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The Fiscal Origins of Comparative Inequality Levels: An Empirical and Historical Investigation

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Abstract**:**

This research exploits novel evidence on current and historical inequality dynamics, as well as an instrumental variable (IV) strategy (founded on historical settler mortality à la Acemoglu et al.), to document the fundamental role of income redistribution through taxes and transfers in accounting for differences in inequality across regions and historical periods. This research challenges the conventional wisdom about the origins of world-leading inequality levels in Latin America, India or Africa, arguing that inequality is not rooted in the colonial period nor are current inequality levels explained by supposedly persistent "extractive" economic institutions maintaining an unequal playing field. De facto, Latin America, Africa and India have had, in most cases, lower inequality levels than Western countries (i.e. Western Europe and its Offshoots) until the early 20th century. Before this period, no different than in colonized nations, Western countries had a regressive fiscal system which required the poorest taxpayers to fund public services that benefited richer households. The IV strategy, and the evidence on inequality dynamics, both indicate that contemporary inequality differences are a product of the 20th century. The emergence of redistributive policies due to democratization, which have taken place in the past century, have led to an exceptional inequality reduction in Western countries. Despite that Latin America and India have converged towards "inclusive" economic institutions, high inequality has persisted through a regressive fiscal equilibrium which still is largely in place due to a slower democratization process.

I. Introduction

Latin America and India are well-known as being among the most unequal places in the world, with world-leading income inequality levels that are roughly 50% higher than in Western Europe, Western offshoots (i.e. Australia, Canada, New Zealand, and the US) or East Asia.[1] The seminal work of Engerman and Sokoloff (1994, 2002) henceforth ES, and of Acemoglu, Johnson and

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[1] 'OECD Income Distribution Database (IDD): Gini, Poverty, Income, Methods and Concepts - OECD'. Accessed 20 June 2020. https://www.oecd.org/social/income-distribution-database.htm.

Robinson (2001, 2002, 2005) hereafter AJR, have famously stressed the colonial origins of these inequality differences and their persistence through historically-determined economic institutions.[2]

These authors and a series of follow-up studies, e.g. Easterly (2007) and Nunn (2008), have stressed that "extractive" colonialism in Latin America, India and Africa, led the formation of "extractive" economic institutions designed to serve the elite at the expense of the bulk of the population.[3] Namely, rules and practices which systematically undermine equality of opportunity and broad-access to capital accumulation by restraining, notably, access to secure property rights, education and career choices to non-elite households.[4] Whereas in "settler colonies" where Europeans settled in large numbers, referred to as "Western offshoots", ES and AJR argue that "settler" colonialism led to the emergence of "inclusive" institutions guaranteeing a more level economic playing field, e.g. broader access to education and ownership rights.[5] At the same time, this literature has also stressed that colonialism also promoted an early emergence of "inclusive" institutions in Western Europe, where exposure to the Atlantic trade (inaugurated by colonization)

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[2] These ideas are well summarized in Sokoloff, Kenneth and James A. Robinson. Chapter IV "Historical Roots of Inequality in Latin America" in *Inequality in Latin America: Breaking with History?* The World Bank, 2004. https://openknowledge.worldbank.org/handle/10986/15009 ; Please also see Engerman, Stanley L., and Kenneth L. Sokoloff. 'Factor Endowments: Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States'. National Bureau of Economic Research Working Paper Series, 1 December 1994. https://www.nber.org/papers/h0066; Engerman, Stanley L., and Kenneth L. Sokoloff. 'Factor Endowments, Inequality, and Paths of Development Among New World Economics'. National Bureau of Economic Research Working Paper Series, 10 October 2002. https://www.nber.org/papers/w9259; Acemoglu, Daron, Simon Johnson, and James A. Robinson. 'The Colonial Origins of Comparative Development: An Empirical Investigation'. American Economic Review 91, no. 5 (2001): 1369–1401; Acemoglu, Daron, Simon Johnson, and James A. Robinson. 'Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution'. The Quarterly Journal of Economics 117, no. 4 (1 November 2002): 1231–94. https://doi.org/10.1162/003355302320935025; Acemoglu, Daron, Simon Johnson, and James A. Robinson. 'Chapter 6 Institutions as a Fundamental Cause of Long-Run Growth'. In *Handbook of Economic Growth*, edited by Philippe Aghion and Steven N. Durlauf, 1:385–472. Elsevier, 2005. https://doi.org/10.1016/S1574-0684(05)01006-3.

[3]The main channels identified by the literature on how "extractive" economic institutions promote inequality are: an unequal distribution of human capital (Mariscal and Sokoloff, 2000; Easterly 2007) and an unequal concentration of wealth. The latter being explained by institutionalized land inequality (ES; Banerjee et al, 2015; Frankema 2005), limited access to credit (Haber, 2011) and through an unequal allocation of secure ownership rights (AJR). Please see Mariscal, Elisa, and Kenneth Sokoloff. 'Schooling, Suffrage and the Persistence of Inequality in the Americas'. Political Institutions and Economic Growth in Latin America: Essays in Policy, History and Political Economy. Hoover Institution Press, Stanford, 2000, 159–218; Easterly, William. 'Inequality Does Cause Underdevelopment: Insights from a New Instrument'. Journal of Development Economics 84, no. 2 (1 November 2007): 755–76. https://doi.org/10.1016/j.jdeveco.2006.11.002; Nunn, Nathan. 'Slavery, Inequality, and Economic Development in the Americas'. Institutions and Economic Performance 15 (2008): 148–180; Banerjee, Abhijit, and Lakshmi Iyer. 'History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India'. American Economic Review 95, no. 4 (2005): 1190–1213; Frankema, Ewout HP. 'The Colonial Origins of Inequality: Exploring the Causes and Consequences of Land Distribution'. Discussion papers//Ibero America Institute for Economic Research, 2005; Haber, Stephen. 'Politics and Banking Systems'. In NBER Chapters, 245–94. National Bureau of Economic Research, Inc, 2011. https://ideas.repec.org/h/nbr/nberch/12611.html.

[4] Please see for instance Acemoglu, Daron, and James A. Robinson. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. London, UNITED KINGDOM: Profile Books, 2012. Page 75-79 https://ebookcentral.proquest.com/lib/londonschoolecons/reader.action?docID=1743163

[5] Idem.

expanded economic opportunities and led to political change towards less institutionalized inequality.[6]

Following the influence of the institutional literature à la ES and AJR, there is an emerging consensus that considers that: (I) comparative inequality levels are fundamentally determined by historically-determined divergent institutions which promote (or undermine) a level economic playing field, and (II) that these persistent institutional arrangements ("inclusive" or "extractive" and its associated inequality levels) can be traced back to the colonial period.[7] For the rest of this paper, the first part of the consensus will be referred as the "institutional hypothesis", while the second part will be referred as the "historical narrative" of AJR and ES.

This paper proposes an original contribution to the research on the origins of comparative inequality across regions and its historical evolution, documenting the crucial role of fiscal redistribution and state capacity over the primacy of economic institutions developed by ES and AJR. To do so, this research develops an empirical and historical exploration into the origins of world-leading inequality levels in Latin America, Africa and India, based on novel comparative evidence on current and historical inequality dynamics – covering an exceptionally wide range of countries since colonial times until today. Then, the investigation follows an instrumental variable (IV) research strategy founded on settler mortality which builds on AJR (2001), to identify the impact of a history of democracy on inequality and redistributive dynamics.

The research questions that structure this investigation are: (I) What are the historical origins of comparative inequality levels across regions and countries? (II) Does the empirical evidence indicate that different levels of inequality are explained by divergent economic institutions rooted in the colonial period? And (III) what is the role played by state capacity and redistribution in explaining historical inequality dynamics?

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[6] Acemoglu, Daron, Simon Johnson, and James Robinson. 'The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth'. American Economic Review 95, no. 3 (2005): 546–579.

[7] The institutional hypothesis (that inequality is embedded in "extractive" economic institutions) and the historical narrative (emphasising institutional persistence) inaugurated by ES, developed by AJR and epitomized in *Why Nations Fails* (Acemoglu and Robinson, 2012), is now widely shared by international organisations – such as the World Bank, the UN ECLAC or the OECD. Please see for instance De Ferranti, David, Guillermo E. Perry, Francisco Ferreira, and Michael Walton. Inequality in Latin America: Breaking with History? The World Bank, 2004; UN ECLAC 2018, Chapter IV "Institutions and the culture of privilege" in CEPAL, NU. *The Inefficiency of Inequality*. ECLAC, 2018. https://repositorio.cepal.org//handle/11362/43443; OECD 2018 "Chapter 3. Institutions to make the state deliver in Latin America and the Caribbean" in OECD, CAF Development Bank of Latin America, and UN ECLAC. Latin American Economic Outlook 2018: Rethinking Institutions for Development. Latin American Economic Outlook. OECD, 2018. https://doi.org/10.1787/leo-2018-en

As we shall see, the institutional thesis as well as the historical narrative of AJR and ES are deeply flawed. The evidence on inequality dynamics suggest that the persistence of "extractive" economic institutions arising from colonialism, as well as the colonial origins of comparative inequality levels, are a myth. Instead, the empirical and historical investigation developed in this paper suggests that what explains comparative high inequality levels in India, Latin America and Africa, is a limited fiscal redistribution rooted in a weak state capacity that arises from a short history of participatory democracy.

This argument will be presented and developed in six sections. In Section II, we will first describe the data and methodology used to construct comparable and reliable distributive statistics across nations and historical periods. Then, we will develop an analytical framework which maps the relationship between economic institutions, redistributive capacity and inequality dynamics within countries. Based on this framework, Section III demonstrates that what matters for explaining world-leading inequality levels in Latin America or India is a relatively regressive fiscal system rooted in a weak state capacity, and not an unequal economic playing field or "institutionalized" wealth concentration – therefore debunking AJR and ES thesis. Section IV, explores the historical origins of comparative inequality levels and a regressive fiscal system in Latin America, India and Africa, arguing that Western Europe and colonized nations, before the 20th century, all had high inequality levels rooted in a regressive fiscal systems which benefited richer households. Section V and VI outline and discuss the Instrumental Variable (IV) strategy, as well as historical evidence and case studies. The results of the IV strategy and the historical evidence developed in these last two sections suggest that the emergence of participatory democracies during the early 20th century, involving mass political participation and electoral competition, started to produce tangibly different rates of inequality following the emergence of redistribution in Western countries. Whereas in Latin America and India, despite a convergence towards "inclusive" economics institutions during post-colonial times, a regressive fiscal equilibrium maintaining high inequality levels is still largely in place due to a slower democratization process.

II Mapping Income Inequality

II.1 Measuring Income Inequality across time and space

This research is structured around a long-term comparative perspective on income inequality and on a quantitative IV approach studying the historical determinants of current inequality and

redistribution levels. Therefore, ensuring the quality and comparability of data across countries and historical periods is a fundamental challenge of this research strategy. To address this challenge, we will start by describing the methodology and sources used here to quantify both historical and current distributive statistics.

Concerning the historical measures on income inequality, the data used in this investigation comes from different publications which have estimated inequality following the methodology developed by Milanovich, Lindert and Williamson (2011) and match a set of standards to ensure the reliability and consistency of these estimations.[8] The methodology of Milanovich et al. allows to obtain comparable distributive statistics for pre-modern societies using "social tables", in other words, historical records, which provide evidence on income differences across different social groups and their respective population – such as censuses. This methodology is preferred as it permits not only to obtain comparable inequality estimates across societies and historical periods, but also because it has been largely used by researchers, thus providing us with abundant comparative evidence on historical inequality dynamics.[9] Concerning the standards related to the consistency of the data, all the historical distributive statistics used in this research consider both slave and free households – as not doing so would underestimate inequality estimations in slave societies.[10] For instance, the Gini coefficient for the US South in 1776 for free population only is 0.34 (equivalent to modern New Zealand) as opposed to 0.46 (equivalent to modern Mexico) once slaves households are included. [11] This research will therefore use the latter estimate to account for inequality across the whole of society. Concerning the criterion to ensure the reliability of the data, we only include estimations based on historical records providing sufficient details and representative evidence to compute distributive statistics for the whole of society.[12] This selection

[8] Milanovic, Branko, Peter H. Lindert, and Jeffrey G. Williamson. 'Pre-Industrial Inequality'. The Economic Journal 121, no. 551 (2011): 255–272.

[9] For instance, the latest publication by Milanovic (2018) includes some of the new comparable estimates on historical distributive statistic following this methodology – after this publication in 2018 new estimates has also been published as for colonial Jamaica. Please see Milanovic, Branko. 'Towards an Explanation of Inequality in Premodern Societies: The Role of Colonies, Urbanization, and High Population Density'. The Economic History Review 71, no. 4 (2018): 1029–1047; Burnard, Trevor, Laura Panza, and Jeffrey Williamson. 'Living Costs, Real Incomes and Inequality in Colonial Jamaica'. Explorations in Economic History 71 (2019): 55–71.

[10] More specifically, here consistency should be understood in the sense that (a) this criteria permits to compare societies across time – because if we only measure income differences between free households after the abolition of slavery the degree of inequality in a given society would artificially increase as ex-lave households which are typically poor would now be included in the estimations, and (b) this criterion allows us to compare inequality across different societies at a given time by following an unified criterion (i.e. income differences across all households) -as researchers publish inequality estimates also for free household only.

[11] Lindert, Peter H., and Jeffrey G. Williamson. '*Unequal Gains: American Growth and Inequality since 1700'*. Juncture 22, no. 4 (2016): 276–283. Table C-5; OECD IDD

[12] These records correspond to "full social tables" (following Milanovic et al categories) which include evidence on all the main social groups and their respective income.

excludes inequality estimates based on partial records, which account for a small section of society and (or) that do not include information on key social groups – such as on colonizers in a colonial context and (or) about the slave population in a slave society. For a comprehensive review of historical estimates used and not used in this research (based on the criteria exposed above) please see Appendix A. Most of the historical inequality estimates used in this paper are available online at the UC Davis Global Price and Income History database – which this research consulted to examine the estimations based on the criteria exposed above.[13] Concerning its rigour, all these estimations have been published in peer-reviewed and renowned journals in economics and economic history.[14]

With respect to the data on current redistribution and inequality levels, the statistics used in this investigation are based on the methodology of the OECD Income Distribution Database (hereafter OECD IDD), dataset and methodology which can also be consulted online.[15] This dataset includes comparable inequality statistics before and after taxes across a wide range of developed and developing countries.[16] This investigation uses the OECD dataset as it is highly valued and used by researchers and policy analysts, and because it allows for a comparative assessment of statistics on inequality and fiscal redistribution.[17] Importantly for this research, the UN ECLAC has used the methodology of the OECD IDD to obtain internationally comparable inequality and redistributive measures for Latin America.[18] Based on this, the data used in this research is a combination of the OECD IDD and ECLAC calculations (founded on the OECD methodology) which allows us to have an internationally comparable dataset on inequality and redistribution for a set of 57 countries, including 24 former colonies covering several continents.[19] The resulting dataset gives us an exceptionally abundant and detailed evidence on redistribution and inequality across the full income distribution (i.e., covering from poor to rich households) which cannot be found in other international databases. For instance, the World Inequality Database (WID) focuses on top income shares which are calculated using fiscal data (following

[13] 'GPIH - Early Income Distributions'. Accessed 16 July 2020. https://gpih.ucdavis.edu/Distribution.htm.
[14] These journals are the Economics Journal (Milanovic et al, 2011), the Economic History Review (Milanovich, 2018), Explorations in Economic History (Burnard et al, 2019), among others – please see Annex A.
[15] OECD Income Distribution Database (IDD): Gini, Poverty, Income, Methods and Concepts - OECD'. Accessed 20 June 2020. https://www.oecd.org/social/income-distribution-database.htm.
[16] The OECD IDD includes all OECD countries, as well as Brazil, Bulgaria, China, Costa Rica, India, Romania, the Russian Federation and South Africa.
[17] Gasparini, Leonardo, and Leopoldo Tornarolli. 'A Review of the OECD Income Distribution Database'. The Journal of Economic Inequality 13, no. 4 (2015): 579–602.
[18] Hanni, Michael, Ricardo Martner Fanta, and Andrea Podestá. 'The Redistributive Potential of Taxation in Latin America', August 2015. https://repositorio.cepal.org//handle/11362/39603.
[19] Besides the Americas, the dataset includes Africa (South Africa), Oceania (New Zealand and Australia), and Asia (India).

the methodology pioneered by Piketty et al.) and therefore lacks the sufficient detail to analyse inequality and redistribution across the full income distribution.[20] The other main datasets on inequality either cover a lower number of former colonies such as the Luxembourg Income Study (LIS) database,[21] or the database, while covering many countries, is not standardized (therefore not comparable) nor does it include inequality measures before and after taxes and transfers. This includes the Gini coefficients collected by the World Bank.[22]

Therefore, and as summarized in Figure 1, the data on modern inequality and redistribution statistics quoted and used (as in figures and regressions) in the rest of this paper is based on the combination of the OECD IDD and ECLAC calculations – see details in Annex A. While the figures presenting comparative evidence on historical inequality (before the 20th century) are based on the methodology developed by Milanovic et al. and follow the criteria expose above.

Figure 1. Summary of Distributive Statistics

Data and Description	Methodology	Main Sources
Modern Distributive Statistics [*Income inequality before and after taxes and transfers and the extent of redistribution]*	OECD Income Distribution Database *[Based on national microdata surveys (household level) covering the full income distribution]*	OECD and ECLAC calculations [*Combination of the OECD IDD and Hanni et al (2015) to cover the countries in Latin America not included in the OECD IDD, see details in Annex A]*
Historical Distributive Statistics *[Income inequality measures based on historical evidence]*	Milanovic et al (2011) *[Based on social tables i.e. historical records providing evidence on income differences across all main social groups, including slaves]*	Different Publications *[Including Milanovic et al (2011), Williamson and Lindert (2016), and Milanovic (2018), among others – see Annex A*]

II.2 A framework on inequality dynamics

Before exploring the determinants and evolution of economic inequality differences across countries based on the data described above, it is fundamental to develop a framework to map

[20]Because the WID methodology is based on fiscal data, the dataset does not present inequality measures across the full distribution because states typically do not have data on poorer households. Namely, because poor households are not included in fiscal records as they are typically exempted from paying income taxes. Please see WID - World Inequality Database. Accessed 16 July 2020. https://wid.world/.

[21] 'LIS Cross-National Data Center in Luxembourg'. Accessed 16 July 2020. https://www.lisdatacenter.org/.

