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LATIN AMERICAN GROWTH-INEQUALITY TRADE-OFFS:
THE IMPACT OF INSURGENCE AND INDEPENDENCE

Jeffrey G. Williamson

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Latin American Growth-Inequality Trade-Offs: The Impact of Insurgence and Independence
Jeffrey G. Williamson
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ABSTRACT

Did independence push Latin America down a growth-inequality trade-off? During the late colonial decades, the region completed two centuries of growth unmatched anywhere and inequality reached spectacular heights. During the half century after insurgency and independence, inequality fell steeply and growth was so modest that the period is called the lost decades. With the appearance of the belle époque in the 1870s, growth rose to impressive levels, again even by world standards, and inequality surged to the highest levels ever, where they have remained for a century. This paper explores the connection.

Jeffrey G. Williamson
The University of Wisconsin
350 South Hamilton Street #1002
Madison, WI 53703
and Harvard University and CEPR
and also NBER
jwilliam@fas.harvard.edu

Latin American Growth-Inequality Regimes since 1600

During the late colonial decades, Latin America completed two centuries of growth unmatched anywhere in the world and inequality reached truly spectacular heights. For the half century starting with insurgency and independence in the early 1800s, inequality fell steeply and growth was so modest that the period is called the lost decades. With the appearance of the *belle époque* in the 1870s, growth rose to impressive levels again even by world standards, and inequality surged to the highest levels ever, where they have remained for a century. This paper explores the connection over these three growth-inequality regimes.

Independence, Lost Decades and Tough Transitions

Africa and Latin America secured their independence from European colonial rule a century and half apart: most of Latin America by 1820¹ and most of Africa by 1960. Despite the distance in time and space, independence was followed in each case by a half-century of political instability, violence and economic stagnation, or what might be called lost decades. It did, however, produce a much more equal distribution of income and wealth than before or after.

Imperial Rule: Economic Integration, Imperial Deterrents and Stability

Imperial rule brought entire regions around the globe into direct contact with the rivalries between European states. Most colonies, however, did not become directly involved in these conflicts. In Latin America, the Dutch invaded Brazil's sugar-rich

¹ Cuba and Puerto Rico are exceptions.

northeast in the early-mid 17th century; Spain lost most of its Caribbean possessions in the 17th century and fought to defend the rest for most of the 18th century; Spain and Portuguese Brazil skirmished over territory that is now Uruguay. But for the most part, the mainland colonies did not become the locus of disputes among European powers. The imperial occupation of Africa also occurred with a relatively low level of conflict, despite the belligerent nationalism that characterized the “great scramble” for Africa (Pakenham 1991; Abernethy 2000). Only during World War I did imperial nations fight on the continent: African imperialists resolved their disputes usually through diplomacy.

Imperialism also brought a measure of economic integration. It fostered trade, if only because groups of colonies shared a single master. Trade and factor mobility were augmented within each of the imperial domains of Latin America due to common legal systems, fiscal policies, currencies, and governing structures. Spanish restrictions on inter-colonial trade in some products were imposed in the early 17th century, but ended with the Bourbon reforms in the 18th century. French-speaking territories in Africa formed a currency zone as did sterling for Britain’s African colonies. Central Africa maintained a free trade zone; Southern Africa maintained a common tariff; and Britain promoted economic integration for Uganda, Kenya and Tanganyika in east Africa and Northern Rhodesia, Southern Rhodesia and Nyasaland in Central Africa.

The imperial powers also successfully repressed internal challenges to colonial rule. In Latin America, potential threats came from ambitious European settlers, enslaved Africans and their descendants, and burdened indigenous peasants. Colonial governments produced few public goods, spent nothing on education and next to nothing on infrastructure apart from fortresses and customs houses. Thus, settlers demanded more

power, more public goods, more privileges, and lower taxes. Spain and Portugal had virtually no police or professional military in their American colonies, but managed to deter (and occasionally suppress) settler-led revolts by maintaining their capacity to mobilize their vast imperial resources. This deterrent helped keep the settler elite in line, but they also needed imperial protection from the slaves and indigenous peasants that they exploited. Large-scale revolts by Indian and slave populations were rare, although low-intensity resistance was endemic (Coatsworth 1988).

As was true of Latin America, European settlers in Africa adopted repressive labor strategies, forcefully seized land, and drove the indigenous population into crowded reserves. While the Crown had largely abandoned forced indigenous labor in Latin America by the early 1600s (except in Peruvian mines), African and Latin American natives were both forced into formal labor markets to earn cash with which to pay taxes. All of this produced high levels of inequality in both colonial regions.

Insurrection and Imperial Collapse

The decline of imperialism in both Latin America and Africa was not driven by some endogenous response to local forces but rather by exogenous events in Europe. In the former case, it was the Napoleonic wars that eroded Iberian power, while in the latter it was World War II.

The collapse of the imperial deterrent occurred gradually for Portuguese Brazil and abruptly for the Spanish Americas. In Brazil, the Portuguese government fleeing Napoleon's army arrived in ships protected by the British fleet in 1807. Independence occurred when the king reluctantly returned to Lisbon in 1821, leaving his son behind to

declare Brazil an independent 'empire.' In the Spanish case, the imperial deterrent collapsed abruptly when Napoleon suddenly turned on the Spanish government. In 1808, he exiled Carlos IV and his eldest son (Fernando VII) to Provence and installed his brother Joseph on the Spanish throne. By the time Fernando recovered his throne in 1813, both Spain and its empire had changed forever. But for a brief time, it seemed like the *status quo ante* would be restored: the Hidalgo revolt in Mexico was crushed in 1810; dissident movements in the Andes were suppressed; and the Venezuelan rebels led by Bolivar were defeated. But disaster struck with an army revolt in 1820. When the king faltered, settler elites in the empire understood they could no longer rely on Spain to protect them. Hidalgo had already proclaimed the end of the caste system and legal equality of all Spanish subjects. Bolivar and San Martin offered freedom to slaves who joined them.² Indigenous populations had stopped paying the head tax (*tributo*), and property-less urban workers demanded voting rights. With a weakened Spain turning liberal, insurrection, independence and less unequal societies were just around the Latin American corner.

