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### **Abstract**

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**Keywords:** Latin America, independence, growth, falling behind, lost decades

**JEL Classification:** F54, N16, N46, N76, O54.

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## *Lost Decades? Independence and Latin America's Falling Behind, 1820-1870*<sup>1</sup>

Leandro Prados de la Escosura<sup>+</sup>,

### **Abstract**

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This paper explores the connections between independence and Latin America's relative decline during the half a century after independence. The release of the fiscal burden was partly offset by higher costs of self-government, while opening up to the international economy represented a handmaiden of growth. Colonial emancipation had a different impact across regions and widened regional disparities. Per capita income grew and though Latin America fell behind to the U.S. and Western Europe, improved or kept its relative position to the rest of the world. 'Lost decades' seems an unwarranted depiction of the period 1820-1870.

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Independence, a long process that was completed by 1825, is recurrently associated to the gap in living standards between Latin America and developed countries.<sup>1</sup> Pessimist assessments of Latin American post-colonial performance that depict the half a century after independence as ‘lost decades’, stem largely from the contrast with the United States.<sup>2</sup> The view of economic stagnation and political turmoil

The purpose of this paper is to challenge this view by assessing the connections between independence and the origins of economic backwardness in Latin America. To do so I will confront the detailed but scattered research at national level with the grand interpretations of Latin America’s historical patterns of development in international perspective.<sup>3</sup>

The paper is organized as follows, I, first, to investigate the effects of independence across Latin America, that result from removing the colonial burden (section I), and opening up to the international economy (section II), and, then, I look at the aggregate impact on the economy of the new republics (section III). Later, I use a comparative and highly intuitive approach to examine whether long-term retardation in Latin America is related to the way independence occurred (section IV). Some remarks close the paper. The main findings can be summarized as follows:

a) The release of the fiscal burden of the Imperial system was partly offset in the new countries by the higher costs of governing themselves.

b) The integration into the world economy brought net gains to Latin American economies over the long run.

c) On the whole, during the years 1820-70, Latin American GDP per head experienced moderate growth. When compared to the U.S. and Western Europe Latin America’s position deteriorated, but remained unaltered with respect to the European

Periphery and clearly improved with respect to Africa and Asia. Hence, 'lost decades' seems an unwarranted depiction of this period.

### **The demise of the colonial rule and state formation**

Independence brought with it the release of the colonial fiscal and trade burden. The colonial fiscal burden consisted of the taxes levied on the indigenous population and included the *Indies' remittances*, or surpluses of the colonial administration that were sent to Spain. In the 1790s, it represented more than half of all the sums sent to Spain from Latin American colonies.<sup>4</sup> By 1800 residents in Bourbon Mexico paid more taxes than Spaniards in the metropolis and were making, therefore, a significant contribution to the imperial administration.<sup>5</sup> John Coatsworth conjectured that the fiscal burden represented 4.2 percent of Mexican GDP by 1800.<sup>6</sup> Removing colonial rule eliminated the fiscal burden and, *ceteris paribus*, added to Latin American GDP.

However, if the net gain for Latin America is to be estimated, an increase in the costs of administering many, not a single political unit has to be taken on board. The fragmentation of the initial national divisions took place soon after independence.<sup>7</sup>

Monetary and fiscal disintegration brought by independence produced the demise of the largest monetary union and fiscal structure in existence, contributed to political fragmentation, and reflected in weak national administrations and increasing transaction costs.<sup>8</sup> Separation had negative effects in terms of economic efficiency: commercial links among regions, however weak in colonial times, were no longer guaranteed. Increasing market integration within the Spanish empire during the late seventeenth and especially the eighteenth century, as shown by price convergence in the Viceroyalty of Peru, came to a halt with independence.<sup>9</sup> Intra-colonial fiscal transfers were, according to Grafe and Irigoin, the successful basis of the colonial system.<sup>10</sup>

