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The settlers' fortunes: Comparing tax censuses in the Cape Colony and early American Republic

Johan Fourie[1] and Frank W. Garmon Jr.[2]

Europeans at the end of the eighteenth century had settled across the globe, from North and South America to Australia to the southern tip of Africa. While theories of institutional persistence explain the 'reversal of fortunes' between settled and unsettled regions, few studies consider the large differences in early living standards between settler societies. This paper uses newly transcribed household-level tax censuses from the Dutch and British Cape Colony and the United States shortly after independence to show comparative levels of income and wealth over four decades both between the two regions and within them. Cape farmers were, on average, more affluent than their American counterparts. While crop output and livestock were more unequally distributed at the Cape, slave ownership in America was more unequal. There was little indication of an imminent reversal of fortunes.

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INTRODUCTION

One of the seminal contributions in new institutional economics attributes differences in living standards between places settled by Europeans and those settled by others to the institutions brought by the Europeans.[3] In settled regions, Europeans brought growth-enabling institutions like property rights, democracy and the rule of law, while extractive institutions prevailed in places not settled by Europeans. These institutional differences help to explain the large income differences between countries today.

Europeans settled because the climate and environment were favorable to them, notably in places without malaria which would have made initial settlement costly. These environmental conditions are also at the root of a second theory about colonial settlement, that of Engerman and Sokoloff, who attribute the large differences in living standards in the Americas today to the temperate versus tropical endowments that greeted settlers on arrival.[4] In tropical areas, crops that benefited from large economies of scale, and thus slave labor, meant that highly unequal societies developed, with a small elite protecting their privileges by denying everyone but themselves the right to vote or access to education. Further European immigration was also often limited. By contrast, in areas with temperate climates, such as North America and the southern tip of Africa, where settlers planted less labor-intensive crops like wheat, more equitable institutions developed, such as universal suffrage and education for all.

Both theories have attracted much interest from within the scholarly community. Yet one concern is that these theories say little about differences in living standards between temperate regions settled by Europeans. Both theories predict that these regions should have similar property right regimes, democratic rule, and educational institutions and, ultimately, establish 'inclusive institutions' or what North, Wallis and Weingast have come to call 'open-access regimes'.[5]

The reality is, of course, that differences exist, then and now, between those places where large numbers of Europeans settled in North America, South America, Australia and South Africa. While more recent differences in living standards of these 'whites' are better documented, for example, in contemporary household surveys, censuses, or innovative approaches like anthropometric evidence, differences in household-level living standards during the eighteenth century and early-nineteenth century are often missing. This is the gap the current paper begins to fill.

Conventional wisdom suggests that the divergence between the American colonies and the South African Cape predated the industrial nineteenth century. Building on an earlier generation of scholars, Lindert and Williamson argue that 'colonial America was a world leader in income per capita' by the end of the eighteenth-century.[6] Even Adam Smith, in his *Wealth of Nations*, suggested that the settlers in North America were more prosperous than those at the Cape.[7] We use newly transcribed tax census information at the household-level over four decades for three

[3] Acemoglu, Johnson and Robinson, 'Reversal of fortune'.
[4] Engerman and Sokoloff, *Economic development*.
[5] North, Wallis and Weingast, *Violence and social orders*.
[6] Lindert and Williamson, 'American Incomes', p. 55.
[7] Smith, 'Wealth of nations', (ed: Edwin Cannan, 1904 (1776), Methuen and Co., Ltd)

regions of the early United States, and four regions of the Dutch and British Cape Colony in what would become South Africa to question these assertions. Our results reveal a high level of Cape settler wealth at the turn of the nineteenth century. Cape settlers more prosperous than the European settlers of North America at the same time. While settler output was more unequally distributed at the Cape, slave ownership was not. There was little indication, at the start of the nineteenth century, of the reversal of settler fortunes that would follow.

THE COLONIES AND THEIR LEGACIES

Adam Smith's exaggerated claim in his *Wealth of Nations* that the 'discovery of America, and that of a passage to the East Indies by the Cape of Good Hope, are the two greatest and most important events recorded in the history of mankind' contrasted the fortunes amassed by European nations after the 'discoveries' to the misfortunes occasioned on the 'natives' of those regions.[8] The two most recent seminal contributions use the same dichotomy in explaining the wealth and poverty of nations. Acemoglu, Johnson, and Robinson distinguish between settler and non-settler colonies and Engerman and Sokoloff between temperate and tropical colonies. Much of the most recent literature examining the determinants of development compares across these very heterogenous regions, or focus exclusively on the contemporary developing world.[9] The historical literature on 'settler colonialism' mirrors the economic literature in making a distinction between colonialism defined by European settlement and colonialism centered around indigenous labor and resource extraction. Consequently, historians emphasize the common features of the colonial process of settlement and indigenous removal.[10]

A closer reading of Smith's *Wealth of Nations* reveals a second paragraph dedicated to the divergence in the fortunes between those territories settled by Europeans. Smith observed that 'Though the Europeans possess many considerable settlements both upon the coast of Africa and in the East Indies, they have not yet established, in either of those countries, such numerous and thriving colonies as those in the islands and continent of America.' In 1776, according to Smith, the American colonies settled by Europeans were thriving; those in Africa, presumably, were not.[11] The question about differences in the relative prosperity of the colonies inhabited predominantly by Europeans has attracted far less attention from the scholarly literature. Why would it, one could argue, if most variation in living standards can be found between settler and

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[8] Smith, 'Wealth of nations', IV.vii.c Part III.

[9] Feyrer and Sacerdote, 'Colonialism and modern income'; Bruhn and Gallego, 'Good, bad, and ugly'; Easterly and Levine, 'The European origins'; Banerjee and Iyer, 'History, institutions'; Huillery, 'History matters'; Michalopoulos and Papaioannou, 'Pre-colonial ethnic'; Alsan, 'The effect of the tsetse fly'; Maloney and Valencia Caicedo, 'The persistence'; Jedwab, Kerby and Moradi, 'History'.

[10] Ostler and Shoemaker, 'Settler colonialism'; Shoemaker, 'Settler colonialism'.

[11] This is not entirely fair towards Smith. He does note that "The Dutch settlements at the Cape of Good Hope and at Batavia, are at present the most considerable colonies which the Europeans have established, either in Africa or in the East Indies; and both those settlements are peculiarly fortunate in their situation. The Cape of Good Hope was inhabited by a race of people almost as barbarous, and quite as incapable of defending themselves, as the natives of America. It is, besides, the half-way house, if one may say so, between Europe and the East Indies, at which almost every European ship makes some stay, both in going and returning. The supplying of those ships with every sort of fresh provisions, with fruit, and sometimes with wine, affords alone a very extensive market for the surplus produce of the colonies." Yet the implication remains that they lagged behind their American counterparts. Smith, 'Wealth of nations', IV.vii.c Part III.

non-settler economies? Yet this question relies on an important assumption: that one can assume that living standards between European settlements, or, indeed, within them, were relatively uniform. History suggests otherwise.

British settlement in North America followed more than a century of European exploration. Early efforts to establish a permanent settlement failed until the Virginia Company founded the Jamestown settlement in 1607. After an early period of poor leadership and starvation the colonists introduced staple crop production and plantation slavery, with tobacco emerging as the colony's first major cash crop. As sugar production expanded in the Caribbean in the eighteenth century many Virginians began planting wheat and corn and raising livestock to export to the West Indies and Southern Europe. This 'provisioning trade' expanded to encompass as much as twenty percent of American exports by 1770.[12]

Religious dissenters formed the first settlements in Massachusetts. The Pilgrims established the Plymouth Colony in 1620, and the Puritans founded the Massachusetts Bay Colony in 1628. As the colony grew and settlement expanded agriculture remained most important but the economy was more diversified than Virginia. The region was densely settled by towns that seemed to replicate themselves as the colony grew. The Census of 1800 reported a total population of 886,000 in Virginia, 423,000 in Massachusetts, and 152,000 in Maine. The colony boasted large numbers of tradesmen and artisans, and shipbuilding, fisheries, and lumber emerged as important industries. By the turn of the nineteenth century, settlers had expanded into the Maine frontier and Massachusetts experienced the beginnings of early industrialism. [13]

Studies of American wealth suggest that early Americans were among the wealthiest in the world. Pioneering studies by Jones and Soltow examined American wealth in 1774 and 1798 using probate inventories and the returns of the 1798 federal direct tax.[14] More recently, Lindert and Williamson reconciled Jones and Soltow's estimates and concluded that the American Revolution was far more devastating than earlier generations of historians had previously believed. The revolution may have destroyed as much as twenty percent of American wealth.[15]

