

Impacts on Income Inequality from the aftereffects of Financial Crisis

Khôi Minh Trương

Faculty Sponsor: Dr. Sujata Saha, Department of Economics, Wabash College



Introduction

- Inequality exists within the income distribution of an economy.
- Usually following an economic crisis (e.g., COVID-19 recession, Great Recession, etc.), those at the lower income percentiles become poorer, while the affluent seem to be accumulating more wealth.
- Existing research on the relationship between income inequality & financial crisis is limited by insufficient temporal or geographical data coverage.
- Few works offer comparable cross-national analysis on influencers of income inequality.

Literature Review

- Goda (2013), Bernstein (2013)
- **Living standards rise** but income is distributed unevenly
 - **Increased borrowing** invites risks
→ Evidence from the US, UK, China, etc.
- Idoko & Ochidi (2016), Jensen & Johannesen (2017), Chwioroth & Walter (2019)
- Rising costs **depress consumption**, which can persist ⇒ recession loop
→ Evidence from Nigeria, Denmark, the US
- Sieron (2017), Mumtaz & Theophilopoulou (2017), Cairó & Sim (2018)
- **Monetary policies** can affect the income gap both ways, or even sever link between income inequality & aggregate demand
→ Modelled on US data, evidence from the UK
- Blau et al. (2021), Biglaiser & McGauvran (2021)
- Inequality increases stock volatility
 - **Greater human capital**, higher income inequality, **stabler stock**
→ Evidence from US shares in 37 countries
 - **Bond downgrades** raise income gap
→ Evidence from 70 developing economies
- and other works