After independence, unequal access to fiscal resources in the absence of intra-colonial re-distribution of tax revenues provoked a struggle for the control of fiscal resources and led to political strife. Costs in defence and law enforcement had to be duplicated, and the coordination in the provision of public goods became more difficult.<sup>11</sup> Each new republic faced the challenge of creating a new fiscal and monetary system and a domestic financial market. Customs duties became the backbone of the new fiscal systems, as in post-independent United States.<sup>12</sup> Unlike the U.S., however, most Latin American governments suffered chronic deficits over the first half of the nineteenth century as tax revenues stagnated and military expenses increased. In fact, fiscal policies were subordinated to military and political *caudillos* at the expense and dilution of tax administration. A vicious cycle emerged in which fiscal weakness led to weak government that led, in turn, to frequent challenges to the elite in power and, as a result, civil strife proliferated.<sup>13</sup> According to North, Summerhill and Weingast the break with the metropolis destroyed many of the institutions that provided credible commitments to rights and property within the Spanish empire.<sup>14</sup> The lack of stabilizing institutions made impossible to achieve efficient economic organization. Hence, a scramble to preserve colonial protection and privileges or to secure new powers occurred.

Alas hard empirical evidence remains scant and only a few national testimonies can be provided. In Mexico, the extraordinary rise in internal military expenditures, a growing tendency to rely on forced loans, and the increasing fiscal autonomy of local treasuries resulted in the destruction of the colonial treasury system.<sup>15</sup> As a result local credit markets became disintegrated. Meanwhile, public internal debt grew by nearly 40 per cent between 1823 and 1848, an outcome of growing public deficits (that reached up to 40 per cent of total government expenditure). Such a situation represented a break with the past, as there were no deficits under colonial rule. In fact, there were transfers of surplus

from one colony to another (*situados*).<sup>16</sup> Independence led to the abolition of two major sources of income of the colonial administration: the Indian tribute tax (levied on all heads of households in Indian towns) and mining taxes (10 per cent duty levied on all silver produced). This reduced potential income of the state by almost 30 per cent.<sup>17</sup> Instability paralleled public debt growth leading arguably to crowding out private investment.<sup>18</sup> A negative association has been posited between political instability and economic growth in the half century after Mexican independence.<sup>19</sup>

In the other main centre of the Spanish empire, Peru, independence took place under different circumstances: foreign republican armies defeated royalist elites. However, as in Mexico, the republican state, under chronic fiscal deficit, increased taxation on mining making its recovery difficult. War destruction of fixed capital, fiscal mismanagement and default, together with political turmoil, had a negative impact on the economy.<sup>20</sup> Independence, in the end, did not deliver the conditions for sustained economic growth.

In another area of large indigenous population, Central America, political instability and war affected the economy, including the destruction of capital, obstacles to trade and transport, and insecurity for investors, while the government forced loans from merchants.<sup>21</sup> The prolonged transition to private property surely introduced uncertainty that delayed investment in land improvement and increased transaction costs.<sup>22</sup>

Chile and Brazil behaved differently as they managed to create institutions that protected groups from aggression and expropriation, although failed to achieve political competition and cooperation among sub-national administrative entities.<sup>23</sup> Colombia, in turn, was successful in improving the colonial tax regime and, by 1850, had a much more fair (head tax on Indians, taxes on public employees and *alcabalas* –a tax on all

sales of domestic production- were eliminated), efficient (customs taxes mainly on imports) and neutral fiscal system.<sup>24</sup>

In the former Viceroyalty of River Plate political stability and economic growth were accomplished in Buenos Aires and Uruguay, while stagnation and political instability prevailed in the interior.<sup>25</sup> The Buenos Aires economy profited from the disappearance of a fiscal system that created disincentives for productive activities. Stable political institutions that allowed contract enforcement were introduced.<sup>26</sup> Rosas dictatorship restricted property and free trade, but lack of political freedom did not imply, however, total suppression of economic freedom. In the interior provinces the principles of economic freedom were not easily accepted. Only in the 1853 constitution was national organization on the basis of economic freedom widely accepted while its enforcement took another thirty years.

The provinces of the Viceroyalty of River Plate failed to devise an incentive structure to keep them voluntarily united under a single government and to take advantage of economies of scale in the provision of defence and justice, reducing transaction costs and encouraging economic development, as the separation of Uruguay and Paraguay revealed. Military threats and trade blockades had long lasting economic and political consequences on Paraguay leading to public finance crisis and economic contraction and to the political demise of proponents of more representative governments and freer trade. They also gave rise to political absolutism and redistribution of property towards the state.<sup>27</sup> Economic activity in the three decades following independence fell below the levels reached in the late colonial period.

