bearing on the likelihood of choosing between education and employment. However, similar to other global studies, it was discovered that the educational status of the parents influences the offspring's decision to pursue higher education or employment.

Analysis of Kazakhstan's Case

Such weird results from Mariya Zdorovets and Alyona Kaus may exist due to some obvious limitations in data collection methods and the sample size of both papers (Mariya Zdorovets, 2017; Alyona Kaus, 2018). Therefore, this part of the paper will critically review these two papers as well as explain the relevance of the third studied paper (Yelena Kalyuzhnova and Uma Kambhampati, 2007).

The studies by Alyona Kaus (2018) and Mariya Zdorovets (2017) had a sample size of no more than 250 participants and failed to take regional variations in educational outcomes into account. Alyona Kaus (2018) included a sample of 172 parents who had their children in Grades 1 and 4 of the Elementary school in Semey. Semey is a small city with a population of 350,000 located in the northeast region of the country, which is the poorest region and accounts for 1.6% of the country's total GDP. Therefore, it appears to be an unreliable and inadequate source of data to represent such a broad relationship on behalf of the entire nation.

The sample of Mariya Zdorovets included 240 participants taken from the two urban mainstream secondary schools in Astana (Mariya Zdorovets, 2017). This city is an economic and financial capital center that accounts for 10.6% of the country's GDP and is considered the second-wealthiest region in the country. As a result, there is a high likelihood of homogeneity because of the small sample size and the lack of regional diversity among participants.

¹⁰ The multiple logit frameworks assume that the probability of any one outcome (like education) is independent of the number and nature of the other outcomes (work, school, and neither), since they consider the determinants of each of the choices separately.

Regarding the methodology of both papers, the use of self-reported surveys may lack conclusive results and standardized analysis, which can adversely affect the authenticity of the information (Chan, David. 2009). This suggests that the results may be highly inaccurate or biased representations of the data, which are not generally externally valid. As a result, this suggests that Alyona Kaus (2018) and Mariya Zdorovets (2017) may not be reliable or representative of the situation in the whole country.

Unlike the two previously mentioned papers, the research of Yelena Kalyuzhnova and Uma Kambhampati (2007) has more reliable results, which were obtained through a more sophisticated methodology, a larger sample size, a different data collection source, and the inclusion of regional differences in the country.

The paper used applications of household surveys conducted by the Agency of the Republic of Kazakhstan on statistics and a sample of 12 000 households, measuring education-employment decisions, household income, parental education, and occupational status from different regions of the country.

Possible explanations for Kazakhstan's unique case

Although Mariya Zdorovets (2017), Alyona Kaus (2018), Yelena Kalyuzhnova and Uma Kambhampati (2007) examined Kazakhstan's case on the relationship between parental SES and children's educational outcomes and concluded that family income has no effect on a child's likelihood of attending school, the authors explain these results based on several assumptions and provide potential explanations for such contradictory findings, such as:

1. The presence of unintentional bias in reporting on parental involvement and student's educational achievements due to the self-reported survey method.
2. Unconsidered differences in parental beliefs, practices, and engagement in other regions of Kazakhstan.
3. The results of the research come from a transitional period in Kazakhstan. Thus, the education system was in transition from a more centrally planned economy to one that was adapting to a market economy. This change required dramatic rethinking and reorientation of educational institutions, their structure, and their perception of education.
4. Additionally, probably, the Soviet-era tradition/custom of compulsory education for all children has persisted to the present day. As a result, parents teach their children "by any means and in any way," as was the custom in the Soviet era.

The case of Kazakhstan is distinctive, in contrast to the research findings from around the world. Concerning how parental SES affects a child's education, the lengthy history of being a part of the USSR, Perestroika, and its structural regulations in the 2000s may have produced surprisingly contradictory results. Moreover, current changing social behaviors and regional diversity in Kazakhstan may have resulted in adverse results compared to the rest of the world. In light of these unique factors that had an impact on the assessment of Kazakhstan's case, it is anticipated that the outcome of this review article will shape a better approach to understanding the influences of parental SES on children's educational outcomes in Kazakhstan.

