Growth-Mobility and Great Gatsby Curves: Upward Social Mobility Across Nations

Danny Quah

Tue 20 May 2025

Lee Kuan Yew School of Public Policy, NUS

Key empirical result: The Growth-Mobility Curve

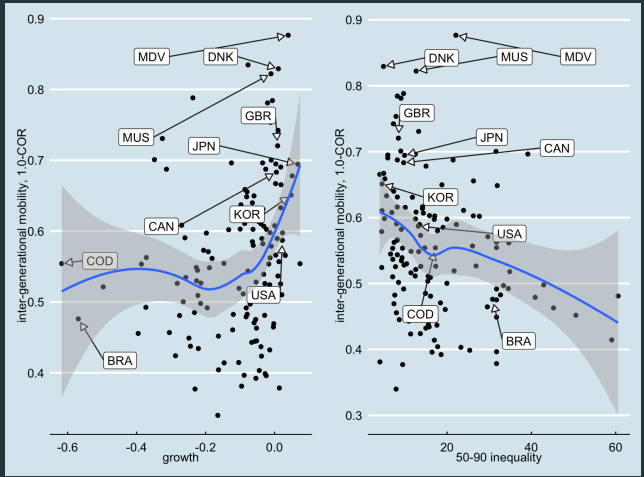


Figure 1: The Growth-Mobility Curve and the Great Gatsby Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

The Growth-Mobility Curve

- High past economy-wide growth strongly foreshadows high social mobility; similarly high incomes predict high social mobiity
- This vision contrasts with the Great Gatsby Curve
- Systemic causality triangle in growth, inequality, and social mobility

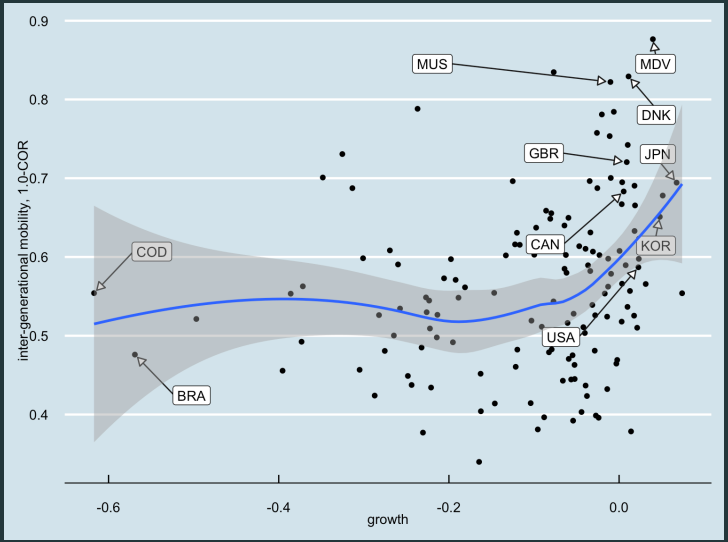


Figure 2: The Growth-Mobility Curve: the positive relationship between social mobility and past economy-wide growth. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

Conclusion

1. Inequality is a property that describes an entire society. There is no such thing as inequality in a single person. So too social mobility.
   - Pathways for **individual-level** intervention can improve well-being and raise social mobility. But sometimes just the first, not the second.
   - Individual improvement and social mobility both matter. Well-being of an individual or family; social cohesion and societal stability; populism; geopolitical attitudes.
2. **Systemic** evidence across countries on social mobility, while confirming the Great Gatsby Curve, ...
   - 2.1 ... show economy-wide high growth and high incomes foreshadow high social mobility, thus, positive spillovers in economic growth;
   - 2.2 ... question how intervention on social mobility provides appropriate balance between the best allocation of talent and effort, and distortion in opportunity.

Social mobility in Singapore is high by international standards

Intergenerational independence in income and education

	Intergenerational independence	
	Income	**Education**
Singapore	0.81	. . .
Canada	0.80	0.68
Denmark	0.73	0.83
UK	0.67	0.72
Japan	0.66	0.69
ROK		0.65
US	0.66	0.59

Table 1: Intergenerational independence, defined as one minus the intergenerational correlation between incomes of fathers and eldest sons, and between years of education of parents and 1980s-cohort offspring. Source: author's calculations for incomes from Ministry of Finance, Singapore (2015) Table 4, p. 17 and a range of independent sources referenced there; for education from Global Database on Intergenerational Mobility, World Bank (2023), using maximum attainment for parents and all for offspring; Singapore data unavailable).