At the same time historians generally suggest that inequality measures were low in the early United States. Most white Americans were of middling status, and, aside from large disparities in wealth between the free and enslaved populations, the distribution of wealth within settler society was relatively egalitarian. Even when slaves are included in inequality estimates the measures are still lower than those found in Europe from the same period.[16]

Older interpretations sometimes compare Virginia and Massachusetts by suggesting that the Virginia Company organized the colony around a cash crop while the godly commonwealth of Massachusetts centered the colony around a moral economy that placed religion first. While

[12] Walsh, *Motives of Honor;* McCusker and Menard, *The Economy.*
[13] Taylor, *Liberty Men.*
[14] Jones, *Wealth of a Nation*; Soltow, *Distribution of Wealth.*
[15] Lindert and Williamson, *Unequal Gains*; Lindert and Williamson, "American Incomes", p741.
[16] Ibid.

southerners were indeed wealthier than their northern counterparts, larger farm sizes and significant slave populations explain the difference, not a half-hearted commitment to capitalism among New Englanders.[17]

As in Virginia, it was a company and its quest for profits that brought European settlers to the southern tip of Africa. European sailors and soldiers employed by the Dutch East India Company arrived at the southern tip of Africa in 1652 to establish a refreshment station on the slopes of Table Mountain. The settlement that formed around the fort was initially small and dedicated towards producing enough fruit and vegetables for the ships that sailed between Europe and the East Indies. The commander soon realized that not enough foodstuffs would be produced by Company servants, and released some of them to become independent farmers, selling their surpluses to the Company at predetermined rates. Several decades passed before the Cape became self-sufficient.

High fertility rates, generous land policies and smallpox epidemics that devastated Khoe settlements encouraged settlers to expand deeper into the interior, first north and then east, so that by the end of the century, after the British had replaced Dutch East India Company as colonial power, around 22 000 free men[18], 14 000 Khoesan and 25 000 slaves inhabited an area from Table Bay in the southwest to the Great Fish river in the east.[19] Large regional differences persisted. In the fertile region close to Cape Town, crop farming, notably wheat and barley, as well as viticulture, making wine and brandy, remained the main staples. Beyond the mountains, in regions that were drier, cattle and sheep farming predominated.

The general sentiment in the historiography of the Cape is that most settlers were surviving just above subsistence. Pockets of wealth existed close to Cape Town, especially amongst those farmers privileged to obtain the monopoly contracts sold by the Company, but elsewhere farmers could do little more than eek out a living in the harsh environment of the frontier. That sentiment has recently been questioned by several economic historians using newly transcribed data sources. Du Plessis and Du Plessis use wage rolls of Company servants to calculate real wages, revealing levels far above subsistence.[20] Fourie uses settler probate inventories to reveal remarkably high levels of wealth.[21] Fourie and Van Zanden calculate levels of settler GDP per capita that were on par or even above those of the richest countries at the time.[22]

The high average level of wealth masked an equally high level of inequality, though. As Fourie and Von Fintel show, early Cape inequality levels within the settler community were high, sometimes comparable to the highest levels of colonial inequality in Latin America.[23] The surprising comparison may just be a consequence of using microlevel evidence against inequality statistics

[17] Clark, *The Roots*; Rothenberg, *From Market-Places*.
[18] Another source records almost 15 000 'white' men, women and children, but these numbers exclude indentured servants and free blacks (Ross 1975).
[19] Freund, *The Cape*.
[20] Du Plessis and Du Plessis, 'Happy in the service'.
[21] Fourie, 'The remarkable wealth'.
[22] Fourie and Van Zanden, '. GDP in the Dutch'.
[23] Fourie and Von Fintel, 'The dynamics of inequality'; Fourie and Von Fintel, 'A history with evidence'.

that are usually calculated with social tables, but the evidence still calls into question the notion of equal opportunities that supposedly characterized settler societies.

We are, of course, not the first to compare differences in living standards between settler societies, although, arguably, this comparison has received far less attention than comparisons across settler and non-settler societies. Historians of the British Atlantic have facilitated transatlantic comparisons to understand why thirteen colonies declared independence while thirteen others remained loyal to the British empire.[24] Consequently, studies of living standards in the British West Indies have naturally made comparisons with the living standards in the United States.[25] Connections have also been made to explain the divergence between colonies in the British, Spanish and French empires.[26] Lloyd notes the 'curious neglect' of comparisons between the settler societies of Australia and America.[27] A 2013 edited volume on settler societies attempts to fill the gap, although almost all contributions, notably the one on 'uneven development paths among settler societies', focus on the post-1850 period.[28] Figure 1 offers an interpretation using the Maddison Project estimates. The data suggest that the divergence in living standards between former settler colonies emerged in the second half of the nineteenth century. It seems logical, therefore, to search for the factors that explain the divergence during this era.

Figure 1: Comparison of Real GDP per capita (2011 US$, logarithmic), Argentina, Australia, Canada, USA and South Africa, 1650-2016
Source: Maddison project

[24] Greene, 'Colonial History'; Bannister and Riordan, *The loyal Atlantic.*
[25] Burnard, Panza and Williamson, 'Living costs'.
[26] Allen et al., 'The colonial origins'; Abad et al., 'Between conquest'; Geloso, 'Distinct within North America'.
[27] Lloyd, 'Australian and American'.
[28] Lloyd, Metzer and Sutch, *Settler economies*.

But this inquiry reveals a paradox: while the Maddison estimates suggest a divergence in the nineteenth century, the theoretical contributions of Acemoglu, Johnson and Robinson, Engerman and Sokoloff, and Smith's observation in the *Wealth of Nations* suggest that the roots of this divergence are to be found in an earlier era. What we need is better knowledge about the comparative living standards in settler colonies soon after their establishment, from the mid-seventeenth to the early nineteenth centuries. Figure 2 demonstrates why. It reports the same estimates as in Figure 1 but focuses on the century between 1750 and 1850. Not only is no divergence evident, but it would be very difficult to predict from the available estimates which countries would prosper and which would lag behind. The data are fragmentary, and, at least for the eighteenth century, largely absent.

This paper provides deeper insight into these early comparative living standards. Our focus is on the two of the earliest settled regions: three of the largest and most economically important American states and the territories of the Dutch and British Cape Colony that would later be unified into the Union of South Africa. In evaluating living standards of the settler population, we will consider the mean and median of agricultural assets and slave labor, and the general level of inequality. We can compare these regions for the first time because of access to two series of remarkably rich tax censuses that we have reconstructed for both regions. The next section discusses the creation of this source in further detail.