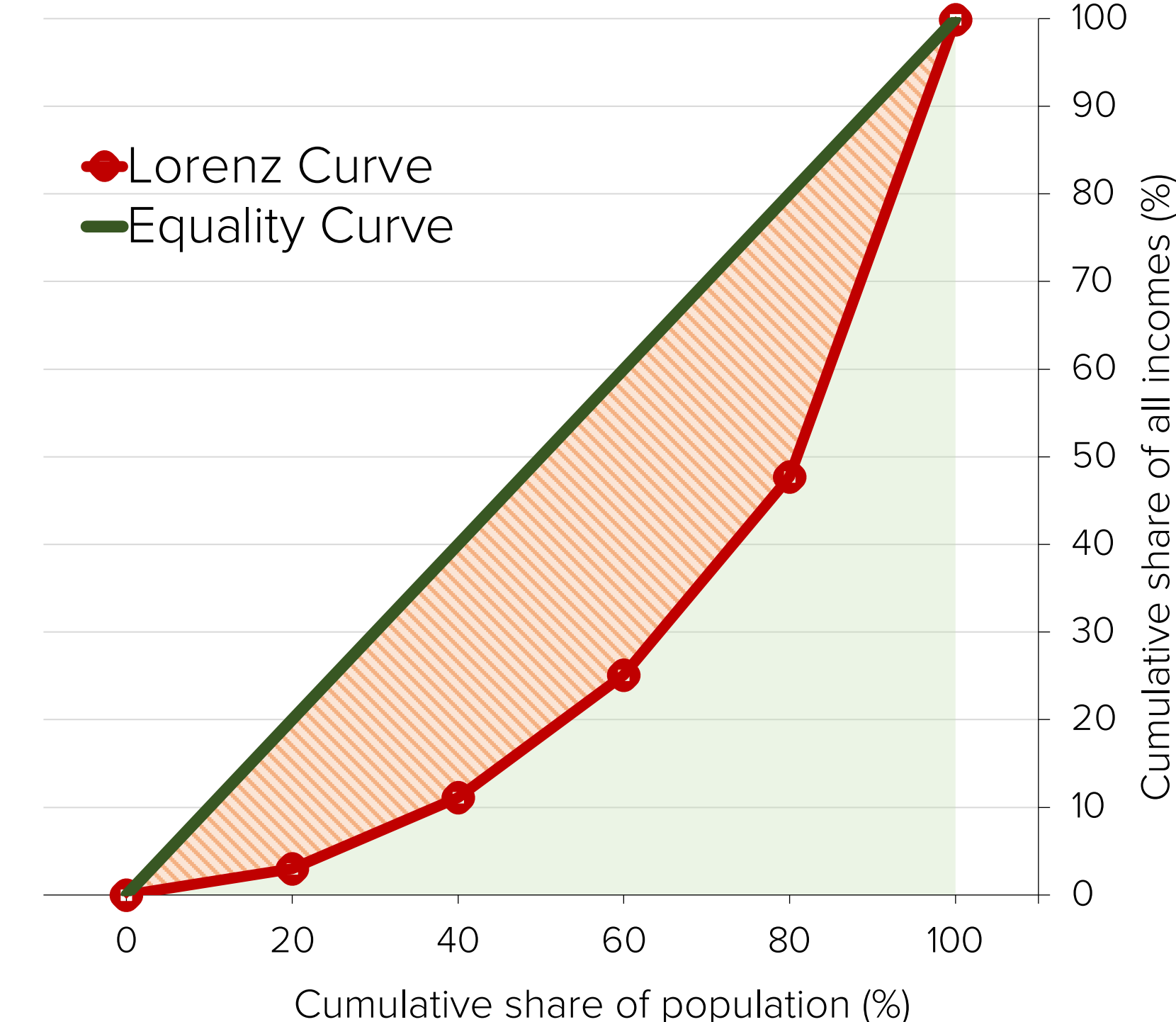
Data

Sets: 15 nations, 15 years → 3 groups, 75 observations each
Groups: Upper-high, lower-high, and middle income
Period: 2004–2018, annually
Sources: Standardized World Income Inequality Database, Federal Reserve Economic Data, Investing.com, World Bank, International Monetary Fund, United States Census Bureau

Methodology

2020 US income distribution inequality

Source: US Census Bureau

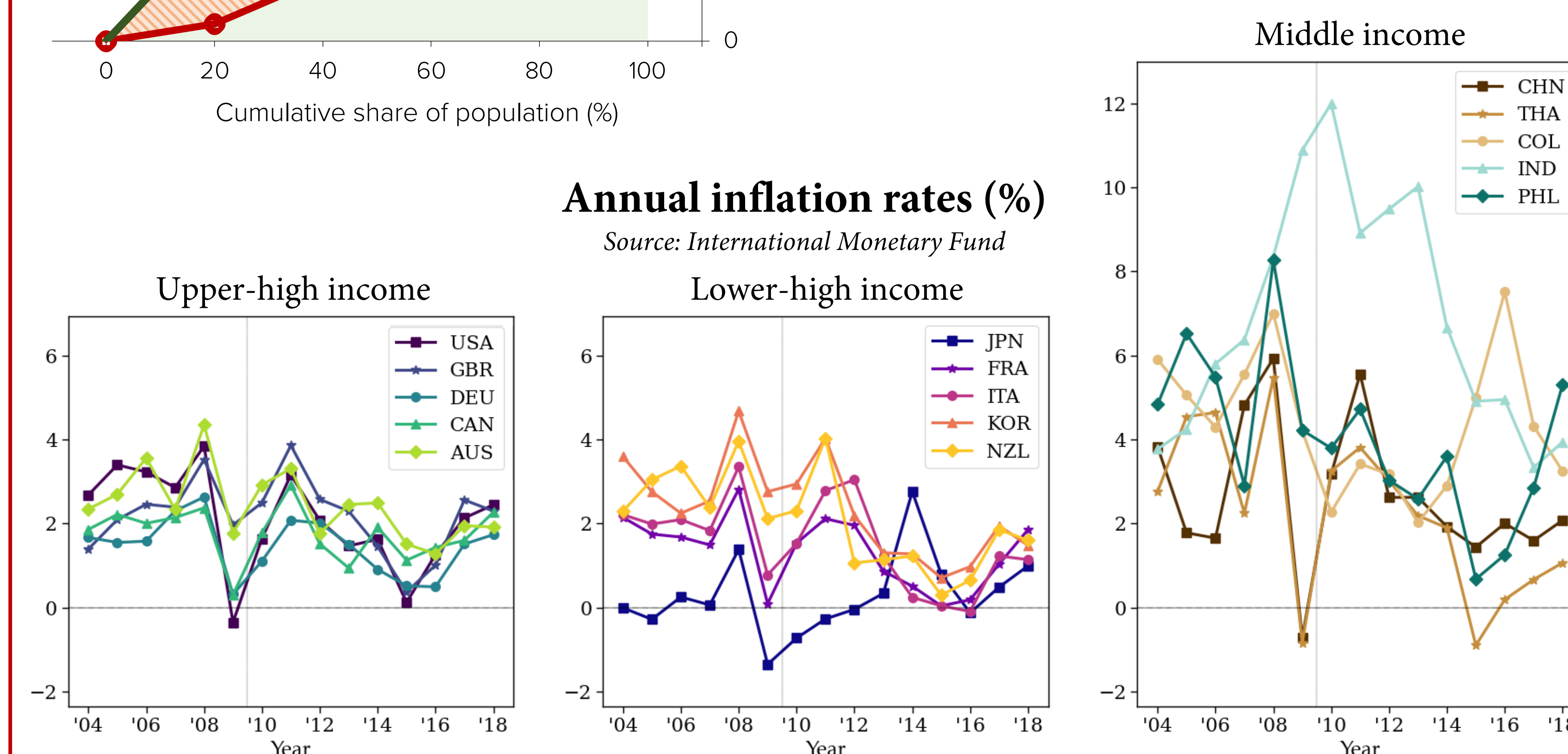


Perfect Equality: 50% of the population is expected to account for 50% of the economy's gross income, etc.