As in Spanish America, most African anti-colonial movements suffered initial defeat, but external shocks associated with World War II strengthened these movements while weakening imperial power. The imperialists traded war services for pledges of citizenship and equality. Financially exhausted by the costs of war, and embattled by anti-imperial uprisings in other parts of the globe, they also reluctantly conceded power to local politicians. In the French territories, African voters won the right to elect

² A number of Latin American republics legislated compensation for slave emancipation after independence, but few owners were compensated since the funds to do so evaporated during the decades of civil wars and international conflicts during those lost decades. Thus, emancipation had a huge egalitarian impact.

representatives to the Parliament in Paris. In English-speaking Africa, the British appointed local politicians to legislative institutions; later, they filled these posts through elections; and later still they modified the colonial governor's Cabinet in the same manner. Like Latin America 150 years earlier, a less unequal Africa was emerging with independence.

Post-Colonial Violence

As the empires collapsed, so too did imperial defenses against external intervention and the imperial deterrent to internal conflict. Latin America fell victim to numerous foreign interventions. Spain made serious efforts to re-conquer its colonies until well in to the 1830s. Britain, France, Spain, and other powers imposed blockades or landed troops to secure economic and military advantages, or to defend their foreign markets. Elite factions in many former colonies supported these interventions. Beginning in the 1820s, the United States competed directly with the British in Mexico, the Caribbean, Central America, and occasionally elsewhere, the two powers backing opposing factions in local civil conflicts. Relative to the industrial core, Latin America was a violent place between 1820 and 1870 where violent deaths averaged 1.2 per thousand, or nearly four times that of western Europe (Bates *et al.* 2007, Table 1).

Foreign incursions also increased in post-independence Africa. While avoiding a hot war on European soil, the Soviet Union and the United States were quite willing to spar on African soil. The cold war spilled over into the Congo on several occasions, with the USSR, China and Cuba supporting rebel movements and the United States and its allies backing incumbent regimes. In the Horn of Africa, the United States and the USSR

again backed opposing sides. So too in South Africa, where the United States long condoned the Apartheid government's occupation of Namibia, while the Soviets and Cubans backed liberation movements there and in the Portuguese colonies of Mozambique and Angola. The result was widespread destruction of property and thousands killed.

The newly independent Latin American countries did not possess internationally or even domestically recognized boundaries. Border wars, especially in Central America, were provoked by efforts to reunify now-independent territories. The conflicts were very costly and contributed to persistent fiscal crises: between 1822 and 1860, military expenditures averaged about 77 percent of total budgets in Latin America.³ Conflicts over borders were less prevalent in Africa, where wars against minority regimes were more common. Between 1950 and 1973, violent deaths averaged 2.4 per thousand in Africa, or more than six times the OECD. Note that post-colonial Africa was twice as violent as post-colonial Latin America (2.4 versus 1.2 deaths per thousand). One wonders how much of the difference was due to the larger European presence in Latin America and how much to the relative efficiency of 20th century weaponry.

Violence, Political Volatility and Post-Colonial Lost Decades

In post-colonial Latin America and Africa, high levels of violence, political instability, economic balkanization, and anti-trade policies all sabotaged economic

³ Government spending in Latin America was from 5 or 10 percent of GDP. Thus, military expenditures were from 3.8 to 7.7 percent of GDP.

growth and reduced state capacities below the already low levels that had characterized the colonial regimes.

Table 1 summarizes Latin American economic performance between 1820 and 1870, where it is compared with the European 'core' (what the table calls the OECD) and with post-1950 Africa. Latin American per capita GDP growth rates were 0.07 percent per annum, or, adjusting for the dubious quality of the data, about zero. This during a period when per capita GDP was growing at 1 percent per annum in the industrializing European core. The post-independence decades were clearly ones of dramatic falling behind for Latin America, and the correlation between conflict, violence and instability, on the one hand, and poor growth, on the other, was causal (Ponzio 2005). The African per capita GDP growth rate was 0.89 percent per annum between 1950 and 1992, this during an era when the European industrial core grew almost three times as fast. These post-independence decades were ones of dramatic falling behind for Africa, and it appears, once again, that conflict, violence and political instability were the root causes (Easterly and Levine 1997; Collier *et al.* 1999; Artadi and Sala-i-Martin 2003). In short, economic performance in the half-century after independence was abysmal in both Latin America and Africa. Lost decades indeed.

Paul Collier and his collaborators offer insight into the impact of violence on private capital in Africa (Collier *et al.* 2002). Conflict affected both the composition and the quantity of capital. In the face of political instability, uncertainty over property rights and potential violence, individuals tend to hold more mobile forms of capital, liquid rather than fixed investments or land. And when fighting destroys old capital, investment in new capital also declines. Both the reduction in the demand for local capital and the

shift from fixed to liquid assets promoted capital flight. One estimate has it that 40 percent of private African wealth had been moved offshore by 1980, and that the threat of violent conflict was among the most important determinants of capital flight (Collier *et al.* 2002, p. 22).