[22] Branko L. Milanovic, All the Ginis Dataset, World Bank Group. Accessed 16 July 2020. https://datacatalog.worldbank.org/dataset/all-ginis-dataset

income inequality dynamics within countries. Namely, because, despite a large and increasing body of research dealing with income distribution, there is still much confusion on the components of income inequality and how economic institutions and redistribution relate to inequality dynamics.[23] As noted by Atkinson and Bourguignon (2015), there is a lack of clarity on what comprises income inequality e.g., if it does include both income from work and capital, and on how tax-and-transfers systems affect inequality dynamics.[24]

Here, following the definition of the OECD and the World Bank, Income inequality corresponds to the extent of disposable income differences between households in a given country, including both income from work and capital.[25] The extent of these income differences results from the interaction of market income inequality, i.e. income disparities before taxes and transfers, with the redistributive capacity of the state, i.e. the degree of income redistribution through taxes and transfers.[26]

Market income inequality, hereafter referred as market inequality, is determined by the market returns (wages and rents) to the efforts and assets (accumulated wealth and human capital) of individuals, and by the underlying distribution of opportunities and of those assets across households.[27] With respect to the dynamics of market inequality, the more unequal the distribution of opportunities and assets is, i.e. when privileges (as opposed to discrimination), wealth and human capital are concentrated among few households, the extent of market income differences will be higher. As such, discrimination based on observable characteristics such as ethnicity, social class or gender, translates into inequality of opportunity and thus leads to high market inequality levels – as the discriminated groups receive lower income.[28] Concerning assets, constrained access

[23] Atkinson, Anthony B., and François Bourguignon. 'Introduction: Income Distribution Today'. In Handbook of Income Distribution, edited by Anthony B. Atkinson and François Bourguignon, 2:xvii–lxiv. *Handbook of Income Distribution*. Elsevier, 2015. https://doi.org/10.1016/B978-0-444-59428-0.09989-6.
[24] Idem.
[25] Disposable income of households is taken as the preferred unit of observation as it captures the capacity of individuals within a certain household to access good and services. Concerning the components of disposable income, it includes market income (i.e. pre-tax earnings) from work, self-employment, and wealth (capital rents), after adding public cash transfers (social benefits including pensions) and deducting social security contributions and taxes paid by households. Please see Causa, Orsetta, and Mikkel Nørlem Hermansen. 'Income Redistribution through Taxes and Transfers across OECD Countries'. Working Paper. LIS Working Paper Series, 2018; Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution and Income Inequality in Latin America. Policy Research Working Papers. The World Bank, 2008. https://doi.org/10.1596/1813-9450-4487.
[26] Idem.
[27] Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution …
[28] Namely because discriminated groups face higher entry barriers to the labour market and receive lower earnings for a given level of productivity. Please see Roemer, John E., and Alain Trannoy. 'Chapter 4 - Equality of Opportunity'. In Handbook of Income Distribution, edited by Anthony B. Atkinson and François Bourguignon, 2:217–300. Handbook of Income Distribution. Elsevier, 2015. https://doi.org/10.1016/B978-0-444-59428-0.00005-9.

to education or to secure property rights should increase market inequality as they hinder the capacity of most individuals to accumulate human capital and wealth while promoting the concentration of ownership (and returns) among the privileged few who have access. For instance, countries which provide open-access to education tend to have lower market inequality levels vis à vis nations with limited access to education, notably because a higher supply of education leads to a lower skill premium.[29] Similarly, open-access to health services also has an equalizing effect on market disparities as it levels the playing field in terms incidence of illness and disability, factors which affects productivity (thus wages) as well as the capacity to accumulate human capital.[30]

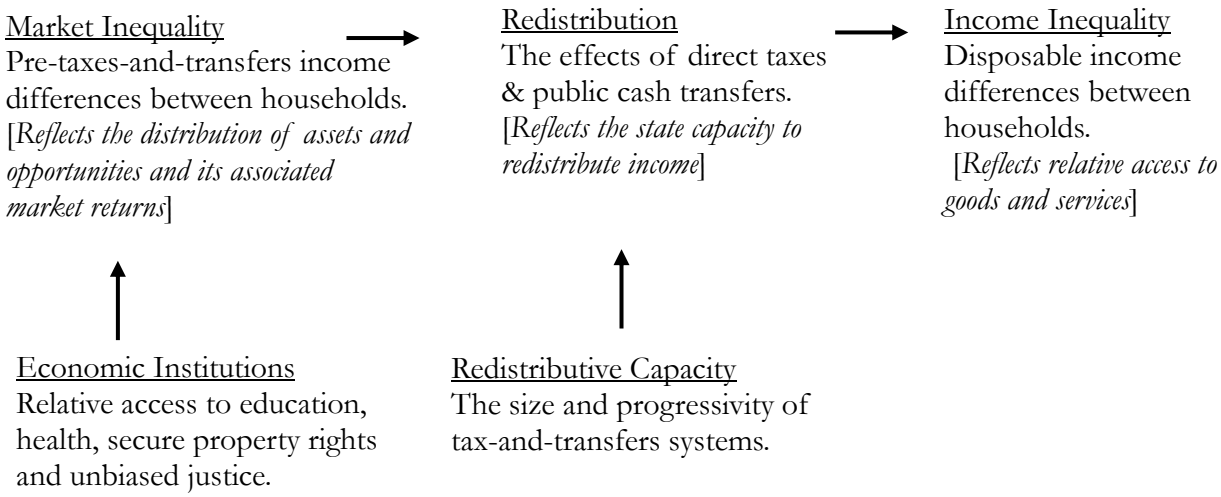
Concerning the extent of redistribution, the redistributive capacity of the state is fundamentally determined by the incidence of fiscal action, i.e. the size and progressivity of taxes and transfers. [31] That is to say, the more substantial and progressive (when its incidence falls more heavily on richer rather than poor households) taxes are, and the more generous and targeted at poorer households social benefits (i.e. transfers) are, the extent of redistribution will be higher, translating into lower income differences between rich and poor households, – and vice versa in the context of a regressive taxes-and-transfers system. Concerning its measurement, redistribution is quantified as the relative decline in market inequality after the effects of tax-and-transfer systems. For example, the extent of redistribution is 50% if market inequality stands at a 0.50 Gini coefficient, and after taxes and transfers, income inequality drops to a 0.25 disposable income Gini.

Therefore, based on the framework developed above, "inclusive" economic institutions à la Acemoglu and Robinson, i.e. which guarantee open access to education, health, property rights enforcement and distributive justice in general (non-discriminatory rules and practices), should lead to a level economic playing field and therefore to low market inequality levels.[32] Whereas "extractive" institutions should have the opposite effects as they are designed to benefit the elite

[29] Lopez, J. Humberto, and Guillermo Perry. Inequality in Latin America: Determinants and Consequences. The World Bank, 2008.
[30] O'Donnell, Owen, Eddy Van Doorslaer, and Tom Van Ourti. 'Chapter 17 - Health and Inequality'. In Handbook of Income Distribution, edited by Anthony B. Atkinson and François Bourguignon, 2:1419–1533. Handbook of Income Distribution. Elsevier, 2015. https://doi.org/10.1016/B978-0-444-59429-7.00018-2.
[31] Orsetta, and Mikkel Nørlem Hermansen. 'Income Redistribution through Taxes and Transfers..; Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution and Income Inequality..
[32] "*Inclusive economic institutions (…) are those that allow and encourage participation by the great mass of people in economic activities that make best use of their talents and skills and that enable individuals to make the choices they wish. To be inclusive, economic institutions must feature secure private property, an unbiased system of law, and a provision of public services that provides a level playing field in which people can exchange and contract; it also must permit the entry of new businesses and allow people to choose their careers*" (Acemoglu and Robison, 2012, Page 74). Please see Acemoglu, Daron, and James A. Robinson. Why Nations Fail: The Origins of Power, Prosperity and Poverty. London, UNITED KINGDOM: Profile Books, 2012. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=1743163.

at the expense of the bulk of the population.[33] In turn, the degree to which asset and opportunities disparities (arising from these institutions) translate into disposable income inequality, is determined by the capacity of taxes-and-transfers systems to tackle market income differences (arising from these disparities) through redistribution,[34] as summarized in Figure 2.

Figure 2: Disentangling income inequality and its components



Notes: Assets includes both wealth and embedded assets such as human capital and health. As such, and based on the OECD methodology, in-kind public transfers such as free (or subsidised) access to public education and health affect income inequality through market inequality (by reducing asset disparities) and are not included in redistribution –as the latter only includes cash transfers.

Source: The Figure is my own and based on the relevant literature on inequality dynamics – please see for instance Goni et al. (2008) and Causa et al. (2018).[35]

As such, economic institutions and its effects on market inequality, as well as the redistributive capacity and its impact through the extent of redistribution, are both essential to understand the inequality dynamics within countries. But then, what are the determinants of these economic institutions and capacities, and which matter most for explaining inequality differences across countries?

[33] Idem. Pages 73-81.
[34] Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution..
[35] Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution..; Orsetta, and Mikkel Nørlem Hermansen. 'Income Redistribution through Taxes and Transfers across OECD Countries'

III. Applying the framework on inequality

III.1 Institutions and the economic playing field: testing AJR and ES

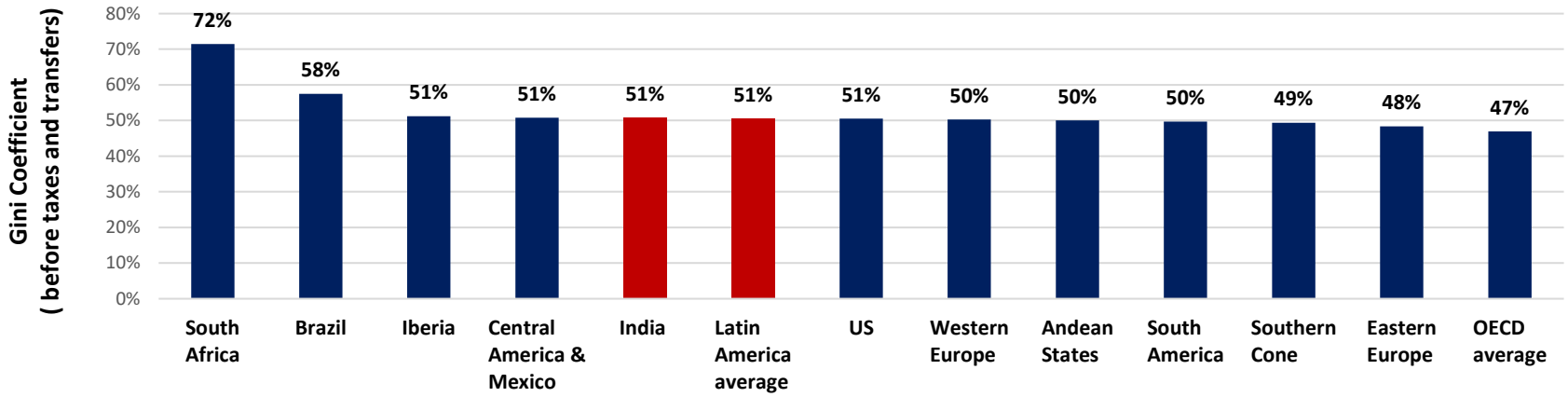
Based on the framework on inequality dynamics developed before, if the institutional thesis of AJR and ES is correct, we should expect high market inequality levels in places with historically-determined "extractive" economic institutions maintaining an unequal distribution of asset and opportunities since colonization, such as in Latin America or India. Accordingly, we should observe that countries which have "inclusive" institutions should have lower market inequality such as the US or Western Europe.

However, as shown in Figure 3 below, the empirical evidence rejects AJR and ES hypothesis (and the conventional wisdom) as there are no significant differences in terms of market inequality between places which experienced different types of colonization ("extractive" or "settler"), nor between colonizers (i.e. Western Europe) and its former "extractive" colonies, i.e. Latin America and India. Market inequality (which reflects assets and opportunities disparities) is not especially high in Latin America nor India, even when compared to Western countries which arguably have "inclusive" economic institutions, i.e. broad access to health, education and a relatively level playing field. In fact, market income differences – which includes income from work, self-employment and capital gains, in both India and Latin America stand at a similar level to Western Europe (around a 0.51-0.50 market inequality Gini) and slightly above the OECD average (0.47) – as depicted in Figure 3. At the same time, the main (former) colonializing nations show similar market inequality levels to their colonies, the UK has 0.50 Gini vs. 0.51 in both India ("extractive" colony) and the US ("settler" colony). Similarly, market inequality in Spain, is no different than in the average Latin American country. Even in the Andean region, the canonical example of "extractive" colonialism related to labour exploitation as under the *Mita in* silver mining or the *Encomienda* system in haciendas in Peru and Bolivia– see for instance Dell (2010),[36] today has a lower market inequality than the US or Western Europe. Similarly, India which is typically seen as the poster child of institutionalized inequality rooted in a discriminatory caste system serving the elites (upper casts), also has a rather average market inequality level – that is even lower than in France (0.52) and comparable to Finland (0,51).

[36] Dell, Melissa. 'The Persistent Effects of Peru's Mining Mita'. Econometrica 78, no. 6 (2010): 1863–1903. https://doi.org/10.3982/ECTA8121.

Figure 3. Persistent asset and opportunities disparities in India and Latin America?

Market inequality in comparative perspective circa 2016



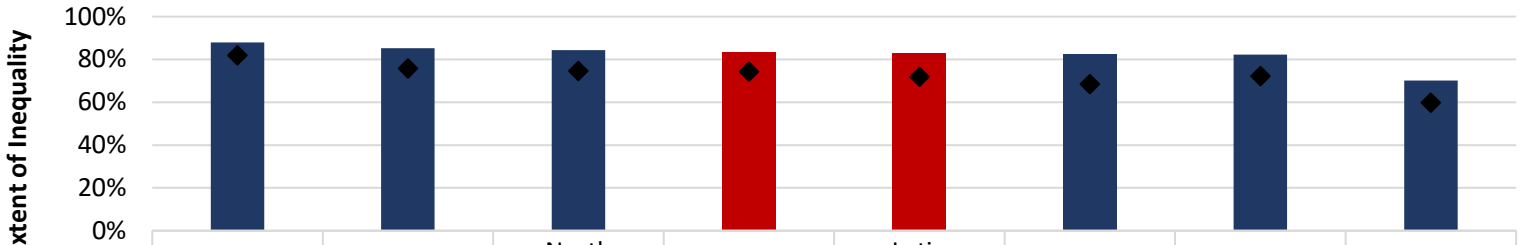
Notes: Market inequality measures income differences across households (including income from work, self-employment and capital) before taxes and transfers – following the OECD methodology. The market inequality Gini coefficients are calculated based on unweighted regional averages, being ordered from the highest to the lowest Gini. The regions and countries presented in this figure were selected based on the availability of comparable and reliable data on market inequality as explained in the "Mapping Inequality" section. Please see the countries included in each region in appendix A.

Sources: Own elaboration based on OECD and UN ECLAC calculations as explained in the "Mapping Inequality" section. As noted before, all the estimations used here are based on the OECD IDD methodology and therefore are comparable.

As a further robustness check on AJR and ES hypothesis we will also study wealth inequality as the literature has emphasised the persistence of an "institutionalized" wealth concentration benefiting the elite in formerly extractive colonies, e.g. ES has emphasized restricted access to land and AJR an unequal distribution of secure property rights. However, consistent with the market inequality levels observed above, the available evidence indicates that the persistence of institutions maintaining an exceptionally unequal distribution of wealth in Latin America or India seems to be a myth. As shown in Figure 4, wealth inequality (including financial and non-financial assets) is not especially high in Latin America, Africa nor India. Even the classical comparison between Latin America, which is depicted as having historically-determined "extractive" institutions vis à vis North America is not sustained by the comparative evidence, as the latter is characterized by a higher concentration of wealth. As such, consistent with its rather unexceptional market inequality levels, wealth concentration levels in Latin America and India are also far from being exceptionally high, casting severe doubts on AJR and ES´s institutional hypothesis.

Figure 4. Debunking "institutionalized" inequality in Latin America, Africa and India:

Wealth inequality across world regions and selected countries in 2018



	Asia-Pacific	US	North America	India	Latin America	Europe	Africa	China
■ Gini	88%	85%	84%	83%	83%	82%	82%	70%
◆ Top 10%	82%	76%	75%	74%	72%	69%	72%	60%

Notes & Sources: Own elaboration. The data is based on the data presented in the latest Global Wealth Report and Databook (Davies, Lluberas and Shorrocks, 2019).[37] This source corresponds to the most comprehensive dataset on wealth statistics across different regions, analysing the household wealth of 5 billion people worldwide. For instance, the OECD uses this Databook to verify their wealth inequality database.[38] The results are similar if we use the OECD dataset.[39]

[37] Davies, Lluberas and Shorrocks. 'Global Wealth Report and Databook'. Accessed 7 August 2020. https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html.

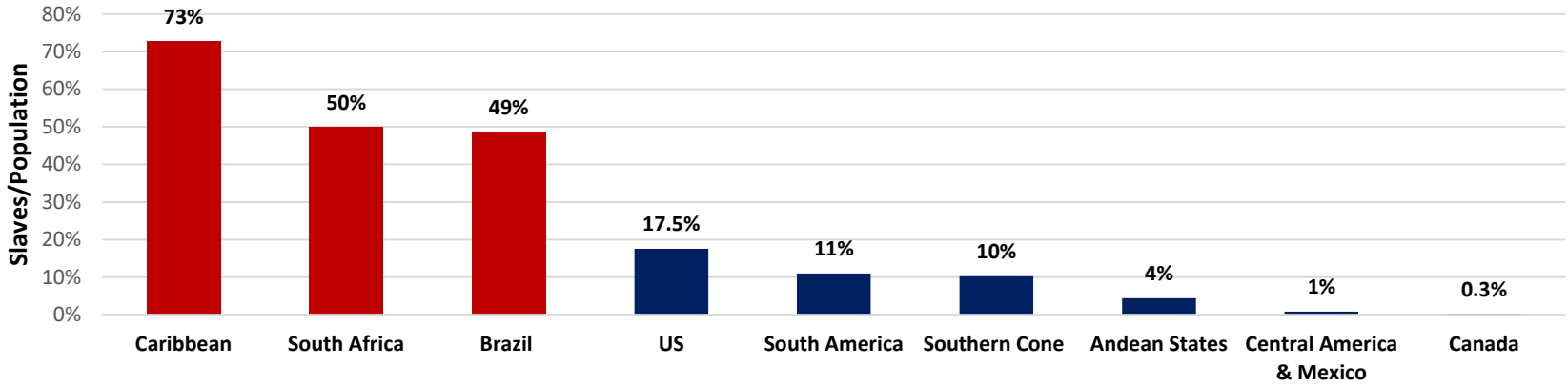
[38] Balestra, Carlotta, and Richard Tonkin. 'Inequalities in Household Wealth across OECD Countries: Evidence from the OECD Wealth Distribution Database', 21 June 2018. https://doi.org/10.1787/7e1bf673-en.

[39] The OECD Wealth Distribution dataset show that in Chile, the only Latin American country in this database, the top 10% richest households own 58% of total net wealth vis à vis 79% in the US – which despite it supposedly "inclusive" economic institutions is the country with the most extreme wealth concentration in the OECD dataset. Please see Balestra, Carlotta, and Richard Tonkin. 'Inequalities in Household Wealth across OECD Countries.

The only exceptions are South Africa and Brazil, which have exceptionally-high market inequality levels as Figure 4 shows, being the highest in the sample. Consistent with literature which has emphasized the persistent effects of slavery on inequality, e.g. ES and Nunn (2008), asset and opportunities disparities have remained high in places which experienced extensive slavery during colonization –especially given that slavery is the most extreme form of institutionalized exploitation.[40] Nevertheless, widespread slavery, as in Brazil and South Africa or in the Caribbean, was the exception and not the rule. All the other former colonies had a significantly lower prevalence of slavery as Figure 5 shows. In Spanish America, indigenous slavery was prohibited since the 1540s as forced labour institutions were progressively eliminated following depopulation concerns related to pandemics and indigenous exploitation during the early colonial period.[41] Similarly, although because of different reasons, most colonized regions were spared from intensive labour exploitation under slavery as they were colonized during the post-chattel-slavery era (in the 19th century) such as most of Africa, Australia, New Zealand and the Indian Subcontinent.[42] For instance, British colonization in India (as in other areas following the abolition of slavery by the British) actively prohibited slavery and other types of forced labour such as debt bondage, which was relatively widespread before colonization.[43] It is therefore not a coincidence that places which actually experienced extensive slavery such as South Africa and Brazil (see Figure 5) have today high market inequality levels (Figure 3), while all the rest of the former colonies (where slavery was significantly less widespread), such as India and Latin American countries have comparable market inequality levels with Western countries and other regions.

[40] Nunn, Nathan. 'Slavery, Inequality, and Economic Development in the Americas'. Institutions and Economic Performance 15 (2008): 148–180.
[41] Arroyo Abad, Leticia, Elwyn Davies, and Jan Luiten van Zanden. 'Between Conquest and Independence: Real Wages and Demographic Change in Spanish America, 1530–1820'. Explorations in Economic History 49, no. 2 (1 April 2012): 149–66. https://doi.org/10.1016/j.eeh.2011.12.001.
[42] Eltis, David, and Stanley L. Engerman. 'Dependence, Servility, and Coerced Labor in Time and Space'. In The Cambridge World History of Slavery.
[43] Stanziani, Alessandro. 'Slavery in India'. In The Cambridge World History of Slavery: Volume 4: AD 1804–AD 2016, edited by David Eltis, David Richardson, Seymour Drescher, and Stanley L. Engerman, 4:246–71. The Cambridge World History of Slavery. Cambridge: Cambridge University Press, 2017. https://doi.org/10.1017/9781139046176.012.

Figure 5: The extent of slavery during colonialism circa 1750-1790s



Notes: Australia and New Zealand are not included as during most of its colonial period (which started later than in the Americas) slavery was already abolished. Similarly, India is not included as the colonial period also stared later and, in any case, there is no evidence on extensive slavery as in the Caribbean, South Africa or Brazil i.e. widespread chattel slavery.[44]

Sources: Own elaboration based on data from Lindert and Williamson (2016) in the case of the US,[45] while the data for the Caribbean, Canada and Latin America are from Nunn (2008), and Fourie et al. (2011) for South Africa.[46] The data presented by Nunn (2008) is revised in the case Chile and Uruguay using country-specific historical demographics (based on censuses), as Nunn (2008) made some mistakes in his interpretation of historical evidence. Please see Appendix A for details.

[44] Idem.

[45] Lindert, Peter H., and Jeffrey G. Williamson. Unequal Gains: American Growth and Inequality Since 1700. Princeton, UNITED STATES: Princeton University Press, 2016. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=4333586.

[46] Fourie, Johan, and Dieter von Fintel. 'A History with Evidence: Income Inequality in the Dutch Cape Colony'. Economic History of Developing Regions 26, no. 1 (1 June 2011): 16–48. https://doi.org/10.1080/20780389.2011.582990; Nunn, Nathan. 'Slavery, Inequality, and Economic Development in the Americas'. Institutions and Economic Performance 15 (2008): 148–180.

Therefore, the evidence revised here shows that the persistence of economic institutions maintaining an unequal playing field arising from "extractive" colonialism has been largely overemphasized. The "institutional thesis" of ES and AJR only seems to apply to Brazil and South Africa. While in all the other former-colonies, the persistence of "extractive" economic institutions is not sustained by comparative evidence as shown by market and wealth inequality levels which are similar to Western countries. Therefore the mechanisms explaining inequality in Latin America and India remained to be explored.