Snapshots of social mobility

	Income growth	
	Inter-generational median	**Bottom half 1993–2023**
Singapore	1.35	2.71
Canada	...	1.39
Denmark	...	1.40
UK	...	1.25
Japan	...	0.91
ROK	...	1.33
US	...	1.33

Table 2: Median income growth over a generation is for offsprings in birth cohort 1978-1982. Bottom half average income growth is over the years 1993-2023. Growth in median income (or the income of any fixed percentile range) is, of course, conceptually different from growth in an individual's or family's income, where that individual or family is median at a given point in time. They wouldn't be expected to be equal. However, it is also difficult to think of circumstances under which the correlation between the two is not high, or that significant difference between them would be sustained. It is a generalization of this intuition that motivates the work by Genicot, Ray, and Concha (2024). Source: Ministry of Finance, Singapore (2015) Fig. 10, p. 18, and author's calculations from World Inequality Database (2025)

Intergenerational risings

	Intergenerational risings			
	Income, from bottom 20%		Education, from bottom 50%	
	surpass	to top 20%	surpass	to top 25%
Singapore	0.76	0.14	...	...
Canada	...	0.14	0.37	0.15
Denmark	...	0.12	0.41	0.20
UK	...	0.09	0.39	0.17
Japan	...	...	0.38	0.17
ROK	...	...	0.36	0.15
US	...	0.08	0.30	0.12

Table 3: Risings measured in fractions, from parents in bottom 20% by income rank and in bottom 50% by rank in years of education. Source: for incomes, Ministry of Finance, Singapore (2015) Fig. 11, p. 19; for education, Global Database on Intergenerational Mobility, World Bank (2023), using maximum attainment for parents and all for offspring (1980s birth cohort); Singapore data unavailable).

Social mobility: Both outcome and driver

Social mobility is ...

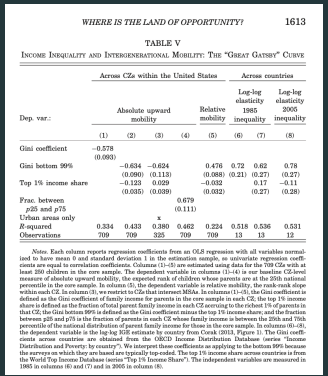
- when unequal starting conditions are reduced in disparity with heightened effort by those initially disadvantaged
- Chetty et al 2014 show high mobility places "are less residentially segregated, have lower inequality, higher quality public school systems, stronger social networks, and stronger family structures" (van der Weide et al 2021)
- 'rising income inequality "can stifle upward social mobility" ' (Corak, 2013)

When absent, makes ...

- "it harder for talented and hard-working people to get the rewards they deserve" (Corak, 2013, citing OECD 2011)
- for "unrealized human potential (...) as talented individuals from disadvantaged families are excluded from opportunities." (van der Weide et al, 2021)
- for friction that tethers life opportunities to socioeconomic status at birth, and thus "undermines the best allocation of talent and impedes the accumulation of human capital" (World Economic Forum 2020)

System-wide ecological drivers for social mobility

All variants of the Great Gatsby Curve show that lower intergenerational mobility comes with higher inequality



WHERE IS THE LAND OF OPPORTUNITY? 1613

TABLE V

INCOME INEQUALITY AND INTERGENERATIONAL MOBILITY: THE "GREAT GATSBY" CURVE

	Across CZs within the United States					Across countries		
Dep. var.:	Absolute upward mobility			Relative mobility	Log-log elasticity 1985 inequality	Log-log elasticity 2005 inequality		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gini coefficient	−0.578 (0.093)							
Gini bottom 99%		−0.634 (0.090)	−0.624 (0.113)		0.476 (0.088)	0.72 (0.21)	0.62 (0.27)	0.78 (0.27)
Top 1% income share		−0.123 (0.035)	0.029 (0.039)		−0.032 (0.032)		0.17 (0.27)	−0.11 (0.28)
Frac. between p25 and p75				0.679 (0.111)				
Urban areas only			x					
R-squared	0.334	0.433	0.380	0.462	0.224	0.518	0.536	0.531
Observations	709	709	325	709	709	13	13	12