Conclusion & Suggestions

Parental socioeconomic status has long been considered one of the primary factors influencing children's educational outcomes. On the basis of this paper's review of literature from around the world, it is clear that parental education is viewed as the most influential factor, as it influences parental behavior and perspective regarding a child's education,

followed by the importance of occupation and income in influencing educational outcomes. However, the papers that examine Kazakhstan's situation happen to claim completely the opposite. Three papers that we have found addressing this question show that parental SES does not influence the child's educational outcome, and one of them projects mixed results. Such contradictory results piqued our interest, so we looked more closely at the papers' methodologies and data collection techniques to determine their validity.

Similar to other papers, research about Kazakhstan's case used a regression model to analyze the collected data, which wasn't seen as an issue since the majority of the papers in the literature review used such a model to find the correlation between the factors. However, the data collection method, such as taking surveys from samples of no more than 250 people with a lack of regional diversity, was hinting that the results could be significantly flawed and invalid.

Compared to the overviewed papers from the rest of the world that used national statistics data and longitudinal databases and surveys, it is strongly advised to use national statistics data sources or longitudinal analysis in Kazakhstan's case on this topic as well. According to a number of authors in literature from around the world, these data sources are more trustworthy because they account for data from a sizable sample of the nation's population and include various demographic and economic background differences among both parents and children. It is also advised to use a larger sample size in the study since, in Kazakhstan, the regional and income differences are relatively high. Thus, analyzing data from only one region of Kazakhstan from two mainstream sources is seen as not reliable enough to prove the validity of the findings of the papers.

If we retest this topic question more seriously and the results are still the same, then Kazakhstan could be considered a particular outlier in this matter. However, if the results of a more robust and recent study show that parental socioeconomic factors influence children's educational outcomes, then it can be concluded that the effect of historical events in Kazakhstan, such as coming out of the USSR, has a dissolving effect over the years.

The author of this paper in particular believes that children's educational outcomes shouldn't be dependent on parental SES factors. This is because children from low-SES families who are less likely to have experiences that encourage the development of fundamental skills of reading acquisition, such as phonological awareness, vocabulary, and oral language, will be disadvantaged compared to their more wealthy peers (Buckingham, Wheldall, & Beaman-Wheldall, 2013).

Moreover, it is also claimed that poor households have less access to learning materials and experiences, including books, computers, stimulating toys, skill-building lessons, or tutors to create a positive literacy environment, and if not addressed accordingly, these children will continue to be disadvantaged by parental SES (Bradley, Corwyn, McAdoo, & García Coll, 2001; Orr, 2003). As a result, the gap between financially privileged children and unprivileged students will only widen. Hence, allowing only the top wealthy people in the country to benefit from higher education and all the other opportunities that may follow, such as finding a decent workplace, subsequently wastes the academic potential of low SES children (Lena Paulus, 2021).

Therefore, by considering the stance that children's educational achievements are independent of parental SES, we stick to the belief that children from low socioeconomic backgrounds may have more opportunities to develop their academic and cognitive potential and learn. Thus, the education system in Kazakhstan will not only improve and educational inequality in the country diminish, but it will also allow the country to generate more ideas for development and innovations, thus improving the standards of living in Kazakhstan.

In closing remarks, the research agenda for the future is to stimulate more reliable studies of the effects of parental SES factors on children's academic outcomes in Kazakhstan through suggestions and approaches used by researchers from around the world while assessing this question, all mentioned previously in the paper. Moreover, this paper encourages reducing the impact of parents' SES on educational outcomes and generating more fair access to educational opportunities. This could be accomplished by facilitating greater government investment in the education system, such as increasing the number of public schools, teaching labor force, government grants, and scholarships to pursue higher education.