III.2 .State capacity and Redistribution

As argued for the remainder of this paper, what is salient about areas with high inequality such as Latin America, India and Africa is a weak state capacity that hinders the extent of redistribution through taxes and transfers.[47] Following Besley and Persson (2011), state capacity should be understood as the ability of the state to extract substantial fiscal revenue – especially through direct taxation, and to mobilize such proceeds towards an efficient state action.[48] State action is considered efficient when it chases public goals, and therefore, fiscal revenue is redistributed back to citizens through social benefits or invested in public goods – as opposed to being diverted or used for the protection of vested interests.[49]

A weak extractive capacity limits the size and progressivity of taxes and transfers systems and therefore hinders the ability of the state to reduce inequality through redistribution as depicted in Figure 6. A low revenue collection (as % of GDP) notably constrains the size of social transfers which are essential to tackle inequality by lifting poorer households out of (relative and absolute) poverty, thus impeding the redistributive capacity of states, – as in Latin America, India, and Africa.[50] As shown by the OECD Global Revenue statistics database and the World Bank, India, Africa as well as Latin America have a relatively limited tax-to-GDP ratio. Standing

[47] Please see for instance on this Cárdenas, Mauricio. 'State Capacity in Latin America'. Economía 10, no. 2 (2010): 1–45; Odusola, Ayodele. 'Fiscal Policy, Redistribution and Inequality in Africa'. Income Inequality Trends in Sub-Saharan Africa: Divergence, Determinants and Consequences (2017), 2017.

[48] Besley, Timothy, and Torsten Persson. *Pillars of Prosperity: The Political Economics of Development Clusters*. Princeton, UNITED STATES: Princeton University Press, 2011. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=4001692.

[49] Acemoglu, Daron. 'Politics and Economics in Weak and Strong States'. Journal of Monetary Economics, Political economy and macroeconomics, 52, no. 7 (1 October 2005): 1199–1226. https://doi.org/10.1016/j.jmoneco.2005.05.001.

[50]Goni, Edwin Lopez, J. Humberto Serven, Luis. Fiscal Redistribution and Income Inequality In Latin America. Policy Research Working Papers. The World Bank, 2008. https://doi.org/10.1596/1813-9450-4487; Odusola, Ayodele. 'Fiscal Policy, Redistribution and Inequality in Africa'. In Income Inequality Trends in Sub-Saharan Africa: Divergence, Determinants and Consequences (2017), 2017. United Nations Development Programme; Lustig, Nora. 'Inequality and Fiscal Redistribution in Middle Income Countries: Brazil, Chile, Colombia, Indonesia, Mexico, Peru and South Africa'. Journal of Globalization and Development 7, no. 1 (2016): 17–60.

on average at 10%, 17% and 21% respectively. This compares to 32% on average in the OECD area.[51]

At the same time, countries with a weak extractive capacity tend to overwhelmingly rely on regressive tax sources. This is partly because indirect taxation, that is trade and consumption taxes which are typically regressive i.e. falls more heavily in poor rather than rich households, often requires less administrative capacity than direct taxation, namely taxes on income and capital gains of individuals which have progressive components.[52] Therefore, as shown in Figure 6b, a weak extractive capacity breeds inequality as it hampers the redistributive impact of taxation through a regressive tax structure. This is notably the case in Latin America and Africa where indirect taxes (i.e. on consumption), which are typically regressive, account for roughly 50% of total taxation. While direct taxes (i.e. on income, profits and capital gains of individuals), which tend to have progressive components, represent only 9% and 15% of total taxes in Latin America and Africa respectively, compared to 25% in the OECD area and 38% in Western offshoots. As such, in Latin America as well as in Africa, the fiscal burden falls more heavily on poor rather than rich households, fuelling disposable income inequality.[53]

[51] Own calculations based on the OECD Global Revenue Statistics database. 'Global Revenue Statistics Database - OECD'. Accessed 12 August 2020. https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm; World Bank 'Tax Revenue (% of GDP) - India | Data'. Accessed 13 August 2020. https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS?locations=IN.

[52] Besley, Timothy, and Torsten Persson. "Chapter 2 Fiscal Capacity" in *Pillars of Prosperity: The Political Economics of Development Clusters* (2011).

[53] Namely because indirect taxes (on consumption) are typically regressive, i.e. have a greater incidence on poorer households, while taxes on income, profits and capital gains of individuals tend to be progressive. Especially given that poorer households consume a larger share of their income and therefore the incidence of consumption taxes is higher in these households, while taxes on income and capital gains tend to have more progressive components – notably because capital and income are concentrated at the top, and as such, its effects reduce inequality by having a lager incidence on richer households.

Figure 6. State Capacity and Redistribution

Figure 6a: Extractive and Redistributive Capacity

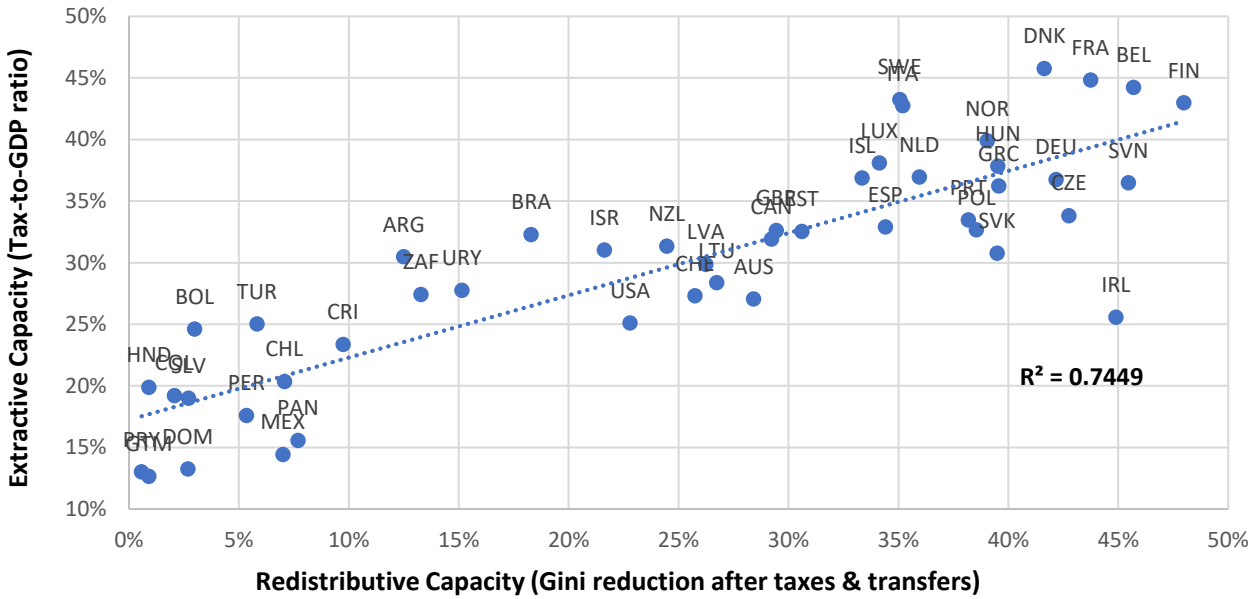
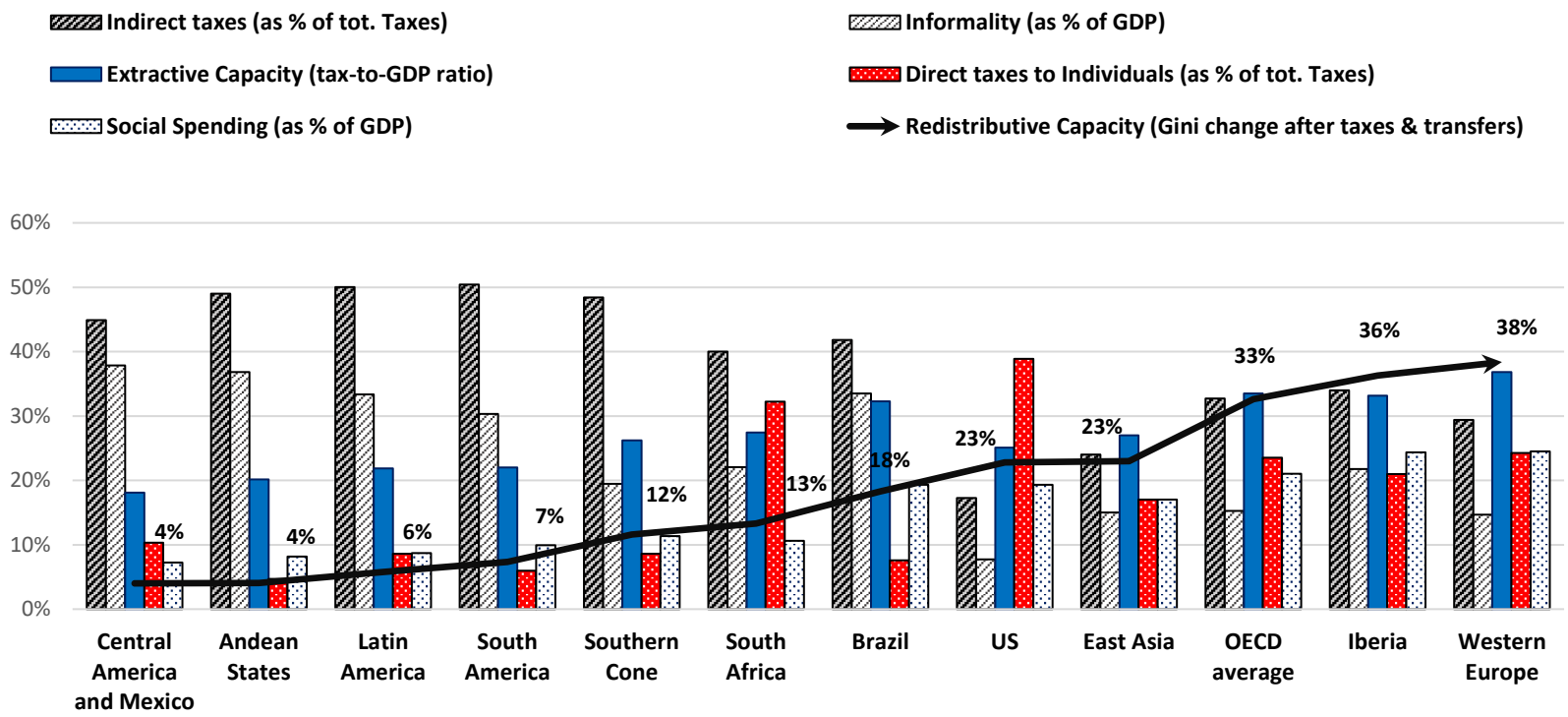


Figure 6b: State Capacity, redistribution and its components



Notes: The redistributive capacity is quantified by comparing inequality before and after taxes and transfers, with inequality being measured by the Gini coefficient. That is to say, redistribution is the relative decline in market inequality after the effect of taxes and transfers. Here, East Asia corresponds to Japan and South Korea for which comparable data on redistribution is available. Latin America does not include the Caribbean –except for Dominican Republic for which data is available. Concerning the time period, the data on taxation (including the extractive capacity) corresponds to the average for 2010-2018 period, while the data on informality is for 2010-2015. The measures on social spending and redistribution are for circa 2016. Following the OECD methodology, here social expenditure comprises public transfers involving a redistribution of resources across households. Direct taxes correspond to taxes paid by individuals, including taxes on income, capital gains and profits, whereas indirect taxation corresponds to consumption and trade taxes.

Sources: The data on taxation is based on the OECD Global Revenue Statistics database (accessed 12 October 2020).[54] The measures of informality are based on IMF calculations as reported in Medina and Schneider (2018).[55] The measures of social expenditure corresponds to OECD calculations based on ECLAC data (for non-OECD Latin American countries) and OECD statistics.[56]

[54] 'Global Revenue Statistics Database - OECD'. Accessed 12 August 2020. https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm.
[55] Medina, Leandro, and Friedrich Schneider. 'Shadow Economies around the World: What Did We Learn over the Last 20 Years?', 2018.
[56] Please see the data underlying Figure 4.4 in OECD (2019) *Latin American Economic Outlook 2019*. https://www.oecd.org/publications/latin-american-economic-outlook-20725140.htm.

Concerning state intervention, when state intervention is inefficient, and therefore, not aligned with public goals and (or) unable to enforce law and taxation, fiscal policy may not be necessarily benefiting those in most need of economic support, therefore undermining the progressivity of fiscal policy, such as in Latin America.[57] In this line, a large shadow economy, denoting the state incapacity to enforce law and taxation, hinders the ability of the state to tackle inequality through redistribution (as depicted in Figure 6b). Informality hampers redistribution because: (a) the coverage and progressivity of transfers are reduced as social benefits are typically conditional on participation in the formal economy while most poor households work in the informal sector and therefore have no access to income support such as to unemployment benefits,[58] and (b) the informal sector, by not being taxed, diminishes fiscal revenue collection and therefore the capacity of the state to provide more generous social benefits.[59] For instance, in Latin America, high informality has considerably aggravated the negative consequences of the Coronavirus pandemic on poorer households, as these informal workers have practically no access to social protection systems.[60] According to ILO stats, in 2018, informal labour accounted for 45% of total employment in Brazil, 66% in Mexico and more than 80% in Central America, India and most of Africa.[61]

Consequently, what is salient about Latin America and India, and explains its world-leading inequality levels, is an exceptionally limited state capacity to tackle market inequality through income redistribution. The latter is summarized in Figure 7, which shows that the fundamental determinant of extreme income inequality in most former "extractive" colonies are exceptionally low levels of redistribution (Figure 7b), and not the rather unexceptional degree of inequality of its economic playing field (Figure 7a). In fact, redistribution in Latin America is roughly 6 times lower than in the OECD area or Western Europe, while market inequality is roughly equivalent to other regions – as Figure 7 shows. Similarly, India is one of the most unequal places in the world (even more than Latin America) because it has an exceptionally weak redistribution, i.e. 2 times lower than in Latin America, and more than 10 times lower than in the OECD area and Western Europe. Even Chile and Mexico, which are relatively prosperous (e.g. both are OECD

[57] Abad, Leticia Arroyo, and Peter H. Lindert. 'Fiscal Redistribution in Latin America since the Nineteenth Century'. Bértola L, Williamson J, Organizadores. Has Latin American Inequality Changed Direction, 2017, 243–282; Cárdenas, Mauricio. 'State Capacity in Latin America'. Economía 10, no. 2 (2010): 1–45.
[58] See: Skoufias, E., Lindert, K., & Shapiro, J. (2010). Globalization and the role of public transfers in redistributing income in Latin America and the Caribbean. World Development, 38(6), 895-907.
[59] See: Goñi, E., López, J. H., & Servén, L. (2008). Fiscal redistribution and income inequality in Latin America.
[60] Arnold, Jens, Paula Garda, and Alberto Gonzalez-Pandiella. 'Reaching out to Informal Workers in Latin America: Lessons from COVID-19', n.d., 6. https://oecdecoscope.blog/2020/06/29/reaching-out-to-informal-workers-in-latin-america-lessons-from-covid-19/
[61] ILOSTAT. 'Informal Economy'. Accessed 12 August 2020. https://ilostat.ilo.org/topics/informality/.

members) vis à vis the average Latin America country and India, still have a very limited redistributive capacity which stand at around 6% Gini reduction, considerably lower than the average in the OECD area (33%), Eastern Europe (27%), North America (26%) and East-Asia (22%).[62]

[62] Here East Asia is Japan and South Korea, for which comparable data on redistribution is available.

Figure 7: What matters for determining income inequality difference across nations?

The primacy of Redistributive Capacity over Economic Institutions

Figure 7a: The extent of market inequality

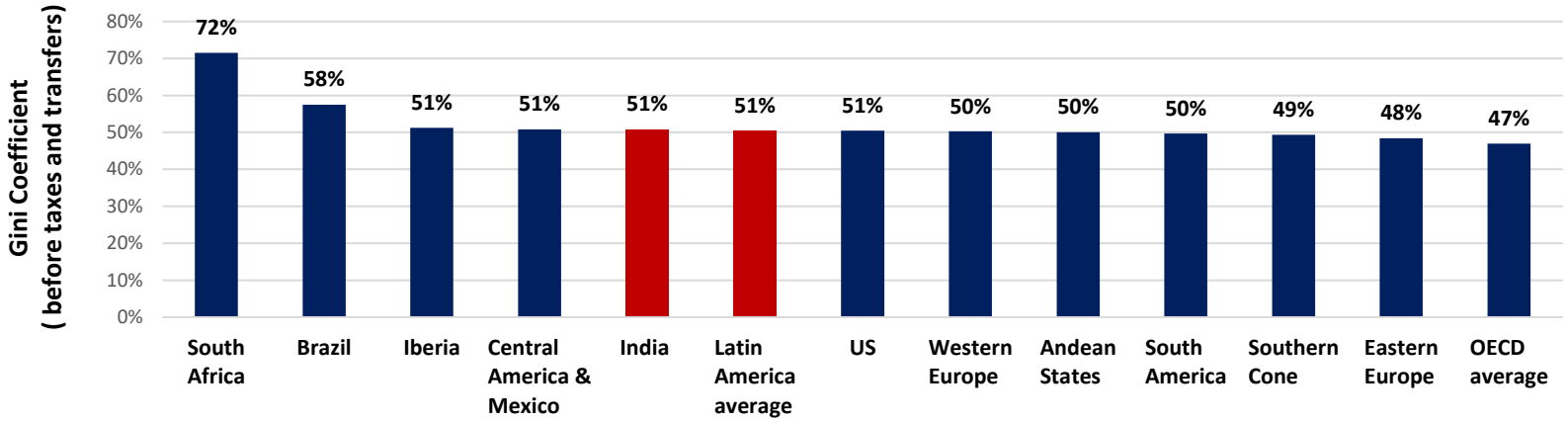


Figure 7b: The extent of redistribution

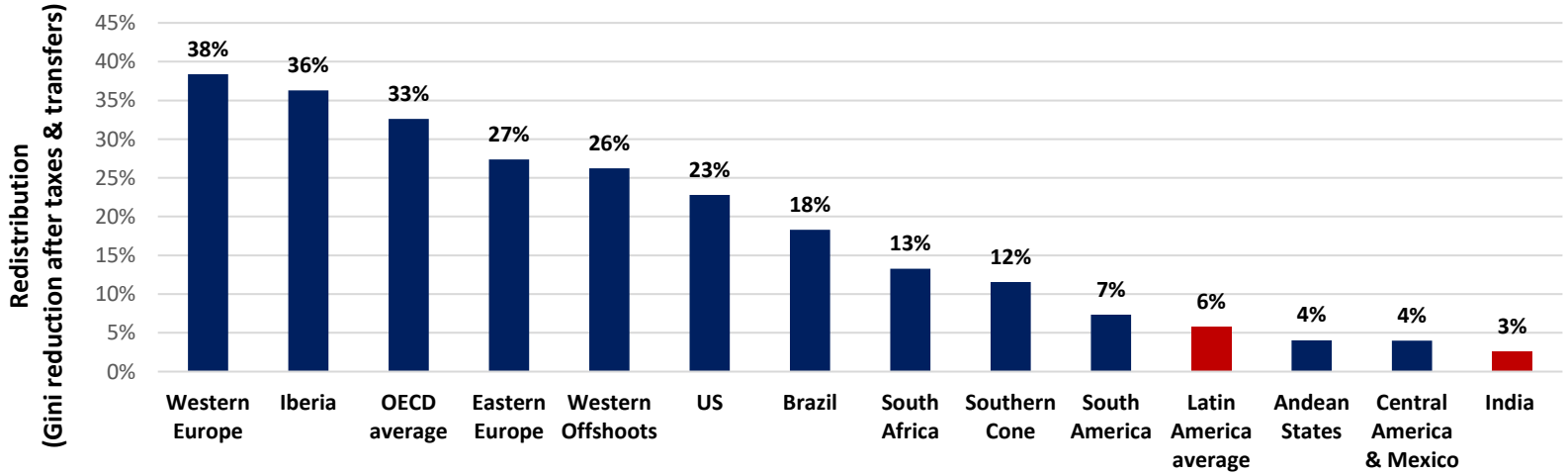
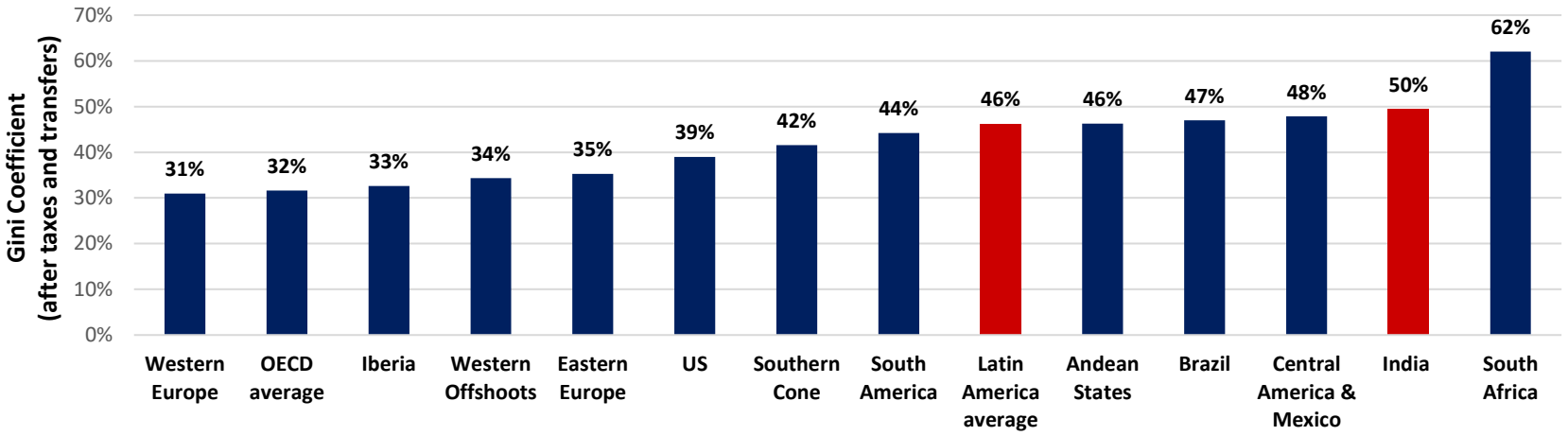


Figure 7c. Income inequality [*Disposable Income Gini = Market Gini * (1- Redistribution)*]



Notes: Redistribution is quantified by comparing inequality before and after taxes and transfers, with inequality being measured by the Gini coefficient. That is to say, redistribution is the relative decline in market inequality after the effect of taxes and transfers. Therefore, by construction, Income inequality corresponds to Market Inequality multiplied by one minus the extend of redistribution i.e. Disposable Income Gini = Market Gini * (1- Redistribution). Besides, the results presented are not driven by any specific methodology or selection bias. The methodology of the LIS cross-national data centre – which along the OECD IDD are the main datasets on inequality, shows roughly the same results on inequality dynamics, i.e. the primacy of redistribution over market inequality on explaining income inequality across former colonies.[63]
Sources: Own elaboration based on OECD and ECLAC calculations as explained in the "Mapping Inequality" section. As noted before, all these calculations are based on the OECD methodology.