Others have also found a direct relationship between civil war and poor economic growth in Africa, the channel of influence running through capital formation (Gyimah-Brempong and Corley 2005). The impact was very large relative to average growth rates, something in excess of 4 percentage points. Collier and his colleagues calculated that the long term effect amounted to a growth rate reduction of 2.1 percentage points over the five years following a civil war (Collier *et al.* 1999). The Collier estimate is large enough to account for a major portion of the lost decades gap between Africa's GDP per capita growth rate and that of other parts of the world.

At the end of the Cold War, Africa had about a quarter of the world's nations, about a tenth of the world's population and about a twentieth of the world's GDP. Yet, it had about half of the world's civil wars. Thus, Africa has supplied far more than its share of violent political conflict. It is perhaps for this reason that Africa is rated the riskiest continent for investors. One can only suppose that the same political instability and violence explained the lack of foreign capital in post-independence Latin America even after 1850 when the late 19th century global capital market really started its boom (Obstfeld and Taylor 2004). While hard estimates of capital flight from post-colonial Latin America are absent, it probably happened there too.

Lost Decades, Balkanization and Anti-Market Policy

Political, fiscal, currency and market fragmentation created economic balkanization in post-independence Latin America (Irigoin 2003; Prados 2006; Grafe and Irigoin 2006). Balkanization probably had a smaller impact in Latin America than in Africa since inter-colonial trade in the Americas was relatively modest, largely due to imperial trade monopolies and high transport costs. Unfortunately, post-colonial protectionism diminished any positive impact that could have been expected from the removal of Iberian commercial monopolies. In 1820, the three biggest Latin American economies had an average market size (GDP) only about one-fifth that of the average European core country (Bates *et al.* 2007, Table 4). Combined, however, these three would have formed a federation about 73 percent of the European core country average size. In 1870, the average size of the four biggest Latin American economies was less than a fifth of the average European core country, but the four combined would, once again, have made a federation 73 percent of the European core country. The young republics paid for their balkanization with small markets, small firm size, and correspondingly low productivity. If scale economies and internal trade matter as much as economists and historians think, post-colonial Latin America could have lost a lot from this fragmentation and balkanization, especially after railroads became available in the 1830s to conquer the physical barriers to market integration.

Balkanization took place in post-independence Africa as well, and to an even greater degree. By 1960, the French colonies had opted for self-government and dismantled their respective federations. While they remained within a currency zone managed by France, each could now impose tariffs, regulate trade, and manage transport

services with an eye to their respective national jurisdictions rather than to international markets. The achievement of independence by Zambia and Malawi marked the break-up of the Federation of the Rhodesias and Nyasaland. The East African High Commission also broke apart, as newly-independent Uganda and Tanzania each sought to promote the growth of local industries, which tended to locate in Kenya. Throughout Africa, each newly-independent country issued its own currency. Both English- and French-speaking countries regulated labor and capital flows across its boundaries. In addition, governments adopted policies that fragmented transport networks. The effect of balkanization is clear in the data: the average African economy had a market size (GDP) only one-tenth that of the average OECD country in both 1950 and 1992. To make matters worse, most countries opted for import substituting industrial policies, seeking to promote the formation of local manufacturing despite the small size of local markets, much like the new Latin American republics did in the 19th century.

The aggressive anti-trade and anti-market policies in Latin America meant that the continent failed to benefit from the boom in world trade between 1820 and 1870.⁴ So too in Africa, where protected economies failed to exploit the world trade boom which started after 1950. Like the new Latin American republics, post-colonial African governments adopted a mix of anti-trade and anti-market policies, the most notable features of which were: the movement to a closed economy; the regulation and promotion of industry; and the widespread use of price controls (Ndulu and O'Connell 2007).

Prevailing economic doctrines, political commitments to socialism, and pressures for

⁴ By 1865, and with the exception of the United States, Latin America had the highest tariffs in the world (Coatsworth and Williamson 2004). High post-independence tariffs in Latin America can be explained by war revenue needs, redistribution goals, domestic industrial policy, as well as other forces (Williamson 2006, chp. 7; Williamson 2007).

economic redistribution put a political premium on these interventionist policies. Indeed, governments adopted such policies in 60 percent of the cases by the mid-1970s. Even Africa's coastal economies, which were spared civil war in the post-imperial period, were subjected to these anti-trade and anti-market policies. This fact may help explain their failure to emulate the growth performance of coastal economies in other parts of the developing world in the late 20th century, especially those of Asia (Sachs 2001).

Table 2 offers some summary statistics confirming that both regions were highly protectionist, anti-global, and had high tariffs (and export taxes). The average Latin American tariff rate in 1870 was about 24 percent, more than four times that of the European core.⁵ Furthermore, Latin America relied heavily on customs duties as a source of revenue. The average share of customs duties in total revenues across eleven Latin American republics was 57.8 percent between 1820 and 1890 (Bates *et al.* 2007, p. 14). Customs revenues were even more important for federal governments (65.6 percent). In the modern era, when non-tariff barriers are often much more effective in reducing trade, the average African tariff rate was still almost 15 percent (1971-1991) vastly higher than for free trade OECD. Post colonial Africa scored, and post-colonial Latin America would have scored, extremely low on the Sachs-Warner openness index. In the case of Latin America, these negative anti-global factors swamped the positive effects that should have come from the dissolution of imperial trade monopolies.

⁵ An average tariff rate of 24 percent may seem modest, but it was consistent with *much* higher tariffs on import-competing goods, like manufactures.