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References

- . 'The Determinants of Children's Attainments: A Review of Methods and Findings'. *Journal of Economic Literature*, vol. 33, no. 4, 1995, pp. 1829–78. JSTOR, <https://www.jstor.org/stable/2729315>.
- . *What Money Can't Buy: Family Income and Children's Life Chances*. Harvard University Press, 1997.
- Acemoglu, Daron, and J. S. Pischke. 'Changes in the Wage Structure, Family Income, and Children's Education'. *European Economic Review*, vol. 45, no. 4–6, May 2001, pp. 890–904. DOI.org (Crossref), [https://doi.org/10.1016/S0014-2921\(01\)00115-5](https://doi.org/10.1016/S0014-2921(01)00115-5).
- Akinsanya, et al. *Relative Effects of Parents' Occupation, Qualification, and Academic Motivation of Wards on Students' Achievement in Senior Secondary School Mathematics in Ogun State*. *British Journal of Arts and Social Sciences*, 2011.
- Alexander, Karl L., et al. 'When Expectations Work: Race and Socioeconomic Differences in School Performance'. *Social Psychology Quarterly*, vol. 57, no. 4, 1994, pp. 283–99. JSTOR, <https://doi.org/10.2307/2787156>.
- Behrman, Jere R., and Mark R. Rosenzweig. 'Does Increasing Women's Schooling Raise the Schooling of the Next Generation? Reply'. *American Economic Review*, vol. 95, no. 5, Nov. 2005, pp. 1745–51. DOI.org (Crossref), <https://doi.org/10.1257/000282805775014263>.
- Benzeval, Michaela, and Ken Judge. 'Income and Health: The Time Dimension'. *Social Science & Medicine*, vol. 52, no. 9, May 2001, pp. 1371–90. DOI.org (Crossref), [https://doi.org/10.1016/S0277-9536\(00\)00244-6](https://doi.org/10.1016/S0277-9536(00)00244-6).
- Björklund, Anders, et al. 'What More Than Parental Income, Education and Occupation? An Exploration of What Swedish Siblings Get from Their Parents'. *The B.E. Journal of Economic Analysis & Policy*, vol. 10, no. 1, Nov. 2010. DOI.org (Crossref), <https://doi.org/10.2202/1935-1682.2449>.
- Blau, David M. 'The Effect of Income on Child Development'. *Review of Economics and Statistics*, vol. 81, no. 2, May 1999, pp. 261–76. DOI.org (Crossref), <https://doi.org/10.1162/003465399558067>.
- Bollen, Kenneth A., et al. 'Socioeconomic Status and Class in Studies of Fertility and Health in Developing Countries'. *Annual Review of Sociology*, vol. 27, no. 1, Aug. 2001, pp. 153–85. DOI.org (Crossref), <https://doi.org/10.1146/annurev.soc.27.1.153>.
- Bradley, Robert H., et al. 'The Home Environments of Children in the United States Part I: Variations by Age, Ethnicity, and Poverty Status'. *Child Development*, vol. 72, no. 6, Nov. 2001, pp. 1844–67. DOI.org (Crossref), <https://doi.org/10.1111/1467-8624.t01-1-00382>.
- Brooks-Gunn, Jeanne, et al. 'Do Neighborhoods Influence Child and Adolescent Development?' *American Journal of Sociology*, vol. 99, no. 2, Sept. 1993, pp. 353–95. DOI.org (Crossref), <https://doi.org/10.1086/230268>.
- Buckingham, Jennifer, et al. 'Why Poor Children Are More Likely to Become Poor Readers: The School Years'. *Australian Journal of Education*, vol. 57, no. 3, Nov. 2013, pp. 190–213. DOI.org (Crossref), <https://doi.org/10.1177/0004944113495500>.
- Cameron, et al. 'Can Tuition Policy Combat Rising Wage Inequality?' *Financing College Tuition: Government Policies and Educational Priorities*, 1999.
- Carneiro, Pedro, et al. 'MATERNAL EDUCATION, HOME ENVIRONMENTS, AND THE DEVELOPMENT OF CHILDREN AND ADOLESCENTS'. *Journal of the European Economic Association*, vol. 11, Jan. 2013, pp. 123–60. DOI.org (Crossref), <https://doi.org/10.1111/j.1542-4774.2012.01096.x>.
- Caruana, Edward Joseph, et al. 'Longitudinal Studies'. *Journal of Thoracic Disease*, vol. 7, no. 11, Nov. 2015, pp. E537–40. PubMed Central, <https://doi.org/10.3978/j.issn.2072-1439.2015.10.63>.