[63] For instance, the LIS database also shows that former "extractive" colonies such as Egypt and Guatemala, which are not included in the OECD IDD nor in ECALC calculations, have lower market inequality levels than the US, France or the UK (and other Western European countries) and an exceptionally limited redistribution which explains its record-high inequality levels. Please Caminada, Koen, Jinxian Wang, Kees Goudswaard, and Chen Wang. 'Income Inequality and Fiscal Redistribution in 47 LIS-Countries, 1967-2014'. LIS Working Papers. LIS Working Papers. LIS Cross-National Data Center in Luxembourg, November 2017.

Only in very specific subset of countries, i.e. in South Africa and to a lower extent Brazil, asset and opportunities disparities are an important determinant of income inequality – as reflected in its high market inequality levels. Although, as in India or Latin America, market inequality translates into extreme income inequality levels as redistribution is not sufficiently high in these countries to contain its structural disparities. For instance, if Brazil had comparable levels of redistribution to the OECD area, as Romania has for instance, its income inequality levels would be 19 Gini points lower and comparable to the US.[64]

To summarize the findings of the first part of this investigation, the "institutional thesis" and conventional wisdom have emphasized that inequality is fundamentally determined by economic institutions which maintain an exceptionally unequal distribution of asset and opportunities, thesis which is not sustained by comparative evidence. Instead, the evidence shows that what matter for explaining record-high income inequality in Latin America, Africa and India, are exceptionally limited levels of redistribution rooted in a weak extractive capacity benefiting richer households through a regressive fiscal policy.[65] What are the historical causes of these patterns?

IV. The historical origins of comparative inequality levels

IV.1 The origins of a regressive fiscal policy

During the colonial period, in Latin America, Africa and India, as in most colonial settings, weak colonial administrations had to align its interests with local elites to maintain authority and be able to tax some revenue, and as such, implemented regressive fiscal systems (i.e. trade, consumption and flat rate taxes) which benefited these elites and minimized investment in state capacity.[66] As noted by Gardner (2012), a regressive fiscal system was preferred by colonizers as it required less investments in administrative capacity, especially given the limited presence and capacity of these "skeletal" colonial administrations.[67] For instance, in Spanish America, weak

[64] As disposable income inequality equals Market Gini * (1-Redistribution), then Income inequality in Brazil (with redistribution as Romania or the OECD area) = 0.58 * (1-0.33) = 0,39 equivalent to income inequality in the US.
[65] Here fiscal policy refers to the taxes-and-transfers schemes studied above.
[66] Frankema, Ewout. 'Raising Revenue in the British Empire, 1870-1940: How Extractive Were Colonial Taxes?' Journal of Global History, 2010, 447–477; Frankema, Ewout, and Marlous van Waijenburg. 'Metropolitan Blueprints of Colonial Taxation? Lessons from Fiscal Capacity Building in British and French Africa, c. 1880-1940'. The Journal of African History 55, no. 3 (2014): 371–400; Grafe, Regina, and Maria Alejandra Irigoin. 'The Spanish Empire and Its Legacy: Fiscal Redistribution and Political Conflict in Colonial and Post-Colonial Spanish America'. Journal of Global History 1, no. 2 (2006): 241–267; Grafe, Regina, and Alejandra Irigoin. 'A Stakeholder Empire: The Political Economy of Spanish Imperial Rule in America 1'. The Economic History Review 65, no. 2 (2012): 609–651.
[67] "With *little knowledge of the incomes of African taxpayers, colonial administrators had little choice but to impose flat rates. Colonial officials were aware that flat taxes were regressive, but assessing taxpayer incomes was well beyond the administrative capacity of the 'thin*

colonial administrations had to rely on local elites to control an enormously vast territory, and as such, these local elites (notably Spanish households and their descents) ended up controlling and benefiting from revenue collection and public expenditure decisions in exchange for their allegiance.[68] The resulting regressive fiscal system reinforced inequality, as epitomized by the fact that direct taxes were targeted at the indigenous population, while Spanish households and their descents (i.e. the local elites) were not only exempted from direct taxation, but were also the main beneficiaries of public services – such as property rights.[69] The same applies to Colonial Africa, where fiscal policy also benefited richer households as colonial administrations financed itself mostly through indirect taxation, and when existing, direct taxes typically had a flat rate (therefore regressive) and its collection relied on (and consequently benefited) local elites e.g. native chiefs.[70] European settlers in Africa were also exempted from direct taxation, while natives had to pay in-kind tribute or work for the state, as under the *corvée* system.[71] Similarly, the colonial administration in British India also had a very limited extractive capacity, and such, authorities aligned its interest with local elites and implemented a regressive fiscal system which relied on (and benefited) local elites and, as in the rest of colonial settings, fiscal policy increased inequality and reinforced local power structures – see Roy (2015).[72] As noted by Gardner, even colonial authorities were aware that "*this system of taxation was unfairly regressive and required the poorest taxpayers to fund the services provided to the wealthiest*".[73]

white line'. Flat rate taxes were a compromise which allowed skeletal administrations to collect a **direct tax at all"** Please see Gardner, Leigh. *Taxing Colonial Africa: The Political Economy of British Imperialism*. Oxford University Press, 2012.

[68] Grafe, Regina, and Alejandra Irigoin. 'A Stakeholder Empire: The Political Economy of Spanish Imperial Rule in America 1'. The Economic History Review 65, no. 2 (2012): 609–651; Grafe, Regina, and Maria Alejandra Irigoin. 'The Spanish Empire and Its Legacy: Fiscal Redistribution and Political Conflict in Colonial and Post-Colonial Spanish America'. Journal of Global History 1, no. 2 (2006): 241–267.

[69] Grafe, Regina, and Alejandra Irigoin. 'A Stakeholder Empire: The Political Economy of Spanish Imperial Rule in America 1'. The Economic History Review 65, no. 2 (2012): 609–651; Grafe, Regina, and Maria Alejandra Irigoin. 'The Spanish Empire and Its Legacy: Fiscal Redistribution and Political Conflict in Colonial and Post-Colonial Spanish America'. Journal of Global History 1, no. 2 (2006): 241–267.

[70]Frankema, Ewout, and Marlous van Waijenburg. 'Metropolitan Blueprints of Colonial Taxation? Lessons from Fiscal Capacity Building in British and French Africa, c. 1880-1940'. The Journal of African History 55, no. 3 (2014): 371–400; Piketty, Thomas. Capital and Ideology. Cambridge, UNITED STATES: Harvard University Press, 2020. Page 272.

[71] Gardner, Leigh *Taxing Colonial Africa: The Political Economy of British Imperialism*. Oxford University Press, 2012 pages 51 to 53; Frankema, Ewout, and Marlous van Waijenburg. 'Metropolitan Blueprints of Colonial Taxation? Lessons from Fiscal Capacity Building in British and French Africa, c. 1880-1940.

[72] Roy, Tirthankar. "Fiscal and Monetary Systems" in *The Economic History of India, 1857-1947*. Oxford University Press. 2011. https://oxford.universitypressscholarship.com/view/10.1093/acprof:oso/9780198074175.001.0001/acprof-9780198074175-chapter-10.

[73] Gardner, Leigh *Taxing Colonial Africa: The Political Economy of British Imperialism*. Oxford University Press, 2012 pages 51 to 53.

However, before the 20th century, a weak extractive capacity characterized by a regressive tax system and public spending benefiting the elite was the rule not only in places characterized by present-day high inequality levels such as Latin America, India or Africa, but also in Western Europe and most world regions. As shown by Piketty (2013), progressive taxation was virtually inexistent before the early 20th century, as tax systems in Europe and across the world relied on regressive sources i.e. consumption, trade and flat rate taxes.[74] By the same token, Lindert (2004) has shown that redistributive spending emerged during the late 19th century in a few Western countries, but only became a non-marginal share of GDP during the 20th century.[75] No different than in Colonial settings, for most of its history, Europeans states had a weak extractive capacity and therefore had to bargain with local elites to extract fiscal revenue and maintain authority, and as such, these elites ended up benefiting from tax and spending privileges, while poorer households had to assume the burden of taxation.[76] In this line, the work of Alfani et al (2016, 2019), has shown how a regressive fiscal burden in Western Europe is fundamental to understand high inequality levels in these pre-modern societies.[77] Similarly, before the late 19th century, in North America, no different than in southern Latin American neighbours, also had a central tax system which benefited richer households as it overwhelmingly relied on regressive revenue sources, i.e. consumption and trade taxes.[78]

The literature, e.g. Acemoglu et al (2005, 2011), has also stressed the collapse of the Old Regime in Western Europe as a milestone on the path towards less institutionalized inequality.[79] However, the different revolutions which occurred before the 20th century did not put an end to this regressive equilibrium as the new ruling elites where the main beneficiaries. The emergent

[74] Piketty, Thomas, and Arthur Goldhammer. Capital in the Twenty-First Century. Cambridge, UNITED STATES: Harvard University Press, 2013. Pages 637 -653
http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=3301398
[75]Lindert, Peter H., ed. 'Explaining the Rise of Social Transfers Since 1880'. In Growing Public: Social Spending and Economic Growth since the Eighteenth Century: Volume 1: The Story, 1:171–90. Cambridge: Cambridge University Press, 2004. https://doi.org/10.1017/CBO9780511510717.008.
[76] Dincecco, Mark. 'The Rise of Effective States in Europe'. The Journal of Economic History 75, no. 3 (2015): 901–918; Alfani, Guido, and Matteo Di Tullio. The Lion's Share: Inequality and the Rise of the Fiscal State in Preindustrial Europe. Cambridge University Press, 2019. Page 163; Alfani, Guido, and Wouter Ryckbosch. 'Growing Apart in Early Modern Europe? A Comparison of Inequality Trends in Italy and the Low Countries, 1500–1800'. Explorations in Economic History 62 (1 October 2016): 143–53. https://doi.org/10.1016/j.eeh.2016.07.003.
[77] Alfani, Guido, and Matteo Di Tullio. The Lion's Share: Inequality and the Rise of the Fiscal State in Preindustrial Europe. Cambridge University Press, 2019. Page 163; Alfani, Guido, and Wouter Ryckbosch. 'Growing Apart in Early Modern Europe? A Comparison of Inequality Trends in Italy and the Low Countries, 1500–1800'. Explorations in Economic History 62 (1 October 2016): 143–53. https://doi.org/10.1016/j.eeh.2016.07.003.
[78] Sokoloff, Kenneth L., and Eric M. Zolt. 'Inequality and the Evolution of Institutions of Taxation: Evidence from the Economic History of the Americas'. 2007.
[79] Acemoglu, Daron, Davide Cantoni, Simon Johnson, and James A. Robinson. 'The Consequences of Radical Reform: The French Revolution'. American Economic Review 101, no. 7 (2011): 3286–3307; Acemoglu, Daron, Simon Johnson, and James Robinson. 'The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth'. American Economic Review 95, no. 3 (2005): 546–579.

elite democracies (i.e. democratic systems excluding average and poor households from politics) in post-revolutionary UK and France, as well as in post-independence Latin America, all decided to maintain a regressive fiscal system.[80] For instance, the Glorious Revolution in England led the emergence of an elite democracy where a coalition of wealth-holders ended up having direct control (as opposed to bargaining power beforehand) over public expenditure decisions.[81] However, this political power was not used to increase the progressivity of fiscal policy, but to channel public expenditure towards the protection and expansion of the business interests of these wealth-holders.[82] Not surprisingly, this exclusionary democracy did not promote equality. In Britain, since the 1780s until the early 20th century, the richest 10% concentrated 90% of total wealth, while the bottom 50% owned around 1% of total wealth.[83] The political effects of the French Revolution were no different than in Britain, the resulting *bourgeois* democracy maintained a regressive fiscal system, which played a fundamental role in explaining the failure of the French Revolution to deliver equality.[84] Exclusionary democracies (as well as non-democracies) in Europe and North America during the 19th century also had no interest in tackling inequality.[85] Similarly, elite democracies in nineteenth-century Latin America maintained a regressive fiscal policy inherited from colonialism.[86]

All these different political settings have in common coalitions of wealth holders that control fiscal policy, either directly through political institutions, as in elite democracies, or indirectly through bargaining power in colonial and non-democratic settings. Whereas poor and average households had virtually no say in revenue collection and expenditure decisions. Therefore, before the 20th century, fiscal policy was designed to extract resources from the politically-

[80] The concept of elite democracies comes from Lindert (2004). Please see Lindert, Peter H., ed. 'Explaining the Rise of Social Transfers Since 1880'.
[81] Jha, Saumitra. 'Financial Asset Holdings and Political Attitudes: Evidence from Revolutionary England'. SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, 13 March 2015. https://doi.org/10.2139/ssrn.934943.
[82] After the Glorious revolution public revenue was heavily invested in a type of overseas expansion which was aligned with the interests of (and there profited) wealth holders i.e. merchants. Please see Jha, Saumitra. 'Financial Asset Holdings and Political Attitudes..
[83]The data corresponds to net wealth, including both financial and non-financial assets. Please see "Figure 5.4. The concentration of property in Britain, 1780-2015". (Piketty, 2020). http://piketty.pse.ens.fr/files/ideology/pdf/F5.4.pdf
[84] Piketty, Thomas. Chapter 4 in *Capital and Ideology*. Cambridge, UNITED STATES: Harvard University Press, 2020. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=6028824.
[85]Please see Figure 10.6. Wealth inequality in Europe versus the United States, 1810–2010 (Piketty, 2013). http://piketty.pse.ens.fr/files/capital21c/en/pdf/F10.6.pdf
[86] Irigoin, Alejandra. 'Representation Without Taxation, Taxation Without Consent: The Legacy of Spanish Colonialism in America'. Revista de Historia Económica; Montevideo 34, no. 2 (September 2016): 169–208. http://dx.doi.org.gate3.library.lse.ac.uk/10.1017/S0212610916000069.

excluded non-elite households (through regressive taxation) to provide public services benefiting an elite of asset holders, such as protection of ownership rights.[87]

IV.2 The consequences of a regressive equilibrium

Consistent with the evidence revised above (that all these settings shared a political equilibrium which excluded non-elite households and an inequality-enhancing fiscal policy) the historical evidence shows that Western Europe and North America had extremely high inequality levels before the 20th century, inequality which was no different (and even higher in most cases) than in Latin America, India or Africa. The later evidence is presented below in Figure 8, which was constructed based on the methodology and criteria to estimate historical inequality explained at the beginning of this paper.

As shown in Figure 8a, income inequality levels in pre-modern Western Europe were extremely high – more pronounced than in colonized parts of India, the southern parts of colonial US (where slavery was widespread) and even higher than in present-day Brazil or India. The US also shows high inequality at the eve of independence, inequality was higher than in Bihar (colonial India) and comparable to modern-day Latin America, 0.44 and 0.46 Gini respectively. While there are no reliable historical records to compute inequality measures for colonial Latin America,[88] the available evidence indicates that inequality was probably not especially high given the limited extent of slavery (except in Brazil) and that real wages where well above subsistence and comparable to European levels.[89] Consistent with the latter, Figure 8b shows that during the late 19th century (when data on inequality is more abundant), Peru, Chile and even Brazil had lower inequality levels than the US and Western countries – which following AJR and ES supposedly had more "inclusive" economic institutions. Again, the only exceptions are places which experienced widespread slavery such as colonial Haiti and South Africa (Cape colony), which show record-high inequality levels since colonial times. However, Figure 8 indicates that the rest of supposedly "extractive" colonies, for which data on historical inequality is available,

[87] For instance, Piketty called the period between the Old Regime and the rise of the Welfare state during the early 20th century, the hegemony of the inegalitarians "Ownership societies" during the 18th and 19th century. Please see Piketty, Thomas "chapter 3 Invention of Owner-ship Societies" in. Capital and Ideology. Cambridge, US. Harvard University Press, 2020.

[88] Please see Appendix B.

[89] Arroyo Abad, Leticia, Elwyn Davies, and Jan Luiten van Zanden. 'Between Conquest and Independence: Real Wages and Demographic Change in Spanish America, 1530–1820'. Explorations in Economic History 49, no. 2 (1 April 2012): 149–66; Williamson, Jeffrey G. 'Five Centuries of Latin American Inequality'. Working Paper. Working Paper Series. National Bureau of Economic Research, August 2009. https://doi.org/10.3386/w15305.

did not have comparatively high inequality levels at least until the late 19th century. This includes Peru, Brazil, Chile, Indonesia, Kenya and India.

Figure 8. Deconstructing the early emergence of comparative inequality levels

Historical inequality in comparative perspective

Figure 8a. Income inequality during colonial rule, circa 1770-1800

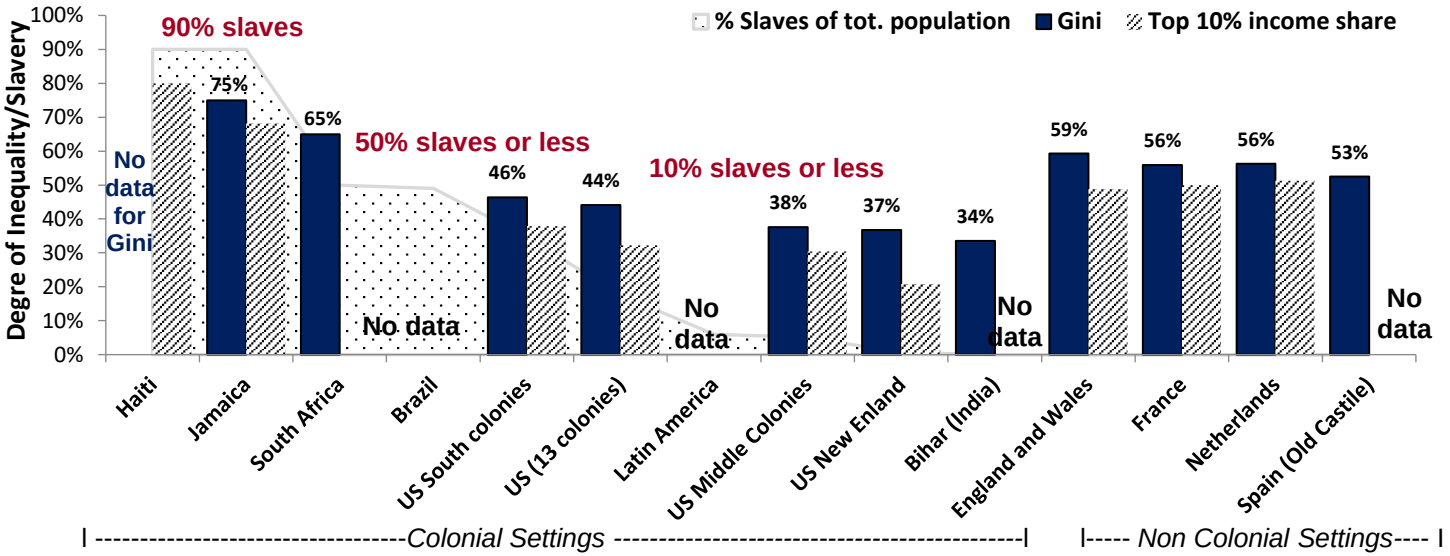
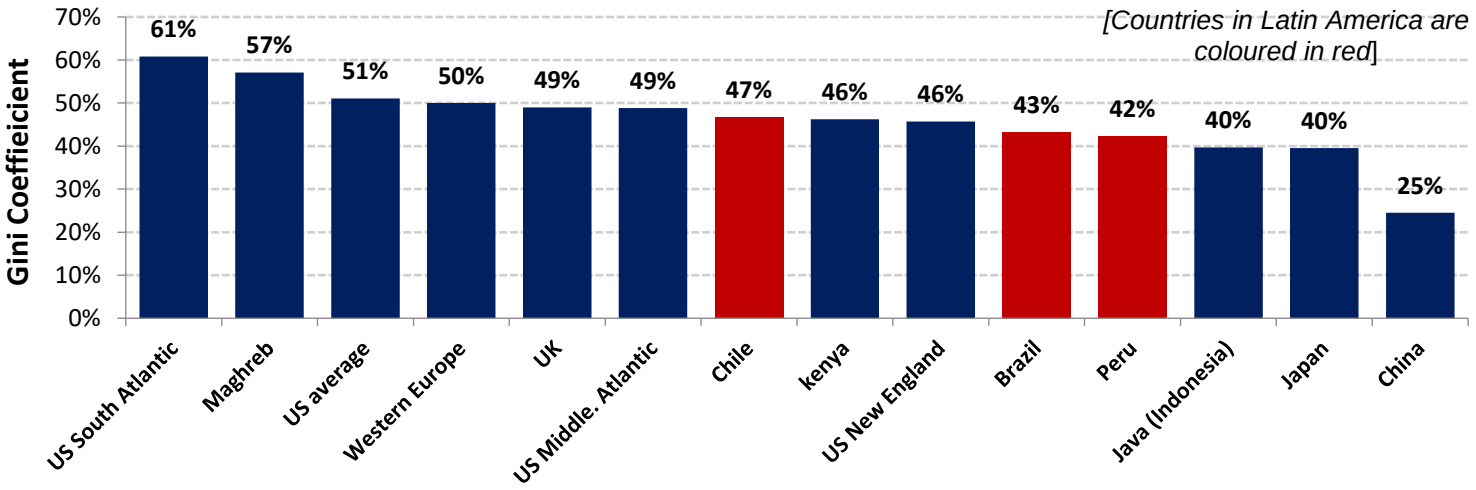


Figure 8b. Income inequality during the late 19th century, circa 1860-70s



Notes: The data is organized from the highest to the lowest Gini coefficient. "No data" means that there are no historical records to construct inequality measures, such as for colonial Latin America or Brazil. In the case of colonial Haiti and Cape Colony, there are historical records documenting income differences, but the inequality estimates for the Gini coefficient and the top 10% income (respectively) have not been calculated. Concerning slavery in Figure 8b, Brazil had 15% of slaves in 1870, while in the US South 46% of its population was under slavery in 1860.

