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# Long-run analysis of regional inequalities in the US

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**Abstract:** We consider the regional differences in economic development across the United States, which have been a unique feature of American economic history. The paths of both convergence and divergence by region have been driven by a complex mix of differences in resource endowments, demographic differences, international and internal migration patterns, and variation in the scope and impact of government policies at the local, state, and federal level. We show that the development of a national and fully integrated economy have accelerated and decelerated over time, and these features are driven by unique sets of historical circumstances and policy choices.

**Keywords:** regional development, American economic history

**JEL classification:** N3, N9, R1

## I. Introduction

Economic development across the United States has proceeded at different speeds, in different directions and in ways that have differentially advantaged subgroups of the population. These paths of both convergence and divergence have been driven by a complex mix of difference in resource endowments, demographic differences, international and internal migration patterns, and variation in the scope and impact of government policies at the local, state, and federal level. While part of this reflects differences that are similar to regional growth stories in other countries, American federalism adds a unique layer to this regional convergence and divergence. In this article we outline the broad patterns of economic development across regions from colonial times to the present and then focus on the ways that policies have helped or hindered convergence across regions and across different segments of the population.

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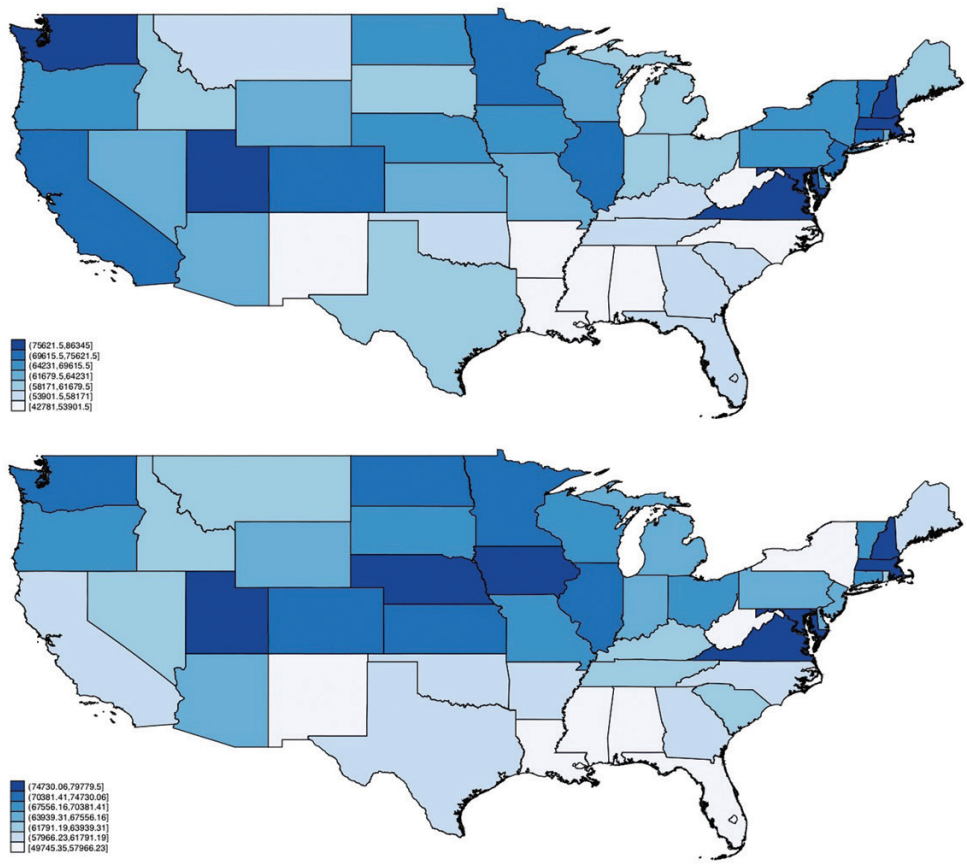
## II. Historical patterns of economic development

Despite a common set of federal laws and largely uninhibited interstate trade and migration, variation persists in economic performance across states and regions in the United States. These differences, captured in Figure 1, are substantial, with the richest states having median incomes roughly twice as large as those of the poorest states.

While income varies substantially across states and regions, so does the type of economic activity and the characteristics of the population. These differences are a product of a long history of both convergence, as transportation improvements and increased interregional trade integrated the US economy, and divergence, as internal migration patterns, shifts from agriculture to manufacturing, and increased global competition differentially affected regions. In the remainder of this section, we provide a broad overview of the evolution of these trends from colonial times to the present.

**Figure 1:** Median household income by state, unadjusted (upper) and adjusted (lower) by regional price parities, in 2018




*Sources*: Median household incomes are from the US Census Bureau and regional price parities are from the Bureau of Economic Analysis.

## (i) Agriculture and early regional inequalities

Despite a lack of modern national accounting data, economic historians have pieced together a detailed picture of the evolution of incomes and wealth in America for both the colonies and the antebellum United States. The current standard is set by the work of Lindert and Williamson (2013, 2016*a*,*b*), building off the pioneering work of Jones (1977), Main (2015), and others, and piecing together probate records, census data, and other sources to estimate income from the production side, expenditure side, and income side. Table 1 provides Lindert and Williamson's estimates of regional inequalities from colonial times to the Civil War.

