

Economic Freedom and Intergenerational Educational Mobility

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Abstract

Using World Bank estimates of intergenerational educational persistence and mobility for multiple countries across the development spectrum, this paper finds that economic freedom noticeably improves educational mobility. This is probably because economic freedom increases the returns to education in ways that incentivize greater investment in education.

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I. Introduction

As debates around economic inequality have heightened over the last two decades, the degree to which inequalities are inherited (that is, social mobility) has gained greater attention—something that has been helped by major progress in data availability. The key findings can be summarized succinctly: (a) social mobility is retreating across Western countries; (b) the contemporary level of inequality is an important determinant of social mobility later, as it speaks to a lower ability of poorer households to seize opportunities for socioeconomic ascension; (c) most of the opportunities for upward mobility are tied to education.¹

¹ For a summary of these aspects of the literature, see Alesina et al. (2021) and Chetty et al. (2014).

However, that literature has been less attentive to the role of institutions and how they can offset the effects of inequality on educational mobility. More precisely, the role of economic freedom (secure property rights, limited regulation, open trade, sound money, limited government) in promoting educational mobility has been largely ignored. To the best of our knowledge, only Boudreaux (2014), Dean and Geloso (2022), and Callais and Geloso (2023) connect economic freedom to social mobility; they find that it is a force for greater mobility to the point of even erasing the effects of inequality. However, they only do so by considering income mobility rather than educational mobility. This is despite the existence of a literature suggesting that economic freedom promotes human capital investment by increasing the returns to human capital (for example, Feldmann 2017, 2021).²

Using the international database of intergenerational income and educational mobility constructed by Narayan et al. (2018), we fill this gap and add to this small but important literature. Our results suggest that economic freedom has both direct and indirect pathways to greater educational mobility, which then affects income mobility.

II. Context, Data, and Method

Generally, economic studies of intergenerational social mobility assess the adulthood outcomes of individuals relative to their parents (Corak 2013) in the following way:

$$\ln E_{i,1} = \beta_0 + \beta_1 \ln E_{i,0} + e_{i,t} \quad (1)$$

Here, $E_{i,1}$ is the level of education of an adult now and $E_{i,0}$ is the education level of that person's parents. β_0 captures the average absolute growth in educational achievement across generations. β_1 is a measure of relative mobility that captures how strong is parental situation in determining educational outcomes today. While β_0 can shift up or down depending on the across-generation increase in education, β_1 sets the slope of the relationship between parents and children. The best way to understand these coefficients is that β_0 ignores *absolute* mobility and concentrates on *relative* mobility via the persistence of parental status. If the status of parents has no effect on the status of children, β_1 is zero even if β_0 is large (the latter indicating that there were gains across generations). This indicates that there is independence across generations and that there is no persistence of parental status. Lack of persistence is then interpreted

² See also Gwartney et al. (2006) and Hall, Sobel, and Crowley (2010).

as perfect *relative* mobility. As the coefficient moves away from zero, there is greater persistence, which is synonymous with less mobility.³ Here, we assume that low persistence (that is, high mobility) is normatively better than high persistence. On average, we should want parental education (or income) to not be a determinant of a child's educational status (or income).

The data we employ, from Narayan et al. (2018), are a cross section of estimates of β_1 for education mobility in multiple countries for people born in the 1980s, which we invert for ease of interpretability in section 3. This is because the existing literature uses equation (1) to speak about persistence, which is then made synonymous with mobility (as high mobility is the inverse of low persistence, a smaller number is preferred). In our case, a higher number is better, as it indicates high mobility, which is synonymous with low persistence. What we seek to assess is whether economic freedom—as assessed by the Fraser Institute's Economic Freedom of the World index—is associated with higher values of β_1 .

There is, however, a complication. Economic freedom has a direct effect on measures of mobility by removing legal barriers to mobility and an indirect effect by affecting economic growth and income levels (which may increase the opportunities of the poor more than the rich—see Callais and Geloso 2023). Because the data are cross-sectional, adding income levels or economic growth as a control would only give us the direct effect of economic freedom. The indirect effect would go unmeasured. To deal with this issue, we employ the same approach as Tavares and Wacziarg (2001) and Callais and Geloso (2023).⁴ First, we conduct the following regression:

$$Y_i = EFW_i' \delta_1 + X_i' \beta + e_i, (2)$$

Here, Y_i is income per capita in a given country, EFW_i is the level of economic freedom in that country, and X_i is a vector of control

³ Usually, β_1 is bounded between 0 and 1. $\beta_1 < 0$ would imply that typically higher parental educational scores lead to lower children's educational scores. This not typical in economic studies. Similarly, $\beta_1 > 1$ is rare since it would imply children's education increases more than proportionally relative to their parents, implying a highly exaggerated persistence of educational differences across generations.