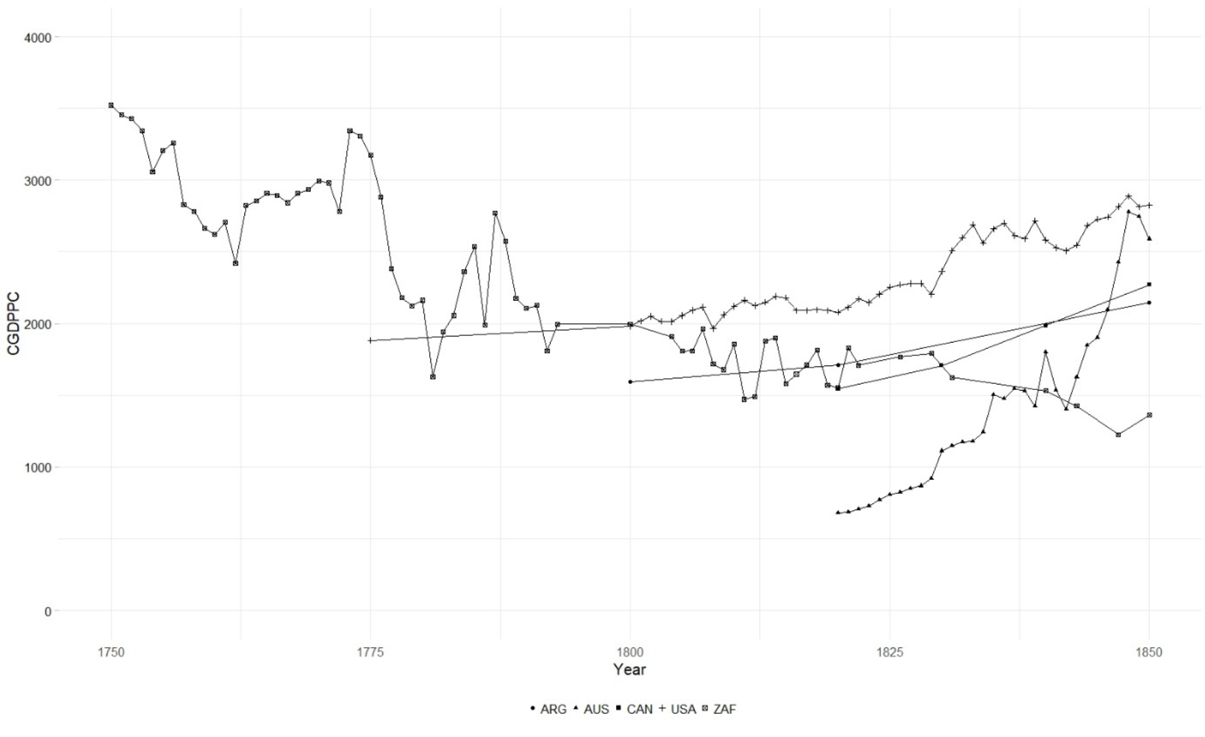

Figure 2: Comparison of Real GDP per capita (2011 US$), Argentina, Australia, Canada, USA and South Africa, 1750-1850
Source: Maddison Project

THE SOURCES

The reason that the nature and distribution of settler fortunes in the early American Republic and the Dutch and British Cape Colony have not been compared before is, unsurprisingly, because it is painstaking and expensive to transcribe comparable records. The tax censuses we employ in this study required years to transcribe. Without access to generous funding it would not have been possible.[29]

One benefit of being governed by a company, as was the case at the Cape during much of the eighteenth-century, is that detailed records of all economic activity were recorded and preserved. One series is of particular interest to us, the *opgaafrollen* or tax censuses, that were undertaken annually between 1663 and 1844. The transcription of these censuses is now part of a larger project, the Cape of Good Hope panel, to build a panel of settler households and match them intergenerationally.[30] Although there is some variation across time and space, the Cape's tax censuses generally record the composition of each settler household, labour used (including European servants, slaves and Khoe labourers), and the annual agricultural output, including crops sown and reaped, vines, wine and brandy produced and livestock (notably horses, cattle and sheep).

[29] For the Cape Colony, we acknowledge the support of the Swedish Riksbanken, Andrew W. Mellon Foundation and South Africa's National Research Foundation for funding the Cape of Good Hope Panel project: Phase I. For the American records we acknowledge support from the Bankard Fund for Political Economy, travel grants from the History Project and the Buckner W. Clay Endowment for the Humanities, and a Faculty Development Grant from Christopher Newport University. We are grateful for the research assistance of Muhammad Syarif Fadhlurrahman, Elaine Hansen, Raphael C.J. Joseph, Rhandy Maco, Joan Nduta, Linda Orlando, Mark Jim Santos, Amber Van Karsen, and Chris de Wit.

[30] Fourie and Green, 'Building the Cape'; Rijpma, Cilliers and Fourie, 'Record linkage'.

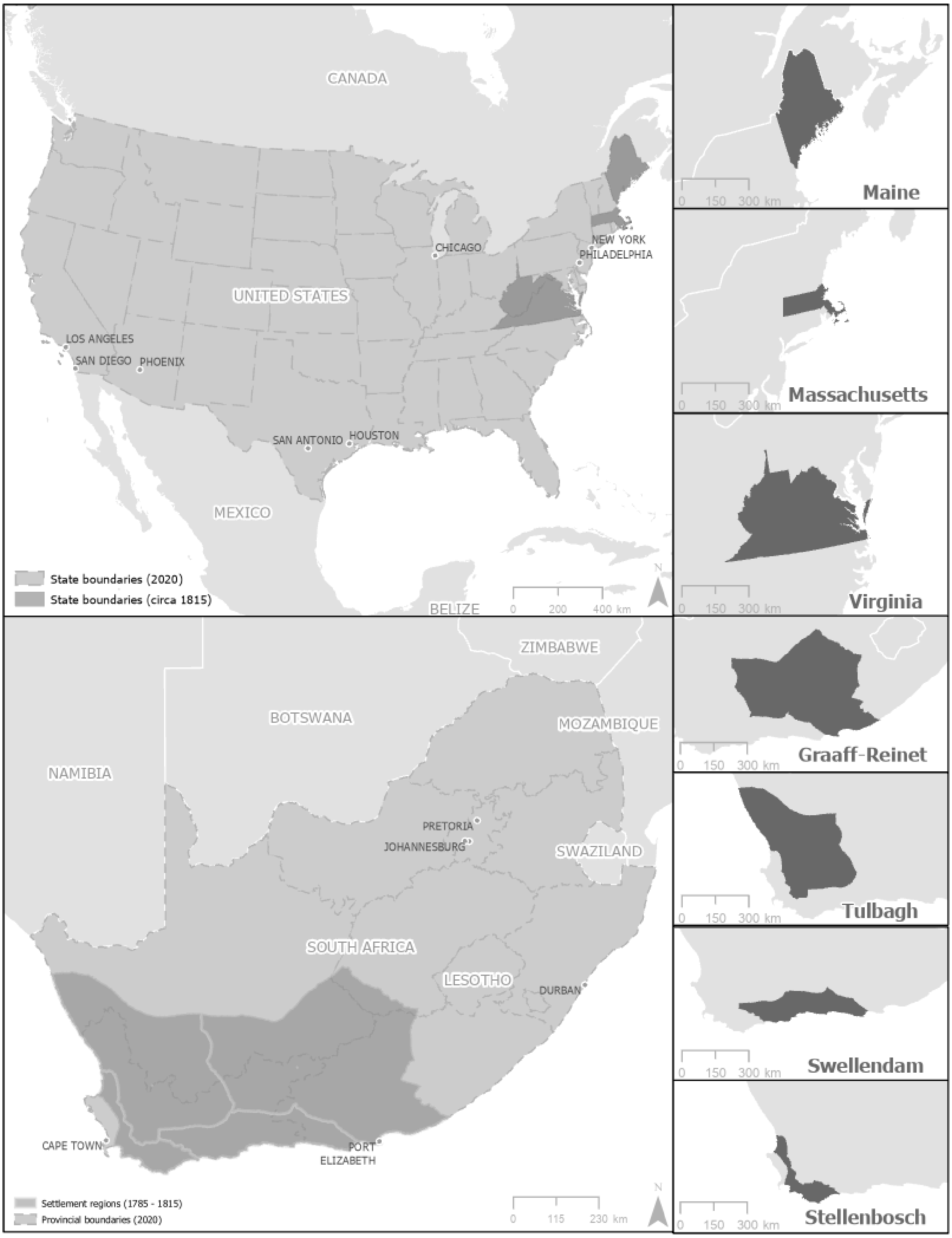

Figure 3: The location of the seven districts of comparison, circa 1815

Early American state property taxes are equally well preserved and offer a suitable counterpart to the Cape Colony data. In Massachusetts town assessors constructed new lists roughly every seven years and updated the lists annually to include those who had moved in or out of the town.

The county assessors in Virginia assembled new lists annually, recording the number of acres of land, number of slaves, and head of livestock. The Massachusetts records are more comprehensive, with the assessors categorizing land into seven classifications based on usage, recording detailed information on non-agricultural wealth, and taxing a variety of luxury items. The taxes collected in both states resembled colonial taxes that had been in place for nearly one hundred years, but grew more sophisticated in the decades following the American Revolution.[31]

The American tax records are the result of a broadly representative partial sample. The Virginia tax lists have been called from three clusters of counties in Northern Virginia, the Northern Neck, and Southside.[32] The Massachusetts records also derive from three clusters, and include the complete records of the towns comprising the present-day suburbs of Boston, a group of southeastern towns bordering Rhode Island, and a cluster of towns in the Pioneer Valley in the northwestern part of the state.[33] The records from Maine include all of the surviving tax lists from the towns in Lincoln County, a coastal county situated near Augusta.[34] The districts sampled are broadly representative of the regions within their respective states.[35]

These tax records allow us to compare agricultural output and slave ownership between and within the two regions. We compare seven districts, four in the Cape Colony (Graaff-Reinet, Stellenbosch, Swellendam and Tulbagh) and three in the United States (Maine, Massachusetts and Virginia). Figure 3 plots these districts on contemporary country and province/state borders. The sizes of the districts vary somewhat, although the boundaries are often closely tied to the natural environment; smaller districts are typically more fertile and are as a consequence more densely inhabited. For example, despite the district of Stellenbosch being only a fifth of the land size of Graaff-Reinet, it had a larger number of inhabitants. Virginia was the largest and most populous of the American states in 1790, and was still the third largest by population in 1820. Massachusetts was the most densely settled of the three, with roughly half the number of inhabitants living on a seventh of the area of Virginia. The Maine frontier was sparsely settled but growing rapidly; its population tripled between 1790 and 1820.