Lindert and Williamson convincingly argue that regional inequality is a key feature to understanding early American economic growth. They attribute slow colonial growth in national income to the competing forces of prosperous coastal economies and a poorer interior economy and the sparsely populated frontier push westward. The population growth of the interior and the corresponding de-urbanization of the economy accounts for the low overall levels of growth in the colonial era and the early nineteenth century. Their findings also highlight a theme that will persist throughout the country's economic development: income gaps between the North and South. Regional income estimates show that different levels of specialization by region, as well as geographic differences in crop suitability, played a role in the divergence of the North and South (Goldin and Sokoloff, 1982, 1984). Equally important, Southern states adopted different institutions, particularly slavery, that led not only to large concentration of wealth but also high degrees of income inequality (Merritt, 2017). Lindert and Williamson attribute the early decline in relative Southern income to losses from war, both the Revolutionary War and Civil War, falling export prices, and, importantly, relatively low investment in public education and public goods more generally, an issue that continues to shape regional inequalities up through the twentieth century. Others dispute the story of an impoverished South, instead stressing the high *per capita* income of the South up to 1860 and its inability to coerce labour after the demise of the slave system as the reasons for the decline (Fogel and Engerman, 1974; Ransom and Sutch, 2001).

It is important to stress that income differences obscure differences in basic institutions between regions in the United States. The Northeast and Midwest produced agricultural output that was labour intensive and lacked economies of scale. Those markets

**Table 1:** Real product *per capita*, 1774–1860 (in 1840 dollars)

| Region | 1774 | 1800 | 1840 | 1860 |
|---|---|---|---|---|
| New England | 61.83 | 56.66 | 129.01 | 181.39 |
| Middle Atlantic | 73.81 | 68.73 | 119.68 | 186.65 |
| South Atlantic | 105.70 | 74.29 | 85.49 | 137.75 |
| East North Central | | | 71.50 | 135.78 |
| West North Central | | | 79.27 | 136.20 |
| East South Central | | | 85.49 | 132.83 |
| West South Central | | | 161.65 | 175.30 |
| Mountain | | | | 209.07 |
| Pacific | | | | 501.81 |

*Notes*: Figures are taken from Table 4 of Lindert and Williamson (2012).

were also prone to produce their output for Northern cities, which left agricultural sectors of the North disadvantaged in several ways (Cuff, 2005). The South, on the other hand, was engaged in the production of large-scale cash crops exported to Europe. In addition, the scale economies on Southern farms and plantations made their productivity substantially greater than the North's (Fogel and Engerman, 1977). This scale economy could only be achieved, however, by instituting a slave system which featured high degrees of oppression and violence. Indeed, Table 2, providing regional estimates of income *per capita* from 1880 to 1910, shows that the relatively high antebellum incomes of the South plummeted after the Civil War, remaining below 65 per cent of the national average into the twentieth century.

### (ii) Internal migration and the rise of manufacturing

The westward expansion of the United States would shape regional inequalities and demographic responses to them through the 1800s. The marginal product of labour and real wages for unskilled workers were significantly higher on the frontier than in the Northeast (Margo, 1999, 2009). Young, blue-collar workers were drawn westward by these regional differences, seeking out both the higher unskilled wages and taking advantage of opportunities to upgrade skills when moving to areas with high skill premiums (Ferrie, 1999; Stewart, 2009; Salisbury, 2014). These real wage gaps would be cut in half by the Civil War and diminish further by the end of the nineteenth century (Kim and Margo, 2004).

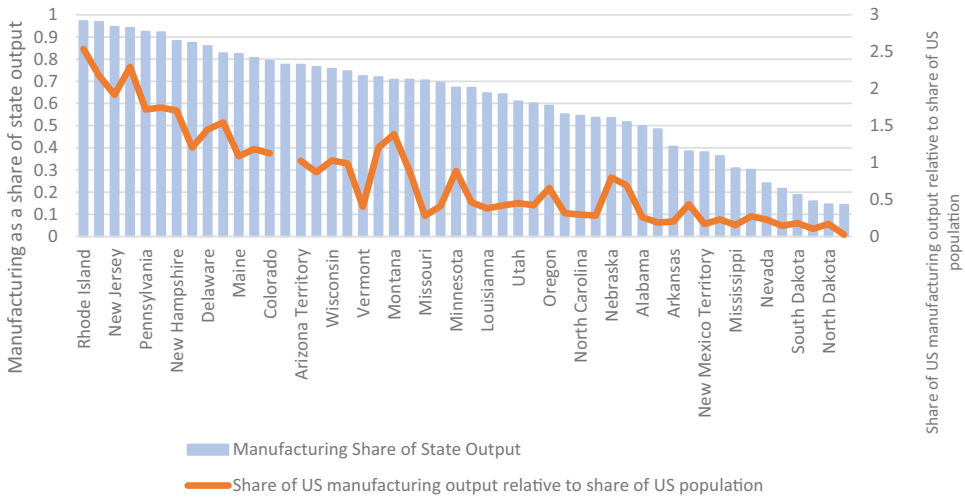
These early migratory movements west were often tied to opening up new agricultural land. Further migration, and further changes in regional inequalities, would be driven by the spatial distribution of the rising manufacturing sector. Early industrialization was disproportionately concentrated in New England, owing to the geographic advantage of an abundance of waterways suitable for power and to the economic advantage of lower relative wages and agricultural productivity for women and children, which made their labour in that sector redundant (Goldin and Sokoloff, 1982, 1984). Through the latter half of the nineteenth century into the early twentieth century, manufacturing continued to expand most strongly in the Northeast and then the Midwest, with all regions becoming more specialized, both in terms of agricultural crops and manufacturing industries (Kim, 1995, 1998). Figure 2 shows the distribution of manufacturing at the start of the twentieth century. For many of the Northeastern states, manufacturing accounted for roughly 90 per cent of total output, while agriculture still accounted for over half of total output in many of the Southern states.