To sum up, reallocating resources from a big closed economy, the colonial empire, to small and, often, open economies such as the new republics implied a non negligible cost. The colonial empire provided security and justice at a cost not too high.

With independence, new providers of protection emerged but with lower capacity than the metropolis. Transaction costs increased independence as political and economic institutions went through a period of turmoil and re-definition, while continued violence between and within countries also contributed to less well defined property rights. These costs were higher for the new republics because of fragmentation and the loss of economies of scale. Moreover, a single fiscal system within a monetary and customs union, such as the Spanish empire, represented significant savings compared to multiple national fiscal and monetary units created by colonial independence. On the whole, until the mid-nineteenth century the benefits derived from removing the fiscal burden overcame were partly offset by the increasing costs of providing their own governments.

### **Opening up to the international economy**

The release of the trade burden imposed by the colonial system allowed the new Latin American countries to have access to expanding world commodity and factor markets. Coatsworth reckoned that the trade burden represented up to 3 percent of New Spain's GDP.<sup>28</sup> Independence allowed the Latin American republics to trade directly with Europe and North America and it represented a reduction in transportation and commercialisation costs that, *ceteris paribus*, increased the volume traded. However, in the decades following independence warfare and political instability made the adjustment to the new international trade regime difficult. Similarly, tariff protection resulting from the new republics' budget constraints probably diminished the positive impact from the removal of Iberian commercial monopolies.

Trade theories suggest a series of testable hypotheses as regards the consequences to Latin American countries of opening up to the world economy. As a



result of getting rid of the trade burden a new 'frontier' opened up in which land expanded at a rising cost in terms of other resources.<sup>29</sup> An expansion of trade would, then, be expected and, through a better resource allocation, an increase in output. Terms of trade might decline, according to the Prebisch School, as Latin America exported primary goods and imported manufactured produce, although, in the light of Classical economists, the opposite would occur.<sup>30</sup> At the same time, changes in income distribution should take place, with a tendency for within-country inequality to rise as the reward to land, the abundant and less evenly distributed factor, improves relative to labour.<sup>31</sup> Lastly, a worsening of Latin American position in the world economy can be predicted.<sup>32</sup>

Location mattered much in the nineteenth century as the tyranny of distance was a determinant factor of trade -in particular, prior to the construction of railways (only in a large scale after 1870)-, despite the sharp reduction in ocean freight and insurance rates. Relative rather than absolute transport costs from alternative locations were what really mattered. Freight rates from Antwerp to Rio de Janeiro in 1850 were only 40 percent of those prevailing in 1820, but freight rates from Antwerp to New York fell even more, to one-fourth. Meanwhile, insurance rates were cut to one-half and to one-third for trips from Rio and Buenos Aires, respectively, to Antwerp.<sup>33</sup> Transport costs from Antwerp to Buenos Aires and Rio remained relatively stable over 1850-70 but those to Valparaiso, on the Pacific Rim, fell by 40 per cent, as a consequence of the convergence of transport costs to the Pacific with those to the Atlantic façade of Latin America's Southern Cone.<sup>34</sup>

Geographic constraints imply different outcomes of exposition to international trade across regions. Coastal regions, densely populated and with temperate climate would be at advantage to landlocked hinterlands in tropical areas, as migration and

infrastructure development become more difficult and incentives exist for coastal economies to impose costs on them.<sup>35</sup> Landlocked economies such as Bolivia and Paraguay, the interior regions of Mexico, Colombia, Brazil and Argentina, and Andean countries such Ecuador and Peru were clearly at disadvantage relative to coastal regions. In addition, countries on the Pacific Rim had a transport cost disadvantage over those on the Atlantic façade. Table 1 provides some insights about the overall transport costs that emphasize the importance of internal costs of transportation.