⁴ Tavares and Wacziarg (2001) use the approach to assess the indirect effect of democracy on economic growth through education. Callais and Geloso (2023) use it to assess the indirect effect of economic freedom on income mobility via income.

variables (which include income inequality). This is followed by estimating equation (3):

$$EM_i = Y_i' \delta_2 + X_i' \tilde{\beta} + e_i \quad (3)$$

Here, EM_i is educational mobility as estimated from β_1 in (1); a higher coefficient means more mobility. The product of δ_1 and δ_2 is the indirect effect of economic freedom on intergenerational educational mobility through income levels and income growth. Then we estimate equation (4):

$$EM_i = Y_i' \delta_3 + X_i' \tilde{\beta} + EFW_i' \delta_4 + e_i \quad (4)$$

Here, the coefficient δ_4 is the direct effect of economic freedom on educational mobility. This means that the total effect of economic freedom on educational mobility is $\delta_1 \delta_2 + \delta_4$. Finally, we run regression (5):

$$IIM_i = X_i' \tilde{\beta} + EM_i' \delta_5 + e_i \quad (5)$$

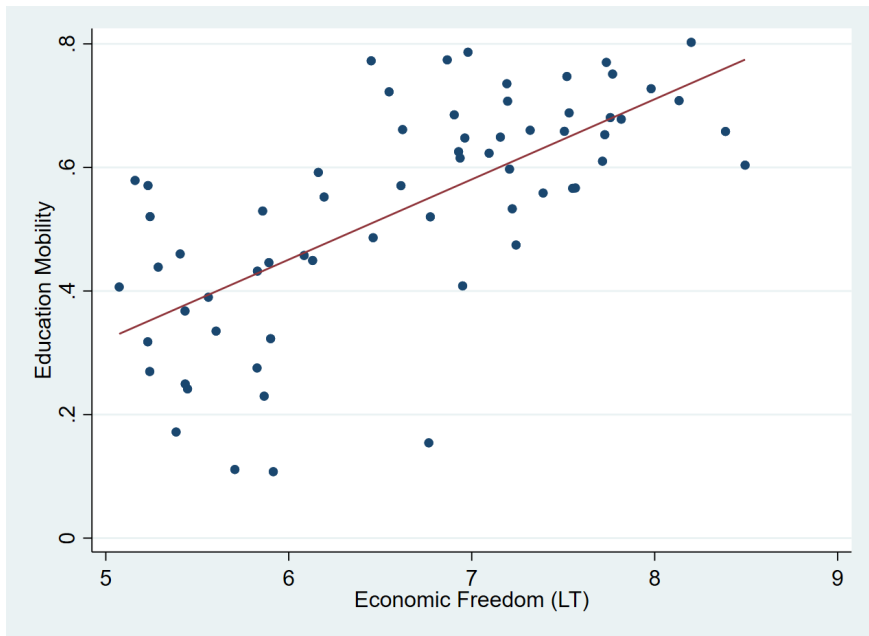
Here, IIM_i is educational mobility. This means that $[\delta_1 \delta_2 + \delta_4] \delta_5$ is the total effect of economic freedom on income mobility via educational mobility.

To keep our results comparable with prior works connecting economic freedom to intergenerational income mobility, we use the same data set as Callais and Geloso (2023). The control and independent variables are the same as theirs.⁵ We also keep their formulation of using lifetime measures (average values from 1980 to 2018). This is because the database of Narayan et al. (2018) considers social mobility of people born in the 1980s, which means that the mobility observed from birth to the present is a function of economic freedom over their lifetime.

III. Results and Discussion

Figure 1 indicates that countries with more economic freedom tend to have higher coefficients for mobility of children's educational outcomes. This means children enjoy more relative educational mobility (that is, one can more easily rise above the parental status of their parents). Table 1 reports our descriptive statistics. Table 2 reports our main estimates for each of the regressions specified above.