**Table 2:** Personal income *per capita* across regions, 1880–1910 (US=100)

| Region | 1880 | 1890 | 1900 | 1910 |
|---|---|---|---|---|
| Northeast | 145 | 141 | 140 | 127 |
| Midwest | 85 | 87 | 90 | 94 |
| South | 56 | 58 | 57 | 65 |
| West | 195 | 175 | 154 | 146 |

*Notes*: Figures are taken from Table 7-5 of Lindert and Williamson (2016*b*).

**Figure 2:** The distribution of manufacturing output across states, 1900




*Source*: US Census data obtained through https://www.nhgis.org/.

These differences in manufacturing and income are also partly correlated with financial institutional development. Capital development in the South, from the end of the Civil War to at least the First World War, was rather inefficient (Davis, 1965; Sylla, 1969; Wright, 1987; Ransom and Sutch, 2001), and financial institutions in the South were not structured in the same way as those in the Northeast and Midwest. Southern banks were much smaller than the national average, and had higher interest rates. This is important, to the extent that capital markets in the US were segmented in the early twentieth century. The South did not have as many capital-intensive industries as the Northeast and Midwest at the beginning of the twentieth century, and North (1959, 1961) has argued that the South did not re-invest the gains made from its productive agricultural sector either before or after the Civil War.

The scope for gains from migration were also uneven as the labour market was fragmented. Rosenbloom (1990, 1996) has shown that the labour market in the early years of the twentieth century was fragmented, and North–South differentials in wages suggest that a national labour market did not exist before the First World War. While it is not true that every locality had its own independent labour market, it is true that the South and North had different labour markets that were not fully integrated to any large degree until after the First World War. Wright (1987) contends that the Southern labour market was not integrated until the New Deal forced the South to invest in capital for the agricultural sector, and that the South was finally brought into the rest of the national labour market by the end of the Second World War.

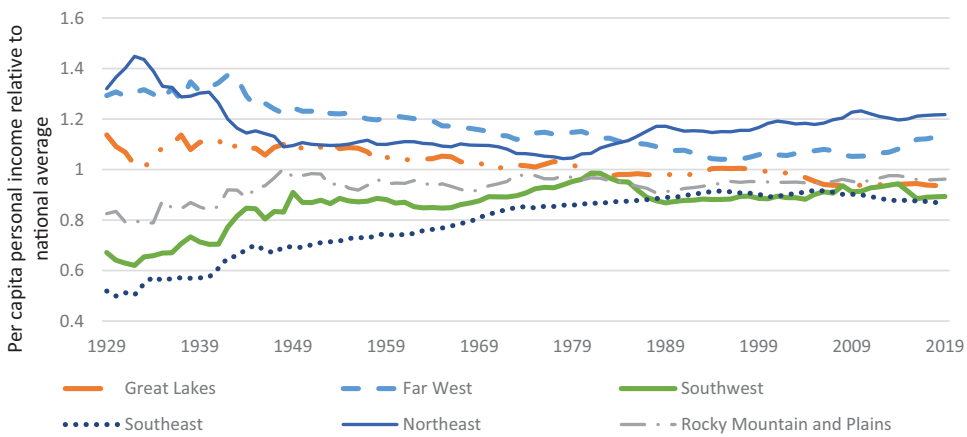
While there is broad agreement on the relative fragmentation of capital and labour markets in the late nineteenth and early twentieth centuries, economic historians have not agreed on the level of fragmentation. For example, Fishback (1998) has argued that Rosenbloom and Wright overstate the isolation of Southern labour markets. He argues that while unskilled wages showed significant gaps, the regional wage gaps of skilled workers were smaller, suggesting that skilled labour was quite mobile during this

time period. Similarly, Eichengreen (1984, 1987) argues that the regional differences in mortgage rates documented by Snowden (1987) can be explained by differences in transactions costs and risk between the Northeast and the South. Regional and state-level interest rates collected by Bodenhorn (1996) do show interest rate convergence by the middle of the twentieth century, but before this time rates in the Northeast were lower than elsewhere. As such, documenting the differences by region is much easier than pinpointing their cause.

In tandem with this uneven development of manufacturing across the country, the United States exhibited highly divergent incomes across regions at the start of the twentieth century. As seen in Figure 3, the regions with large manufacturing sectors led the country in incomes, with the Northeast having *per capita* personal income roughly 35 per cent above the national average and the Great Lakes having substantially higher than average incomes as well. Note that opportunities for prosperity were still to be found in the West, as the regional economy continued to expand and attract migrants. The Far West region had incomes comparable to those of the Northeast. It is the Southeast that stands out as lagging behind. However, the divergence that accompanied the growth of manufacturing over the nineteenth century gave way to (partial) convergence in incomes across regions over the first half of the twentieth century.

The push of the population westward was central to the development of the American economy. However, equally important was migration out of rural areas to urban areas as the manufacturing and service sectors grew. This migration took the form of inter-regional migration largely out of the South to the manufacturing areas in the North and, more broadly, migration from rural to urban counties. In 1880, 72 per cent of the white population and 87 per cent of the black population lived in rural areas. By 1910 the majority of the white population lived in urban areas. The black population became majority urban by 1950 and by 1960 surpassed the white population in terms of per cent urban.