#### INSERT TABLE 1

Wide regional discrepancies in the degree of integration in the international economy would be expected. In Mexico, independence ended laws restricting immigration and capital inflows and brought an increase in openness (the relative size of trade went up, according to Coatsworth, from 8.1 percent of GDP in 1800 to 12.3 percent by 1845), but arguably not when compared to the late colonial period.<sup>36</sup> Meanwhile in Peru, mercantilist policies remained in place. After an episode of trade expansion up to the mid-1820s, fixed prices, taxation, and protectionism remained an obstacle to economic activity for decades. Only three decades later the stimulus of the international demand (the guano boom) opened the country up.<sup>37</sup> Qualitative evidence on Central America suggests stagnation, but current imports from Britain almost doubled (while its prices were practically halving) between two peaks (1826 and 1839) to decline afterwards.<sup>38</sup> There were limited incentives to trade as physical barriers implied high transport costs. Independence brought a break of colonial commercial networks and procedures. Links between regions of the Federation weakened as export orientation increased. Together with political instability it led to the creation of five new countries in 1839. An exogenous shock occurred as a consequence of U.S. assimilation of California: new maritime routes through Panama isthmus, together with the Panama

railroad (1855), led to a sharp decline in transport costs increasing trade and finance.<sup>39</sup>

In contrast to Spanish America, independence in Brazil did not involve a shift in the direction of trade.<sup>40</sup> The Buenos Aires economy profited from the disappearance of colonial regulation that forced it to trade through the metropolis. From re-exporting silver from Alto Peru Buenos Aires became an economy exporting livestock products. The main consequence of independence was adding new lands to cultivation and opening up to foreign trade.<sup>41</sup>

The hypothesis of an uneven impact of post-independence opening up to the international economy can be tested with evidence on the purchasing power of exports (current values of exports deflated by the price of imports) normalized by population (Table 2).<sup>42</sup> Location conditioned the importance of trade, with the Southern Cone and the Caribbean ahead of the rest. The relative dispersion of per capita exports declined, however, over the whole considered period. Evidence on capital inflows per head from Britain, the main investing country in Latin America, confirms the integration of Latin America, though uneven across countries, in the international capital market.<sup>43</sup>

#### INSERT TABLE 2

But at what pace did Latin America integrate in the international economy? Over forty years, the purchasing power per Latin American inhabitant of both exports (1830-70) and British investment (1825-75) increased noticeably, at an average annual rate of growth of 1.5 and 3.5 percent, respectively (computed from Table 2). The purchasing power of exports per capita accelerated after 1850 and its rate of growth moved from 1.2 percent in 1830-50 up to 1.8 over 1850-70, while British investment per Latin American population took off after 1865, jumping from 2.1 percent per year over 1825-65 to 9.1 percent in 1865-75, a phenomenon linked to government loans and, to a less

extent, associated to the shift of foreign investment toward railroads construction and public utilities.<sup>44</sup>

Evidence at national level on purchasing power of exports in terms of imports, also known as income terms of trade, confirms these findings. Cuba's income terms of trade improved substantially (277 by 1867, 1826=100) due to supply increases in sugar exports.<sup>45</sup> In Mexico, no trend was exhibit during 1828-1851 but, then, a sharp improvement took place up to the 1880s.<sup>46</sup> In Colombia, real exports *per capita* doubled between the late 1830s and 1880, while income terms of trade trebled between the 1830s and the 1860s.<sup>47</sup> In Brazil, real exports *per capita* multiply by three between the 1820s and the 1850s and by four between the 1820s and 1870s, while income terms of trade grew at an annual trend rate of 4.2 per cent over 1822-1849 (2.8 per cent in *per capita* terms).<sup>48</sup> Argentina also experienced a remarkable increase in the quantity and the purchasing power of her exports.<sup>49</sup> Chilean real *per capita* exports, in turn, multiplied seven times between independence and 1870.<sup>50</sup>