[31] Garmon, 'Mapping Distress'; Einhorn, *American Taxation*; Henderson, 'Taxation and Political Culture'.
[32] The Virginia districts include the city of Alexandria, along with Fairfax and Loudoun County in Northern Virginia; King George, Lancaster, Northumberland, Richmond, and Westmoreland County on the Northern Neck; and Charlotte, Lunenburg, Mecklenburg, and Prince Edward County in Southside.
[33] The towns around Boston include Brighton, Brookline, Dorchester, Milton, Newton, Roxbury, and Watertown. The southeastern towns bordering Rhode Island are Attleboro, Berkeley, Dighton, Easton, Mansfield, Norton, Raynham, Rehoboth, Seekonk, and Taunton. Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Erving's Grant, Gill, Greenfield, Hawley, Heath, Leyden, Montague, Northfield, Rowe, Shelburne, Wendell, and Whately are in the northwestern Pioneer Valley.
[34] Those towns are Belfast, Boothbay, Bowdoin, Bowdoinham, Bristol, Camden, Cushing, Dresden, Edgecomb, Frankfort, Georgetown, Isleboro, Jefferson, Lincolnville, Medumcook, Newcastle, Nobleboro, Northport, Pownalboro, Prospect, Thomaston, Topsham, Union, Vinalhaven, Waldosboro, Walpole, Warren, and Woolwich.
[35] Garmon, 'State Taxes'.

Figure 4: Sample size across seven districts and four decades
Source: Various tax censuses (see text), own calculations.

We use tax censuses from four approximate benchmarks, 1785 to 1815. We do not have a tax census for each district in every year; we therefore use the closest tax census to the year in question. For example, the first census available in Graaff-Reinet, 1787, substitutes for 1785. The 1792 tax list for Massachusetts and Maine is the closest approximation for 1795, and, for Maine, the 1801 lists stand in for 1805. There are some years, though, for which we have no sufficient replacement. This is especially the case for Tulbagh, a district that broke off from the larger Stellenbosch district in 1806. None of the Massachusetts towns sampled have a surviving tax list from 1801. Figure 4 displays the sample size by district and year.

We compare ten agricultural commodities. Wheat, barley, rye and oats reaped are available for six of the seven districts. The quantities sown are available only for the Cape districts, as are wine produced. Only Maine and Massachusetts recorded corn (maize) reaped. The number of sheep owned is available for all districts excluding Virginia. The number of horses and cattle owned are the only two commodities available for every district in our sample. Table 1 in the Appendix reports the number of bushels of each commodity by district across all years.

The surveying process worked largely the same way in both regions. At the Cape, local officials were appointed by the Company in each district to compile annually a list of all households and their relevant assets and output. Only household size, the number of farm labourers (both European wage labour (or *knechts*), Khoesan and slave labour) and agricultural outputs are recorded, although from the numerous blank entries it would seem that all households were surveyed. There is some evidence of substantial underreporting. Fourie (2013), for example, compares tax censuses to probate inventories. While the mean and median number of slaves owned is fairly similar, an ownership category which was not taxed, the numbers of livestock in the probate inventories are almost twice the number in the tax censuses. Van Duin and Ross (1987) note, however, that such evasion was not necessarily constant throughout the eighteenth century. 'Valuable indications can be derived from the figures obtained under British rule,' they note, 'when evasion seems to have been far less, because the British demanded that the returns were made on oath and because the farmers were uncertain of the checks that would actually be made on them' (Van Duin and Ross 1987: 23). Given that the first two of our benchmarks are under VOC rule and the last two under British rule, we note the potential for a decline in output to be explained by more accurate reporting of output.

The tax assessment process in Virginia and Massachusetts bore rough similarities, although the tax schedules in Massachusetts covered a far more expansive list of assets and assessors there employed more sophistication in subdividing property into different categories based on value.[36] Both states levied a poll tax (head tax) on adult white men, ensuring that even those who did not own any property would be included in the tax lists. In Virginia the county courts appointed assessors and sheriffs annually to serve as collectors. By separating the assessment and collection process in two sets of hands, the potential for collusion and corruption would have been reduced. In Massachusetts everything revolved around the town, and local officials had more discretion in making abatements. Town selectmen constructed new lists at least once every ten years, and updated the lists annually with lists of new arrivals. In both cases taxpayers self-reported their assets but faced substantial penalties for underreporting or evasion. Those who failed to pay could have their property seized and sold at auction, and could be sent to debtors' prison if the auction failed to satisfy the amounts owed. Collectors possessed strong incentives to collect taxes due and discover instances of evasion. In Virginia sheriffs received five percent of all amounts collected, but could be held personally liable for any uncollected sums.[37]

Both the Cape and the American South were slave economies. Cape slaves were predominantly shipped from Indian Ocean territories like present day Indonesia, India, Madagascar and Mozambique. The Atlantic slave trade brought Africans to the Americas as slaves. The tax censuses of all four districts at the Cape record the numbers of slaves owned by each household. The Supreme Judicial Court of Massachusetts declared slavery to be incompatible with its state constitution in 1783. Because Maine was a district of Massachusetts until 1820 the constitution had the effect of abolishing slavery in both districts. Consequently, Virginia is the only American state in our sample to record slave ownership. Table 2 in the Appendix reports the size of slave ownership by district and year.

COMPARATIVE LIVING STANDARDS

The 25,089 observations of settler households across seven districts and four time periods (roughly a decade apart) allow us to compare the average living standards of settlers in the United States and Cape Colony at the end of the eighteenth and beginning of the nineteenth century. Here

[36] Einhorn, *American Taxation*.
[37] Garmon, 'Mapping Distress'.

it is important to add a qualifier: we do not have information about income or wealth for those outside the colonial economy. In other words, we cannot compare the living standards of independent Khoesan households at the Cape or indigenous American households in our estimates. Our estimates therefore capture only the average living standard of the settler households within those regions. Moreover, our analysis treats enslaved humans as capital assets and not as separate households that should be included when measuring per capita income in the colonies. Given the higher ratio of settlers to slaves in the US compared to the Cape, we would expect different rankings in per capita GDP estimates when the total population is included. We also prefer to work with settler household averages rather than per capita figures. That is because we do not have the number of household members for all regions. We do not believe this would substantially effect our results. Although we do not have consistent comparisons of household size – as explained, single young men above 16 who may have lived with their parents were often recorded separately as households at the Cape – we do know that fertility rates were similar: in 1800, settler females in both the United States and the Cape Colony could expect to bear 7 children on average.[38] It is perhaps useful to add that counting single men as separate households at the Cape are likely to bias Cape settlers' household wealth downward.

In the end, then, we compare settler living standards in two ways. First, we simply compare average living standards at the household level. Second, we compare levels of inequality within and between regions.