Notes. Each column reports regression coefficients from an OLS regression with all variables normalized to have mean 0 and standard deviation 1 in the estimation sample, so univariate regression coefficients are equal to correlation coefficients. Columns (1)–(5) are estimated using data for the 709 CZs with at least 250 children in the core sample. The dependent variable in columns (1)–(4) is our baseline CZ-level measure of absolute upward mobility, the expected rank of children whose parents are at the 25th national percentile in the core sample. In column (5), the dependent variable is relative mobility, the rank-rank slope within each CZ. In column (3), we restrict to CZs that intersect MSAs. In columns (1)–(5), the Gini coefficient is defined as the Gini coefficient of family income for parents in the core sample in each CZ, the top 1% income share is defined as the fraction of total parent family income in each CZ accruing to the richest 1% of parents in that CZ, the Gini bottom 99% is defined as the Gini coefficient minus the top 1% income share, and the fraction between p25 and p75 is the fraction of parents in each CZ whose family income is between the 25th and 75th percentile of the national distribution of parent family income for those in the core sample. In columns (6)–(8), the dependent variable is the log-log 1gE estimate by country from Corak (2013, Figure 1). The Gini coefficients across countries are obtained from the OECD Income Distribution Database (series "Income Distribution and Poverty: by country"). We interpret these coefficients as applying to the bottom 99% because the surveys on which they are based are typically top-coded. The top 1% income share across countries is from the World Top Income Database (series "Top 1% Income Share"). The independent variables are measured in 1985 in columns (6) and (7) and in 2005 in column (8).

Figure 3: A Great Gatsby Curve. The Table shows a negative coefficient in the regression of mobility on inequality. Source: Chetty et al 2014.

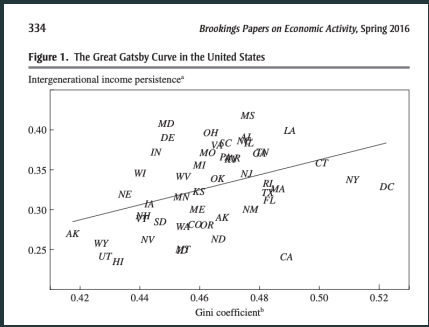


Figure 4: A Great Gatsby curve. The graph shows across US states a negative relation between social mobility and income inequality. Source: Kearney and Levine 2016.

Using different measures does not change how lower social mobility comes with higher inequality

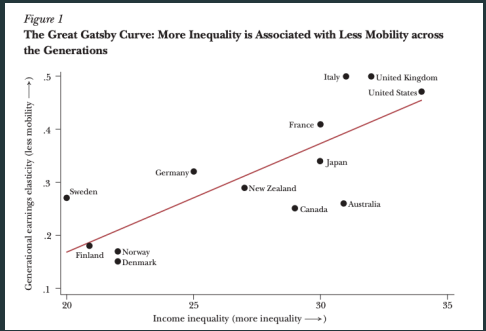


Figure 5: A Great Gatsby Curve. The table shows rich nations a negative relation between social mobility and income inequality. Source: Corak 2013.

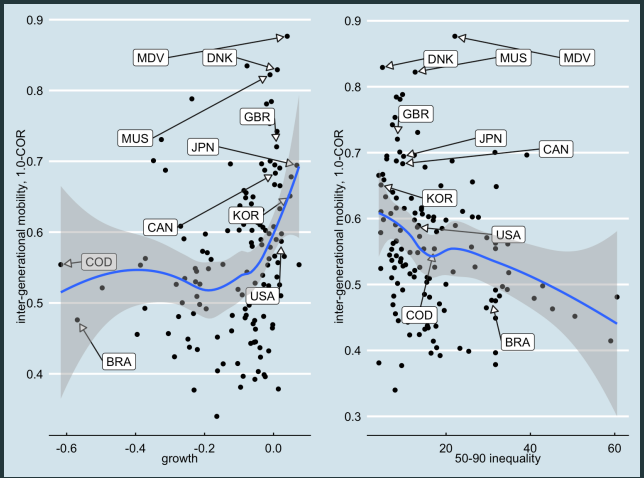
Figure 6: A Great Gatsby curve. The graph shows across nations a negative relation between social mobility and income inequality. Source: Narayan et al 2018.