The net barter terms of trade, that is, the ratio of export to import prices, provide a measure of the purchasing power per unit of exports. Recent estimates for major Latin American countries are presented in Table 3. In Mexico the net barter terms of trade experienced a moderate improvement between 1828 and 1881 (at 1.4 percent per year) and probably added 3 percent to GDP by 1860.<sup>51</sup> Venezuela's terms of trade followed the Mexican pattern of stability over 1830-50, to deteriorate in the early fifties and to recover in the seventies.<sup>52</sup> In Chile, after a sharp rise and decline at the time of independence, stability was the rule.<sup>53</sup> Brazilian purchasing power per unit of exports increased in three-fourths between 1826-30 and 1876-80.<sup>54</sup> Colombian net barter terms of trade improved as much as Brazil between the late 1830s and 1880.<sup>55</sup> Richard and Linda Salvucci were able, on the basis of Gootenberg's data, to estimate that the net

barter terms of trade of Peru were 47 per cent higher in the early 1850s than in the 1830s.<sup>56</sup> Argentina's terms of trade show an improvement that peaked in the late 1850s.<sup>57</sup> The demand for exports increased due to international trade expansion and European industrialization while the growth of inputs used by the pastoral economy and a rise in productivity lie behind the supply expansion. Cuba provides the exception as her net terms of trade deteriorated between 1826 and 1866 (by 50 per cent), and when adjusted for productivity changes in the export sector (the so called single factorial terms of trade) no trend appears between 1826 and 1846 to experiment, then, a decline up to 1862 (by 61 per cent).<sup>58</sup>

### INSERT TABLE 3

Evidence tends, therefore, to reject the view of deteriorating terms of trade that hindered Latin American growth precisely at the time (1820s-1870s) when large international disparities in per capita income began to emerge. Actually, it can be suggested that the domestic terms of trade, that is, those perceived by the Latin American population, should have improved more dramatically than the international terms of trade as independence allowed to trade directly in world markets, colonial tariffs were repealed and the new republics' tariffs were often lower.<sup>59</sup> Transport costs and the increase in the scale of trade also helped to reduce margins in international trade. On the combined evidence provided by the evolution of the relative price of exports (Table 3) and the purchasing power of total exports (Table 2) the idea of *immiserizing* growth can be rejected for most of Spanish America and for Brazil.<sup>60</sup>

The opening up to the international economy has been associated to a widening of income differences within national boundaries and across countries. No much evidence is available on the former for the pre-1870 period. Argentina represents the exception. Newland and Ortiz have shown that the expansion in the pastoral sector

resulting from improved terms of trade increased the reward of capital and land, the most intensively used factors, while the farming sector contracted and the returns of its intensive factor, labour, declined, as confirmed by the drop in nominal wages.<sup>61</sup> A redistribution of income in favour of owners of capital and land (*estancieros*) at the expense of workers took place confirming empirically Stolper-Samuelson theoretical predictions.<sup>62</sup>

To sum up, the release of the colonial trade burden had net gains for the economies of Latin America as the evolution of quantities and prices of exported goods does suggest. Although trade did not have the strength to pull along the economy as an episode of export-led growth, it can be argued that, when it was not hindered by geographic and institutional barriers, it facilitated economic growth.<sup>63</sup> Trade in nineteenth century Latin America, seems to have been, in most national cases, a handmaiden of growth.<sup>64</sup> In any case, recent claims by Bates, Coatsworth, and Williamson that ‘Latin America failed to exploit the world trade boom between 1820 and 1870 [because of its] aggressive anti-trade policies’ and that, in the early nineteenth century, ‘the growth rates of exports per capita were below 1 percent per annum’, are firmly rejected by the empirical evidence presented here.<sup>65</sup> Such rejection also applies to their argument that foreign investment was just an ‘ephemeral investment cycle in the early to mid 1820s’.

### **The aggregate impact of independence**

Evidence on aggregate economic performance across countries shows a wide variance. At the core of the colonial empire, Mexico and Peru, independence did not deliver the conditions for sustained economic growth. War destruction of fixed capital, financial capital flight, mining depression, fiscal mismanagement and increasing taxation,

and political turmoil, all contributed negatively to growth. Among the explanatory hypotheses for sluggish performance in Mexico and Peru are political instability and the decline in silver production that did not recover until mid-nineteenth century both as a result of the economic policies and changes in the international market for mercury.<sup>66</sup>