Source: Own elaboration based on historical inequality estimates following Milanovic et al Methodology and based on the criteria developed in the "Mapping Inequality" section. The specific sources of each inequality estimate used can be found in Appendix A, as well as the specific dates of each estimation based on its respective historical record.

Therefore, consistent with our analysis of modern distributive statistics analysed at the beginning of this paper, the available evidence on historical inequality also refutes the historical narrative and institutional thesis of ES and AJR. The historical inequality estimates (shown above) do not support the early (or colonial origins) of comparative inequality differences, i.e. places which have extreme inequality levels today (Latin America and India) show lower historical inequality than places which are relatively equal today (Western Europe). All this evidence suggests that the historical origins of inequality differences do not arise from supposedly divergent economic institutions related to colonialism. Instead, it seems that the origins of comparative inequality levels are to be found in the 20th century and has to do with divergent fiscal policy and political (not economic) institutions.

IV.3 The Great Divergence on regional inequality trajectories during the 20th century.

As explained by Lindert (2004) and Piketty (2013), it was not until the early 20th century that, exceptionally in some Western societies, fiscal policy became progressive as redistribution developed following an unprecedented democratization process, i.e. the inauguration of mass political participation (especially of poorer households) and open electoral competition.[90] Since the early 20th century and for the first time in history, by being *de facto* represented in politics, average and poor households had a say on expenditure and revenue collection decisions, which eventually led to a fiscal policy which promoted redistribution – as opposed to inequality beforehand.[91] As shown below in Figure 9, the emergence of a redistributive fiscal policy in western countries led to an unprecedented and persistent reduction on income inequality during the 20th century and notably since the 1930s, referred to as the "Great Levelling" – namely, the emergence of substantial progressive taxation and spending policies benefiting poorer households.[92] At the opposite end, despite similar levels of inequality before and during the First

[90] Lindert, Peter H. Growing Public: Volume 1, the Story: Social Spending and Economic Growth since the Eighteenth Century. Vol. 1. Cambridge University Press, 2004; Piketty, Thomas, and Arthur Goldhammer. Capital in the Twenty-First Century. Cambridge, UNITED STATES: Harvard University Press, 2013. Pages 601-608 and 637 -653.

[91] Lindert, Peter H., ed. 'Explaining the Rise of Social Transfers Since 1880'. In Growing Public: Social Spending and Economic Growth since the Eighteenth Century: Volume 1: The Story, 1:171–90. Cambridge: Cambridge University Press, 2004. https://doi.org/10.1017/CBO9780511510717.008; Piketty, Thomas, and Arthur Goldhammer. Capital in the Twenty-First Century. Cambridge, UNITED STATES: Harvard University Press, 2013. Pages 637 -653

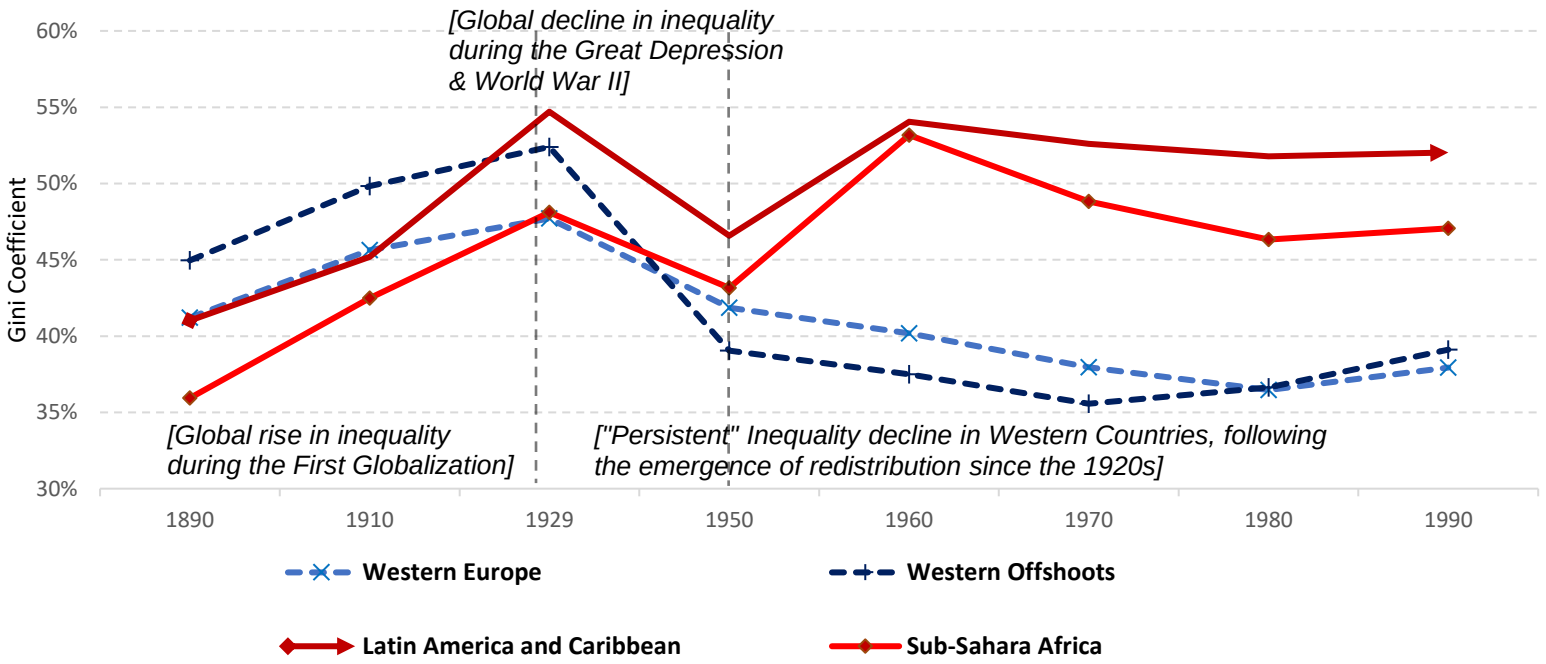
[92] Concerning the "persistency" of the reduction, despite the well-known fact that income inequality has increased in Western societies since the 1980s, income inequality in Western Europe and the US is very far from the extreme inequality levels reached during the Belle Époque (1870-1920s). At the same time, the work of Piketty et al. which have famously stressed rising inequality is based on pre-tax inequality dynamics, and therefore, the rise in inequality observed in their data since the 1980s is overestimated as they do not account for redistributive dynamics. For instance, the inequality rise led by the emergence of the so-called "working rich" (i.e. the new managerial classes receiving top salaries) has been relatively contained by a robust redistributive capacity in Western Europe and in the OECD area – notably through direct taxation which checks rising pre-tax wage disparities. For a comprehensive analysis on the

Globalization, income inequality has remained comparably high in Latin America, Africa and India all through the 20th century until today.[93] The latter, as we have seen, is explained by a weak state capacity and a regressive fiscal policy which has not been fully addressed until today.

current rise in inequality and the fundamental role played by redistribution in OECD countries please see Causa, Orsetta, and Mikkel Nørlem Hermansen. 'Income Redistribution through Taxes and Transfers across OECD Countries'. 2018.

[93]This historical evolution of inequality dynamics and timing, shown in Figure 9, is consistent with other estimations e.g. Prados de la Escosura et al (2007) and Williamson (2015). Please see Escosura, Leandro Prados de la, Timothy J. Hatton, Kevin H. O'Rourke, and Alan M. Taylor. "Inequality and Poverty in Latin America: A Long-Run Exploration "". in Hatton, Timothy; Kevin ORourke; Alan Taylor (Hg.): The New Comparative Economic History. Essays in Honor of Jeffrey G. Williamson. Cambridge Mas. & London, 2007, 291–315; Williamson, Jeffrey G. 'Latin American Inequality: Colonial Origins, Commodity Booms or a Missed Twentieth-Century Leveling?' Journal of Human Development and Capabilities 16, no. 3 (3 July 2015): 324–41. https://doi.org/10.1080/19452829.2015.1044821.

Figure 9. The "Great Divergence" on inequality during the 20th century



Notes: These measures correspond to the regional average of the estimates on income inequality for each country during the period studied. These inequality estimates correspond to the best available evidence on historical inequality dynamics during the 20th century. Most of the measures are historical reconstructions based on a wide range of historical records documenting within-countries income differences, including social tables, heights, real wages, factor prices among other pieces of evidence. As noted before, Western Offshoots include the US, Canada, New Zealand and Australia.

Sources: The figure is my own based on the regional Gini estimates from Moatsos, Michail, Joerg Baten, Peter Foldvari, Bas van Leeuwen, and Jan Luiten van Zanden. 'Income Inequality since 1820', in *How Was Life?: Global Well-being since 1820*, OECD Publishing, Paris. 2 October 2014, 199–215 https://doi.org/10.1787/9789264214262-15-en.

Other well-known factors affected worldwide inequality dynamics during the 20th century, although its impact does not explain the "Great Divergence" in long-term inequality trends – namely because these were global shocks and not country-specific. These factors are: (I) a transport revolution (e.g. steamships, trains and canals) which triggered the First Globalization since the 1870s and led to increasing inequality (related to the expansion of international trade and finance) across all regions;[94] and (II) its subsequent boost during the Great Depression and World War II, which eroded wealth value (due to inflation and capital destruction) and limited international trade and finance – due to war disruptions (see for instance Piketty, 2013).[95] However, as Figure 9 shows, these shocks affected all regions in an already largely globalized and interdependent world since the late 19th century, and therefore, does not explain the persistent "Great Divergence" in inequality across regions, as the latter is explained by redistributive dynamics. *De facto*, when the global disruptions (to international trade and finance) maintaining worldwide inequality subdued dissipated during the post-war period, inequality increased again in Latin America and Africa, whereas a robust redistributive capacity maintained inequality (relatively) under check in Western countries.

In this line, Williamson (2015, 2019) has argued that, consistent with the evidence revised here, that North America (as well as Western Europe) only became less unequal than Latin America during the 20th century – as the latter missed the "Greatest Levelling" which took place in Western Nations.[96] However, Williamson has not explained why Latin America missed the "Great Levelling" nor what did the region miss. Has Latin America missed the emergence of "inclusive" economic institutions (as suggested by AJR) or the formation of redistributive capacity? As we have shown through this paper, the fundamental divergence is on redistribution and state capacity, not on the degree of "inclusiveness" of economic intuitions – which is similar in Western countries and Latin America. Therefore, the fundamental question is: why a regressive fiscal policy which breeds inequality was not reformed in Latin America, India or Africa?

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[94] On the first Globalization and the transport revolution please see O'Rourke, K. and J. Williamson (1999). "Transport Revolutions and Commodity Market Integrations", Chapter 3 in *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*. MIT press, 1999.

[95] Concerning the connection between inequality and globalization, the analysis of these mechanisms is beyond the scope of this investigation. For a comprehensive review on this subject please see for instance Kanbur, Ravi. 'Chapter 20 - Globalization and Inequality'. In Handbook of Income Distribution, edited by Anthony B. Atkinson and François Bourguignon, 2:1845–81. Handbook of Income Distribution. Elsevier, 2015. https://doi.org/10.1016/B978-0-444-59429-7.00021-2.

[96] Williamson, Jeffrey G. 'Latin American Inequality: Colonial Origins, Commodity Booms or a Missed Twentieth-Century Leveling?' Journal of Human Development and Capabilities 16, no. 3 (2015): 324–341; LINDERT, PETER H., and JEFFREY G. WILLIAMSON. 'The Greatest Leveling of All Time'. In Unequal Gains, 194–218. American Growth and Inequality since 1700. Princeton University Press, 2016. https://doi.org/10.2307/j.ctvc77j93.12.

V. Explaining the Great Divergence

V.1 The political Economy of Redistribution

In the rest of this investigation, we will try to shed some lights on the importance of democratisation and redistribution on explaining the Great Divergence in inequality during the 20th century. The hypothesis of this research is that limited *de facto* political voice of poor and average households (related to a not-so-democratic 20th century) in India, Latin America and Africa undermined the formation of the state capacity and the political support required to levy substantial progressive taxation and to channel these resources towards social protection schemes. Why?

The empirical and theoretical literature on the political economy of fiscal policy suggests that only full democratization (i.e. the incorporation of average and poor households into politics) leads to substantial redistribution, i.e. sizable and progressive taxation and social transfers. Concerning the political economy of the process, Meltzer and Richard (1981) have famously argued that an enlargement of the franchise should lead to a more progressive fiscal policy, namely because incorporating poorer households into politics change the position of the decisive political actor in the income distribution.[97] However, this does not mean that democracy *per se* leads to higher redistribution. Namely, because the likelihood to implementing progressive taxation is only higher in full democracies, i.e. when the franchise is closer to universal suffrage and there is uncontrolled electoral competition, and therefore, poor and average households have *de facto* access to a political voice.[98] Whereas elite democracies (which exclude non-elite households through wealth or literacy requirements), are more likely to implement regressive taxes benefiting richer households – as explored above in the case of 19th century UK or France.[99]

[97] Meltzer, Allan H., and Scott F. Richard. 'A Rational Theory of the Size of Government'. Journal of Political Economy 89, no. 5 (1981): 914–927; Lindert, Peter H., ed. 'Explaining the Rise of Social Transfers Since 1880'. In Growing Public: Social Spending and Economic Growth since the Eighteenth Century: Volume 1: The Story, 1:171–90. Cambridge: Cambridge University Press, 2004. https://doi.org/10.1017/CBO9780511510717.008.

[98] As argued by Sokoloff and Zolt (2007) based on comparative evidence on suffrage and taxation systems in the Americas during the 19th and 20th century, focusing on the different experiences between Latin and North America. By the same token, Aidt et al (2009), following a quantitative approach applied to OECD countries since the 19th century, has shown that progressive taxes are more likely to emerge in places which achieved (or got closer) to full democracies, while a democratization process which excludes poorer households may even increase indirect taxation as in elite democracies in Europe during the 19th century. Please see Aidt, Toke S., and Peter S. Jensen. 'The Taxman Tools up: An Event History Study of the Introduction of the Personal Income Tax'. Journal of Public Economics 93, no. 1 (1 February 2009): 160–75. https://doi.org/10.1016/j.jpubeco.2008.07.006; Sokoloff, Kenneth L., and Eric M. Zolt. 'Inequality and the Evolution of Institutions of Taxation: Evidence from the Economic History of the Americas'. In *The Decline of Latin American Economies: Growth, Institutions, and Crises*, 83–138. University of Chicago Press, 2007.

[99] Elite democracies, as in 19th century Europe and Latin America, are aligned with the interests of richer households (which have access to political representation) and therefore prefer a regressive fiscal policy.

Concerning redistribution through social transfers, increased *de facto* political voice of poorer households (i.e. broader political participation and electoral competition), does not only lead to progressive revenue collection but also to more progressive expenditure. As shown by Lindert (2004), the incorporation of non-elite households was a necessary condition for the emergence of substantial redistributive public spending, namely because poorer households have a strong interest in using their political voice to channel public resources towards social benefits.[100]

Democratization also helps to build a solid "fiscal contract" i.e. when citizens trust the state and therefore are more willing to pay taxes. In a full democracy, checks and balances on the executive (notably on expenditure decisions) lead to a state intervention which chases public goals, and therefore, permits the formation of *credible commitments* which increase the extractive capacity of the state.[101] Namely because, citizens are more willing to pay taxes if the state is under the "control" of society, and therefore, *committed* to redistribute back to citizens a substantial part of these resources through social benefits or public goods, as opposed to use these resources for the protection of vested interests. For instance, the work of the OECD shows that a citizens-centred public spending solidifies the "fiscal contract", and as such, reduces informality and increase revenue collection, whereas widespread corruption (reflecting weak checks on expenditure) erodes tax compliance.[102] Therefore, a solid fiscal contract (arising from democratization) increase redistribution by increasing revenue collection (related to higher compliance), which increments the redistributive capacity of the state, i.e. the state is capable to provide more generous social benefits; on the top of reducing informality, and therefore, increasing access to social security.

V.2 Research Strategy

To the best of our knowledge, the literature has not empirically tested the impact of democratization on redistribution *per se* (as opposed to imperfect measures such as direct taxation or social transfers), nor has differentiated the impact of a history of democratic institutions on market inequality (reflecting economic institutions) from redistribution (reflecting

[100] Lindert, Peter H., ed. 'Explaining the Rise of Social Transfers Since 1880'. In Growing Public: Social Spending and Economic Growth since the Eighteenth Century: Volume 1: The Story, 1:171–90. Cambridge: Cambridge University Press, 2004. https://doi.org/10.1017/CBO9780511510717.008.

[101] Dincecco, Mark. 'The Rise of Effective States in Europe'. The Journal of Economic History 75, no. 3 (2015): 901–918; Acemoglu, Daron. 'Politics and Economics in Weak and Strong States'. Journal of Monetary Economics, Political economy and macroeconomics, 52, no. 7 (1 October 2005): 1199–1226. https://doi.org/10.1016/j.jmoneco.2005.05.001.

[102] OECD (2019), Tax Morale: What Drives People and Businesses to Pay Tax?, OECD Publishing, Paris, https://doi.org/10.1787/f3d8ea10-en; OECD (2018). 'The Social Contract in Latin America and the Caribbean: Situation and Policy Challenges', 9 April 2018, 43–87. https://doi.org/10.1787/leo-2018-6-en.

state capacity).[103] Moreover, as noted by Acemoglu et al (2015), the literature studying the effects of democratization on redistribution (using imperfect measures) has not developed rigorous econometric research, notably because they have not accounted for the endogeneity of political institutions.[104] Therefore, causal interpretations of the findings of this literature are difficult.

