Report 1: Master Thesis

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In 1995, Brazil eliminated its dividend taxes, arguing that double taxation of corporate profits hindered growth and distorted capital allocation. This tax policy, however, helped the consolidation of a very regressive tax system, in which the 85th percentile pays a higher average tax rate than the 99th by 2022 (Figure 1). Since then, inequality in Brazil has remained on the rise, confining the 7th most populous nation to a capital concentrating status quo. As of 2022, Brazil's Gini index is 53%, making it the most unequal country in Latin America and among the top 10 globally¹. Brazil also has the highest wealth concentration worldwide: the top 1% holds 48.4% of national wealth².

Several recent studies have attempted to understand the role of taxation on top income inequality. Particularly, Berman and Klor, 2024 investigate the impact of dividend taxes on top income inequality in Israel, following the 2017 tax cut. They find a significant increase in retained earnings among the top 1%, which is not observed in other income groups. Similarly, Nallareddy et al., 2021 study the effects of corporate taxes on income inequality, finding that corporate tax cuts led to increases in income inequality, a result that is robust across regressions. Together, those studies provide a strong empirical framework that will serve as the foundation for my research.

Considering the context of Brazil and the existing literature, I would like to dedicate my master's thesis to understanding the drivers of top-income inequality in Brazil, with a particular focus on the role of dividend taxation in shaping income distribution. The database provided by WID offers a wealth of time series indicators related to income distribution and inequality, which will be crucial for my analysis. In particular, the study by Morgan and Souza, 2025 presents an extensive analysis of the evolution of income, minimum wages, and wealth in Brazil over a 72-year period (see Figure 2), by combining data from various official Brazilian agencies and other non-official microdata sources. Moreover, the authors provide a well-structured use of the raw data they compiled, along with a solid theoretical framework to understand the evolution of income and wealth in Brazil.

My approach will be the Synthetic Control Method (SCM), which allows for the construction of a synthetic control group that approximates the characteristics of the treated unit. This method is particularly useful when the number of treated units is small, as is the case for Brazil. The SCM was formalized in Abadie and Gardeazabal, 2003 and further developed in Abadie et al., 2010. To improve the model's efficiency, I will include a set of controls that capture the main determinants of income inequality, such as financial development, openness, government spending, and poverty rates, following the work by Afandi et al., 2017 and Roine et al., 2009.

¹World Bank, 2022

²Global Wealth Report, 2023

Furthermore, in order to optimize the model's performance, I will use Machine Learning techniques to construct the synthetic controls, as described by Araujo, 2023. This helps create sparse coefficients that identify the most relevant control units. Similarly, clustering algorithms will be used to group the control units, reducing the dimensionality of the model and improving its efficiency, while allowing for robustness testing of the results. This process is yet again demonstrated by Abadie and L'Hour, 2023, who used penalized regression to estimate the synthetic control weights.

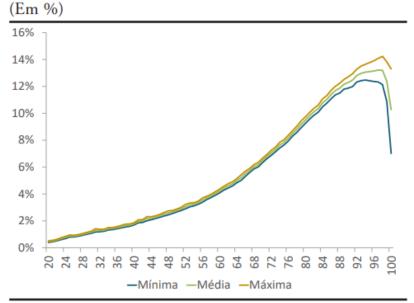
References

- Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic control methods for comparative case studies: Estimating the effect of california's tobacco control program. *Journal of the American Statistical Association*, 105 (490), 493–505. https://doi.org/10.1198/jasa.2009.ap08746
- Abadie, A., & Gardeazabal, J. (2003). The economic costs of conflict: A case study of the basque country. *American Economic Review*, 93(1), 113–132. https://doi.org/10.1257/000282803321455188
- Abadie, A., & L'Hour, J. (2023). A penalized synthetic control estimator for disaggregated data. *Journal of the American Statistical Association*, 118(542), 785–799. https://doi.org/10.1080/01621459.2021.1974911
- Afandi, A., Rantung, V. P., & Marashdeh, H. (2017). Determinants of income inequality. *Economic Journal of Emerging Markets*, 9(2), 159–171. https://doi.org/10.20885/ejem.vol9.iss2.art5
- Araujo, D. K. G. (2023, October). Synthetic controls with machine learning: Application on the effect of labour deregulation on worker productivity in brazil (BIS Working Paper No. 1127). Bank for International Settlements. https://www.bis.org/publ/work1127.htm
- Berman, Y., & Klor, E. F. (2024, February). Capital taxation, retained earnings and inequality: Evidence from dividend tax reforms (NBER Working Paper No. 32136). National Bureau of Economic Research. https://doi.org/10.3386/w32136
- Morgan, M., & Souza, P. (2025). Distribution in late development: The political economy of the kuznets curse in brazil. (2025/2). https://doi.org/10.35188/UNU-WIDER/2025/559-2
- Nallareddy, S., Rouen, E., & Suárez Serrato, J. C. (2021, July). Do corporate tax cuts increase income inequality? https://www.journals.uchicago.edu/doi/full/10.1086/718950
- Roine, J., Vlachos, J., & Waldenström, D. (2009). The long-run determinants of inequality: What can we learn from top income data? *Journal of Public Economics*, 93(7–8), 974–988. https://doi.org/10.1016/j.jpubeco.2009.04.003

Appendix

GRÁFICO 2

Alíquota média de imposto de renda por centil dos declarantes (2022)



Elaboração do autor

Figure 1: Average tax rate by income percentile

Translation:

Average tax rate by income percentile among reporters (2022).

(As a %)

— Minimum — Average — Maximum.

Source: IBGE, 2022.

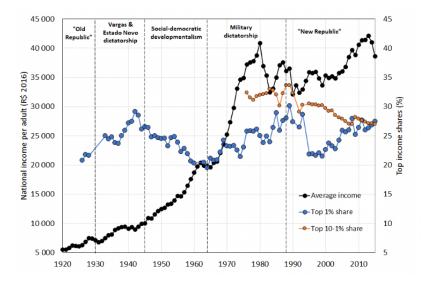


Figure 2: Average income over time