Quantitative guesses are available for Mexico's economic performance. According to Coatsworth, output per head fell at a yearly rate of nearly  $-0.6$  per cent between 1800 and 1860.<sup>67</sup> Salvucci, in turn, pointed that prolonged stagnation or, even, decline of *per capita* income are appropriate depictions of Mexican economic performance over 1800-40.<sup>68</sup> More recently, Coatsworth has conceded that, after the decline during the independence wars, a very mild recovery (0.2 percent per year) occurred between 1820 and 1845.<sup>69</sup> Sánchez Santiró has gone further in the revision to sustain that economic growth and population expansion occurred between 1820 and the mid-1850s, followed by stagnation and even decline until 1870. He reckons that per capita income grew at around 0.5 percent per year during the fifty years after independence to decline, then, until the 1870s.<sup>70</sup> This view is consistent with Richard and Linda Salvucci's earlier claim that real output per head increased at 0.5 per cent annually over 1800-1840.<sup>71</sup>

Slavery economies offer a distinct and different behaviour. They did not undergo a deep political and institutional transformation. Cuba remained loyal to Spain and experienced sustained progress until 1860.<sup>72</sup> Santamaría's recent estimates point to an annual growth rate of around 1 percent for real per capita GDP between 1790 and 1860.<sup>73</sup> Low rates of growth in a context of free trade, limited structural change and political stability would have characterized the case of Brazil.<sup>74</sup>

Meanwhile, in the former Viceroyalty of New Granada, output per head experienced a rise up to mid-nineteenth century and stagnated during its central decades

in Venezuela.<sup>75</sup> Stagnation of income per head has been, instead, conjectured for Colombia.<sup>76</sup>

Economies in the Southern Cone show, in turn, sustained economic progress after independence. Chilean GDP per head grew at 0.9 per cent per year over 1810-60, though most of the improvement in *per capita* income took place after 1830.<sup>77</sup> Available economic indicators suggest fast growth in the Buenos Aires region that translated in an improvement of Argentina's per capita income. Increases in population and labour force, urbanization, and a significant rise of total factor productivity in livestock production are among the distinctive features of post-independence River Plate.<sup>78</sup> Argentina's littoral agricultural output per head grew at 2 percent per year over 1825-1865.<sup>79</sup> If we assume that this sector was representative of the littoral's economy as a whole, while in Argentina's interior provinces per capita income stagnated, a population-weighted rate of growth of 0.8 percent per year would result for per capita GDP.<sup>80</sup> It does not seem far-fetched to assume that that Uruguay behaviour was similar to that of the Argentine's River Plate.<sup>81</sup>

If the fragmented evidence and conjectures for each country are used to project backwards present day GDP per head, comparative levels of per capita income can be obtained for the period 1820-1870. Moreover, by weighting each country's per capita GDP level by its share in Latin American population, an aggregate figure can be derived for the entire region (Table 4). The implicit yearly growth rate between 1820 and 1870 is 0.5 percent. This apparently moderate figure is quite respectable in its historical context and far above the recent assessment by Bates et al., who point to a growth rate for Latin American per capita GDP of 0.07 percent per year, 'or, adjusting for the dubious quality of the data, about zero'.<sup>82</sup>

INSERT TABLE 4



Do these results imply retardation that would, thus, be related to the way independence occurred?

A glance at the evolution of *per capita* income levels suggests that when Latin America is compared to the United States a sustained decline is observed for the period 1820-1870. A more informative picture derives, however, from a country by country analysis. The scant estimates available suggest that while the relative position of Mexico and Brazil to the U.S. halved, Argentina, Colombia, Cuba, and Venezuela experienced only moderate relative decline, below world average, and Chile and Uruguay kept their positions roughly unaltered.

However, falling behind the United States does not necessarily imply that development opportunities were missed by the new Latin American republics. Lower human capital to labour ratios (implied by life expectancy and literacy rates) and disparate geographical conditions (average temperature, distance to the sea, and latitude) suggest different steady states in Anglo and Latin Americas.<sup>83</sup> Moreover, historians' insistence on the different institutional conditions at the time of colonial emancipation in Anglo and Latin Americas (colonial inheritance, initial inequality of wealth and political power, and property rights definition) suggest that it would be unrealistic to expect in Latin America a similar performance to that of the U.S. in the decades to come.<sup>84</sup>

When, instead, Latin America's performance is confronted with that of other world regions the picture changes dramatically. During the half a century after independence, Latin American performance fell behind a handful of countries in Western Europe but was comparable to that of the European Periphery and superior to that of Asia and Africa.