As such, the novel identification strategy of this investigation aims to identify the causal impact of a history of democracy during the 20th century on current inequality and redistributive dynamics. To do so, we will follow an Instrumental Variable (IV) strategy to address the endogeneity of political institutions. Building on AJR (2001), this research exploits historical European mortality rates as an instrument for the "inclusiveness" of the political system (i.e. the degree of political inequality) as done in the literature - see for instance AJR (2002, 2005) and Rodrick et al (2004).[105] The underlying assumption, that we share with AJR, is that in areas with lower European mortality rates, Europeans settled in larger numbers during colonization, which eventually led to an history of more "inclusive" political institutions – as shown latter in Figure 10a.[106]

However, while the research of AJR focuses on access to secure property rights (during the late 20th century) and its impact on economic development, this investigation focuses on analysing the impact of a history of democratic institutions (during the 20th century) on inequality and redistributive dynamics. The only thing in common of this research strategy and AJR, is the IV approach based on settler mortality. However, we do not even use the same data to construct our instrument. Namely because, Acemoglu et al. data present potential measurement error as these authors had to extrapolate (based on assumptions) some mortality rates to address the lack of evidence on historical European mortality rates across all colonized countries.[107] This research uses instead a revised version of AJR (2001) settler mortality data developed by Albouy (2012), who revised some estimates made by AJR based on within-country evidence on historical settler

[103] For a comprehensive review of the literature please see Acemoglu, Daron, Suresh Naidu, Pascual Restrepo, and James A. Robinson. 'Chapter 21 - Democracy, Redistribution, and Inequality'. In Handbook of Income Distribution, edited by Anthony B. Atkinson and François Bourguignon, 2:1885–1966. Handbook of Income Distribution. Elsevier, 2015. https://doi.org/10.1016/B978-0-444-59429-7.00022-4.
[104] Idem.
[105] Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. 'Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development'. Journal of Economic Growth 9, no. 2 (2004): 131–165.
[106] Namely because colonizers typically guaranteed equal political rights to other colonizers, therefore places with more European settlers (i.e. more colonizers vis à vis indigenous population) ended up having less political inequality. This early emergence of less political inequality facilitated the formation of more democratic institutions after independence as we will see in Figure 10a.
[107] Albouy, David Y. 'The Colonial Origins of Comparative Development: An Empirical Investigation: Comment'. American Economic Review 102, no. 6 (1 October 2012): 3059–76. https://doi.org/10.1257/aer.102.6.3059.

mortality rates.[108] Therefore, we used Albouy data as it is closer to capture the historical variation on mortality rates across territories, and as such, this revised dataset minimizes measurement error and potential sources of bias. In any case, the findings of this research are robust to using the original AJR data - please see Appendix B.

V.3 Building the IV model

To measure the degree of access to political voice during the 20th century we construct two variables to quantify a history of democratic institutions. These measures correspond to the average value (during the period studied) of two widely used measures of democratic institutions: the Polity2 index (from the Polity IV database) and Vanhanen´s Index of Democracy (from the Polyarchy dataset). The Polity2 index captures checks on the executive as well as political competitiveness and openness, ranging from -10 ("Full Autocracy") to +10 ("Full Democracy").[109] Respectively, the Index of Democracy is constructed using electoral data on political participation (i.e. the percentage of adults who votes) and electoral competition (i.e. the share of votes going to the winning party).[110] As shown by Vanhanen, accounting for both political participation and competition, as the Polity2 and the Index of Democracy does, is fundamental to capture *de facto* access to political voice in a democratic system – as the distribution of real political power requires both mass participation and open competition.[111] For example, present-day Venezuela and Cuba hold elections with mass political participation, however, there is no real political competition i.e. the official party capture the majority of the votes, therefore political voice is *de facto* limited. A such, the two chosen measures of a history of democracy capture both openness and participation to account for *de facto* access to political voice.

[108] Idem.
[109] 'PolityProject'. Accessed 26 June 2020. https://www.systemicpeace.org/polityproject.html.
[110] Oslo (PRIO), Peace Pesearch Institute. 'The Polyarchy Dataset - PRIO'. Accessed 26 June 2020. https://www.prio.org/Data/Governance/Vanhanens-index-of-democracy/.
[111]Vanhanen, Tatu. 'A New Dataset for Measuring Democracy, 1810-1998'. Journal of Peace Research 37, no. 2 (2000): 251–265.

Figure 10: Settler Mortality, Democratic History and Comparative Inequality levels

Figure 10a. Historical Settler Mortality and Democratic History

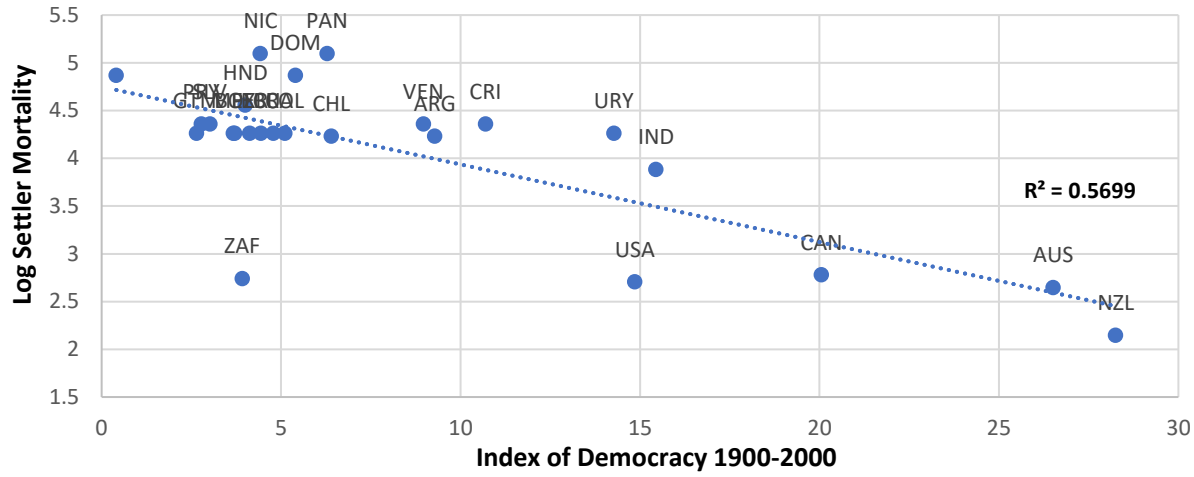
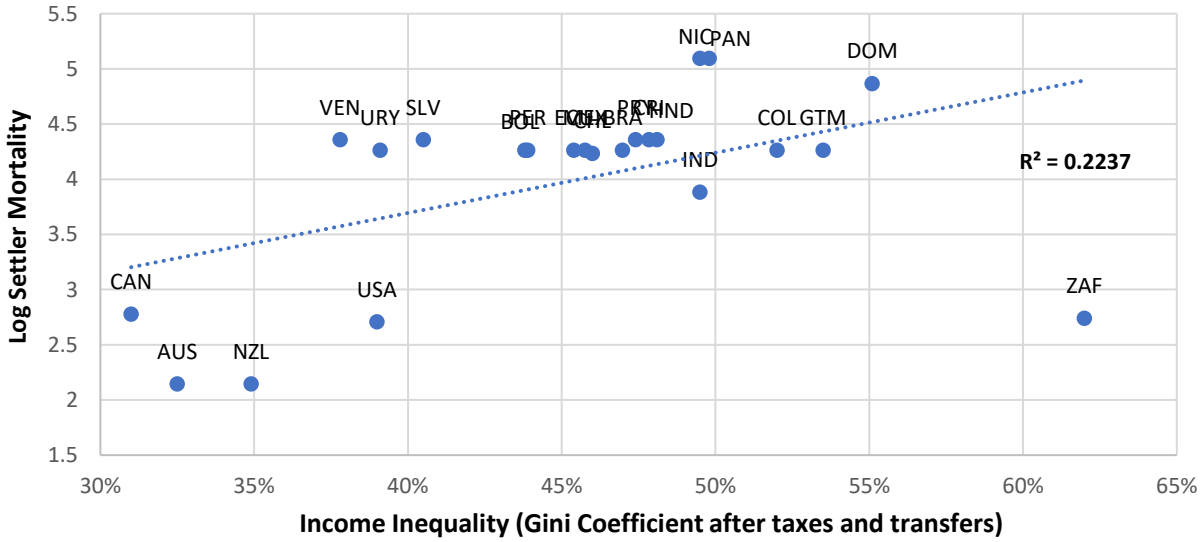


Figure 10b. Historical Settler Mortality and Income Inequality



Consistent with the macro-narrative of AJR, Figure 10b shows that historical settler mortality not only leads to divergent democratization processes, but also to different inequality levels between former settler colonies (i.e. western offshoots) and non-settler colonies i.e. Latin America and India. However, Figure 11 presented below strongly suggests that the latter is fundamentally explained by divergent levels of redistributive capacity (Figure 11a) as our hypothesis suggest, and not by differences in the extent of "institutionalized" inequality of the economic playing field (Figure 11b) – as suggested by AJR, ES and conventional wisdom. Figure 11b depicts an (apparent) absolute lack of relationship between market inequality and different types of colonization ("settler" or not) which is consistent with the evidence revised in section II, further reinforcing the imperative to study redistributive dynamics instead of supposedly

divergent economic institutions. The econometrical analysis that we will develop next will allow us to confirm, by arguably establishing causality through the IV approach, that different democratization processes during the 20th century explain these divergent redistributive capacities, and therefore, the comparative inequality levels observed in Figure 10b.

Figure 11: The Fiscal Origins of Comparative Inequality Differences

Figure 11a. Settler Mortality and Redistribution

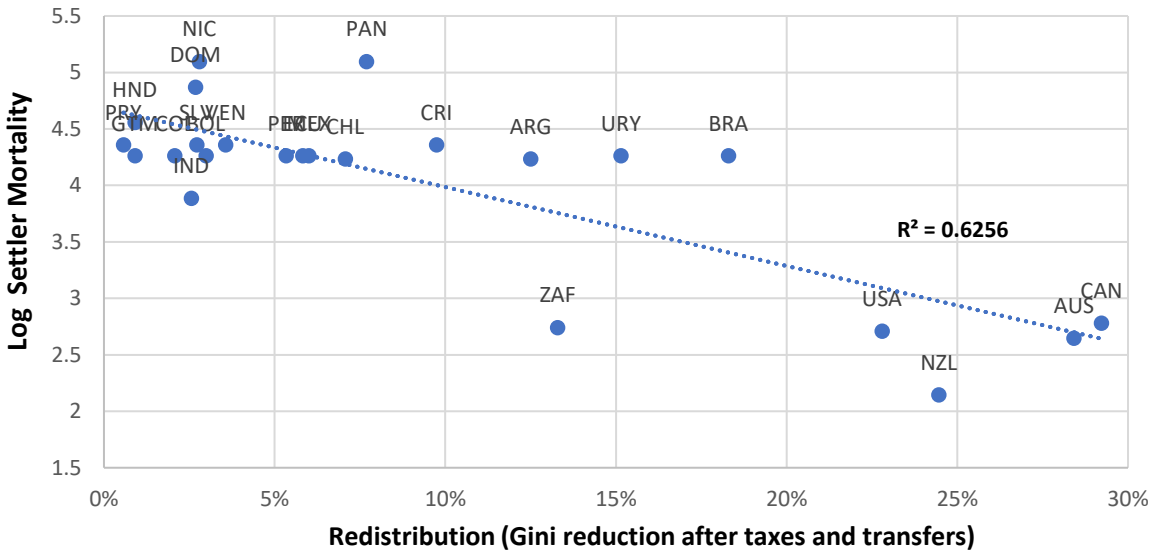
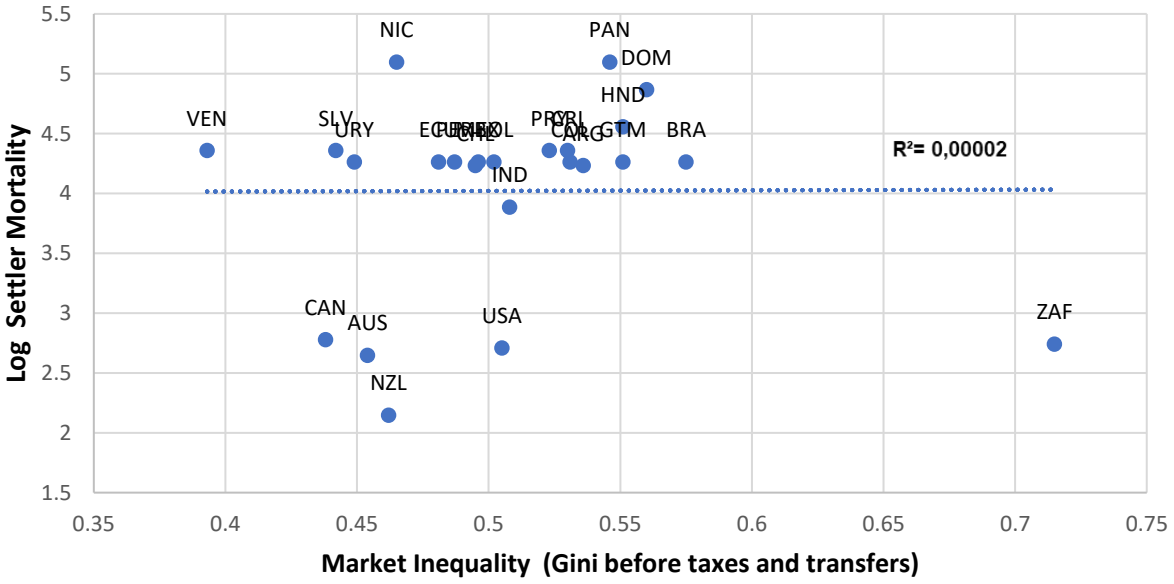


Figure 11.b Settler Mortality and Market Inequality



For establishing causality, the literature stipulates that it is fundamental to consider a set of relevant control variables in our IV estimations, including geography, climate as well as political and institutional development before colonization. First, the historical evidence shows that colonial administrations build on of pre-colonization institutions (i.e. social, labour and tributary systems) to develop their extractive and administrative capacity, and as such, indigenous development largely influenced subsequent institutional and state capacity development across colonized territories.[112] Therefore, based on the data from AJR (2002), the IV estimations controls for native population density (pre-European conquest circa 1500), which accounts for economic development before colonization and the relative abundance of native labour. As a further robustness check, our IV estimates also control for the presence and complexity of native forms of government based on the "State History" Index developed by Borcan et al (2018), which permits us to control for accumulated human capital and sate capacity before European colonization i.e. by circa 1500.[113] Incorporating the State History index notably permits to take into consideration the large differences in pre-colonization administrative capacity, i.e. between places which developed strong states such as the Inca Empire or Moghul India, which provided public goods and levied tribute, and areas where forms of government rarely surpassed the tribal level as in North America. Secondly, following McArthur and Sachs (2001), we also incorporate geography and climate to our controls as accounting for these factors is fundamental to achieve causal estimations and notably so when using settler mortality as IV. [114] Namely because mortality rates are typically higher in warmer areas and in places closer to the equator, and therefore, not accounting for these variables could produce bias – as historical settler mortality rates would correlate with the omitted variables (geography and climate), which may themselves have an impact on the outcome variables.

Concerning the validity of the instrumental variable (IV), as depicted in Table I, historical settler mortality is a strong and relevant determinant of democratic political institutions during the 20th century. The explanatory power of the IV remains robust once we account for all the relevant controls discussed above, which validate the choice of our instrument. Concerning the exclusion

[112] Frankema, Ewout, and Marlous van Waijenburg. 'Metropolitan Blueprints of Colonial Taxation? Lessons from Fiscal Capacity Building in British and French Africa, c. 1880-1940'. The Journal of African History 55, no. 3 (2014): 371–400; Arias, Luz Marina, and Desha M. Dirod. 'Indigenous Origins of Colonial Institutions'. Quarterly Journal of Political Science 9, no. 3 (18 September 2014): 371–406. https://doi.org/10.1561/100.00013135.

[113] Borcan, O., Olsson, O. and Putterman, L. (2018) "State History and Economic Development: Evidence from Six Millennia" Journal of Economic Growth 23(1): 1-40. https://sites.google.com/site/econolaols/extended-state-history-index

[114] McArthur, John W., and Jeffrey D. Sachs. 'Institutions and Geography: Comment on Acemoglu, Johnson and Robinson (2000)'. National bureau of economic research, 2001.

restriction of the IV, based on the literature, once we control for geography, climate and political and economic development before colonization, there are no reasons to believe that historical settler mortality affects our outcome variables through other channels than political institutions.[115] Besides, the results of the relevant econometrical tests such as for underidentification and overidentification, which are all available in Appendix B, confirm that our identification strategy is correct.

[115] McArthur, John W., and Jeffrey D. Sachs. 'Institutions and Geography: Comment on Acemoglu, Johnson and Robinson (2000)'. National bureau of economic research, 2001; Acemoglu, Daron, Simon Johnson, and James A Robinson. 'Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution'. The Quarterly Journal of Economics, n.d., 64, 2002.

Table I. Historical Settler Mortality and Democratic Institution

Table Ia. Dependent= Vanhanen Index of Democracy 1900-2000	(1)	(2)	(3)	(4)
Settler Mortality Revised	-4.236***	-3.634**	-2.886*	-6.639**
	(0.689)	(1.234)	(1.164)	(1.797)
Geography & Climate controls	no	yes	yes	yes
Indigenous Population Density by 1500			-1.531**	-1.300
			(0.554)	(0.894)
Native State History by 1500				-0.0335
				(0.270)
_cons	26.29***	22.39*	14.45	22.94*
	(3.100)	(8.483)	(8.292)	(10.95)
N	51	40	40	30
adj. R^2	0.424	0.373	0.473	0.551

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table Ib. Dependent = Polity2 index 1900-2000	(1)	(2)	(3)	(4)
Settler Mortality Revised	-2.682***	-3.213**	-2.770**	-3.423**
	(0.475)	(0.924)	(0.907)	(1.033)
Geography & Climate controls	no	yes	yes	yes
Indigenous Population Density by 1500			-0.907*	-0.0577
			(0.432)	(0.788)
Native State History by 1500				-9.259
				(7.217)
_cons	12.97***	17.86**	13.16*	14.63*
	(2.131)	(6.351)	(6.464)	(6.506)
N	49	40	40	40
adj. R^2	0.392	0.361	0.418	0.428

Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: The "Geography & Climate controls" include Sea Exposure (i.e. the amount of the territory within 100 km of the sea), Absolute Latitude (i.e. distance from the equator, normalized between 0 and 1), and Mean Temperature.

V.4. Main Results and Interpretations

The results of the IV regressions presented in Table II show that, in line with the argument developed in this investigation, there is a strong and significant relationship between a history of democratic institutions an inequality reduction through taxes and transfers (as shown in Table 2a), while there is not a significant connection between democratic institutions and a more level economic playing field (as depicted in Table 2b). The sample of 24 countries used for the IV estimations includes all former colonies for which comparable and reliable data on redistribution and inequality is available – as developed in Section II of this paper.

Table II. IV Results: The Fiscal Origins of Comparative Inequality levels

Table IIa: History of Democracy, Redistribution and Sate Capacity

Reg	(1) Redistribution	(2) Direct Taxes (% of GDP)	(3) Ratio Direct/ Indirect Taxes	(4) Redistribution	(5) Direct Taxes (% of GDP)	(6) Ratio Direct/ Indirect Taxes
Index of Democracy	0.00905***	0.831***	0.0947*			
1900-2000	(0.00210)	(0.252)	(0.0409)			
Polity2 Index				0.0121***	1.064**	0.126**
1900-2000				(0.00263)	(0.365)	(0.0467)
Geography & Climate	yes	yes	yes	yes	yes	yes
Native Population	-0.0237*	2.982*	0.282	-0.0407***	0.686	0.0570
Density by 1500	(0.0107)	(1.432)	(0.269)	(0.00860)	(1.057)	(0.168)
Native State History	-0.0179	-13.26	-0.943	0.0726	4.925	0.310
by 1500	(0.0962)	(8.683)	(1.388)	(0.0840)	(8.015)	(1.069)
_cons	0.126*	6.025	0.213	0.0419	-7.879	-0.474
	(0.0618)	(6.839)	(0.963)	(0.0574)	(7.819)	(0.946)
N	24	24	21	24	24	21
adj. R2	0.808	0.173	0.152	0.832	.	0.371

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table IIb: History of Democracy, Market Inequality and Asset and Opportunities Disparities.

Reg	(1) Market Inequality	(2) Life Expect. Inequality	(3) Education Inequality	(4) Market Inequality	(5) Life Expect. Inequality	(6) Education Inequality
Index of Democracy	0.00365	-0.0436	-0.0735			
1900-2000	(0.00427)	(0.195)	(0.316)			
Polity2 Index				0.00488	-0.0983	-0.00388
1900-2000				(0.00506)	(0.427)	(0.00432)
Geography & Climate	yes	yes	yes	yes	yes	yes
Native Population	0.0286	1.957*	3.347*	0.0218	2.039*	3.485*
Density by 1500	(0.0217)	(0.991)	(1.607)	(0.0166)	(0.863)	(1.399)
Native State History	-0.240	-2.581	11.56	-0.203	-3.017	10.83
by 1500	(0.195)	(8.916)	(14.45)	(0.162)	(8.433)	(13.67)
_cons	0.462***	3.075	7.317	0.429***	3.480	7.999
	(0.126)	(5.733)	(9.291)	(0.111)	(5.762)	(9.339)
N	24	24	24	24	24	24
adj. R2	.	0.466	0.590	.	0.453	0.580

Standard errors in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Notes: The "Geography & Climate" controls include "Sea Exposure" (i.e. the amount of the territory within 100 km of the sea), "Absolute Latitude" (i.e. distance from the equator, normalized between 0 and 1), and "Mean Temperature". Please see the details on the rest of indicators in Annex B. The first stage results of the IV estimation are presented in Appendix B and show that, consistent with Table I, historical settler mortality is statistically significant and economically relevant even when the sample has 24 countries i.e., all former colonies with comparable data on inequality dynamics. The sources on market inequality and redistribution are the same as in Figure 7. The IV estimation uses normal standard errors following the results of the IV heteroskedasticity test. Direct Taxes corresponds to taxes on income, profits and capital gains of individuals (as a percentage of GDP) taken as the average for the 2010-2018 period – founded on the OECD Global Revenue Statistics Database.