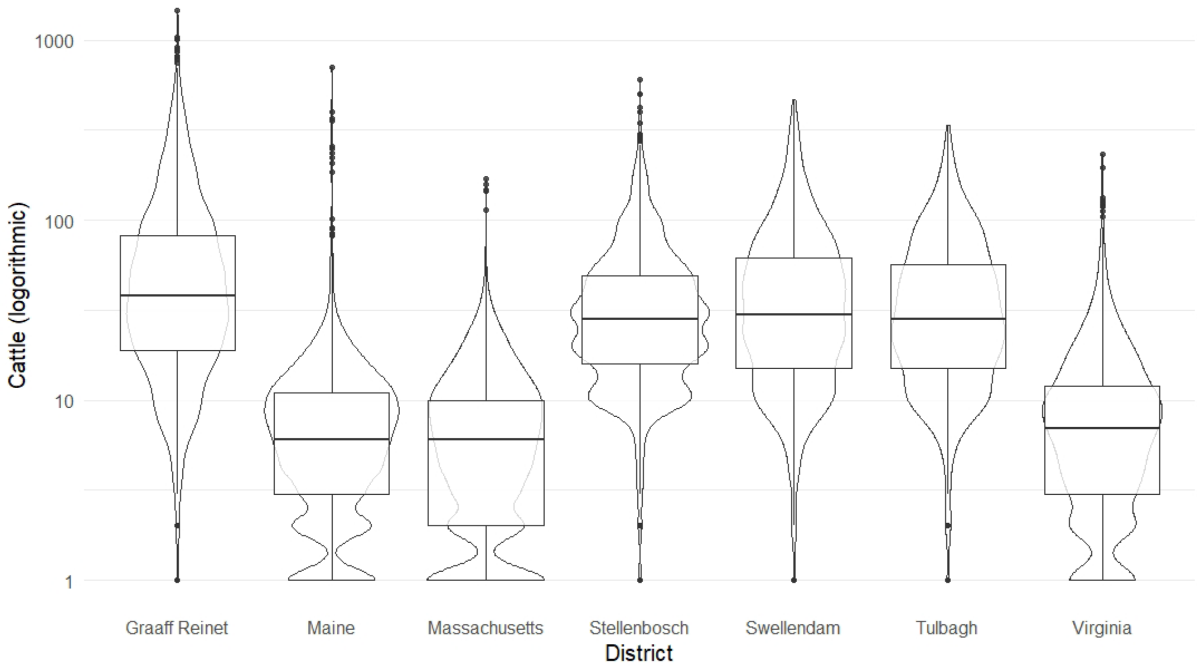

Figure 5: Comparison of cattle ownership by district, pooled years
Source: Various tax censuses (see text), own calculations.

[38] Wanamaker, 'Industrialization and Fertility'; Cilliers and Mariotti, 'The shaping'.

To calculate average living standards we compare agricultural output at the household level. Our focus on agricultural output naturally excludes other forms of production and consumption. We find, however, that an overwhelming majority of the settlers in both North America and Southern Africa were engaged primarily in agriculture. Much of the non-agricultural production, such as wagon making, beer brewing, leather tanning, and bread baking, would have been closely correlated to agricultural output. We acknowledge, however, that manufacturing and industrial production would have been more prevalent in the United States, not only because of the larger urban and more dense population, but also because the Dutch East India Company actively discouraged manufacturing on the Cape. As Fourie has demonstrated using probate inventories, this policy resulted in smaller Cape towns and a shift to more diversified farm production.[39] At the same time, the tax lists sampled from Massachusetts, which had a more diversified economy than perhaps any other district in our study, reveal only a few dozen sawmills, fulling mills, iron works, and other small workshops.

Figure 5 provides a snapshot of the average cattle ownership, by district, pooled across all the years for which data is available. Cattle can be considered an imperfect proxy for both income and wealth. In contrast to other assets, like land or, as we will discuss below, slave holdings, stock size is more likely to be indicative of the type of farming practiced. Farmers working arable tracts of land close to markets might be less likely to engage in cattle ranching than those located in less fertile regions farther away. Land and slave holdings may also reflect wealth obtained from other economic activities, whereas cattle ownership typically does not.

Given its ubiquity in the records, however, it makes sense to start the comparison here. There are two main results from Figure 5. First, and most obvious, settlers in the three American districts owned fewer head of cattle per farm than their Cape counterparts. The gap is large and significant. Cape farmers owned, on average, thirty-three head of cattle. American farmers owned five. Even if households that did not own cattle are excluded, to account for agricultural specialization, the average American free household owned eight head of cattle. Of course, cattle ownership is not per se indicative of living standard differences. Cattle at the Cape, as we have discussed, was a valuable export commodity for the passing ships. Stock farming suited the drier environment of the Cape interior and was prized by both the indigenous pastoral Khoesan and sedentary, Bantu-speaking Xhosa, whom the settlers would meet on the Colony's eastern frontier. Cape cattle would also have been a different breed than those of the American territories, used for their meat and hides rather than for milk and dairy products. American farmers also exported cattle, beef, butter, and cheese to the British West Indies as part of the provisioning trade, but most of their production would have been consumed domestically.[40]

The second result from Figure 5 is that despite the large environmental differences between Maine and Virginia or between Stellenbosch and Graaff-Reinet, the average number of cattle owned per household is largely similar across each of the two countries. By contrast, the gap between Virginia and Stellenbosch is large. The point is that there is much greater variation between countries than between districts within countries.

[39] Fourie, 'Slaves as capital'.
[40] Greene, 'Colonial History'; Sheridan, 'The Crisis of Slave'.

Figure 6 plots crop output per producer by district for each of the four periods. To exclude taxpayers engaged primarily in nonagricultural production, we have focused our analysis on households that produced at least one bushel of wheat, barley, rye, oats, or corn in a given year, or who owned any livestock. We find that roughly three quarters of the taxpayers met these criteria in all but one district. The proportion of farmers ranged from a low of 70.8% in Massachusetts to a high of 81.9% in Graaff Reinet. Stellenbosch is an outlier here, with only 47.7% of taxpayers engaged in the production of the above-mentioned agricultural outputs.[41] Our data are comparable to Bettye Hobbs Pruitt's, who found that 83% of landowners in Massachusetts owned both livestock and improved land in 1771.[42]

If we only consider the quantity of crops produced, we find little difference between the most productive regions at the Cape and those in the United States. The district of Stellenbosch in the Cape Colony was the largest producer per household, with an average of 33.2 bushels of wheat, 11.6 barley, 1.2 rye and 27.1 oats for a total of 110.1 bushels. The frontier district of Graaff-Reinet were better suited to cattle ranching and sheep grazing, and crop production there was substantially lower. New England households exhibited for a comparative advantage in producing corn and rye rather than wheat and barley. Much of this corn was consumed locally as feed for livestock, or mixed with rye to produce the distinctive regional bread.[43] Massachusetts households produced an average of 105.6 bushels of all crops, on par with the most productive region in South Africa, with an average of 4.3 bushels of wheat, 1.1 barley, 19.6 rye, 18.8 oats and 61.8 bushels of corn. Production on the Maine frontier had much in common with the interior districts of the Cape. In both the Cape Colony and the United States districts located closer to urban centers tended to produce more oats, while those situated further away tended to produce more barley. Total crop output in Maine was 53.6 bushels, including 4.1 bushels of wheat, 8.4 barley, 4.7 rye, 1.5 oats, and 34.7 bushels of corn. The New England households also produced several tons of hay for pasturing, for which we do not have comparable figures for South Africa.

We do, however, want to compare total crop production, but for that we require prices. Finding a consistent series of prices for each of the different commodities by year at the district level has proved difficult for both the United States and the Cape Colony. For the United States, we employed a price series for wheat, barley, oats, rye and corn from Massachusetts, with values from Maryland substituting for missing wheat prices, between 1785 and 1815.[44]

Determining the valuations for livestock has proved even more challenging. There are no price series for horses, cattle, or sheep in the early American republic. Scholars have provided very few

[41] We posit two reasons for this. First, we exclude specialist viticulturalists from our analysis. There are, however, few wine farmers that do not also own livestock or cultivate crops. Second, we exclude horses from livestock. In Stellenbosch, it seems, large numbers of (young) men are listed with only a single horse and no other assets.
[42] Pruitt, 'Self-Sufficiency'.
[43] Rothenberg, 'The Productivity', pp. 317-18.
[44] All prices except wheat are from Wright, Carroll D. Comparative Wages, Prices, and Cost of Living [From the Sixteenth Annual Report of the Massachusetts Bureau of Statistics of Labor, for 1885] (Boston: Wright & Potter Printing Co., 1889), p**p**. 165-167; the wheat figures are from Adams, Jr., Donald R. "Prices and Wages in Maryland, 1750-1850" The Journal of Economic History 46, No. 3 (Sep., 1986), p. 644.

indications of livestock valuations aside from traveler's accounts. A letter from David Stuart to George Washington offers one such estimate. Stuart was a former delegate to the Virginia General Assembly who frequently corresponded with Washington. The letter reports prices current from Loudoun and Berkeley counties for a variety of agricultural goods. Stuart's descriptions suggest a value of £12 to £20 for second-rate horses, £2.10 to £3 per head of middling cattle, and 6/ to 15/ for sheep. Using the midpoint for each of Stuart's ranges, and converting them to dollars in the year 1800 suggests a price of $94.93 for horses, $16.32 for cattle, and $3.11 for sheep.[45] Winifred Rothenberg's price index for rural Massachusetts offers some confirmation that these figures are in the ballpark. By multiplying the live weight of the cattle in her study by the average price per pound of fresh beef, Rothenberg's data suggest an average price of $15.29 per head of cattle in 1800.[46]