## **Concluding Remarks**

Disorder after independence increased transaction costs as political and economic institutions were redefined throughout a lengthy and painful process. The path to independence was quite different between regions: the way it was won and the previous degree of commitment to colonial mercantilism conditioned the new republics' performance. Independence may have exacerbated regional disparities. For Latin America as a whole it took time for the gains from releasing the fiscal burden to offset the tax increase to cover expanding governmental expenses that accompanied state building.

The favourable evolution of quantities and relative prices of goods exported suggests that removing the trade burden and opening up to the international economy represented net gains for the economies of Latin America.

On the whole, during the half century after independence, real product per head grew in Latin America at a similar rate to the world average and to that of the European Periphery and far higher than the one prevailing in Asia and Africa. 'Lost decades' seems, therefore, an inadequate description of the period 1820-1870.

Table 1 *Transport Costs in Latin America c. 1842*

[Sterling per Ton]

	Average Freight from England	Transport Cost port to the capital
Argentina	2.0	0.0
Bolivia	4.5	19.3
Chile	3.8	2.4
Ecuador	4.5	15.0
Mexico	2.5	13.8
New Granada	2.5	45.0
Peru	4.0	1.0
Uruguay	2.0	0.0
Venezuela	3.0	4.3

*Sources:* C. W. Brading, 'Un análisis comparativo del costo de la vida en diversas capitales de Hispanoamérica (1842)', *Boletín Histórico de la Fundación John Boulton* Vol. 20 (1969), pp. 229-66

Table 2 Per Capita Purchasing Power of Exports and British Investment per Head

[1880 Pounds Sterling]

	Exports			Investment		
	1830	1850	1870	1825	1865	1875
Argentina	0.26	2.10	2.87	0.90	1.29	8.83
Bolivia		1.11	1.50			0.93
Brazil	0.57	1.01	1.48	0.48	1.66	2.41
Chile	0.58	1.60	2.47	0.48	1.31	4.01
Colombia	0.32	0.38	1.14	2.79	2.04	1.18
Costa Rica		2.32	3.67			20.10
Cuba	2.30	4.53	7.97		1.60	0.88
Dominican Rep.		0.70	0.86			3.20
Ecuador		0.40	0.71		1.34	1.50
El Salvador		0.66	1.26			
Guatemala		0.34	0.43		0.07	0.42
Honduras		1.00	0.62			16.98
Mexico	0.23	0.65	0.41	0.61	2.16	2.57
Nicaragua		0.75	0.61		0.10	0.30
Paraguay		0.26	1.24			5.77
Peru	0.09	0.76	1.75	0.72	1.16	11.18
Uruguay		11.20	8.09		3.66	18.18
Venezuela	0.40	0.67	0.90		2.06	3.46
TOTAL	0.84	1.07	1.55	0.56	1.45	3.50

*Sources:* Current values deflated with the British export price index in B.R. Mitchell, *British historical statistics* (Cambridge 1988): Exports, P. Bairoch and B. Etemad, *Structure par produits des exportations du Tiers-Monde 1830-1937* (Genève 1985) for 1830, and Bulmer-Thomas, *Economic History*, 1850 and 1870. Investment, Stone, 'British investment'

Table 3 Net Barter Terms of Trade in Latin American Countries, 1810-1880

[Average 1836-40 = 100]

	Cuba	Mexico	Venezuela	Colombia	Brazil	Argentina	Chile
1811/15						61	85
1816/20						76	100
1821/25						115	143
1826/30	108	84			94	127	106
1831/35	100	95	105		107	125	107
1836/40	100	100	100	100	100	100	100
1841/45	102	98	105	124	97	108	95
1846/50	86	101	102		109	104	104
1851/55	69	106	74		120	123	104
1856/60	62	100	80	157	115	165	105
1861/65	53	79	76		120	127	99
1866/70	56	94	71	127	89	105	97
1871/75	57	104	108	139	147		104
1876/80	57	116	112	178	173		108

*Sources:* Cuba, Salvucci and Salvucci, 'Cuba', 197-222; Mexico, Salvucci, 'Mexican terms of trade'; Venezuela, Baptista, *Bases cuantitativas*; Colombia, Ocampo, *Colombia*; Brazil, Leff, *Underdevelopment*; Argentina, Newland, 'Exports'; Chile, Braun et al. 'Economía chilena'.