- Chan, David. 'So Why Ask Me? Are Self-Report Data Really That Bad?' *Statistical and Methodological Myths and Urban Legends: Doctrine, Variety and Fable in the Organizational and Social Sciences*, Taylor & Francis e-Library, 2009.
- Chevalier, Arnaud, and Gauthier Lanot. 'The Relative Effect of Family Characteristics and Financial Situation on Educational Achievement'. *Education Economics*, vol. 10, no. 2, Aug. 2002, pp. 165–81. DOI.org (Crossref), <https://doi.org/10.1080/09645290210126904>.
- Chevalier, Arnaud, et al. 'The Impact of Parental Income and Education on the Schooling of Their Children'. *SSRN Electronic Journal*, 2005. DOI.org (Crossref), <https://doi.org/10.2139/ssrn.673407>.
- Corak, Miles, and Andrew Heisz. 'The Intergenerational Earnings and Income Mobility of Canadian Men: Evidence from Longitudinal Income Tax Data'. *The Journal of Human Resources*, vol. 34, no. 3, 1999, p. 504. DOI.org (Crossref), <https://doi.org/10.2307/146378>.
- Dahl, Gordon B., and Lance Lochner. *The Impact of Family Income on Child Achievement*. National Bureau of Economic Research, Apr. 2005. National Bureau of Economic Research, <https://doi.org/10.3386/w11279>.
- Danziger, Sheldon, and Jane Waldfogel, editors. *Securing the Future: Investing in Children from Birth to College*. Russell Sage Foundation, 2000.
- Davis-Kean, Pamela E. 'The Influence of Parent Education and Family Income on Child Achievement: The Indirect Role of Parental Expectations and the Home Environment.' *Journal of Family Psychology*, vol. 19, no. 2, 2005, pp. 294–304. DOI.org (Crossref), <https://doi.org/10.1037/0893-3200.19.2.294>.
- Day, Randal D., and Michael E. Lamb. *Conceptualizing and Measuring Father Involvement*. Routledge, 2003.
- Duncan, Greg J., and Jeanne Brooks-Gunn, editors. *Consequences of Growing up Poor*. Russell Sage Foundation, 1997.
- Duncan, Greg J., Jeanne Brooks-Gunn, et al. 'Economic Deprivation and Early Childhood Development'. *Child Development*, vol. 65, no. 2, Apr. 1994, p. 296. DOI.org (Crossref), <https://doi.org/10.2307/1131385>.
- Duncan, Greg J., W. Jean Yeung, et al. 'How Much Does Childhood Poverty Affect the Life Chances of Children?' *American Sociological Review*, vol. 63, no. 3, 1998, pp. 406–23. JSTOR, <https://doi.org/10.2307/2657556>.
- Eccles, Jacquelynne S. 'Influences of Parents' Education on Their Children's Educational Attainments: The Role of Parent and Child Perceptions'. *London Review of Education*, vol. 3, no. 3, 2005. DOI.org (Crossref), <https://doi.org/10.1080/14748460500372309>.
- Ellwood, et al. 'Who Is Getting a College Education? Family Background and the Growing Gaps in Enrollment'. *Securing the Future: Investing in Children from Birth to College*, 2000.
- Elstad, Jon Ivar, and Anders Bakken. 'The Effects of Parental Income on Norwegian Adolescents' School Grades: A Sibling Analysis'. *Acta Sociologica*, vol. 58, no. 3, Aug. 2015, pp. 265–82. DOI.org (Crossref), <https://doi.org/10.1177/0001699315594411>.
- Erola, Jani, et al. 'Parental Education, Class and Income over Early Life Course and Children's Achievement'. *Research in Social Stratification and Mobility*, vol. 44, June 2016, pp. 33–43. DOI.org (Crossref), <https://doi.org/10.1016/j.rssm.2016.01.003>.
- Furstenberg, Frank F., et al. *Managing to Make It: Urban Families in High-Risk Neighborhoods*. University of Chicago Press, 1999.
- Hampden-Thompson, Gillian. 'Family Policy, Family Structure, and Children's Educational Achievement'. *Social Science Research*, vol. 42, no. 3, May 2013, pp. 804–17. ScienceDirect, <https://doi.org/10.1016/j.ssresearch.2013.01.005>.
- Hanson, T. L., et al. 'Economic Resources, Parental Practices and Children's Well Being'. *Consequences of Growing up Poor*, G. Duncan and J. Brooks-Gunn, Russel Sage foundation, 1997.
- Hao, Lingxin, and Wei-Jun Jean Yeung. 'Parental Spending on School-Age Children: Structural Stratification and Parental Expectation'. *Demography*, vol. 52, no. 3, June 2015, pp. 835–60. DOI.org (Crossref), <https://doi.org/10.1007/s13524-015-0386-1>.