Concerning redistributive capacity, Table 2a shows that a history of democracy during the 20th century is the fundamental determinant of redistributive capacity differences across countries, and therefore, explains the comparative inequality levels observed in Figure 10b. As shown in column (1) and (4) the effects of the different measures of a history of democracy on redistributive capacity are economically and statically very significant: a 1 point increase in the average Polity2 index during the 20th century leads to a 1.2 percentage points higher redistributive capacity. Columns (2) and (5) show a robust relationship between a history of democracy and substantial direct taxation. While columns (3) and (6) shows that, for any given level of taxation, a democratic history increased the progressivity of the tax system – as direct taxes are typically progressive while indirect taxes are regressive.

As such, the results presented in Table2a confirm our hypothesis that the development of a robust redistributive an extractive capacity is largely determined by democratic conditions: When governments are checked by citizens with *de facto* access to political voice, the state can issue the *credible commitments* to extract substantial taxes from citizens as demonstrated by columns (2) and (5). Consequently, the same political voice which checks (and therefore facilitates) revenue collection also checks expenditure decisions, and as such, will make sure that a substantial part of these additional revenues is redistributed back to citizens through social transfers – therefore leading to a higher redistribution as depicted in columns (1) and (4). Tacking both mechanisms together, the estimations show that going from a "slightly" non-democratic 20th century such as in Latin America (a Polity2 average of -1) to a "fully" democratic century as in Western Offshoots (a Polity2 close to 10) is associated with an increase of 11 points in direct taxation (as % of GDP), and a 13 percentage points higher inequality reduction through taxes and transfers. Therefore, the impact of democratization is very large and economically relevant i.e., a 13 points higher redistribution is more than two times the redistributive capacity in Latin America (6%).

Concerning the results presented in Table 2b, the IV estimations show there is no significant effect of a history of democracy on the extent of asset and opportunities disparities. A democratic 20th century is not associated with a more level economic playing field as quantified by market inequality as shown in columns (1) and (4). Even when we analyze the distribution of assets *per se*, using UNDP data on inequality,[116] this finding is further confirmed: we do not observe that inclusive political institutions lead to a significant reduction on education disparities

[116] The data on education and life expectancy inequality is based on Human Development Report (2019, table 3). Please see Human Development Report 2019: Beyond Income, beyond Averages, beyond Today: Inequalities in Human Development in the 21st Century, 2019.

(columns 3 and 6), nor health inequality as depicted by column (2) and (5) in table 2b. Therefore, it seems that "exclusionary" political institutions have not been an obstacle to develop "inclusive" economic institutions guaranteeing broad access to healthcare, education or asset accumulation as in Latin America during the 20th century, contradicting AJR and ES historical narrative – as well as conventional wisdom.

As such, these findings confirm that the "Great Divergence" on income inequality is fundamentally explained by different levels of redistribution arising from divergent political trajectories during the 20th century, and not by asset and opportunities disparities rooted in economic institutions. Therefore, the results confirm our hypothesis and further contradicts the institutional thesis of AJR and ES. For instance, based on the results of the IV model, if Latin America would have had a democratic 20th century, its redistributive level would be 13 points higher, i.e. 19% instead of 6%, and therefore, its income inequality level would be almost identical than in its northern neighbour i.e. inequality would be just 2 Gini points higher than in the US (0.41 vs 0.39).

VI. Exploring the results

VI.1 The convergence of economic institutions

Concerning the link between democratisation and a level economic playing field, while institutional reforms leading to lower asset and opportunities disparities in Western countries such as the massification of education happened in a context of expanding political voice – see for instance Lindert (2004),[117] this was not necessarily the case in other regions – see for example Kosack (2012).[118] De facto, most former colonies have converged towards more "inclusive" economic institutions during post-colonial times – irrespective of its colonial legacies or lack of democratic political institutions. For instance, Prados de la Escosura (2015) and Astorga et al. (2005), have documented an impressing catching up process in terms of providing broad-access to formal education and healthcare between the periphery (notably Latin America, India and North Africa) and OECD countries since the early 20th century.[119] Similarly, Duflo and Banerjee

[117] Lindert, Peter H., ed. 'The Rise of Mass Public Schooling before 1914'. In Growing Public: Social Spending and Economic Growth since the Eighteenth Century: Volume 1: The Story, 1:87–127. Cambridge: Cambridge University Press, 2004. https://doi.org/10.1017/CBO9780511510717.006.

[118] Kosack, Stephen. The Education of Nations: How the Political Organization of the Poor, Not Democracy, Led Governments to Invest in Mass Education. Oxford University Press, 2012.

[119] Prados de la Escosura, Leandro. 'World Human Development: 1870–2007'. Review of Income and Wealth 61, no. 2 (2015): 220–247; Astorga, Pablo, Ame R. Bergés, and Valpy FitzGerald. 'The Standard of Living in Latin America during the Twentieth Century 1'. The Economic History Review 58, no. 4 (2005): 765–796.

(2011, 2014), has shown how economic institutions (e.g. access to credit, education, healthcare and opportunities in general) can become more inclusive (or pro-poor) in countries with "bad" (i.e. non-inclusive) political institutions à la AJR, such as in Africa or India.[120]

In Latin America, institutional change towards "inclusive" economic institutions happened in the context of "exclusionary" political institutions. These reforms were notably implemented during the so-called "Import Substitution Industrialization" period (1930s-1970s), which promoted public investments in favour of the historically disenfranchised masses.[121] As shown in Figure 12, this period of radical reforms did not happen in a context of democratization but the opposite, as the Polity2 Democracy index remained negative. The figure also shows that decreasing trend on education inequality clearly pre-dates the democratization process which only started in Latin America during the 1980s. De facto, these reforms towards lower "institutionalized" inequality were notably led by populist "strongman" (e.g. Peron in Argentina, Vargas in Brazil, Cardenas in Mexico among many others), hegemonic parties (e.g. the Institutional Revolutionary Party which controlled politics in Mexico since the 1930s),[122]and by *de facto* revolutions such as in Cuba or Bolivia during the 1950s.[123]

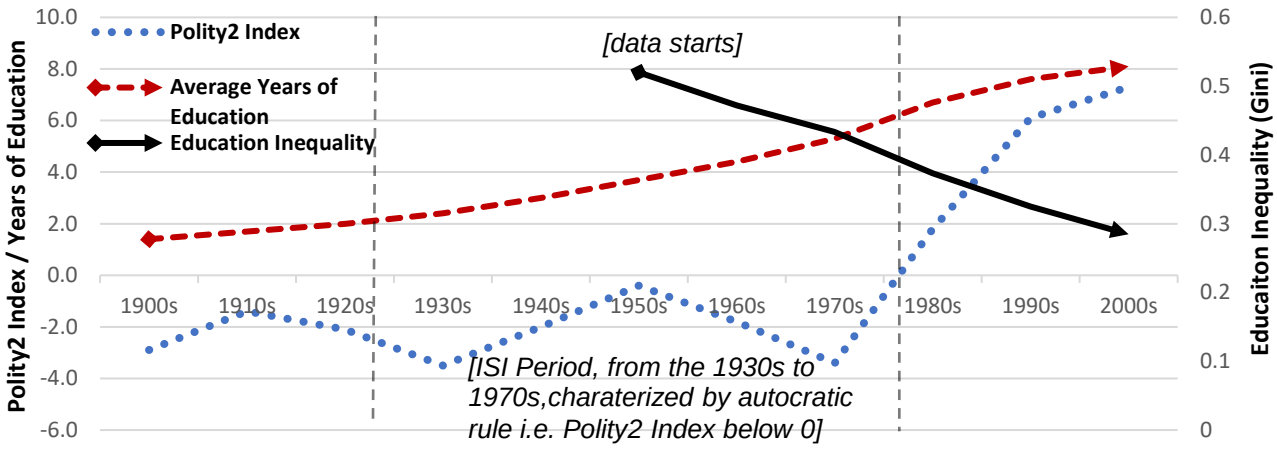
[120]Banerjee, Abhijit V., Abhijit Banerjee, and Esther Duflo. Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty. Public Affairs, 2011; Banerjee, Abhijit V., and Esther Duflo. 'Under the Thumb of History? Political Institutions and the Scope for Action'. Annu. Rev. Econ. 6, no. 1 (2014): 951–971;

[121] On the improvements during ISI concerning education and health, please see Astorga, Pablo, Ame R. Berges, and Valpy Fitzgerald. 'The Standard of Living in Latin America during the Twentieth Century'. The Economic History Review 58, no. 4 (2005): 765–96. https://doi.org/10.1111/j.1468-0289.2005.00321.x.

[122] For instance, the writer and Nobel Prize laureate Mario Vargas Llosa famously referred to Mexico´s political system maintained by the PRI since the 1930s to the 2000 as a "perfect dictatorship" due to its proficiency in arranging elections. For a comprehensive analysis of populism in Latin America please see Kaufman, Robert R., and Barbara Stallings. 'The Political Economy of Latin American Populism'. In *The Macroeconomics of Populism in Latin America,* 15–43. University of Chicago Press, 1991.

[123] Peres-Cajías, José Alejandro. 'The Expansion of Public Spending and Mass Education in Bolivia: Did the 1952 Revolution Represent a Permanent Shock?' In *Has Latin American Inequality Changed Direction*, 2017, 195–218.

Figure 12. Political institutions and education disparities in Latin America



Sources and notes: Own elaboration. The data on education inequality (the Gini based on years of education) are my own calculations based on Ziesemer (2016).[124] Ziesemer (2016) measures the Gini coefficients based on the data from Barro and Lee (2013), the series starts in 1950 as there is no data before that period. The regional average of years of education, as well as the Polity2 Index, are based on Table 5.4 and 9.2 from Van Zanden et al (2014).[125]

Interestingly, the long list of populist movements that marked the 20th century in Latin America, in addition of their disregard of legitimate democratic processes, they all have in common a focus on improving the condition of working class households through state interventions (notably regulatory policy) and not fiscal redistribution.[126] In line with the hypothesis of this investigation, it seems that building redistributive capacity necessitates the formation of a fiscal and political contract (i.e. *credible commitments*) which are unlikely to form under non-democratic institutions – and less so under a populist leader which builds support by polarizing society.

VI.2 The divergence of redistributive capacity

Concerning redistributive capacity, the findings formulated above do not seem to be driven by differences in economic development, but by differences in the democratization process as we

[124] Ziesemer, Thomas. 'Gini Coefficients of Education for 146 Countries, 1950-2010'. MERIT Working Papers. MERIT Working Papers. United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT), 29 August 2016. https://ideas.repec.org/p/unm/unumer/2016044.html.
[125] van Zanden, J., et al. (eds.) (2014), *How Was Life?: Global Well-being since 1820*, OECD Publishing, Paris, https://doi.org/10.1787/9789264214262-en.
[126] For instance, these policies included expropriations of private assets, economic distortions (e.g. price-fixing and multiple exchange rates to reduce private rents and increase real wages), and notably rising nominal wages. Please see Sachs, Jeffrey D. 'Social Conflict and Populist Policies in Latin America'. Working Paper. Working Paper Series. National Bureau of Economic Research, March 1989. https://doi.org/10.3386/w2897; Kaufman, Robert R., and Barbara Stallings. 'The Political Economy of Latin American Populism'. In The Macroeconomics of Populism in Latin America, 15–43. University of Chicago Press, 1991.

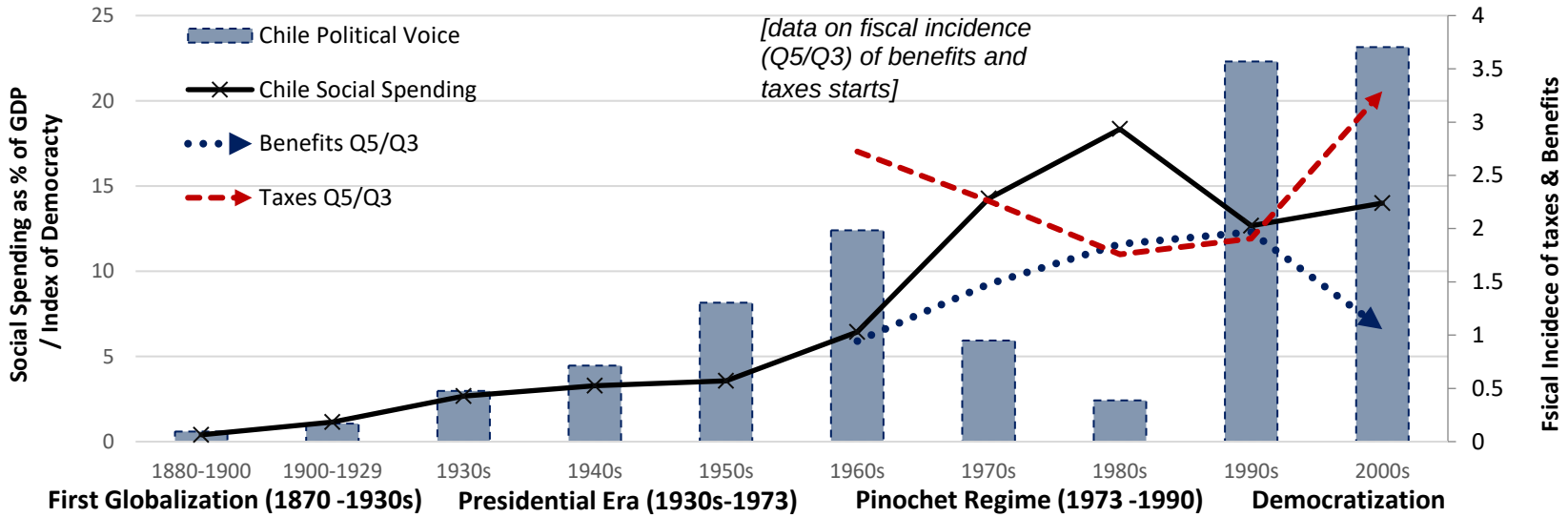
will demonstrate based on the following case studies. These cases include the US in the context of Western Offshoots, and Chile and Mexico in the context of Latin America. The case of Chile will be analysed more in detail as it has a relative abundance of data on long-term inequality and redistributive dynamics, compared to the rest of Latin America.[127]

The US, despite being the richest country among Western offshoots, has the lowest levels of redistribution among them. Consistent with our hypothesis, the latter is explained by a partially "inclusive" democratic history in the US, compared to Canada, New Zealand and Australia. The US has (in)famously constrained the political participation of non-elite households (notably ethnic minorities) and especially so until the Voting Rights Act of 1965 which aimed to end the persistent political exclusion of Afro-Americans. In the US, only 32% of the total adult population was allowed to vote (on average) during the 20th century, compared to 52% in Australia, 47% in New Zealand and 37% in Canada.[128]

Likewise, Chile, despite being the richest Latin American country in terms of GDP per capita and a member of the OECD, because of a not-so-democratic 20th century, the extent of redistribution in Chile is half 5 times lower than the OECD average. Chile experienced economic development and political stability during the Pinochet Dictatorship (1973- 1990) and during the democratic transition in the 1990s.[129] However, as shown in Figure 13 below, during this non-democratic period of economic boom, although social spending did not decrease, its fiscal incidence became significantly more regressive: "Benefits Q5/Q3" increased meaning that in-kind and cash transfers going to the top 20% richest households expanded vis à vis the bottom 60% i.e. average and poor households. Taxes also became more regressive: "Taxes Q5/Q3" decreased meaning that the fiscal burden fell more heavily on poorer quintiles and less on the top 20%. Therefore, consistent with our hypothesis, a restrained political voice clearly benefited richer households in Chile.

[127] Abad, Leticia Arroyo, and Peter H. Lindert. 'Fiscal Redistribution in Latin America since the Nineteenth Century'. Bértola L, Williamson J, Organizadores. Has Latin American Inequality Changed Direction, 2017, 243–282.
[128] Vanhanen data on political participation available at 'Polyarchy | Clio Infra | Reconstructing Global Inequality'. Accessed 24 August 2020. https://clio-infra.eu/Indicators/Polyarchy.html.
[129] After leaving the executive, Pinochet continued to serve as Commander-in-Chief of the Chilean Army until 1998, and he was senator-for-life of Chile until 2002.

Figure 13. Social spending, fiscal incidence and political voice in 20th century Chile



Notes: "Political voice" corresponds to the Index of Democracy. The data on the incidence of fiscal policy on income quintiles (i.e. "Q5/Q3") starts in the 1960s as there are no data for the period beforehand. Q5 corresponds to the top 20% richest households i.e. the elite, while Q3 to the bottom 60% i.e. average and poor households. The "Benefits Q5/Q3" is the fiscal incidence of social spending i.e. the amount of in-kind and cash transfers captured by the elite vis à vis the bottom 60%, while "Taxes Q5/Q3" is the amount of taxes paid by the elite relative to the bottom 60%. It is important to note that the extent of "Political Voice" appears to be quite strong during the 1990s however this is *de facto* overestimated, notably because the Index of Democracy does not consider the specific political context of each country and, in Chile, during the 1990s the threat of a return to a non-democratic system continued e.g. Pinochet was Commander-in-Chief of the Chilean Army until 1998. Therefore this threat limited potential reforms to the fiscal policy pursued during the regime.

Sources: Own elaboration based on the data on fiscal incidence and social spending from Arroyo and Lindert (2017) which is available online at the GPIH.[130] The Index of Democracy is based on Vanhanen data.[131]

[130] Abad, Leticia Arroyo, and Peter H. Lindert. 'Fiscal Redistribution in Latin America since the Nineteenth Century'. In Bértola L, Williamson J, Organizadores. *Has Latin American Inequality Changed Direction*, 2017, 243–282.

[131] Polyarchy | Clio Infra | Reconstructing Global Inequality'. Accessed 24 August 2020. https://clio-infra.eu/Indicators/Polyarchy.html.

In Chile, only since the 1990s and during the 2000s when democratic institutions had solidified, fiscal policy (both taxes and spending) started to become more progressive as shown in Figure 13. However, the current level of redistribution in Chile is still lagging behind neighbouring Argentina and Uruguay i.e. 7% compared to 13% and 15% respectively. Consistent with the hypothesis, these countries have a similar level of economic development than Chile, but a longer democratic history which seems to explain the divergence on redistributive capacity.[132]

Similarly, Mexico experienced relative political stability and growth under the hegemonic rule of the Institutional Revolutionary Party (PRI) from the 1930s to 2000. However, the leaders of the PRI, which had a very different ideology than the conservative Pinochet Regime, were also unable to build a robust redistributive capacity. The PRI was notably unable to issue the *credible commitments* needed to achieve substantial taxation (which is essential for redistribution) as citizens could hardly trust a government which had no interests on checking widespread corruption, nor respect for democratic processes, on the top of weak checks on the executive.[133] It is no coincidence that Mexico´s tax-to-GDP ratio stands at 14%, lower than in Latin America (21%) and Africa (17%), and that redistribution in post-PRI Mexico is as low as in post-Pinochet Chile, being roughly 3 times lower than in the neighbouring US and 5 times lower than in its fellow OECD members.[134] Both in Chile and Mexico, as in the rest of Latin America – and to a lower extent in Uruguay and Argentina, a limited *de facto* political voice during the 20th century hindered the formation of the state capacity and the political channels (i.e. the *credible commitments* and political pressure) necessary to levy and mobilize substantial resources towards redistribution.

VII. Conclusions

Based on an empirical and historical investigation of inequality dynamics, this paper has documented the fundamental role of fiscal redistribution in accounting for differences in inequality across regions and historical periods. The framework on inequality dynamics developed and applied in this investigation, as well as the novel research strategy of the econometrical analysis, by distinguishing between market inequality (reflecting asset and opportunities disparities) and redistribution through taxes and transfers (reflecting state capacity

[132] The average Index of Democracy during the 20th century in Chile is 6.4 compared to 9.3 in Argentina and 14.2 in Uruguay.
[133] Mexico average polity2 index during the 20th century was -2.
[134] Owns calculations. Please see figure 5 notes.

and fiscal policy) has been able to shed some light on the factors explaining income inequality differences across countries and regions.

The evidence on historical and present-day inequality dynamics revised through this research challenges the conventional wisdom about the origins of world-leading inequality levels in Latin America, India or Africa, indicating that these inequality levels are not rooted in the colonial period nor explained by historically-determined "extractive" economic institutions maintaining an exceptionally unequal playing field – as suggested by the literature i.e., AJR and ES. Accordingly, this paper´s econometrical analysis using an instrumental variable (IV) strategy founded on historical settler mortality shows that, consistent with the evidence on inequality dynamics, what matters for explaining comparative inequality levels are differences in the redistributive capacity of the states rooted in the 20th century, and not supposedly divergent economic institutions between "settler" colonies (Western offshoots) and "extractive" ones, such as in Latin America or India. The results of the IV strategy, as well as evidence on inequality dynamics, indicates that present-day comparative inequality levels materialized during the 20th century as a result of the emergence of redistribution (progressive taxation and transfers) in Western countries due to full democratization, i.e. mass political participation and open competition. Despite that, Latin America and India have been able to recently converge towards "inclusive" economic institutions, due to a slower democratization process, a regressive fiscal equilibrium is still largely in place – thus, explaining its comparatively high inequality levels.