**Figure 3:** *Per capita* personal income by region relative to the national average, 1929–2019



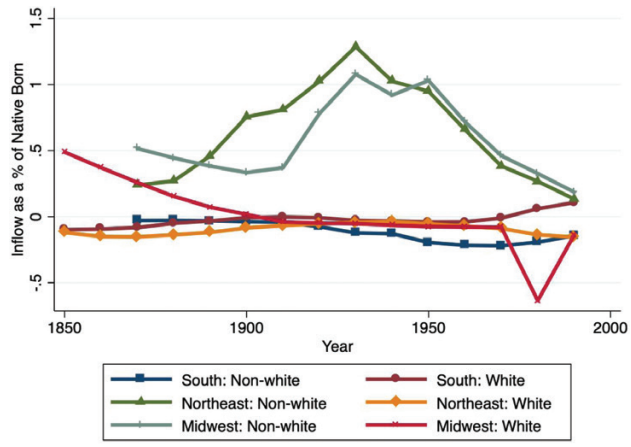

*Source:* Data are from the Bureau of Economic Analysis, retrieved through https://fred.stlouisfed.org

### (iii) The spatial distribution of the black population over time

The flow of workers to manufacturing regions began in the nineteenth century for white workers, although a major source of northern arrivals was international rather than interregional migration. The First World War and major changes to immigration policies reduced the supply of immigrant workers, opening up job opportunities for Southern blacks to move North (Collins, 1997).[1] The Great Migration, clearly visible in Figure 4, represented a dramatic relocation of labour across regions throughout the end of the nineteenth century and the first half of the twentieth century, fundamentally changing the spatial distribution of the black population.[2] This substantial shift in the spatial distribution helped narrow the black–white income gap (Collins and Wanamaker, 2014), but it did not narrow the relative black/white income gap. That is, blacks migrated to areas with higher incomes, but their average position in the income distribution relative to whites remained unchanged (Eichenlaub *et al.*, 2010).

Not only did the black population shift toward the manufacturing belt, it became substantially more urban. With the arrival of black workers in Northern cities, cities reconfigured themselves. White households moved out towards the suburbs while black households became concentrated in urban cores (Cutler *et al.*, 1999, Boustan, 2010). While this increasing segregation of cities has been a focal point of the economics literature and policies, it is important to recognize that rural communities were also becoming increasingly segregated during the early twentieth century and continue to be highly segregated (Lichter *et al.*, 2007; Logan and Parman, 2017).

**Figure 4:** Net inflow of residents as a percentage of those born in the region, 1850–1990




*Source*: Based on US Census data as reported in the Historical Statistics of the United States.

[1] In particular, the literacy test imposed by the Immigration Act of 1917 and the quotas introduced by the Emergency Quota Act of 1921 and the Immigration Act of 1924 ended the Age of Mass Migration.

[2] The Great Migration was not limited to the movement of black workers. A substantial number of white Southerners moved as well, although there were systematic differences in where white and black migrants chose to settle, with white migrants more likely to settle where previous white migrants had, and black migrants more likely to choose states with high shares of manufacturing and rapidly growing labour demand (Collins and Wanamaker, 2015).

### (iv) The drivers of urban growth: geography, agglomeration, and human capital

Which regions and cities developed fastest in the nineteenth and twentieth centuries is a product of geographic advantages, the momentum of increasing returns to scale, and variation in policies toward investments in industry, technology, and human capital.

A natural explanation for the locations of cities, and the relative success or failures of regions, is geography. An interesting example of the role of geography in the US context is provided by Bleakley and Lin (2012) who highlight the role of obstacles in natural waterways, focusing on the 'fall line' along the east coast of the United States, a geological feature of the marking the final rapids on Eastern rivers before the Atlantic Ocean. These impasses required portage, leading to the establishment of trading posts which were the roots of future cities such as Richmond (or Chicago, as examined by Cronon (1991)). However, the cities that formed continued to outshine other cities after railroads eliminated the need for portage, suggesting that city growth is also a function of agglomeration economies and increasing returns to scale. Ellison and Glaeser (1999) estimate that roughly 20 per cent of the measured geographic concentration of industries can be attributed to a handful of natural advantages.

The stylized facts of geographic advantage and the timing of city development across the country are succinctly summarized by Glaeser *et al.* (2014) and perhaps best represented by the cities near the Great Lakes. Access to waterways drove early city development. Consequently, early nineteenth century city development in the Midwest was correlated with access to the Great Lakes, as that access was critical for transporting agricultural output. A second surge in urban development along the Great Lakes took place in the first half of the twentieth century as factories developed in these Midwestern cities aided by labour exiting the agricultural sector. However, Glaeser *et al*. argue that further technological progress reduced the logistical advantages of access to the Great Lakes which led people to leave for regions with better consumption amenities, such as the Sun Belt from the south Atlantic to the western US. After 1970, the strongest predictor of county-level growth is not longitude capturing general westward development, nor distance to the Great Lakes capturing access to transportation networks, but instead January temperature. These manufacturing centres of the first half of the twentieth century saw their fortunes decline even further as global competition in manufacturing rose dramatically at the end of the century (see, for example, Autor *et al.* (2016) on the China shock).

While urban development in the nineteenth and early twentieth centuries was, in part, a function of geography and agglomeration in the emerging manufacturing industries, human capital became the crucial factor in the growth of cities in the latter half of the twentieth century (see the work of Shapiro (2006), Florida *et al.* (2008), and many others). Table 3 provides correlations in 2010 state-level data between *per capita* income, the share of the population with a college degree, and the relative sizes of the manufacturing and information sectors. Regional success is now a story of higher education, human capital, and the rising tech and service sectors. The variation in human capital levels is substantial. West Virginia and Kentucky both have shares of college graduates barely above 10 per cent, while all of the New England states have shares above 20 per cent. Understanding regional inequalities today requires understanding these dramatic differences in human capital across space in the United States.