- Hauser, Robert M. 'Measuring Socioeconomic Status in Studies of Child Development'. *Child Development*, vol. 65, no. 6, Dec. 1994, p. 1541. DOI.org (Crossref), <https://doi.org/10.2307/1131279>.
- Hauser, Robert M., and Min-Hsiung Huang. 'Verbal Ability and Socioeconomic Success: A Trend Analysis'. *Social Science Research*, vol. 26, no. 3, Sept. 1997, pp. 331–76. ScienceDirect, <https://doi.org/10.1006/ssre.1997.0604>.
- Haveman, Robert, and Barbara Wolfe. *Succeeding Generations: On the Effects of Investments in Children*. Russell Sage Foundation, 1994.
- Heckman, James J., and V. Joseph Hotz. 'An Investigation of the Labor Market Earnings of Panamanian Males Evaluating the Sources of Inequality'. *The Journal of Human Resources*, vol. 21, no. 4, 1986, pp. 507–42. JSTOR, <https://doi.org/10.2307/145765>.
- Hill, M. Anne, and Elizabeth King. 'Women's Education and Economic Well-Being'. *Feminist Economics*, vol. 1, no. 2, July 1995, pp. 21–46. DOI.org (Crossref), <https://doi.org/10.1080/714042230>.
- Hoff, Erika. 'The Specificity of Environmental Influence: Socioeconomic Status Affects Early Vocabulary Development Via Maternal Speech'. *Child Development*, vol. 74, no. 5, Oct. 2003, pp. 1368–78. DOI.org (Crossref), <https://doi.org/10.1111/1467-8624.00612>.
- Hofferth, Sandra, et al. *The Child Development Supplement to the Panel Study of Income Dynamics: 1997 User Guide*. 1997.
- Hoover-Dempsey, Kathleen V., and Howard M. Sandler. 'Parental Involvement in Children's Education: Why Does It Make a Difference?' *Teachers College Record: The Voice of Scholarship in Education*, vol. 97, no. 2, Dec. 1995, pp. 310–31. DOI.org (Crossref), <https://doi.org/10.1177/016146819509700202>.
- Jiang, Yuchen. *How Socio-Economic Status Affects Academic Performance: A Study of Education Inequality in Junior High School Students in China Based on a Structural Equation Model*. 2021. DOI.org (Crossref), <https://doi.org/10.2991/assehr.k.210519.255>.
- Jinan University, Guangzhou, Guangdong, China, and Han Lv. *The Effects of Family Income on Children's Education: An Empirical Analysis of CHNS Data*. 2017, pp. 49–54. DOI.org (Crossref), <https://doi.org/10.24104/rmhe/2017.04.02002>.
- Karaaslan, Abdulkерim, and Hasan Hüseyin Tekmanli. 'Factors Affecting Household Expenditures on Education: A Heckman Sample Selection Application for Turkey'. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, vol. 13, no. 3, Sept. 2022, pp. 269–81. DOI.org (Crossref), <https://doi.org/10.21031/epod.1015970>.
- Kaus, Alyona. *Parental Involvement in Elementary Education in Kazakhstan: Nature, Factors, and Implications for Academic Achievement*. 2018, https://nur.nu.edu.kz/bitstream/handle/123456789/3675/MSc_2018%20Alyona%20Kaus.pdf?sequence=1&isAllowed=y.
- Korenman, S., and J. E. Miller. 'Effect of Log-Term Poverty on Physical Health of Children in the National Longitudinal Survey of Youth'. *Consequences of Growing up Poor*, Russell Sage Foundation, 1997.
- Li, Xiaohui Sophie. 'What Impacts Young Generations' School/College Education Through the Lens of Family Economics? A Review on JFEI Publications in the Past Ten Years'. *Journal of Family and Economic Issues*, vol. 42, no. Suppl 1, 2021, pp. 118–23. PubMed Central, <https://doi.org/10.1007/s10834-020-09726-4>.
- Mayer, Susan E. *The Influence of Parental Income on Children's Outcomes*. Knowledge Management Group, Ministry of Social Development, 2002.
- McLanahan, Sara, and Gary D. Sandefur. *Growing Up with a Single Parent: What Hurts, What Helps*. Harvard University Press, 2009.
- Memo, G. R., et al. *Impact of Parental Socioeconomic Status on Students Educational Achievement at Secondary Schools of District Malir, Karachi*. *Middle East journal of scientific research*.
- Namangan State University, and Mukhriddin Makhhammadaminovich Sodirjonov. 'EDUCATION AS THE MOST IMPORTANT FACTOR OF HUMAN CAPITAL DEVELOPMENT.' *Theoretical & Applied Science*, vol. 84, no. 04, Apr. 2020, pp. 901–05. DOI.org (Crossref), <https://doi.org/10.15863/TAS.2020.04.84.161>.