The historical analysis developed in this investigation indicates that the origins of a regressive fiscal equilibrium lie in a weak extractive capacity. Both in colonial settings, as in Old Regime Europe, a weak state capacity forced central administrations to depend on local elites to maintain authority and collect revenue. A such, these elites ended up benefiting from and controlling (directly or indirectly through bargaining power) revenue collection and expenditure decisions in exchange for allegiance. The resulting regressive fiscal equilibrium that benefited the elites and bred extreme inequality levels (as shown in historical records) persisted broadly unchecked until the emergence of full democracies during 20th century. Only the *de facto* incorporation of poor and average households into politics led to the emergence of substantial progressive taxation and social transfers for the first time in history. Full democracies, characterized by mass political participation and open electoral competition, developed first and more fully in Western countries and led to the emergence of redistribution during the early 20th century. This explains why inequality only reached comparatively low levels in these places during this period. On the contrary, the democratisation

process has been slower in Latin America and India, and as such, this regressive equilibrium maintaining high inequality levels is still largely in place.

Therefore, what is persistent about Latin America, India and Africa is a limited state capacity to tackle inequality through substantial progressive taxes and transfers. The results of the IV strategy, consistent with different cases studies, indicates that limited access to political voice during the 20th century in Latin America, Africa and India undermined the formation of the *credible commitments* from the state, as well as the *de facto* political representation of poorer taxpayers, which are essential to levy and channel public resources towards building a robust fiscal and redistributive capacity. These *commitments are* fundamental to build a solid "fiscal contract" which allows the state to levy substantial progressive taxation (notably direct taxes) from its citizens, who in turn expect (and will make sure of it through their political voice) that these proceeds are partly redistributed back to them through social benefits.

The consequences of the divergence on redistributive capacity among countries and regions are severe and far-reaching. While a robust inequality reduction through redistribution helps to shield societies from distributional tensions and social conflict, as it does in most OECD countries, the combination of unchecked inequality levels (arising from a limited redistributive capacity) with poorly-installed democratic systems fuels social conflict and fosters a demand for populism in Latin America and India.[135] Even relatively prosperous countries are affected by the lack of redistribution. This is illustrated by the inequality-fuelled massive demonstrations and riots since October 2019 in Chile, which have left the country at risk of experiencing the rise of populism.[136] In Chile, like in most of Latin America, a not-so-democratic 20th century hindered the formation of the social and political consensuses needed to solve distributional conflict through fiscal redistribution. Similarly, among Western offshoots, it is also not a coincidence that the US has the lowest level of redistribution (arising from a history of political exclusion of minorities), the highest

[135] Among former colonies, the US is an interesting case as it is progressively resembling to Latin America because inequality is increasing (since the 1980s) along with social conflict and populism. Although, as noted above, income inequality (and social conflict) in the US are still significantly behind Latin America´s levels. Please see Sachs, Jeffrey D. 'Social Conflict and Populist Policies in Latin America'. Working Paper. Working Paper Series. National Bureau of Economic Research, March 1989. https://doi.org/10.3386/w2897; Stiglitz, Joseph E. The Price of Inequality: How Today's Divided Society Endangers Our Future. WW Norton & Company, 2012.

[136] Sehnbruch, Kirsten, and Sofia Donoso. 'Social Protests in Chile: Inequalities and Other Inconvenient Truths about Latin America's Poster Child'. Global Labour Journal 11, no. 1 (30 January 2020). https://doi.org/10.15173/glj.v11i1.4217; Concerning income inequality in Chile with respect to the OECD please see the OECD Income Distribution Database.

levels of social conflict (related to its unchecked inequality levels), and saw the emergence of a populist "strongman" in 2016.[137]

[137]Concerning social conflict, political polarization and inequality in the US, please see for instance Stiglitz, Joseph E. *The Price of Inequality: How Today's Divided Society Endangers Our Future*. WW Norton & Company, 2012.

VIII. Appendices

Appendix A:
A1. Modern Distributive Statistics

Concerning the data on modern income inequality before and after taxes and transfers, the data comes from the OECD Income Distribution Database (OECD IDD) complemented by ECLAC calculations as reported in Hanni et al. (2015) for those Latin American countries not included in the OECD IDD, i.e. all except Chile, Brazil and Costa Rica. Despite the fact that Mexico is included in the OECD IDD, the data from ECLAC is preferred as the OECD data on market inequality for Mexico is only pre-transfers and post-taxes, whereas to be comparable market inequality must be before taxes and transfers as in Hanni et al. (2015) and in the case of all the rest of the countries included in the OECD IDD.

The only data that does not come from the OECD IDD or ECLAC calculations corresponds to Guatemala, which is based on Cabrera, Lustig and Morán (2015).[138] The data on market inequality and disposable income inequality for Guatemala is comparable to the OECD IDD and ECLAC calculations as it follows the same methodology i.e., the same definition of market and disposable income.

All the Gini coefficients before and after taxes and transfers used in this paper account for inequality across the total population, including both the working age population as well as the retired population in order to account for inequality across the whole of society.

Figures & Details on Historical Inequality Estimates (see details for Figure 8)
Figure 3
The countries included in each region are: Iberia is Portugal and Spain. Latin America does not include the Caribbean for which comparable data on inequality is not available – the only exception is Dominican Republic which is included in Latin America. Eastern Europe incorporates Hungary, Latvia, Lithuania, Estonia, Poland, Romania and Russia – for which data is available in the OED IDD. Western Europe corresponds to France, Belgium, Ireland, Germany, Luxembourg, Netherlands, Italy, Spain, Portugal and the UK. Central America and Mexico: is Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Mexico. The Andean States includes Colombia, Bolivia, Peru and Ecuador. The Southern Cone is Chile, Uruguay and Argentina.

Figure 5
Changes made to Nunn (2008) data on slavery in the Americas:
Nunn (2008) and other authors tend to overestimate slavery in Spanish America, as in some cases they consider every individual from African descent (including *mulatos* and *pardos*) as slaves. However, the same historical records show that the majority of the population from African descent were not under slavery during the 18th century in Spanish America. The following corrections are made to Nunn (2008) data:

Uruguay: The same census used by Nunn (2008) show that Montevideo in 1778 had 1386 slaves, 562 free Africans and 538 free *mulatos (or pardos) of a total of* 9.298 inhabitants. Therefore slavery represents 15% of the total population not 26% as reported by Nunn (2008).

[138] Cabrera, Maynor, Nora Lustig, and Hilcías E. Morán. 'Fiscal Policy, Inequality, and the Ethnic Divide in Guatemala'. World Development 76 (December 2015): 263–79. https://doi.org/10.1016/j.worlddev.2015.07.008.

Source where the census is reported: Sans, M. (2009). " Raza", adscripción étnica y genética en Uruguay. Runa, 30(2), 163-174. https://www.redalyc.org/pdf/1808/180813903005.pdf

Chile: Nunn data for chile comes from Sater (1974) and estimates 12,5% of slaves. However, Sater et al. (2004) based on the same Chilean censuses of 1777-1778 account for around 5.000 slaves out of 700.000 total inhabitants i.e. less than 1% of total population. The large difference is explained because Sater (1974) made a mistake at interpreting the census data for 1777, errors that he corrected in 2004- As Nunn (2008), Sater (1974) also considered every *mulato*, *pardo* and African in the census as slave. However, most of the African and African descent population was not under slavery.

Source: Collier, Simon, William F. Sater, and F. William III. A History of Chile, 1808-2002. Vol. 82. Cambridge University Press, 2004.

Figure 8. Historical Reconstruction of Income Inequality

As noted in the "Mapping Inequality" section, the estimations presented in Figure 8 are based on historical records (i.e. social tables) and calculated using a shared methodology to compute inequality estimates that are comparable, reliable and account for inequality across the full income distribution -including slaves and colonizers. The estimates included here corresponds to the most up to data on inequality dynamics for the period studied, the figure includes all the estimates which meet the criteria developed in the data section.

Figure 8a.

Notes: No data" means that there are no historical records to construct inequality measures, such as for colonial Latin America or Brazil. In the case of colonial Haiti and Cape Colony there are historical records documenting income differences, but the inequality estimates for the Gini coefficient and the top 10% income (respectively) have not been calculated. Concerning the dates of each estimations based on its respective historical record, France is in 1788, Netherlands in 1808 and India in 1807. The data for Haiti is for 1780 and top income share for France is for circa 1780. Jamaica corresponds to 1774, the US to 1773 and England and Wales to 1802. The data for South Africa is for 1757 which is the closest estimates to 1770-1800. Besides, all the inequality estimates reported here are selected based on the criteria developed in the "Mapping Inequality" section.

Sources: The sources for the data and slavery are the same as in Figure 5. The inequality estimates for France, Netherlands, and India comes from Milanovic et al (2011), the data for Haiti and top income share for France comes from Figures 4.3 and 7.2 in Piketty (2019). [139] The data for Jamaica in comes from Burnard et al (2019), the and estimates for the US and England and Wales in 1802 are from Tables 2-4 and 2-5 in Lindert and Williamson (2016).[140] The data for South Africa is for 1757 (the closest estimates to 1770-1800) and comes from Fourie and Fintel (2011).[141] Besides, all the inequality estimates reported here are selected based on the criteria developed in the "Mapping Inequality" section.

[139] Milanovic, Branko, Peter H. Lindert, and Jeffrey G. Williamson. 'Pre-Industrial Inequality'. The Economic Journal 121, no. 551 (2011): 255–27;

[140] Burnard, Trevor, Laura Panza, and Jeffrey Williamson. 'Living Costs, Real Incomes and Inequality in Colonial Jamaica'. Explorations in Economic History 71 (2019): 55–71; Lindert, Peter H., and Jeffrey G. Williamson. Chapter 2 "Colonial Incomes at the eve of Revolution" in *Unequal Gains: American Growth and Inequality Since 1700*. Princeton, UNITED STATES: Princeton University Press, 2016. http://ebookcentral.proquest.com/lib/londonschoolecons/detail.action?docID=4333586.

[141] Fourie, Johan, and Dieter von Fintel. 'A History with Evidence: Income Inequality in the Dutch Cape Colony'. Economic History of Developing Regions 26, no. 1 (1 June 2011): 16–48.

Notes on historical inequality measures not included: Milanovic et al include distributive statistics for colonial Mexico (Nueva España by 1790) but we do not include these estimates in this Figure as this estimates are based on an especially "short" social tables and therefore not reliable – since they are calculated using evidence which lacks the sufficient detail and quality to be fully representative of that society. More precisely, the inequality estimates for Nueva España are based on a social table which includes information for only 3 social groups (the lowest amount of detail on Milanovic et al sample) in a very socially-diverse society – as epitomized by its complex *castas* system, on the top that the calculations are based on the observations of a Spanish priest rather than on historical records (e.g. a census) as the rest of the estimates presented by Milanovic et al.[142] On the contrary, all the estimates quoted and used to construct the figures of this paper are based on estimations using "full" social tables, which are founded on relatively reliable historical records (as opposed to subjective observations or unrepresentative records) and include evidence on at least 8 different social groups.

Figure 8b

Notes: Concerning the dates of each estimations based on its respective historical record, the data for the US and Chile is for 1860, the estimate for the UK is for 1867, Brazil is for 1873 while Peru corresponds to 1876. The data for China, Japan, Java and Maghreb is for 1880.

Sources: The inequality estimates for Brazil, China, Indonesia, Java, Japan, Peru, Japan and Maghreb are from Milanovic (2018).[143] The data for the US comes from Lindert and Williamson (2016), while the estimate for the UK is from Lindert (1997) as available online at the Global Price and History Database.[144]The data for Western Europe is for 1870 and comes from Moatsos et al (2014).[145]

[142] The details of the short social table of "Nueva España 1790" and the information on how inequality is calculated can be found online at the GPIH - Early Income Distributions'. Accessed 16 July 2020. https://gpih.ucdavis.edu/Distribution.htm.

[143] Milanovic, Branko. 'Towards an Explanation of Inequality in Premodern Societies: The Role of Colonies, Urbanization, and High Population Density'. The Economic History Review 71, no. 4 (2018): 1029–1047.

[144] 'GPIH - Early Income Distributions'. Accessed 16 July 2020. https://gpih.ucdavis.edu/Distribution.htm.

[145] Moatsos, Michail, Joerg Baten, Peter Foldvari, Bas van Leeuwen, and Jan Luiten van Zanden. 'Income Inequality since 1820', in How Was Life?: Global Well-being since 1820, OECD Publishing, Paris. 2 October 2014, 199–215 https://doi.org/10.1787/9789264214262-15-en.

Appendix B: Tables and Regressions

B1, Brief Description of the data used

The state history Index from Borcan et al (2018) is an updated version of the state Antiquity Index originally created by Bockstette, Chanda and Putterman (2002). The index reflects whether across time (before 1500) the country had a supra-tribal government, the percentage of the territory of the (modern) country controlled by the state, and whether that government was local or foreign. In other words, state history is the accumulated "institutional capacity" of the country before 1500 discounted at a fixed rate. The data can be downloaded and revised here: https://sites.google.com/site/econolaols/extended-state-history-index

Indigenous population density by 1500 corresponds to the measure used in AJR (2002). This measure is preferred to Urbanization by 1500 also used in AJR (2002), namely because as acknowledge by ARJ the extent and data quality on urbanization by 1500 is rather limited in former-colonies AJR (2002). In addition, population density by 1500 have been identified by the literature as a key determinant of development in the Americas as it also accounts not just for development but also for the extent of available native labour (Bruhn and Gallego, 2012). Urbanization by 1500 is partly captured by our "State History" measure which is probably better measured as states are easier to observe in historical records than urbanization by 1500. The data on State History and population density by 1500 also cover a wider range of countries – as there is more available data to compute them.

The geography and climate controls are absolute latitude (i.e. distance from the equator, scaled between 0 and 1), Sea Exposure (i.e. the amount of the territory within 100 km of the coast) and Mean Temperature. These controls are used in AJR (2001) based on data from McArthur and Sachs (2001).

The data on education and life expectancy inequality is based on Human Development Report (2019, table 3). Inequality in life expectancy corresponds to the Atkinson Inequality index. Inequality in education corresponds to the Atkinson inequality index of years of schooling based on data from household surveys.

B2. Results of the IV estimations using the settler mortality data from AJR (2001).

The results are roughly similar than the ones reported in the paper, the level of statistical significance and economic relevance remains the same than using the revised settler mortality data.

First Results: Democracy and Settler Mortality

Dependent = Vanhanen Index of Democracy 1900-2000	(1)	(2)	(3)	(4)
Settler Mortality (AJR, 2001)	-4.316***	-3.792**	-3.014**	-3.668**
	(0.658)	(1.139)	(1.096)	(1.266)
Geography & Climate controls	no	yes	yes	yes
Indigenous Population Density by 1500			-1.440*	-0.555
			(0.550)	(1.022)
Native State History by 1500				-9.492
				(9.236)
_cons	26.48***	23.28**	15.49	17.06*
	(2.939)	(8.208)	(8.161)	(8.296)
N	51	40	40	40
adj. R^2	0.457	0.406	0.491	0.492

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Dependent = Polity2 index 1900-2000s	(1)	(2)	(3)	(4)
Settler Mortality (AJR, 2001)	-2.684***	-3.196***	-2.742**	-4.390**
	(0.461)	(0.861)	(0.861)	(1.270)
Geography & Climate controls	no	yes	yes	yes
Indigenous Population Density by 1500			-0.840	0.241
			(0.432)	(0.693)
Native State History by 1500				-0.363
				(0.207)
_cons	12.87***	18.11**	13.56*	27.16**
	(2.055)	(6.202)	(6.413)	(8.492)
N	49	40	40	30
adj. R^2	0.406	0.383	0.428	0.465

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Main Results: Democracy, Redistribution and Taxation [Using AJR (2001) settler mortality data]

Reg	(1) Redistribution	(2) Market Gini	(3) Direct Taxes (% of GDP)	(4) Redistribution	(5) Market Gini	(6) Direct Taxes (% of GDP)
Index of Democracy	0.00868***	0.00311	0.853***			
1900-2000	(0.00200)	(0.00407)	(0.254)			
Polity2 Index				0.0117***	0.00419	1.107***
1900-2000				(0.00255)	(0.00494)	(0.326)
Geography & Climate	yes	yes	yes	yes	yes	yes
Native Population	-0.0247*	0.0271	3.259	-0.0409***	0.0213	0.954
Density by 1500	(0.0104)	(0.0211)	(1.719)	(0.00846)	(0.0164)	(1.183)
Native State History	-0.0111	-0.230	-14.13	0.0750	-0.199	1.894
by 1500	(0.0934)	(0.190)	(9.506)	(0.0826)	(0.160)	(8.059)
_cons	0.124*	0.460***	4.931	0.0431	0.431***	-10.12
	(0.0602)	(0.122)	(7.559)	(0.0565)	(0.110)	(8.702)
N	24	24	20	24	24	20
adj. R^2	0.817	.	0.255	0.838	.	0.271

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B2. First Stage results of Table 2 and tests results

First-stage results using Index of Democracy and tests for the baseline estimation (Table 2).

(Based on ivhettest and ivreg2 commands in Stata)

(*Political voice is the Democracy Index 1900-2000)

```
First-stage regressions
```

Number of obs	= 24
F(6, 17)	= 6.32
Prob > F	= 0.0012
R-squared	= 0.6905
Adj R-squared	= 0.5813
Root MSE	= 4.7763

political_voice_20th	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Temp	.4145625	.319243	1.30	0.211	-.2589814	1.088106
Lat	14.97374	13.6478	1.10	0.288	-13.8206	43.76808
SeaExposure	7.041606	4.009897	1.76	0.097	-1.418536	15.50175
popDensity_1500	-1.99552	1.303307	-1.53	0.144	-4.745257	.7542171
StateHist_native1500	13.15146	12.64618	1.04	0.313	-13.52964	39.83257
SettlerMortality_revised	-6.13109	1.833661	-3.34	0.004	-9.999776	-2.262404
_cons	16.8442	10.89323	1.55	0.140	-6.138512	39.82692

```
Underidentification test (Anderson canon. corr. LM statistic):                 9.522
                                                      Chi-sq(1) P-val =        0.0020
-------------------------------------------------------------------------------------
Weak identification test (Cragg-Donald Wald F statistic):                     11.180
Stock-Yogo weak ID test critical values: 10% maximal IV size                   16.38
                                         15% maximal IV size                    8.96
                                         20% maximal IV size                    6.66
                                         25% maximal IV size                    5.53
Source: Stock-Yogo (2005).  Reproduced by permission.
-------------------------------------------------------------------------------------
Sargan statistic (overidentification test of all instruments):                 0.000
                                                      (equation exactly identified)
-------------------------------------------------------------------------------------
Instrumented:         political_voice_20th
Included instruments: Temp Lat SeaExposure popDensity_1500 StateHist_native1500
Excluded instruments: SettlerMortality_revised
-------------------------------------------------------------------------------------

. ivhettest
IV heteroskedasticity test(s) using levels of IVs only
Ho: Disturbance is homoskedastic
     Pagan-Hall general test statistic   :   5.425  Chi-sq(6) P-value = 0.4905
```

First-stage results using Polity 2 Index and tests for the baseline estimation (Table 2).
(Based on ivhettest and ivreg2 commands in Stata)

First-stage regressions

Number of obs	24
F(6, 17)	4.42
Prob > F	0.0072
R-squared	0.6092
Adj R-squared	0.4712
Root MSE	3.2161

Polity2_1900to2000s	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Temp	.0337289	.2149622	0.16	0.877	-.4198018	.4872596
Lat	.3612953	9.189743	0.04	0.969	-19.02737	19.74996
SeaExposure	2.197827	2.700063	0.81	0.427	-3.498809	7.894463
popDensity_1500	-.0892882	.8775815	-0.10	0.920	-1.940823	1.762247
StateHist_native1500	2.361431	8.515303	0.28	0.785	-15.60429	20.32715
SettlerMortality_revised	-4.586388	1.234695	-3.71	0.002	-7.191368	-1.981409
_cons	19.54276	7.334957	2.66	0.016	4.067348	35.01816

Underidentification test (Anderson canon. corr. LM statistic): 10.752
Chi-sq(1) P-val = 0.0010

Weak identification test (Cragg-Donald Wald F statistic): 13.798
Stock-Yogo weak ID test critical values: 10% maximal IV size 16.38
15% maximal IV size 8.96
20% maximal IV size 6.66
25% maximal IV size 5.53
Source: Stock-Yogo (2005). Reproduced by permission.

Sargan statistic (overidentification test of all instruments): 0.000
(equation exactly identified)

Instrumented: Polity2_1900to2000s
Included instruments: Temp Lat SeaExposure popDensity_1500 StateHist_native1500
Excluded instruments: SettlerMortality_revised

. ivhettest
IV heteroskedasticity test(s) using levels of IVs only
Ho: Disturbance is homoskedastic
Pagan-Hall general test statistic : 3.837 Chi-sq(6) P-value = 0.6988

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