Lost Decades and the World Economic Environment

Table 3 reports impressive export growth rates in Latin America *after* the lost decades, averaging a little more than 2 percent per annum from 1850 to 1912. The half century before 1850 is quite a different story: except for Chile, the growth rates of exports per capita were below 1 percent per annum, and in three cases they were below 0.4 percent per annum. The source of low and stable exports was certainly not faltering world demand since during its lost decades Latin America shared in the spectacular secular terms of trade boom which favored all commodity exporting periphery regions (Williamson 2006, chp. 6). True, Latin America had a less dramatic terms of trade boom than did the rest of the periphery, but over the four decades between 1820 and 1860 the ratio of export to import prices in Latin America rose by more than 50 percent.

What about post-colonial Africa? While the mid-late 1980s were certainly bad years for its commodity prices, Africa had twenty or even forty years (if we reach back to 1940) of strong markets for its exports (Deaton 1999). Clearly, explanations for Africa's and Latin America's lost decades cannot lie with poor world market conditions.

The Drift to Liberalism

Post-colonial violence and economic decline in both Africa and Latin America reduced state capacities and thus undermined economic strategies that required strong national governments. Yet, Latin America's civil wars and international conflicts also undermined many burdensome (and inegalitarian) colonial institutions: caste systems, slavery, state monopolies, trade regulations, heavily taxed urban consumption, state

enforcement of the tithe, archaic property rights in land and restrictions on internal trade.⁶ The slave system had been undermined in Hispaniola and in those mainland colonies where independence leaders offered freedom to slaves who joined them (Bolívar in Venezuela and Colombia, San Martín in Argentina and Chile). Secularizing governments stopped enforcing the tithe. Entail (*mayorazgo*) was abolished when republican governments refused to recognize titles of nobility. Church property was disentailed, and when the Church resisted (as in Mexico), its properties were expropriated and sold. The hitherto inalienable lands assigned to indigenous villages and town councils (*cabildos*, *ayuntamientos*) were sold and efforts were undertaken to privatize public lands through auctions, grants, and colonization. Reforms of the property rights system culminated in new civil and commercial codes after mid century. Fiscal necessity (to finance conflicts) as much as ideology drove much of this activity, which was often accompanied by new tariff codes, fiscal reform, and the reorganization of judicial systems.

The net effect of these institutional changes was to liberate economic activity from a burdensome colonial legacy and to make for a much less unequal society: they undermined state-sanctioned private privileges of the elite and dismantled colonial monopolies. Thus, the Latin American republics drifted toward liberalism and less inequality throughout the lost decades. Similarly, state-centered, anti-market strategies in Africa were undermined and the liberalization of economic policies was set in motion. Governments had over-valued their currencies, undermined export incentives and created incentives for smuggling. Because total public revenues relied so heavily on import and

⁶ Customs houses along roads and at city gates were eliminated. Furthermore, restrictive regulations were abandoned, such as the rules mandating seizure of imported goods that deviated from specified routes into the interior and required a document called *guias* which had to be signed at each destination and returned to the port of entry. The elimination of these institutions was trade-creating, of course.

export taxes, they declined. In addition, governments that had regulated industries and imposed price controls created incentives for economic activity to shift to the informal economy, where it remained untaxed. This policy induced fiscal crisis and contributed to the collapse of political order. Furthermore, since governments had retained power by targeting economic benefits to powerful constituencies, the decline in public revenues led to a rise in political instability. When governments could not pay their military forces – or paid them in worthless currencies -- soldiers began to pay themselves in kind by engaging in extortion and looting, giving rise to even higher levels of economic insecurity.

Reform, Recovery and the Belle Époque

Nearly everything changed in Latin America after the 1860s. First, there came political (and often military) victory of Liberal political forces that eliminated ethnic discrimination by the state, abolished slavery, separated church and state, put an end to archaic property rights in land, privatized public assets (especially land), abolished internal customs, and eliminated public monopolies. Second, long term stability was secured in most cases by means of historic compromises among competing economic interests. Once conservatives accepted the new rules of the game, militarism and popular mobilization were replaced by governing arrangements that provided major domestic and foreign business groups secure access to influence. Third, the new political economy came to be embodied in modern civil and commercial codes, judicial reform and reorganization, new banking and insurance laws, renegotiation of domestic and external debts, tariff protection for industries in the larger economies, increasing public

investment in physical infrastructure and security. Fourth, stability facilitated economic growth, which helped to cement the new political economy (Ponzio 2005). The GDP per capita growth rate was 1.8 percent per annum for Latin America between 1870 and 1913, one of the highest in the world (Maddison 2003, p. 142). Economic growth was sustained by new investment, particularly foreign investment, which came first in response to government guarantees and subsidies (railroads, public works, banking), and then to exploit new opportunities in export production and industry.

These changes could not have been achieved in most Latin American countries without the conflict and bloodshed of the lost decades. Civil wars destroyed many of the colonial institutions that Liberals sought to abolish long before the fighting stopped. This destructive phase of institutional modernization facilitated the transition to a second more constructive phase in which governments discovered the institutional arrangements and policies most likely to encourage investment and growth. However, the new regimes succeeded in eliminating (or at least diminishing) the political participation of the rural poor, and thus their relative economic position. They centralized power in provincial and national capitals, away from villages and small towns, adding more to rural-urban income gaps. They also installed, or enforced more rigorously, property and literacy limits on the franchise. Political exclusion aided political stability and economic growth, but favored a less egalitarian society. Still, most stable Latin American regimes of the late 19th century lacked the capacity or the incentives to create institutions that could credibly guarantee the property and civic rights of ordinary citizens or give priority to investments in human capital. Thus, institutions favoring inclusive development did not develop in Latin America after the lost decades were over.

Latin America finally emerged from its post-independence lost decades into a second half-century of impressive growth and political stability. But the social costs of the policies that led to this Latin American outcome were high, generating benefits for the few, more economic inequality, and political exclusion.