As income becomes more evenly distributed, the striped area becomes smaller, **Gini coefficient approaches 0**.

Hypotheses:

1. As **unemployment rises**, expected income **inequality grows**.
2. Paradoxically, **expansionary monetary policies** are expected to **widen the income gap** due to **arbitrage and sticky wages**.



Rationale behind Panel Groups

- ❖ Higher incomes are expected to behave similarly, yet there are still inherent differences.
- ❖ Middle income is hugely diverse.

Results & Conclusions

- Income inequality is **overall increasing**, more so in real terms.
- Countries of **lower-high incomes** were the least affected.
- Post-crisis **unemployment hikes** increase inequality, but post-crisis **rising per-capita income** bridges the income gap.
- **Expansionary monetary policies** can produce **stabilizing effects** on the income gap in all country income groups involved.
- The average household may have **altered the composition of income** following the Great Recession.

Policy Suggestions

- ✓ Public dissemination of information on certain assets or other investment vehicles, providing **more accessibility to platforms for financial investment**.
- ✓ Balancing between maintaining healthy inflation and **nurturing gap-bridging redistribution of wealth**.

References

- Bernstein, J. (2013). The Impact of Inequality on Growth. *Center for American Progress*. <https://www.americanprogress.org/wp-content/uploads/2013/12/BerensteinInequality.pdf>
- Biglaiser, G., & McGauvran, R. J. (2021). The effects of bond ratings on income inequality in the developing world. *Business and Politics*, 23(1), 36–66. <https://doi.org/10.1017/bap.2020.1>
- Blau, B. M., Griffith, T. G., & Whitby, R. J. (2021). Income inequality and the volatility of stock prices. *Applied Economics*, 53(38), 4404–4416. <https://doi.org/10.1080/00036846.2021.1904110>
- Cairó, I., & Sim, J. W. (2018). Income Inequality, Financial Crises, and Monetary Policy. *Finance and Economics Discussion Series 2018-048*. <https://doi.org/10.17016/FEDS.2018.048>
- Chwioroth, J. M., & Walter, A. (2019). *The Wealth Effect*. Cambridge University Press. <https://doi.org/10.1017/9781316649992>
- Goda, T. (2013). The role of income inequality in crisis theories and in the subprime crisis. *Post Keynesian Economics Study Group Working Paper 1305*. <https://dx.doi.org/10.2139/ssrn.2486864>
- Idoko, C. U., & Ochidi, E. A. (2016). The Effect of Global Financial Crisis on Consumption Behaviour of Households in Kogi State, Nigeria. *European Journal of Business, Economics and Accountancy*, 4(5), 9.
- Jensen, T. L., & Johannesen, N. (2017). The Consumption Effects of the 2007–2008 Financial Crisis: Evidence from Households in Denmark. *American Economic Review*, 107(11), 3386–3414. <https://doi.org/10.1257/aer.20151497>
- Mumtaz, H., & Theophilopoulou, A. (2017). The impact of monetary policy on inequality in the UK: An empirical analysis. *European Economic Review*, 98, 410–423. <https://doi.org/10.1016/j.euroecorev.2017.07.008>
- Sieron, A. (2017). Inflation and Income Inequality. *Prague Economic Papers*, 26(6), 633–645. <https://doi.org/10.18267/j.pep.630>
- ... more works referenced & reviewed to be found in the paper.

Results

	Income Group:	Dependent variable: Gini Coefficient		
		I Upper-High	II Lower-High	III Middle
Post-Crisis effect		86.52 *	43.39	52.91 ***
Real M3 [†]		-1.41 ***	-0.19 ***	-0.26 **
Post-crisis real M3 [†]		1.61 **	-0.02	0.17
Unemployment		-0.33	-0.39 ***	0.81 ***
Post-crisis unemployment		1.00 *	0.38 **	0.37 **
Real GNI per capita [†]		14.63 ***	2.95 *	2.85 **
Post-crisis real GNI per capita [†]		-12.23 ***	-5.54	-5.89 ***
Control variables [‡]		Yes	Yes	Yes
Constant		-54.47 *	12.05	19.27 **
R ²		0.86	0.26	0.91

* p<0.05

** p<0.01

*** p<0.001

[†] measured in natural log

[‡] Control variables include yield spread, real stock price index, stock volatility index, annual inflation, and corresponding post-crisis interaction effects

☆ The dummy factor represents the period post Great Recession

☆ As Woolridge tests detect serial correlation in the data, regressions were run with Driscoll-Kraay standard errors for panel analysis