⁵ We do make two exceptions. Callais and Geloso (2023) include measures of government spending on education (as a percentage of GDP) and life expectancy at birth. We remove the measure of government spending on education (as a percentage of GDP) because government spending is already included in Area 1 (size of government) in the Economic Freedom of the World index. For similar reasons, we drop life expectancy at birth.

Figure 1. Economic freedom and education mobility

Note: Higher education-mobility scores correspond to less educational persistence (more mobility).

Table 1. Summary statistics

Variable	N	Mean	Std. dev.	Min	Max
Income mobility ¹	65	0.4817	0.2569	-0.0954	0.8871
Education mobility ^{1,2}	65	0.5333	0.1815	0.1075	0.8025
Econ. freedom (lifetime ³)	65	6.6349	0.9547	5.0733	8.4941
GDP per capita (logged, lifetime ³)	65	9.1593	1.1897	6.7124	10.7786
Inc. inequality (disposable inc., lifetime ³)	65	36.1870	8.7875	23.2903	61.4579
Postcommunist	65	0.2154	0.4143	0	1

Notes: ¹higher levels of these variables correspond to *more* mobility (that is, less persistence in income and education).

²Education mobility values are used from those born in the 1980s; scores are based on all parents and all children.

³Lifetime values are the averages from 1980 to 2018.

Table 2. Testing the economic freedom-mobility channels

Variables	(1) Ed. mobility	(2) Log GDP pc (LT)	(3) Ed. mobility	(4) Inc. mobility
EFW (LT)	0.049 (0.031)	0.873*** (0.122)		
Log GDP pc (LT)	0.097*** (0.026)		0.126*** (0.016)	
Inc. Ineq. (LT)	0.004 (0.003)	-0.030** (0.013)	0.003 (0.002)	-0.021*** (0.003)
Postcommunist	0.034 (0.036)	-0.130 (0.245)	0.028 (0.040)	-0.093 (0.058)
Ed. mobility				0.227* (0.130)
Constant	-0.815*** (0.224)	4.489*** (1.219)	-0.737*** (0.210)	1.147*** (0.163)
Observations	65	65	65	65
R-squared	0.584	0.712	0.563	0.598

Note: Robust standard errors in parentheses. LT=lifetime; EFW=Economic Freedom of the World
*** p<0.01, ** p<0.05, * p<0.1

The first column shows the direct effect of economic freedom on educational mobility. While the sign is positive (signifying less persistence, or more mobility), it is not statistically significant, which means that δ_4 is not mathematically different from 0. The second column shows the conventional finding in the literature on economic freedom (Hall and Lawson 2014; Lawson et al., 2020; Lawson et al., 2024) that income is strongly and significantly related to economic freedom. The third column shows that income levels are tied to greater educational mobility. Columns 2 and 3 provide us with $\delta_1\delta_2$ (that is, the indirect effect of economic freedom on educational mobility), which is 0.11. Given that the standard deviation for educational mobility is 0.18, this means that an extra point of economic freedom is associated with greater educational mobility of three-fifths of a standard deviation.

The fourth column shows the correlative link between educational mobility and income mobility. The effect is significant. The positive coefficient of educational mobility on income mobility means that if persistence in educational outcomes rises (falls), it is

also associated with increases (falls) in income levels. As δ_4 is not mathematically different from 0, this means that $[\delta_1\delta_2 + 0]\delta_5$ is our estimate of economic freedom's association with income mobility via educational mobility. That effect is 0.025.

There are two ways to contextualize that result. First, a one-point increase in economic freedom is associated with increasing income mobility by one-tenth of a standard deviation via educational mobility. Second, because we use the same setup as Callais and Geloso (2023), who estimate the association between economic freedom and income mobility directly and indirectly through income levels, we can compare that estimate to theirs. They estimate that the indirect effect places a coefficient of 0.09 on economic freedom and the direct effect is not mathematically different from 0. This means that the effect we find for educational mobility is roughly a quarter as strong as theirs and thus complements that mechanism appreciably.

Overall, our results support the contention that economic freedom is associated with greater educational mobility, which is also associated with greater income mobility.

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