Next, we now turn to the evidence confirming this growth-inequality trade-off over the three centuries between 1600 and 1929.

Inequality, Independence and the Belle Époque: Climbing Up the Trade-Off

Most analysts of the modern Latin American economy believe that Latin America has always had very high levels of income and wealth inequality. They see today a more unequal Latin America compared with Asia and the rich post-industrial nations (López and Perry 2008) and then assume that this must always have been true. Indeed, Engerman and Sokoloff (1997) have famously argued that high inequality appeared very early in the post-conquest Americas, and that this fact supported rent-seeking and anti-growth institutions which help explain the disappointing growth performance we observe there even today. This conclusion is not supported by recent research. Latin America certainly *did* reach very high levels of inequality at the end of the colonial era, but it was *not* any higher than pre-industrial western Europe. Furthermore, inequality fell markedly during the insurgency and lost decades after independence, so much so that it was quite a bit lower than western Europe just prior to the Latin American *belle époque*. It only became high thereafter.

Latin America in Context: Pre-Industrial Inequality the World Round

Recently, Branko Milanovic, Peter Lindert and myself (2008; hereafter MLW) collected what we call an ‘ancient inequality’ data base for 29 places, ranging over two millennia from the Roman Empire in the year 14 to British India in 1947. The sample includes four Latin American observations: Nueva España 1790, Chile 1865, Brazil 1872, and Peru 1876, although a new Mexican 1844 observation for Querétaro can now be added to the sample. While each of these 29 observations and that for Querétaro reports a Gini coefficient and other measures of inequality, only Tuscany 1427 offers a full size distribution of income. Instead, the observations have been constructed mainly from what are called *social tables*, sources which report average income and income recipients by social classes, but no income variance within them.

Social tables are particularly useful in evaluating ancient societies where classes were clearly delineated, where the differences in mean incomes between them were substantial, and where mobility between them was trivial. If class (and race) were the primary determinants of income, and if income differences between classes were large while income differences within classes were small (mainly reflecting life-cycle status and luck), then most inequality would be explained by average income differences between classes. Indeed, when income variance within class is also available for any pre-industrial country offering social table estimates, the differences between measured inequality are typically very small whether within class variance is included or excluded. In short, the lion’s share of inequality in pre-industrial societies is and was accounted for by between-class average income differences.

Figure 1 reports what the ancient inequality data, where the Gini coefficients are plotted against income (GDI) per capita. Figure 1 also displays what is called the *inequality possibility frontier* (solid line), a curve based on the maximum inequality the elite could have extracted at that income per capita. Now then: what explains the patterns we observe there?

Elsewhere, empirical analysis of Figure 1 has confirmed the following (Milanovic *et al.* 2008): The Kuznets hypothesis posits that inequality tends to follow a bell-shape as average real income increases. Although Kuznets formulated his hypothesis explicitly with a view toward industrializing and industrialized economies, his Curve is even more apparent among these pre-industrial economies, and for good reason. After all, the secular upswing in the Kuznets Curve could be easily explained by increases in per capita income: poor countries do not have much surplus for the elite to extract, but as income rises in pre-industrial economies, so does the surplus and potential inequality. In addition, the more urbanized countries had higher inequality, consistent with the common finding that inequality in urban areas tends to be higher than in rural areas (Ravallion *et al.* 2007). Indeed, each percentage point increase in the urbanization rate is associated with an increase in the Gini by 0.35 points. Colonies were clearly much more unequal: holding everything else constant, non-colonies had a Gini almost 13 points lower than colonies: the latter were ruled by foreign elites which were able and willing to achieve higher extraction rates than weaker local elites; and countries with weak local elites but with large surpluses attracted powerful colonizers to extract it (Acemoglu, Johnson and Robinson 2001, 2002).

Population density is negatively associated with inequality. The negative impact of population density on inequality seems to be counter-intuitive. After all, conventional theory would predict that more population pressure on the land should raise land yields and land rents, lower labor's marginal product and the wage, thus producing *more* inequality, not less. Furthermore, this effect should have been all the more powerful in pre-industrial societies where land and labor drove inequality not, as in modern societies, human capital and financial wealth. It seems likely that this conventional effect is being offset in the ancient economy data by two forces. First, densely populated agrarian societies also had lower per capita income, so this may have been working against the conventional force (since inequality rises with per capita income). Second, more densely populated agrarian societies must have had higher relative food prices than thinly settled or frontier societies, so that nominal subsistence had to be much higher to purchase the more expensive foodstuffs, lowering measured inequality.⁷ It seems likely that this force must have been most powerful during the two millennia before the middle of the 19th century since a world market for grains did not yet exist and thus local conditions dictated the relative price of food (Clingingsmith and Williamson 2008; Studer 2008). This second offset has important implications for comparing inequality in the labor-scarce and resource-abundant Americas with the labor-abundant and resource-scarce Europe, and between the densely populated highlands in Mexico and the Andes relative to resource-abundant Southern Cone.

⁷ Rarely do even modern inequality studies assess the impact of different class-specific cost-of-living trends on *real* inequality trends. We know this mattered hugely in early modern Europe (Hoffman *et al.* 2002), and we need to know whether it has also mattered at any time in Latin America since 1491. When Latin America underwent her commodity export boom during the *belle époque*, did the rise in food export prices in the Southern Cone serve to raise *real* inequality even more than *nominal* inequality? Did it have the opposite effect in Mexico, which imported cheap corn from the United States? And what about 20th century Latin American food exporters when their terms of trade collapsed 1915-1940?

Has Latin America Always Been More Unequal?