Summary of literature evidence on causes and consequences of social mobility

1. Social mobility is a target: attack it directly. (Chetty et al 2014)
2. Social mobility is an outcome of inequality: Fix both at the same time. (Corak 2013)
3. Social mobility is conflated with both controls and symptoms (health, education, technology, work opportunities, social protection, inclusive institutions). Measure it better. (World Economic Forum 2020, OECD 2018)
4. Social mobility is an important driver for social cohesion and social capital, and a powerful safeguard against extremist populism

The Growth-Mobility Curve. A contrasting view

The Growth-Mobility Curve. High past economy-wide growth rates foreshadow high social mobility.



The Growth Mobility Curve and the Great Gatsby Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

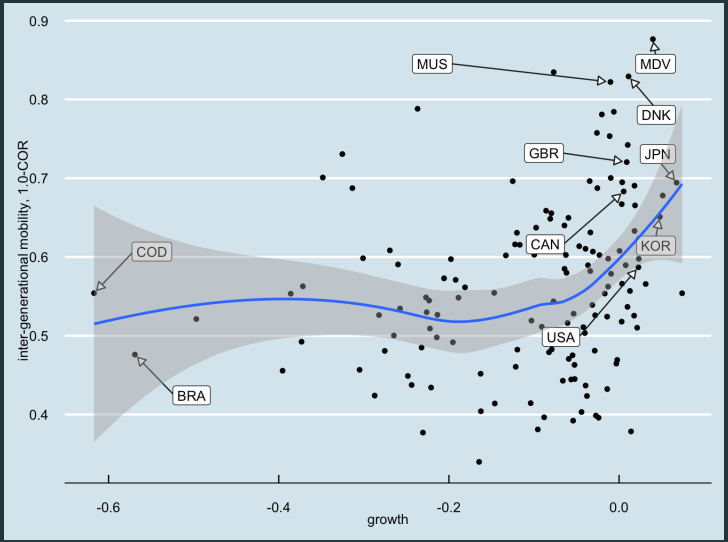


Figure 2: The Growth-Mobility Curve: the positive relationship between social mobility and past economy-wide growth. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

Using different measures for social mobility does not change how high social mobility comes with high growth

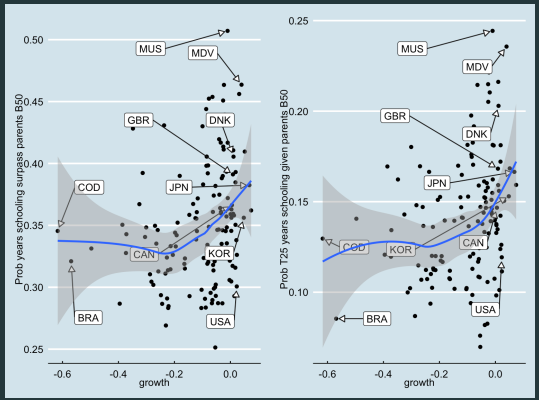


Figure 7: The Growth-Mobility Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

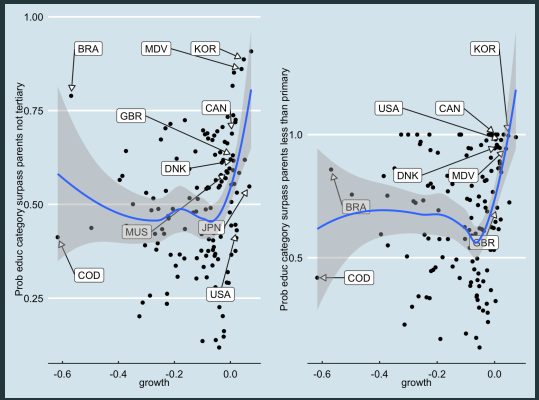


Figure 8: The Growth-Mobility Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

With per capita incomes the social mobility relationship is similar but less pronounced.