**Table 3:** Correlations between income, education, and industrial composition; state-level data for 2010.

| | Income | Share with college degree | Manufacturing sector | Information sector |
|---|---|---|---|---|
| Income | 1 | | | |
| Share with college degree | 0.85 | 1 | | |
| Manufacturing sector | –0.33 | –0.34 | 1 | |
| Information sector | 0.68 | 0.76 | –0.29 | 1 |

*Notes*: College includes the share of the population aged 25 and over with a college or graduate degree. Income refers to *per capita* income in the past 12 months. Industrial sector shares are the proportion of the civilian employed population aged 16 years and over working in that industry. Data are from the 2010 American Community Survey.

## III. Policy and the evolution of regional inequality: the case of black–white gaps

A broad range of policies at the local, state, and federal levels have contributed to trends outlined in income and industrial structure. Policy has served to both mitigate and exacerbate inequality across regions and done so differentially for different groups (Hardy *et al.*, 2018*b*). Before turning to a broader discussions of the role of historical and contemporary policy variation across space, it is instructive to start with the experience of the African American population. As suggested above, this is a population that was deeply affected by the relative poverty of the South, geographic mobility across regions and from farms to cities driven by the rise of manufacturing, and the declines in relative income as manufacturing faced stronger competition from foreign firms in an increasingly global economy at the end the twentieth century. All of those transitions occurred against a backdrop of policies that occasionally helped and often intentionally hindered economic progress for black workers.

The case of the African American population also exhibits an example of how American federalism acts to shape other forms of inequality. The states which housed the majority of the African American population before the start of the twentieth century began as slave systems and morphed into states with restrictions on labour and low levels of public goods investment. Merritt (2017) argues that the postbellum racial system is an extension of the class-based restrictions placed on whites before the Civil War. This argument has some support in recent literature which documents anti-democratic institutional structures among whites before the Civil War.[3] Irrespective of their source, African Americans lived in places that, while under a federal structure, had vastly different democratic norms, investment in pubic goods, and legislation against labour market discrimination.

Geography and politics dictated the initial regional variation in reliance on slavery, concentrating the antebellum black population in the Southern states. A long literature in economic history discusses the varying roles of soil suitability to cotton and the political influence of plantation owners contributing to the prevalence and persistence of slavery in the South prior to the Civil War.[4] The reliance on slavery led to policies that would hinder Southern development after emancipation (Wright, 1978, 2006). In

[3] See Chacon and Jensen (2020).

[4] See Olmstead and Rhode (2018) for a brief discussion of key developments in this literature, starting with the seminal work of Conrad and Meyer (1958).

**Table 4:** State and regional correlates of economic and policy outcomes: 1980–2018

| Dependent variables | Labour supports (0/1) | Right to work (0/1) | Poverty % | Unemployment % | GSP $ |
|---|---|---|---|---|---|
| South | –0.3062*** | 0.7035*** | 5.2276*** | 0.7997*** | –39,564.5505** |
| | (0.0211) | (0.0289) | (0.2174) | (0.1359) | (19,344.9227) |
| Midwest | –0.2372*** | 0.4551*** | 1.3092*** | –0.1862 | –58,342.7421*** |
| | (0.0226) | (0.0306) | (0.2326) | (0.1454) | (20,693.0167) |
| West | –0.1381*** | 0.1874*** | 1.0321*** | 0.2877*** | –26,442.7923*** |
| | (0.0111) | (0.0150) | (0.1144) | (0.0715) | (10,174.5323) |
| Constant | 0.3590*** | –0.0000 | 10.5026*** | 5.5712*** | 239,077.5462*** |
| | (0.0170) | (0.0231) | (0.1758) | (0.1099) | (15,642.4503) |
| Observations | 1,989 | 1,950 | 1,989 | 1,989 | 1,989 |
| R-squared | 0.1040 | 0.2371 | 0.2677 | 0.0384 | 0.0047 |

*Notes*: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Right to work regression (column 2) excludes observations from the District of Columbia. GSP denotes gross state product, and Labour is defined as states with both (1) supplemental earned income tax credit programmes and (2) minimum wage rates above the federal level. Dependent variables are measured at the state level and are primarily drawn from the University of Kentucky Center for Poverty Research (2020) national data set over 1980–2018. We further supplement these data with information on the year in which right-to-work statutes are enacted from the National Conference of State Legislatures: https://www.ncsl.org/research/labor-and-employment/right-to-work-laws-and-bills.aspx. Finally, states are categorized into one of four census region codes. Omitted region category is comprised of states within the Northeast region of the United States.

particular, the South would not develop the educational, civic, and financial institutions needed to promote innovation and diversify away from cotton.

After emancipation, a wave of new local and state policies continued to constrain the black population. While political representation initially led to increased public funding benefiting the black population in the South (Logan, 2018), the end of Reconstruction and subsequent disenfranchisement of the black population led to Jim Crow laws that severely restricted the economic opportunities of Southern blacks. These policies were directed at black workers but also contributed to an overall lack of development of the Southern economy. A clear demonstration of this is the work by Hornbeck and Naidu (2014) which demonstrated that white farm owners failed to modernize their farms until black out-migration in the early twentieth century forced them to. This is consistent with Margo's (1991) argument that southern whites did not begin to invest in black schools until African American migration north placed pressure on their captive labour force, an argument reinforced by the recent work by Baker (2019) demonstrating that black public school funding was kept at the bare minimum needed to avoid litigation.