For slave prices, we have utilized Fogel and Engerman's data on slave sales and appraisals. After converting the appraisal values to real 1800 dollars, we narrowed our focus to include only those slaves who would have been old enough to have appeared in the tax lists, and omitted those who would have likely been exempt from taxation due to age or infirmities. For the period 1782-1817, the data yield an average price of $178.51 for slaves over the age of sixteen, and $162.95 for slaves between the ages of twelve and sixteen. These estimates are based on 2,614 slave appraisals from Maryland and Virginia.[47]

Cape Colony prices were equally difficult to find. As the Dutch East India Company was the monopsony buyer in the Colony, the prices they paid for crops and livestock from farmers were available only for the eighteenth-century. These prices were, however, not recorded in the same unit (per pound of meat) as in the *opgaafrolle* (headcount). We instead chose to transcribe four Cape auctions: one from 1798[48], two from 1800[49] and one from 1802[50]. Auctions were usually held after the death of a farmer, attracting buyers from afar interested in acquiring both household goods like linen and kitchen utensils and agricultural commodities like those included in the tax censuses. In short, we believe these better reflect market prices. The auctions record several prices per commodity. For example, the auction of Hester Beatrix Olivier list the sale of 10 *mudden koorn* (bushels of wheat) twelve times. Eight unique buyers acquired 10 *mudden*, with the price ranging between 29:2 and 31:4 Cape rijksdaalders. We take the average of these prices across the four auctions to arrive at a price for wheat. We do the same for each of the other commodities.

The Cape prices are then converted from Cape rijksdaalders to US dollars. Five rijksdaalders in 1800 was estimated to be one British pound[51], while US$4.53 exchanged for one pound.[52] We calculate the exchange rate, therefore, at 1.1 rijksdaalder per US dollar.

[45] Richards, 'Dr. David Stuart's Report', p. 291.
[46] Rothenberg, 'A Price Index', 995-996.
[47] Fogel and Engerman, 'Slave Sales'; Garmon, 'State Taxes', 149-150.
[48] The auction of Hester Beatrix Olivier (MOOC10/18.19)
[49] The auctions of Maria Elizabeth Eems (MOOC10/18.74) and Johan George Stadeler (MOOC10/18.78)
[50] The auction of Cornelis Coetzé and Hercules Coetzé (MOOC10/19.30)
[51] Swart, H.G., Developments in Currency and Banking at the Cape between 1782 and 1825, with an account of contemporary controversies. PhD dissertation: University of Cape Town, 1953, p. 23.
[52] Lawrence H. Officer, 'Information on Dollar-Pound Exchange Rate', MeasuringWorth.com, 2007.

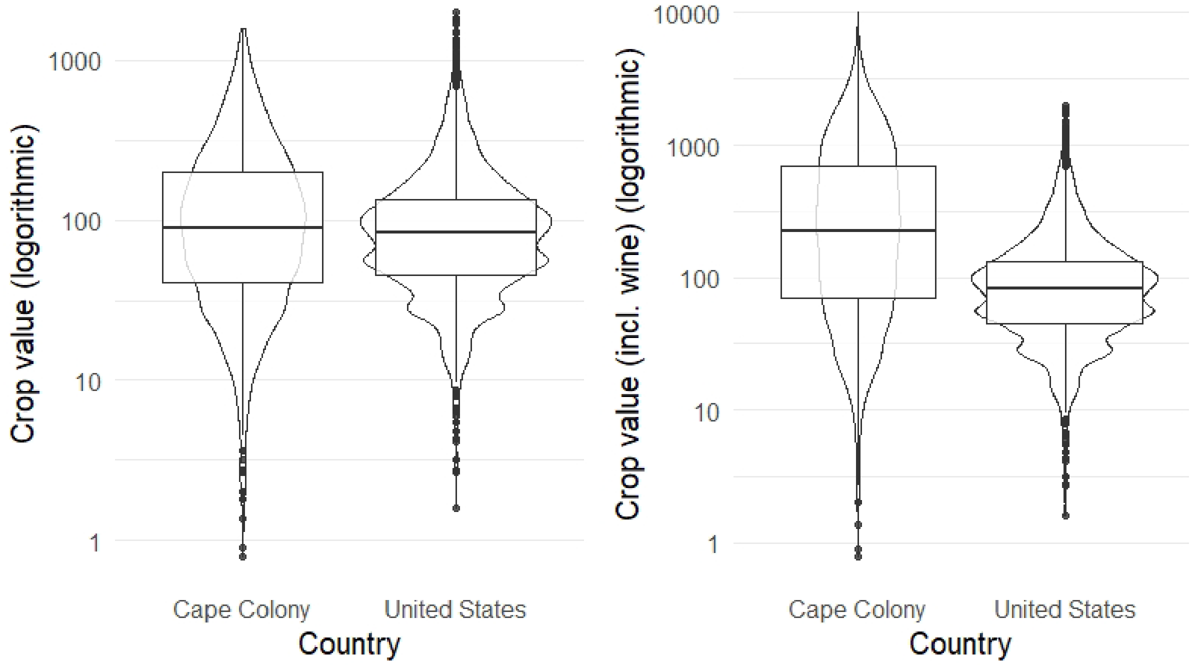

Figure 6: Comparison of crop output by district, pooled years
Source: Various tax censuses (see text), own calculations.

Figure 6 reports the average crop output at the household level across all districts and time periods where available. When we assess only the value of wheat, barley, rye, oats and corn, we find that farmers in Massachusetts lead the ranking, with $93.7 of annual output. Second is Tulbagh ($66.7), followed closely by Stellenbosch ($59.1) and Maine ($45.6). Graaff-Reinet lags significantly, at only $9.9 per household, pulling the average for the Cape Colony down to $37.4 compared to the $55.8 in the United States.

When wine and brandy are added, however, the picture changes substantially, with a much higher mean value of output now recorded for farmers in Stellenbosch ($477) and Tulbagh ($142.1). The ranking of the two countries shifts. While the American figure remains the same at $55.8 of crop output per household, Cape Colony farmers now produce $190.8 worth of crop output on average.

Adding livestock to these output averages raises an important methodological question: how to add a stock variable to a flow variable? We choose a simple approach: we use the standard interest of 6% in the Cape Colony and the United States and multiply that with the total value of livestock (and, later, slaves).[53] Doing so lifts those districts with large cattle and sheep counts. Households in Graaff-Reinet, for example, enjoyed an annual income of $148.7 for cattle and sheep, compared

[53] We should rightfully include depreciation in our calculations. That is because the ratio of rental value (use value) to asset purchase value should approximate not just the interest rate but the interest rate plus the depreciation rate minus the rate of expected asset-price appreciation (for given quality and ignoring taxes). Given the lack of information about depreciation rates and asset-price appreciation, we choose to simplify the analysis by simply including the interest rate. This should not affect our comparisons between Stellenbosch and Virginia, although it could cause our valuations to be understated.

to $8.1 for Maine and $7.5 for Massachusetts. When these livestock incomes are added to the income for crops (excluding wine and brandy), the average income for the Cape Colony is $135.1 per household versus $76 for Maine and Massachusetts.[54]

Perhaps these high numbers are simply the result of inflated prices for livestock in the Cape Colony. We acknowledge that our sources are tenuous. We therefore revert to another series of livestock prices, calculated using the same series of auctions, but now for the first half of the eighteenth-century. Considering that inflation was negligible for most of the century, this may provide a more conservative alternative to the series we have used. We now value Cape horses at $20.24 instead of $36.38, cattle at $9.37 instead of $19.28 and sheep at $1.18 instead of $1.73.

The results remain largely the same. Excluding wine and brandy, the Cape Colony household average income from agriculture is $92.3 compared to the average income per household for Maine and Massachusetts of $76. Were wine and brandy added to the Cape Colony average, it would increase to $245.6 per household.

A third comparison we draw is between slave holding in Stellenbosch and Virginia. Virginia is the only American district in our sample where slavery remained legal. Slave holding is typically considered a good proxy for total wealth, and has precedent in both the Cape Colony and American literature.[55] Slaves comprised the largest component of movable wealth in Alice Hanson Jones' study of the American colonies in 1774.[56]

We find that Stellenbosch slaveholding households owned, on average, more slaves than the slaveholding households in Virginia. This is not true for every year, though. In 1785, the first year in our sample, Stellenbosch households owned only 3.5 slaves compared to 4.2 for their Virginia counterparts. But there was a reversal of fortunes in the three decades that followed. The number of slaves owned by Stellenbosch households grew to 5.2 in 1795, and a high of 5.8 in 1805, while the average number of slaves owned by Virginia households declined to 2.8 ten years later and bottomed out at 2.4 in 1805. Part of this trend can be explained by artifact of the tax lists. In 1787 the Virginia legislature repealed the tax on slaves under the age of twelve but maintained it for slaves of all other ages. The change in the tax law explains some, but not all of the drop in slave ownership recorded in the tax lists between 1785 and 1795. That the number of slaves per household continued to decline in 1805 suggests this was part of a larger trend, however, and not simply a product of bookkeeping changes in the tax code.