- National Committee of Inquiry into Higher Education (Great Britain), editor. *Higher Education in the Learning Society: Report of the National Committee*. The Committee, 1997.
- Odoh, Longinus Chukwudi, and Ben E. Odigbo. 'Influence of Parental Occupation and Level of Education on Academic Performance of Accounting Students in Nigeria'. *Research on Humanities and Social Science*, vol. 7(10), 2017.
- Orr, Amy J. 'Black-White Differences in Achievement: The Importance of Wealth'. *Sociology of Education*, vol. 76, no. 4, 2003, pp. 281–304. JSTOR, <https://doi.org/10.2307/1519867>.
- Paulus, Lena, et al. 'How Do Educational Inequalities Develop? The Role of Socioeconomic Status, Cognitive Ability, Home Environment, and Self-Efficacy along the Educational Path'. *Intelligence*, vol. 86, May 2021, p. 101528. ScienceDirect, <https://doi.org/10.1016/j.intell.2021.101528>.
- Peters, et al. 'The Role of Family Income and Sources of Income in Adolescent Achievement'. *Consequences of Growing up Poor*, 1997.
- Razza, Rachel A., et al. 'Associations among Family Environment, Sustained Attention, and School Readiness for Low-Income Children.' *Developmental Psychology*, vol. 46, no. 6, 2010, pp. 1528–42. DOI.org (Crossref), <https://doi.org/10.1037/a0020389>.
- Rendall, Michael S. 'Identifying and Misidentifying Single Mothers in the Panel Study of Income Dynamics'. *The Journal of Human Resources*, vol. 32, no. 3, 1997, p. 596. DOI.org (Crossref), <https://doi.org/10.2307/146185>.
- Schultz, T. Paul. 'Investments in the Schooling and Health of Women and Men: Quantities and Returns'. *The Journal of Human Resources*, vol. 28, no. 4, 1993, pp. 694–734. JSTOR, <https://doi.org/10.2307/146291>.
- Sektnan, Michaella, et al. 'Relations between Early Family Risk, Children's Behavioral Regulation, and Academic Achievement'. *Early Childhood Research Quarterly*, vol. 25, no. 4, Oct. 2010, pp. 464–79. ScienceDirect, <https://doi.org/10.1016/j.ecresq.2010.02.005>.
- Suleman, Qaiser, et al. 'Effects of Parental Socioeconomic Status on the Academic Achievement of Secondary School Students in District Karak (Pakistan)'. *International Journal of Human Resource Studies*, vol. 2, no. 4, Oct. 2014, p. 14. DOI.org (Crossref), <https://doi.org/10.5296/ijhrs.v2i4.2511>.
- Thomas, Duncan. 'Education Across Generations in South Africa'. *The American Economic Review*, vol. 86, no. 2, 1996, pp. 330–34. JSTOR, <https://www.jstor.org/stable/2118147>.
- Zdorovets, Mariya. *The Effect of Demographic, Family and School-Related Variables on Academic Performance and Educational Expectations of High School Students in Kazakhstan*. 2017, https://nur.nu.edu.kz/bitstream/handle/123456789/2563/Mariya_Zdorovets.pdf?sequence=1&isAllowed=y.