With the Great Migration, black workers traded the Jim Crow policies of the South for a different set of discriminatory policies in the north. The suburbanization and segregation that accompanied the inflow of black residents into manufacturing belt cities was aided by explicitly discriminatory policies in the form of restrictive covenants and redlining that kept black residents from the amenities, jobs, housing wealth, and, importantly, the schools of the emerging suburbs (Oliver and Shapiro, 2006; Rothstein, 2017). These restrictions on residential location contribute to the persistent *de facto* segregation of schools despite the *de jure* segregation of schools ending in the years following *Brown v. Board*. More generally, segregation and redlining also influenced the geography of investment in public goods in northern cities, leaving African Americans at a disadvantage relative to whites, even in areas with larger investments in public goods. In particular, Derenoncourt

(2019) has shown that the Great Migration was concurrent with significant increases in policing which targeted black men, in Northern cities. Indeed, the significant disparity in the likelihood of incarceration irrespective of income for black men plays a role in the downward economic mobility for black men in Northern cities noted by Chetty *et al.* (2019).

This notion of access to schools highlights the complex relationship between policies, regional inequality, and persistent inequality between different groups. The funding of school districts is largely at the hands of state and local governments, though recent federal policies do impose certain constraints. The results of these policies are often vast inequalities across schools districts and across states. A long history of economic transformation, internal migration, and housing policies have dictated the spatial distribution of different groups across those districts, resulting in persistent inequalities. In the next sections, we offer a fuller picture of the scope of a subset of these policies that influence regional inequalities, and the socioeconomic inequality associated with such policy choices that persist today.

## IV. Contemporary regional inequality: socioeconomic and policy outcomes

Modern-day social and economic regional inequality is rooted in a combination of factors, including geographic endowments, agglomeration economies, regional differences in human and physical capital investments, and, importantly, persistence of past policy decisions, investments, and choices (Hardy *et al.*, 2018*b*). Here, we describe a broad set of sub-national policy and expenditure decisions falling within the domain of economic development, including education, social safety net transfer programmes, and labour market supports, which have helped to shape the inequality we observe today.

As noted previously, the nation's system of fiscal federalism permits state and local governments to exert authority over the financing and provision of core services to their constituents, resulting in a patchwork of distinct governmental systems and outcomes. These systems reflect political and social preferences of local decision-makers and, in turn, result in distinct state and local governmental decisions with respect to tax policy and the provision of services. Throughout history, this has proven to be particularly salient for blacks and socioeconomically disadvantaged Americans. Importantly, these investment choices can have spillover effects for all residents of a state or region. Here, we briefly discuss how education and human capital, transfer programmes, and labour market supports contribute to economic development differences and regional inequality.

### (i) Education

As a first-order principle, there is a fairly robust, albeit complex, human capital–poverty link in the United States, at the family and state-region unit of analysis. Whether at the national or sub-national level, education is linked to productivity and is subsequently attached to higher-paying employment opportunities (e.g. Goldin and Katz, 2007; Autor, 2014; Holzer, 2014). For this reason, human capital interventions are held up as central to broader economic policy interventions. Several studies (e.g. Haskins

*et al.*, 2009; Ladd, 2012; Rothstein and Wozny, 2013) document that children who grow up within lower-income and poor families generally perform worse on a range of scholastic achievement and educational attainment measures, such as achievement tests, high school graduation, college attendance, and college completion. Although college attendance has increased among children from low-income families, other family background gaps have grown over time. For example, the reading achievement gap for kids from high- and low-income families has grown from 0.6 standard deviations in the 1940s to 1.2 standard deviations in contemporary times (Ladd, 2012).

Complicating the policy prescription of education as a remedy to regional inequality, the benefits of education may operate, in large part, through a mix of social and labour market networks, as well as family economic resources (Becker and Tomes, 1979; Solon, 1992; Hardy *et al.*, 2019*a*). Regional differences in intergenerational mobility are primarily explained by the transmission of low earnings, versus educational outcomes or school quality (Rothstein, 2019). Consistent with this finding, black–white differences in test scores are largely explained by differences in family income (Rothstein and Wozny, 2013). While the overall returns to education are positive, they do differ across sociodemographic characteristics. Children from low-income and minority families receive lower returns. For example, children from near-poverty backgrounds receive a 71 per cent earnings premium from college attendance (relative to stopping at a high school diploma), compared to a 136 per cent premium for college graduates from families above near-poverty status (Bartik and Hershbein, 2018). This evidence calls into question whether additional investments and improvements in education, alone, can effectively reshape regional inequality.

Economic resource differences and human capital gaps aggregate up to the regional level, and are acute when observing regions of the nation—such as counties in the so-called 'black belt' of the deep south as well as in parts of Appalachia—experiencing persistent and deep poverty (e.g. Islam *et al.*, 2015). Ladd (2012) documents a strong, negative relationship between state maths and reading achievements, and state child poverty rates—and this persists after controlling for fixed, unobserved regional characteristics. Taken together, evidence in the US surrounding best practices for economic growth support local interventions that prioritize robust educational investments and job-training efforts targeted at jobless residents as core features of a local economic development strategy (Bartik, 2018).