The proportion of households owning at least one slave increased from decade to decade in Stellenbosch, from 39.7% in 1785 to a high of 55.1% in 1805, while slaveholding became more concentrated in Virginia and Tulbagh. The average number of slaves per household fell in both districts largely as a consequence of the growing inequality in slave ownership. In the Virginia counties sampled, 49.8% of households owned at least one slave in 1785, compared to 43.1% in 1815. The growing proportion of non-slaveholding households outpaced the growth in the slave

54 We exclude Virginia because no crop information is recorded.
55 Worden, *Slavery*; Jones, 'Estimating wealth'.
56 Jones, *Wealth of a Nation*.

population in those districts, causing the district averages to decline. The proportion of households owning slaves remained constant in Swellendam, and moved only slightly in Graaff-Reinet.

Figure 7 reports the return on investment in the enslaved by district for the full period. We use a standard 6% rate across both countries. Two sets of Cape prices are used. Section A uses the price series we originally obtained from the four transcribed auction rolls between 1798 and 1802. This suggests that Cape Colony returns were substantially above those of Virginia. Concerned that these auctions may have inflated prices, we again use an earlier price series from the auction rolls for the first half of the eighteenth century. In this more conservative estimate, the median return on investment in the enslaved is above all but one Cape Colony district. Stellenbosch is the exception, with a median of $60.9 compared to $53.4 for Virginia. The average, interestingly, is higher in Virginia ($88.8) than in Stellenbosch ($83.0).

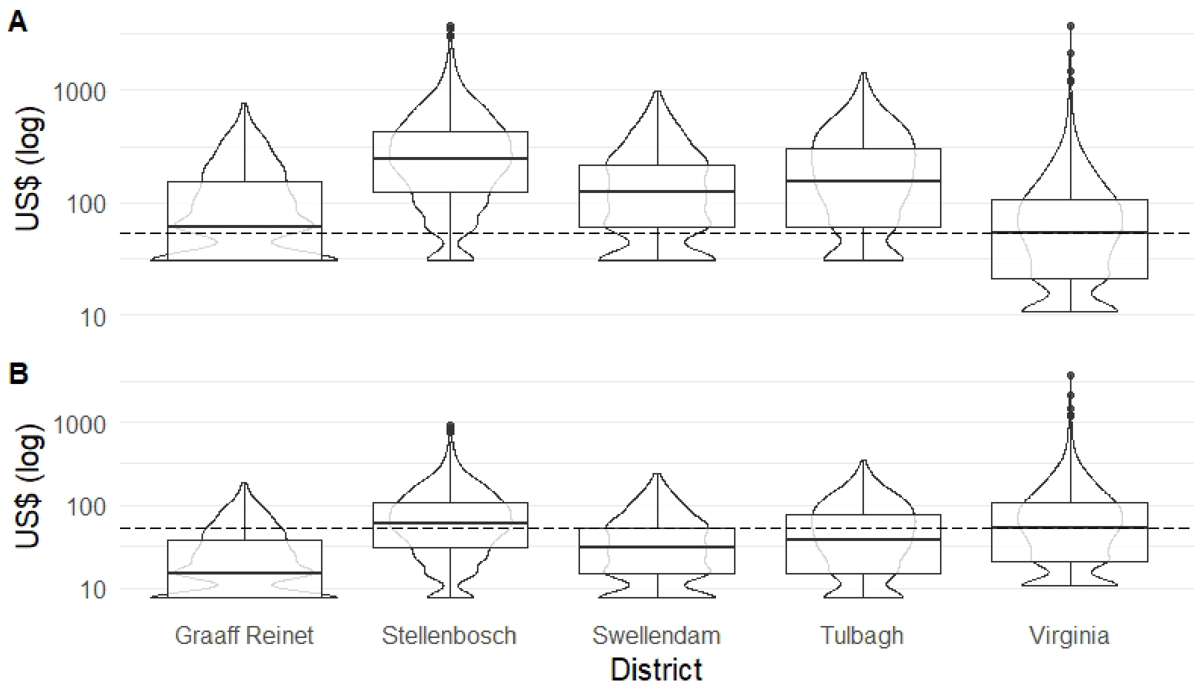

Figure 7: Income on slave ownership, by district (1785-1815)
Note: Section A uses prices from the four Cape auctions (1798-1802). Section B uses prices from Cape auctions during the first half of the eighteenth century. Dotted horizontal line indicates the median income on slave ownership for Virginia.
Source: Various tax censuses (see text), own calculations.

Although we only consider agricultural output, livestock, and slave ownership– the results above suggest substantial wealth differences between Cape and American farmers, with Cape farmers, on average, significantly better off than their North American compatriots. We are cautious to calculate total wealth indicators, given the gaps in the tax censuses for some commodities across time and space and the precarity of our price series. Despite these concerns, however, and the lack of additional information about occupations and by-employment, even our most conservative estimates call into question Lindert and Williamson's bold assertion that 'colonial America was a world leader in income per capita'.[57] Instead our results suggest, much like the income comparisons in Figure 2, that Cape settlers were at no disadvantage to American settler households in the four decades following the American Revolution. If anything, the gap seems to have widened over the period, at least until the beginning of the nineteenth century, when the Dutch ceded the Cape to Britain. If our household-level tax information are to be believed, the settlers of the Cape Colony at the southern tip of Africa should be considered amongst the most affluent in the world at the turn of the century.

INEQUALITY AND THEORIES OF DEVELOPMENT

Lindert and Williamson also claim that 'the American colonies in 1774 probably had the most equal distribution of income in the western world – even including the slaves'.[58] This provides support, of course, for the Engerman-Sokoloff hypothesis; temperate regions were more likely than tropical regions to have an equal distribution of wealth, with persistent effects into the present.

The tax censuses allow us to test the extent of inequality in farming output among free settler households between the two countries. We calculate Gini coefficients for farmers. Crops at the Cape are more unequally distributed than in New England. Adding wine and brandy increase the Gini coefficient even more at the Cape; the Cape was a highly unequal society in terms of crop production. By contrast, livestock ownership is fairly evenly distributed in both the Cape and in the US at around 0.5, although Graaff-Reinet, the district with the largest livestock endowment, also had the highest Gini, at 0.55. Our inequality measures are on par with similar studies of wealth derived from tax lists, but higher than estimates of income inequality.[59]

Slave ownership, by contrast, was more evenly distributed at the Cape. The district with the highest concentration of slaves, Stellenbosch, has the lowest Gini, at 0.58. By contrast, the Gini for slave ownership in Virginia is 0.74. Figure 8 plots the Lorenz curves for crops, livestock and slaves, excluding all farmers who did not own any of the particular asset in question. Here, too, the lower inequality of the early American republic is clear in crop production. The Cape also tended to have higher levels of inequality in livestock ownership. Yet slave ownership reveals the opposite trend. Slave ownership was more concentrated in Virginia than in the Cape districts (even including those at the frontier, where slave ownership was limited to only a few households). This ambiguous ranking between the United States and the Cape Colony would seem to complicate the Lindert and Williamson assertion. Our result suggests it depends crucially on the type of ownership assessed.

[57] Lindert and Williamson, 'American Incomes', p. 55.
[58] Ibid.
[59] Sarson, *The Tobacco-Plantation*; Soltow, *Inequalities*; Lindert and Williamson, 'American Incomes'.

Table 1: Gini coefficients by type of ownership

District	Obs	Crops	Crops + wine and brandy	Livestock	Slaves
Graaff-Reinet	3448	0.95	0.95	0.55	0.83
Maine	6880	0.61	0.61	0.49	NA
Massachusetts	6095	0.73	0.73	0.49	NA
Stellenbosch	2962	0.89	0.76	0.52	0.58
Swellendam	1755	0.80	0.83	0.52	0.74
Tulbagh	1079	0.79	0.81	0.53	0.65
Virginia	2879	NA	NA	0.51	0.74

Note: We exclude only non-farmers.