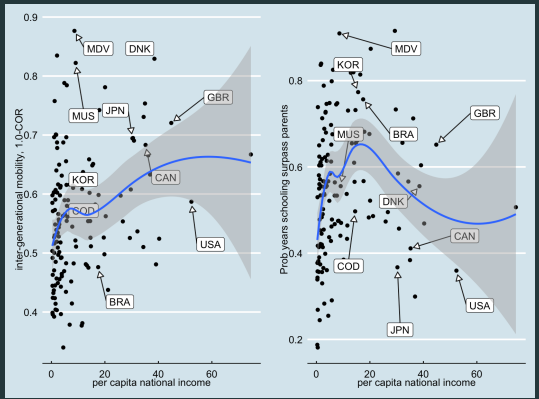


Figure 9: A positive, but less pronounced, relationship between social mobility and past income levels. Source: author's calculations from GDIM World Bank 2023, World

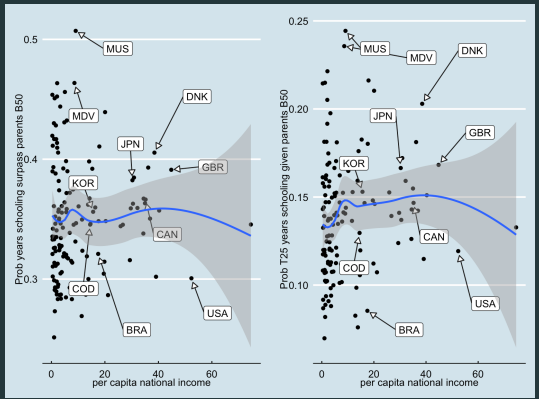


Figure 10: Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

With inequality, the social mobility relationship is less stable

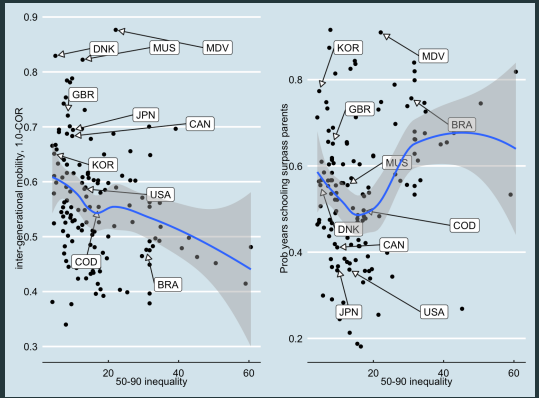


Figure 11: An unstable negative relationship between social mobility and income inequality (Great Gatsby Curve). Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

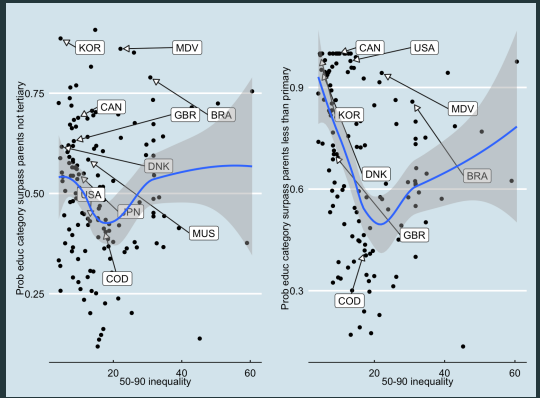


Figure 12: Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

A triangle of causal priority between growth, income inequality, and social mobility

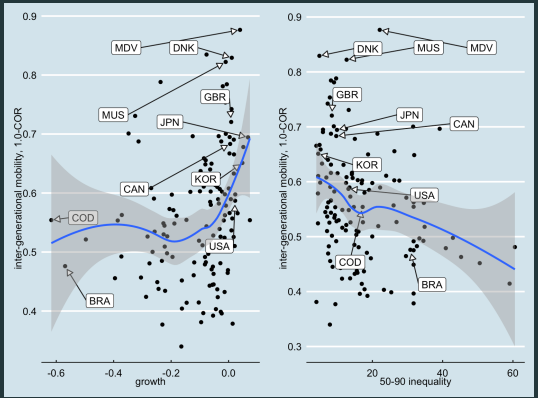


Figure 13: The Growth-Mobility Curve and the Great Gatsby Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

Growth-mobility conclusions

1. (At the same time that high inequality comes with low social mobility:)
2. High past economy-wide growth strongly foreshadows high social mobility
3. Except at very high levels, high average incomes too predict high social mobility
4. Extreme cases attract too much attention; however, they are also cross-sectionally fragile (BRA).