States grappling with high poverty may fail to raise the requisite revenue needed for such investments, finding themselves in something of a steady-state with respect to stalled progress on these factors. Higher levels of school spending, a largely state and local investment proposition given the structure of education financing in the US (Chingos and Blagg, 2017), are associated with higher earnings and lowered poverty (Jackson *et al.*, 2016; Lafortune *et al.*, 2018). The potential mechanisms here include higher teacher pay, smaller class sizes, and additional student supports, such as counsellors and nurses within schools (Carrell and Hoekstra, 2010; Reback, 2010).

Many states and localities fund elementary and secondary education through a combination of tax instruments, including local property taxes, and recent evidence (Corman *et al.*, 2018) points to substantial variation in state expenditures for elementary and secondary education, and further towards relatively low per-pupil expenditures (below $9,000 per annum) across the West and South of the US. Some studies report lower per-pupil expenditures in poorer school districts, many of which face higher costs

in the course of providing educational services. These include additional supports for students living in poverty, those learning English as a second language, and students with disabilities (Morgan and Amerikaner, 2018). Ultimately, the evidence suggests that the aforementioned economic barriers to education—and associated job networks—define much of the persistence of economic status in the US (e.g. Blanden *et al.*, 2011).

### (ii) Social welfare policy

Along with primarily locally determined expenditures on educational investments, the nation's social welfare system operates as an important mechanism for the provision of cash assistance, food assistance, child care, housing, and medical assistance, as well as support for education and training. Such income support programmes raise family incomes, leading to improved child development and subsequently higher levels of economic well-being (Duncan *et al.*, 2012). We therefore discuss how social welfare transfers and labour market supports relate to regional inequality.

As is the case with education, the provision of these benefits is devolved to states and local governments—though mostly funded with federal dollars. States make decisions with respect to whether and how they provide benefits for families. For example, many states have retreated from providing cash assistance through their welfare programmes (Bitler and Hoynes, 2016) since the mid-1990s, coincident with reform of the nation's welfare system that further devolved authority to the states (Ziliak, 2016). Part of this decline may represent the racialization of anti-poverty programmes and the resulting political backlash (Soss *et al.*, 2011; Bailey and Duquette, 2014). Throughout the 1990s and 2000s, states with a higher proportion of black clients on the welfare caseload were less likely to provide cash benefits versus other, non-cash related services (Hardy *et al.*, 2019*b*). This is consistent with earlier pressures throughout the 1960s surrounding the political dangers of economic stimulus interventions perceived to be overly generous to black recipient families and neighbourhoods (Russell, 2003; Bailey and Duquette, 2014). It is also consistent with contemporary evidence from Schram *et al.* (2009) that the enhanced caseworker discretion derived from policy reforms of the mid-1990s via devolved authority can lead to stricter sanctions against low-income black clients and their families. And, low-income women residing within states with aggressive job promotion efforts within their welfare programmes throughout the mid-1990s were significantly less likely to attend college, the very skill acquisition needed for upward economic mobility in a macroeconomy transitioning away from manufacturing (Covington and Spriggs, 2004).

In spite of these inequities, there is nonetheless evidence of large, historical and contemporary, poverty-reduction benefits from the nation's anti-poverty social safety net (Hoynes *et al.*, 2016). There is no singular experience, *per se*, with the social welfare state in the US, but instead a variety of packages and experiences that low-income families have in their interactions with human services agencies nationwide. As a result, net aggregate benefits of the US social safety net can mask important regional heterogeneity.

### (iii) Labour market supports

Another set of state and regional supports for low-income families intervene within the labour market. Though often scaffolded by education and safety-net interventions,

earned income from employment is perhaps the main mechanism for poverty reduction and upward economic mobility in the US. This trajectory of prosperity and employment weaves together human capital and skill development matched to local labour markets that provide sufficient employment opportunities. Local and regional labour markets differ in their regulatory frameworks, some of which provide for a higher minimum income floor, as well as policies that promote worker bargaining power in the form of unions.

Over one-half of US states administer supplements to the federal earned income tax programme (EITC). The EITC, a wage subsidy administered through the tax code, now stands as the largest cash transfer programme for the poor in the US, larger than the nation's programme that traditionally allocated cash welfare (Hardy *et al.*, 2018*a*). The EITC is broadly associated with major reductions in poverty (Gundersen and Ziliak, 2004; Nichols and Rothstein, 2016), and many states have added on to the federal credit with their own, state-level supplements. Importantly, many working-poor and near-poor families with dependent children rely on a combination of EITCs and food assistance benefits as a substitute for wage growth (Hardy *et al.*, 2018*a*). Although the EITC is associated with large after-tax improvements in well-being, they are concentrated among those at or slightly above poverty (Hoynes and Patel, 2018), and these credits do not necessarily buffer against unemployment shocks (Bitler *et al.*, 2017). Given higher unemployment and income volatility among black Americans (Hardy, 2017), the distributional benefits of the programme do not accrue to those in deep poverty, those out of work, or those without dependent children (Ben-Shalom *et al.*, 2012).

Over the past few decades, many states within the US have also raised their minimum wages above the national level, in a bid to boost the earnings of workers with fewer formal skills. The factors that predict adoption of such measures are complex; many coastal states with higher prices choose to adopt supplemental EITCs and higher minimum wages. Evidence is mixed with respect to the benefits and costs *vis-à-vis* employment and earnings from implementing higher minimum wages, both nationally and sub-nationally (Neumark, 2017). While standard neoclassical models predict disemployment from minimum wages, several empirical studies find no such effect (Card and Krueger, 1994; Addison *et al.*, 2009, 2012; Dube *et al.*, 2010), along with benefits including increased family incomes (Bernstein and Shierholz, 2014; Rinz and Voorheis, 2018) and lowered poverty (Dube, 2017).