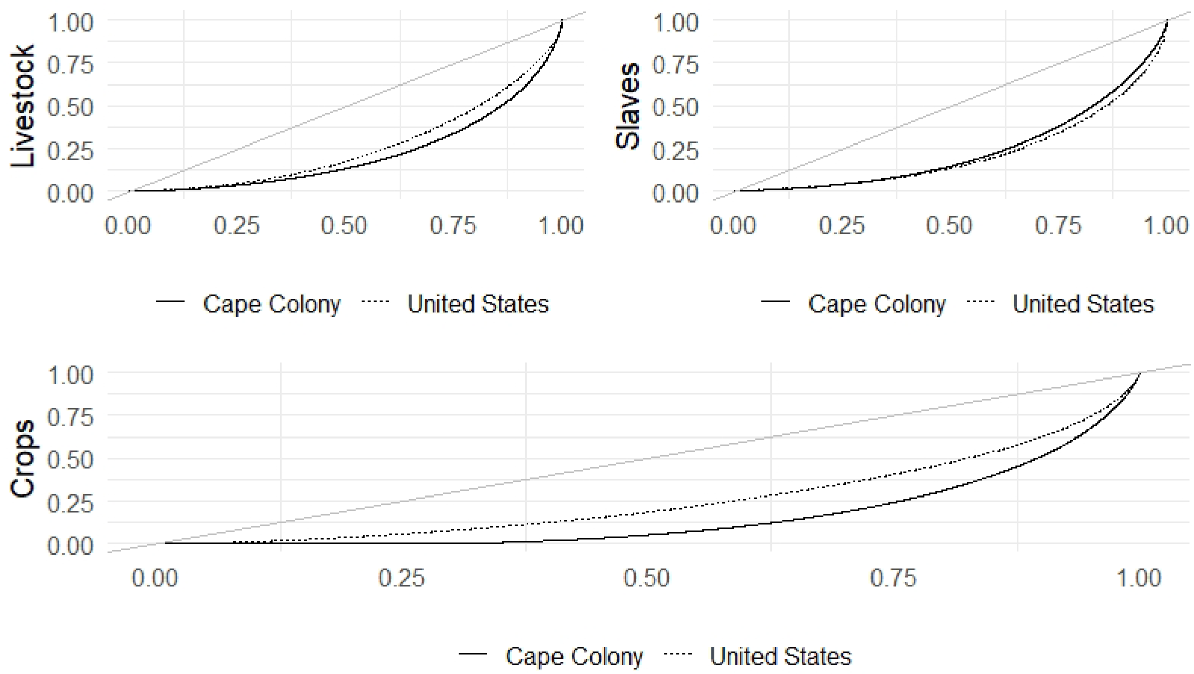

Figure 8: Lorenz curves of total livestock, slave and crop ownership, by country (excluding non-owners)
Source: Various tax censuses (see text), own calculations.

These results should, again, be interpreted with caution. They do not include the value of land or any other types of manufacturing or services. Jones found that land accounted for roughly 60% of total physical wealth in the United States.[60] Given that land would have been the most valuable asset that households owned, we might expect the Gini coefficients for wealth to be closer to our crop inequality measures than for livestock or slaves – at least for those districts where crops were the dominant output. Despite these limitations, though, these results do challenge the assertion that the United States enjoyed 'the most equal income distribution in the western world'. That may have been true at some points in history and for some regions using certain inequality measures, but it seems unlikely to be true as a blanket statement. More evidence is needed.

[60] Jones, *Wealth of a Nation*.

While the tax censuses allow us to compare the average levels of production and ownership between districts in the Cape Colony and the early American Republic, the distinctive nature of each source complicates comparisons of other kinds. We would, for example, like to calculate and compare farm productivity across the two regions. For some Cape districts, we have crops sown and crops reaped, but not for the American territories. For the American territories we have acreage under cultivation. In Virginia we have slave ownership that could be considered a labor input, but we do not have crop outputs that are comparable to those at the Cape.

These data inconsistencies will inevitably occur when working with microlevel data over time and across space. New tools might help to circumvent them. Although we can potentially match Cape settler households across the four time periods, such linkages, being a decade apart, introduce survivorship bias. A new project to transcribe the tax censuses *annually* will help to address this. The same is true for the tax lists from Massachusetts and Maine where the full population of the respective towns were transcribed. Matching is, however, not possible for Virginia, because the available records are the result of a random 20% sample from each county. We consider this an area for future research.

CONCLUSIONS

The 'reversal of fortunes' between regions settled by Europeans and those not settled is a popular explanation for the large variation in global incomes we observe today. This literature is predicated on the assumption that those regions settled by Europeans, in the Americas, Australasia, and the southern tip of Africa, had fairly equal living standards, both within and between territories. The results presented here complicate this assumption.

We find that free Cape households were, on average, *more* affluent than their American counterparts. This average level of output across four decades conceals, as our household-level information allow us to show, substantial variation in living standards within each territory and over time. The predominance of American living standards would only become apparent towards the middle of the nineteenth century.

It is worth noting, as we have done above, that our estimates are limited to the settler population in both the US and the Cape. Our purpose is to compare average *settler* living standards. Were we to consider average living standards of all inhabitants, including enslaved and indigenous individuals, our results would likely reverse. The American territories were far more densely populated than the Cape Colony. The total population of Massachusetts, Maine, and Virginia was estimated at 1.46 million in the 1800 US Census, compared to little more than 60 000 for the Cape Colony. Although the proportion of the population enslaved was roughly similar in Virginia and the Cape, the share of settler population in the two regions would diverge in the nineteenth century, as European immigrants arrived in large numbers in the US and the territory of the Cape Colony expanded to include areas densely populated by Africans.

What explains the high initial level of settler wealth and income at the Cape? As Smith noted, the Cape's favourable location as refreshment station for the passing ships gave it an advantage. So, too, did relatively cheap land and access to the Indian Ocean slave trade. The sparsely populated Cape Colony may initially have offered settlers greater access to land and natural resources, that is until the closing of the frontier in early nineteenth century. The preponderance of slaveholders on the Cape also gave settler households an advantage in agricultural output over their counterparts in New England. The Dutch East India Company also subsidized the costs of a sizeable administrative and military presence. As the Colony expanded deeper into the interior, these advantages became less important.

By the nineteenth century, trade routes would have affected local prices, which would lead to differences in relative purchasing power. The higher volume of trade between the United States and Europe, combined with greater access to local manufacturing, likely lowered the cost of manufactured goods. Established trade routes could also influence settlers' decision to migrate. If the costs of migration were higher for settlers in the Cape Colony, migration might have been limited to those with the resources to engage in larger-scale farming. Unfortunately, we do not have sufficient price data to make inferences about the size of these effects.

Of course, settler living standards were even greater in those societies where 'extractive institutions' were established. Our estimates of average wealth for the Cape Colony are, for example, only a fraction of the best estimates for Jamaica. The average income among Jamaican slaveholders was £308 local currency (£220 sterling) in 1774, with per capita wealth of £134 (£95.71 sterling). Our estimates for average incomes derived from livestock and crops among the free population are comparable to the incomes received by Jamaican overseers.[61] In contrast to the Jamaican plantations and other colonies with 'extractive institutions', slave ownership at the Cape was more equally distributed. Our results challenge the conventional wisdom that American wealth enjoyed an unparalleled egalitarian distribution at the turn of the nineteenth century.

Several factors could account for these trends, and each present an opportunity for future research. First, the South African tax censuses do not record acreage, and it may be the case that South African farms and acres under cultivation were larger than in the early United States. Land abundance may explain some of the differences we have observed. Alternatively, the farms in one region could have been worked more intensively than another. Our results might appear differently if measured per-worker rather than per-farm.

In heralding the significance to the discovery of America and the Cape of Good Hope, Adam Smith noted that "it is impossible that the whole extent of their consequences can have been seen. What benefits or what misfortunes to mankind may hereafter result from these great events, no human wisdom can foresee."[62] Such was the position of the Cape Colony and the United States at the turn of the nineteenth century. The higher standard of living in the Cape Colony, or the comparative levels of inequality, offered no indication of the reversal of settler fortunes that awaited in the industrial age.

[61] The authors accidentily report the £134 figure as per capita income when they mean per capita wealth, see Burnard, Panza and Williamson, 'Living costs', p. 55, 64-65, 69; Burnard, Planters, Merchants, and Slaves, pp. 159, 319n6; Burnard, 'Prodigious Riches', p. 517.
[62] Smith, 'Wealth of nations', IV.vii.c Part III.