Has Latin America always been more unequal than other parts of the world, as implied by the work of Stanley Engerman and Kenneth Sokoloff (1997)? Engerman and Sokoloff offered a hypothesis to account for Latin American growth underachievement during the two centuries following its independence. Their thesis begins with the plausible assertion that high levels of income inequality, and thus of political power, favor rich landlords and rent-seekers, and thus the development of institutions which are compatible with rent-seeking but incompatible with economic growth. Their thesis argues further that high levels of Latin American inequality have their roots in the natural resource endowments present when Iberia conquered and colonized the region five centuries ago. Exploitation of the native population and of imported African slaves, as well as their subsequent dis-enfranchisement, reinforced the development of institutions incompatible with growth. Engerman and Sokoloff had no difficulty collecting evidence which confirmed high inequality, dis-enfranchisement and lack of suffrage in Latin America compared with the United States. But what about comparisons with the rest of the world? Oddly enough, neither the Engerman-Sokoloff team or its critics have confronted the thesis with inequality evidence for the economic leaders in northwest Europe at comparable pre-industrial stages.

Table 4 presents inequality information for pre-industrial northwest Europe (that is, prior to about 1800) and for pre-industrial Latin America (that is, prior to about 1870). For the former, we have observations from 1788 France, 1561 and 1732 Holland, and 1688, 1759 and 1801 England-Wales. For the latter, we have Mexico 1844, Chile 1861, Brazil 1872, and Peru 1876. Engerman and Sokoloff coined their hypothesis in terms of

income inequality. According to that criterion, their thesis must be soundly rejected. That is, the (population weighted) average Latin American Gini (45.9) was considerably *lower* than that of northwest Europe (52.9), not higher. Furthermore, the comparative inequality implications emerging for these social tables have been confirmed recently by Rafael Dobado Gonzáles and Hector Garcia using an inequality proxy – Maddison’s real GDP per capita relative to their unskilled grain wage: according to their data, Mexico, Bolivia and Colombia all had less inequality in 1820 than did the Netherlands, the United Kingdom and France, or even Portugal and Spain (Dobado Gonzáles and Garcia 2009: Figure 18).

It is not true that pre-industrial Latin America was more unequal than pre-industrial northwest Europe. Thus, if inequality encouraged rent-seeking and discouraged growth in Latin America, it must have done it even more so in northwest Europe where the industrial revolution first started! Since we know that high inequality was consistent with industrial revolutions occurring in northwest Europe, it is unclear why it should be inconsistent with them in Latin America somewhat later. Indeed, the qualitative evidence reviewed above suggests that higher inequality was closely correlated with faster growth in Latin America after 1600. What about the quantitative evidence?

Broad Sweep: Reconstructing Latin American Inequality Trends since 1600

Table 5 and Figure 2 use the MLW Gini regression discussed above to predict Ginis for Latin America in 1600, 1700, 1790, 1820, 1870 and 1929. Table 5 also predicts Ginis for Mexico in 1790, 1820, 1844 and 1870. Note also that the table reports predictions for the five Latin American cases where we also have actual inequality

estimates: i.e. Nueva España 1790, Mexico 1844, Brazil 1872, Chile 1865 and Peru 1876.

While the correlation between actual and predicted inequality for those five cases is hardly perfect, it is positive and significant ($R^2=0.42$), a comforting result. Indeed, the only big deviant of predicted from actual is 1861 Chile, where relatively high urbanization and GDP per capita drive up the predicted Gini well above the actual. Without the Chilean observation, $R^2=0.74$.

Over the two centuries between 1600 and 1790, a number of fundamentals were at work in Latin America which served to raise inequality. First, populations partially recovered their 16th century losses, rising from 8.6 million in 1600 to 12.5 million in 1790. Thus, population density rose from about 0.78 to 1.14, and land-labor ratios fell by about 31 percent. Second, GDP per capita rose from 438 to 650, or almost by half, probably the fastest growing region over those two centuries. Urbanization rose from 9 to 14.2 percent, or by more than half, and to levels exceeding most of Europe. These forces imply that the Gini might have risen from 36.2 to 57.6, which implies that over the three centuries between 1600 and 1870 Latin American inequality reached its peak in the late colonial decades just prior to independence (Table 5).

Independence, Lost Decades and Egalitarian Gains

While revolution, independence and the lost decades that followed up to about 1870 were very complicated times, and while there must have been many forces at work influencing inequality, the MLW ancient inequality regression predicts that the Gini probably dropped from 57.6 in 1790 to 46.4 in 1870, consistent with the qualitative evidence cited in the first part of this paper. The biggest force contributing to this big fall

was, of course, independence and de-colonization since the lost decades between 1820 and 1870 yielded very little GDP per capita growth⁸ or urbanization. Mexico repeats the Latin American (predicted) trends, its Gini falling even more steeply from 57.7 to 44 between 1790 and 1870, and, once again, by far the biggest fall being between 1790 (57.7) and 1820 (47.8). Ongoing research by Amilcar Challu confirms the big fall in Mexican inequality: he estimates a Gini of 51.3 for 1844 Querétaro which implies that most of the Mexican inequality fall between 1790 and 1870 had taken place by the 1840s.

Leticia Arroyo Abad (2008: Figure 1) confirms this sharp fall in inequality after independence. She uses data on wage rates and land rents to infer trends in inequality. When her rent-wage ratios for Argentina, Mexico, and Venezuela are weighted by 1850 populations, the resulting Latin American rent-wage ratio falls by 11 percent between 1820 and 1850, and for Mexico alone the fall is 12 percent. Furthermore, the Arroyo Abad Mexican rent-wage ratio trends and the Mexican Gini coefficients coming from Table 5 are closely reproduced by the Amilcar Challu rent-wage series for central Mexico 1780-1869 reported in Table 6. Challu's inequality index rises by 38 percent from the 1780s to the 1800s, falls by 29 percent from the 1800s to the 1820s, and then continues a slow downward drift during the lost decades up to the 1860s.