Unobserved Social Mobility: Multiple Indicators Multiple Causes

Social Mobility with Multiple Indicators and Multiple Causes

$$Y = X\beta + \epsilon$$

1. The right explanatory variables X? Causality, instruments. Multiple causes
2. The right dependent variable Y?
3. $Y_i = \gamma Z + \eta_i$, $i = 1, \ldots, M$. Multiple indicators

Conclusion

Key empirical result: The Growth-Mobility Curve

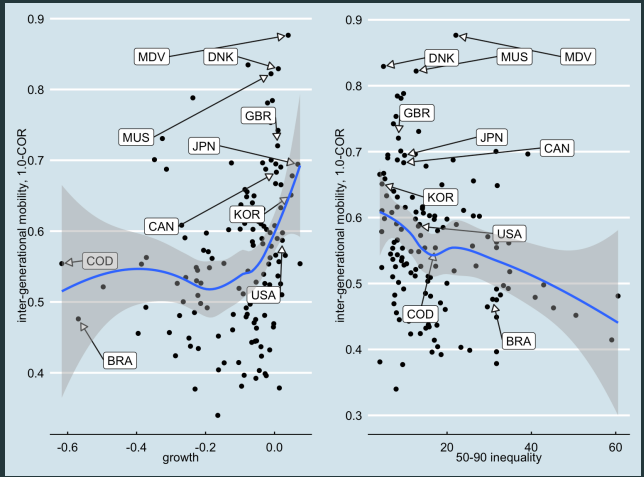


Figure 1: The Growth-Mobility Curve and the Great Gatsby Curve. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

The Growth-Mobility Curve

- High past economy-wide growth strongly foreshadows high social mobility; similarly high incomes predict high social mobiity
- This vision contrasts with the Great Gatsby Curve
- Systemic causality triangle in growth, inequality, and social mobility

Conclusion

1. Inequality is a property that describes an entire society. There is no such thing as inequality in a single person. So too social mobility.
   - Pathways for **individual-level** intervention can improve well-being and raise social mobility. But sometimes just the first, not the second.
   - Individual improvement and social mobility both matter. Well-being of an individual or family; social cohesion and societal stability; populism; geopolitical attitudes.
2. **Systemic** evidence across countries on social mobility, while confirming the Great Gatsby Curve, ...
   - 2.1 ... show economy-wide high growth and high incomes foreshadow high social mobility, thus, positive spillovers in economic growth;
   - 2.2 ... question how intervention on social mobility provides appropriate balance between the best allocation of talent and effort, and distortion in opportunity.

Growth-Mobility and Great Gatsby Curves: Upward Social Mobility Across Nations

Danny Quah

Tue 20 May 2025

Lee Kuan Yew School of Public Policy, NUS

Appendix

Intuition draws inappropriately from isolated examples

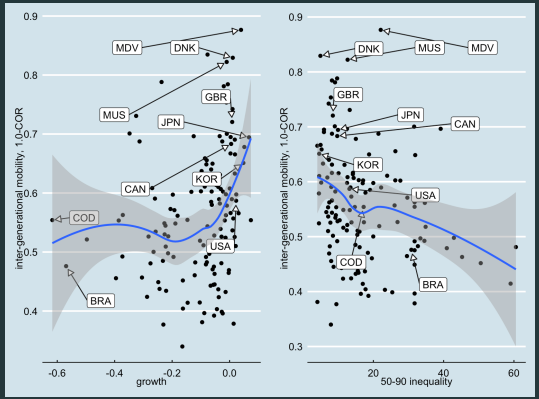


Figure 14: Brazil has low social mobility, low growth, and high inequality. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.

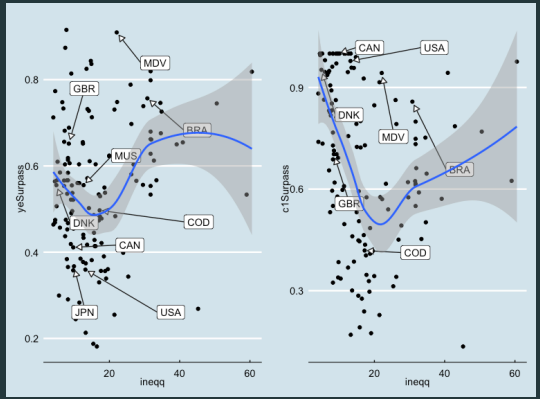


Figure 15: But the relationship is unstable. Source: author's calculations from GDIM World Bank 2023, World Inequality Database 2025.