States adopting higher minimum wages are, on average, more likely to support worker bargaining power, whereas many of the same states that elect not to adopt these labour market supports also eschew unionization of workers. A disproportionate share of such states are located within the south of the US (Sanes and Schmitt, 2014). Many of these states provide fewer social benefits, lower tax revenues, and relatively low minimum wages (Schmitt, 2014). At the federal level, minimum wage expansions have had disproportionate benefits for black Americans historically. Large earnings increases among black Americans coincided with reductions in black–white wage gaps during the 1960s and 1970s, attributable to federal minimum-wage policy expansions throughout the 1960s that extended wage-floor protections to sectors of the economy where roughly a third of black workers were located (Derenoncourt and Montialoux, 2019); these policy expansions may explain as much as 20 per cent of the black–white earnings gap.

The earnings gains may have accrued at the expense of extensive margin employment among black men, however (Bailey *et al.*, 2020).

We close our discussion of regional inequality, socioeconomic outcomes, and policy outcomes with a descriptive analysis of how these inequities have taken shape over the past 38 years. To do so, we construct a state panel data set spanning 1980–2018 depicting information on state and regional differences in economic well-being and economic policy. Specifically, we focus on a subset of contemporary well-being and policy measures, such as higher state-level minimum wages (as compared to the national level) and refundable state-earned income tax supplements, which operate as wage subsidies for the working poor. We also assess states that have instituted restrictions on unions and worker bargaining power—so-called 'right to work' states. We then describe regional patterns in poverty, unemployment, and gross state product (a measure of overall state economy size and output akin to gross domestic product) since 1980. In order to describe these patterns, we estimate a series of descriptive regressions where we assess the link between one of the aforementioned economic or policy outcomes and the state's location in one of four regions: South, Midwest, West, or North.

Summarizing these results, shown in Table 4, we begin in column 1 with a definition of labour market supports, defined as states with both a supplemental earned income tax credit and minimum wages above the federally mandated level. Here, we find that states located within the South are 0.30 less likely to implement this combination of benefits relative to Northeastern states. Moving to column 2, we also find that states within the South are, once more, 0.70 more likely to have enacted policies that constrain worker bargaining power (relative to Northeastern states). Across both sets of policies, the South is—in absolute terms—the least likely among all of the regions to enact these types of work supports.

Turning our attention to columns 3–5 of Table 4, the pattern of relatively less generous worker supports among the South carries over to our selected economic well-being measures. Contemporary poverty and unemployment rates are significantly higher in the South than in all other regions of the country; gross state product, a summary measure of the size of the state economy, is higher than that of the Midwest, but lower than economic output in the North and West. Over a 38-year period, what emerges is a snapshot of the United States that remains unequal, and with substantial economic disadvantages accruing throughout the Southeastern United States. This relatively higher degree of economic insecurity—as measured by unemployment and poverty—coincides with relatively austere worker supports and protections.

In considering the evolution of the nation along social, political, and economic dimensions, the evidence coalesces around some degree of regional persistence with respect to economic outcomes. While there are numerous mechanisms, including migratory patterns, initial capital endowments, and social conditions, recent work (e.g. Acharya *et al.*, 2016; Andrews *et al.*, 2017) also traces a link between historical factors such as the local intensity of racial segregation and slavery over 100 years ago, and local differences in modern-day socioeconomic outcomes, policy preferences, and racial resentment. Local and regional contemporary outcomes—both those enhancing regional well-being and those depressing it—can be traced to many of these historical factors.

## V. Conclusion

Within the US system of fiscal federalism and devolved authority, a broad range of historical policy choices have exerted disproportionate harm on specific groups of people and regions of the country. Among these regions, the South looms large as it lags the nation's other regions on a range of social, economic, and policy outcomes. In explaining the condition of the South and its member states, it is difficult to disentangle the challenges associated with a move away from a crop-based, agrarian economy from the counter-productive activity of racial exclusion and state-sanctioned terroristic activity against black Americans, a relatively large proportion of the overall population; most blacks initially, and still, are situated within the southern states. The initial conditions described here enabled policy positions and attitudes that constrained the human capital formation, wealth promotion, and labour force protections of many Americans. That said, there is evidence of some convergence and improvements across a range of economic outcomes throughout the nation, and within the Southeast. Some cities throughout the Southeast are, for example, among the most innovative and dynamic regions in the country—Raleigh-Durham, Nashville, Atlanta, and Richmond are noteworthy examples; meanwhile many cities located in the West, Midwest, and Northeast—including Oakland, Milwaukee, Detroit, and Baltimore—have continuously struggled with persistently low levels of employment, high poverty, and inequality. Further complicating the narrative, these ostensibly prosperous or struggling localities are on distinct trajectories, but with neighbourhoods within them that diverge from the overall citywide trend (e.g. Chetty *et al.*, 2016; Casey and Hardy, 2018). Thus, while informative, the regional snapshot must also be interpreted with circumspection.

Ultimately, even amid the presence of city and neighbourhood heterogeneity within distinct regions of the United States, we synthesize a vast literature documenting large, persistent, regional differences from the early twentieth century through the 2000s. Ultimately, we view this as largely symptomatic of historical social, economic, and policy forces that replicate themselves across political jurisdictions today. When comparing regions in the United States, a set of steady-state initial conditions, in large part shaped by the nation's pattern of economic development, and its legacy of slavery and racial exclusion, continues to shape modern-day economic and policy outcomes, helping to reinforce observable regional inequality today.

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