Independence and the early republican governments brought greater equality to Latin America.

⁸ Debate over Angus Maddison's data is intense, but some adopt his more positive view of Latin American growth 1820-1870. However, even Leandro Prados de la Escosura's more rosy view of post-independence is consistent with very poor growth performance (Prados 2009; 2007: Table 1.4): between 1820 and 1850, the two biggest republics, Brazil and Mexico, grew at 0 and 0.1 percent per annum, respectively; in the 1850s, the figures were -0.1 and -1.3. Lost decades indeed!

Creating Modern Inequality during the *Belle Époque* Boom

As “export-led economic growth took off throughout Latin America in the late 19th century, [income and wealth] inequality increased” (Coatsworth 2008: 567-8), and we know the reasons why. Latin America faced a rising terms of trade throughout the late 19th century, as commodity prices boomed. Since it was a primary product exporter, land and mineral rents were driven up relative to wages. This happened everywhere around the poor periphery (Williamson 2002, 2008), but it was especially dramatic in Latin America partly because the region was able to expand its export sectors so effectively, thus to become very large shares in GDP (Williamson 2009: Table 4.1). Since land and mineral resources were held by those at the top, inequality rose as well.

Not too long ago, the only data we had to judge the magnitude of these inequality trends were proxies, like the land rent to unskilled wage ratio or the GDP per worker to unskilled wage ratio (Williamson 1999, 2002). Thus, when the rent-wage ratios for Argentina, Mexico, Uruguay and Venezuela (Arroyo Abad 2008: Figure 1) are weighted by 1890 populations, the Latin American average rises by 37 percent between 1850 and 1900. This rent-wage proxy implies a very big inequality surge over the second half of the century. We also have the more comprehensive *belle époque* inequality evidence for the Southern Cone summarized in Table 7. It comes from two sources: first, Ginis calculated from new evidence collected by Luis Bértola and his collaborators (2009: Table 4), and second, what Leandro Prados de la Escosura (2007: Table 12.1) calls his backward projected Pseudo-Ginis. They both tell the same tale: inequality rose by 11-37 percent over the *belle époque*. True, the Latin American weighted average reported in Table 7 refers only to four republics in the Southern Cone – Argentina, Brazil, Chile and

Uruguay, an average that misses the heavily populated Mexican and Andean republics. However, Prados de la Escosura also shows that a Mexican inequality proxy -- income per worker relative to the unskilled wage ratio -- rose by about 2.8 times between the early 1880s and 1920 (Prados de la Escosura 2007: Figure 12.1b), suggesting that over its four Porfiriato pre-revolutionary decades Mexico followed the Southern Cone by recording a steep rise in inequality. The Brazilian inequality index increased by 45 percent between the early 1880s and the mid 1920s (Prados de la Escosura 2007: Figure 12.1b). Furthermore, the Arroyo Abad rent-wage inequality proxy for Mexico confirms the Prados data since the 1870-1900 increase was 27 percent over the three decades. It follows that Latin American inequality probably rose by 30 percent or more over the *belle époque*. Applying that increase to the 1870 Latin American Gini coefficient in Table 5 would imply that it rose from 46.4 to 60.3, making the Gini in the 1920s the highest that Latin America had recorded since 1492, even higher than the 1790 colonial peak (57.6), and *much, much* higher than 1600 (36.2), or even 1700 (48.5).

A Latin American Growth-Inequality Trade-Off Revealed

Compared with the rest of the world, Latin America underwent fast economic growth across the two colonial centuries up to insurrection in the early 1800s, very poor economic growth over the five post-independence decades up to 1870, and fast economic growth again during the *belle époque* up to the 1920s. Figure 2 traces out the region's inequality over the same three regimes reaching a high at the end of the first regime, a low at the end of the second regime, and its highest at the end of the last regime.

Inequality and growth were positively correlated over the three centuries between 1600 and 1929. It also appears that the correlation may have been causal. Has this correlation broken down since then?

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Table 1 Post-Independence GDP Per Capita Growth 1820-70 and 1820 Levels

	Latin America 1820-1870	Ratio Latin America to OECD	Africa 1950-1992	Ratio Africa to OECD
GDP per capita level (in 1990 US dollars)	751	0.44	1099	0.1
GDP per capita growth	0.07%	0.07	0.89%	0.31

Source: Bates *et al.* (2007, Table 3).

Table 2 Post-Independence Tariffs and Openness

	Average Tariff Rate 1870 (%)	Average Tariff Rate 1971-99 (%)	Sachs-Warner Openness Indicators	
			1963	1992
(1) Latin America	24.1			
(2) Western Europe	5.7			
Ratio (1)/(2)	4.23			
(3) Africa		14.9	0.066	0.177
(4) Europe OECD		0.43	1	1
Ratio (3)/(4)		34.75		
Ratio (4)/(3)			15.1	5.6

Source: Bates *et al.* 2007, Table 4).

**Table 3 Latin American Exports per capita, current US dollars
1800-1912**

Country/Year	1800	1850	1912	Growth Rate per annum (%)	
				1800-1850	1850-1912
Argentina	10.03	10.3	62.1	0.05	2.89
Brazil	4.78	5.0	14.2	0.09	1.69
Chile	1.63	7.8	44.7	3.18	2.86
Cuba	18.35	22.2	64.7	0.38	1.74
Mexico	2.11	3.2	10.7	0.84	1.97
Peru	2.31	3.7	9.4	0.95	1.52

Source: Bates *et al.* (2007, Table 6).

Table 4 Inequality in Pre-Industrial Latin America and Western Europe

Country	Year	Source of Income Data	Population (000)	Actual Gini
Brazil	1872	occupational census	10,167	43.3
Chile	1861	occupational census	1,702	54.0
Mexico	1844	social tables	7,089	51.3
Peru	1856	social tables	2,469	35.5
Latin America			21,427	
Unweighted average				46.0
Weighted average				45.9
England	1688	social tables	5,700	45.0
England	1759	social tables	6,463	45.9
England	1801	social tables	9,053	51.5
France	1788	social tables	27,970	55.9
Holland	1561	census dwelling rents	983	56.0
Holland	1732	census dwelling rents	2,023	61.1
Western Europe			52,192	
Unweighted average				52.6
Weighted average				52.9

Source: Williamson (2010, Table 7).

Table 5 Predicted and Actual Ginis 1491-1876

	GDP per capita (1990 US\$)	Gini Coefficients	
		Actual	Predicted
Latin America			
1491	416		22.5
1492	416		35.1
1600	438		36.2
1700	530		48.5
1790	650		57.6
1820	691		47.0
1870	676		46.4
Mexico			
1790	710	63.5	57.7
1820	759		47.8
1844	718	51.3	46.1
1870	674		44.0
Brazil 1872	721	43.3	48.9
Chile 1861	1083	54.0	72.3
Peru 1876	653	42.2	45.4

Source: Williamson (2010, Table 4).

**Table 6. An Inequality Proxy for Central Mexico 1780-1869:
Land Rents per Hectare Relative to City Unskilled Wages**

Decade	land rent/unskilled wage
1780-1789	62.0
1790-1799	72.5
1800-1809	100.0
1810-1819	80.0
1820-1829	71.0
1830-1839	77.2
1840-1849	78.7
1850-1859	60.8
1860-1869	52.6

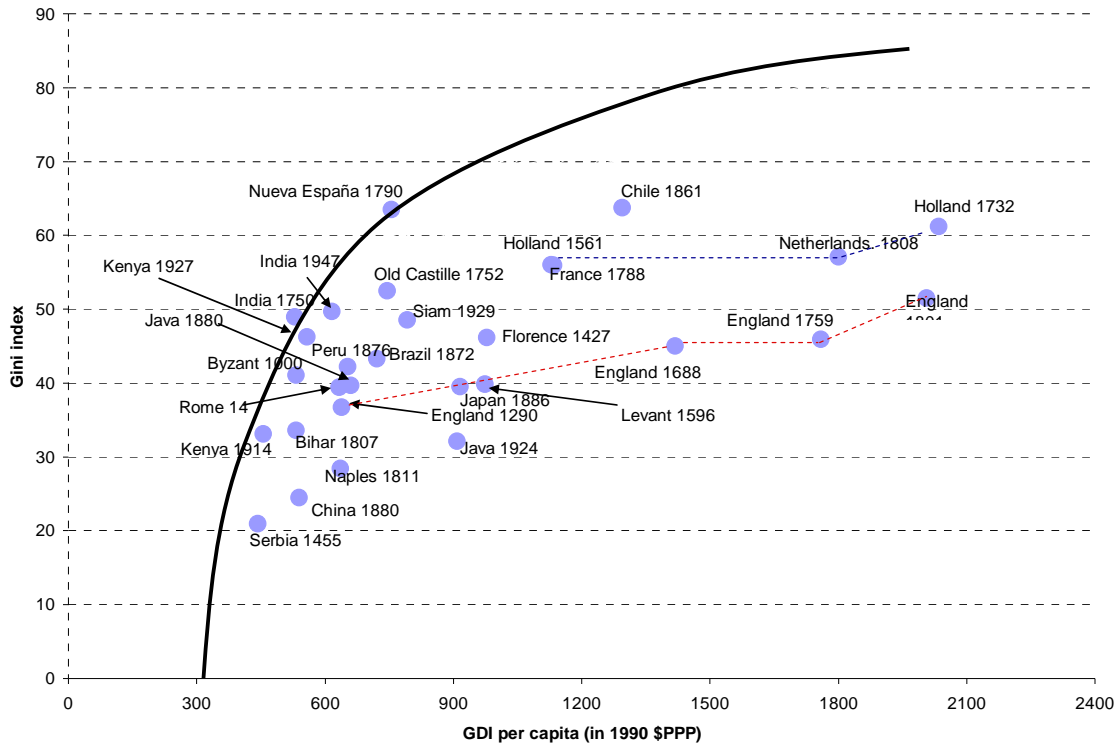
Source: Williamson (2010, Table 5).

Table 7 Latin American Inequality Trends 1870s-1920s

	Argentina		Brazil		Chile		Uruguay		Latin America	
	Gini	P-Gini	Gini	P-Gini	Gini	P-Gini	Gini	P-Gini	Gini	P-Gini
1870s	52.2	39.1	39.2	32.9	59.4	41.3	48.1	29.6	44.0	34.8
1920s	57.4	49.3	59.7	47.2	64.1	49.2	56.2	36.6	59.6	47.5
% change	10.0	26.1	52.3	43.5	7.9	19.1	16.8	23.6	35.5	36.5

Source: Williamson (2010, Table 6).

Figure 1 Ancient Inequality: Estimated Gini Coefficients, 14-1947



Note: The solid line IPF is constructed on the assumption that subsistence=\$PPP 300. See text.
Source: Milanovic, Lindert and Williamson (2008: Figure 2).

Figure 2. Predicting Inequality in Latin America 1600-1929