Table 4 Comparative GDP per Head, 1820-1870

(1990 International Geary-Khamis Dollars)

	1820	1870	Growth (%)		
			1820-1870	1820	1870
	(U.S. = 1)				
Argentina	1249	1837	0.8	0.99	0.75
Brazil	652	680	0.1	0.52	0.28
Chile	607	1295	1.5	0.48	0.53
Colombia	346	463	0.6	0.28	0.19
Cuba	583	838	0.7	0.46	0.34
Mexico	693	720	0.1	0.55	0.29
Uruguay	1004	1880	1.3	0.80	0.77
Venezuela	347	529	0.8	0.28	0.22
Latin America (average) (8)	640	809	0.5	0.51	0.33
Africa	420	500	0.3	0.33	0.20
China	600	530	-0.2	0.48	0.22
India	533	533	0.0	0.42	0.22
Japan	669	737	0.2	0.53	0.30
East Asia (11)	599	647	0.2	0.48	0.26
Eastern Europe	683	937	0.6	0.54	0.38
Former USSR	688	943	0.6	0.55	0.39
Western Europe (12)	1245	2088	1.0	0.99	0.85
West European Periphery (4)	925	1237	0.6	0.74	0.51
United States	1257	2445	1.3	1.00	1.00
World	687	910	0.6	0.55	0.37

*Note:* For supra-national entities, population weighted averages are used. Numbers in brackets correspond to the number of countries included.

*Sources:* Maddison, *Historical statistics*, except for Latin America. Volume indices of Latin American per capita GDP were spliced with Maddison's per capita GDP levels for 1990, expressed in 1990 Geary-Khamis dollars.

Argentina, G. Della Paolera, A. M. Taylor, and C. Bózoli, 'Historical statistics.', in G. Della Paolera and A. M. Taylor (eds.), *A new economic history of Argentina*

(Cambridge, 2003), pp. 376-85 (plus CD-Rom), GDP, 1884-1990, spliced with R. Cortés Conde, *La economía argentina en el largo plazo* (Buenos Aires, 1997), for 1875-84. I assumed the level for 1870 was identical to that of 1875. Newland and Poulson, 'Purely animal', estimated Argentina's littoral agricultural output per head grew at 2 percent per year over 1825-1865. I have assumed that this sector was representative of the littoral's economy as a whole, and that there was no per capita growth in Argentina's interior provinces. A population-weighted average casts a per capita GDP rate of growth of 0.8 percent per year. Population data comes from Newland, 'economic development'.

Brazil, GDP, R. W. Goldsmith, *Brasil 1850-1984: Desenvolvimento financeiro sob um século de inflação* (Sao Paulo, 1986), 1850-1980. Zero per capita income growth for the early nineteenth century as suggested by Leff, 'Economic development', was adopted. A lower initial level and, subsequently, a higher growth rate would result if A. Maddison, *Monitoring the World Economy, 1820-1992* (Paris 1995), p. 143, assumption that per capita income growth in 1820-50 grew at the same pace as in 1850-1913 were accepted. Chile, Díaz, Lüders and Wagner, 'economía chilena'.

Colombia, Kalmanovitz, 'Nueva Granada', 1820-1913; then, GRECO GRECO [Grupo de Estudios de Crecimiento Económico], *El crecimiento económico colombiano en el siglo XX* (Bogotá, 2002).

Cuba, Santamaría, 'cuentas nacionales'.

Mexico, Coatsworth, 'decline', for the nineteenth century. Following Coatsworth, 'Mexico', I accepted a mild rise in GDP per capita over 1820-1845. INEGI, *Estadísticas Históricas de México*, (México D.F., 1995), since 1896.

Uruguay, L. Bértola y asociados, *El PBI de Uruguay 1870-1936 y otras estimaciones* (Montevideo 1998). I assumed that Uruguay evolved as Argentina's littoral between 1850 and 1870, and as Argentina as a whole over 1820-50.

Venezuela, Baptista, *bases cuantitativas*.



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<sup>1</sup> Except for Cuba and Puerto Rico, that remained Spanish colonies until 1898, independence became a widespread phenomenon. Cf. V. Bulmer-Thomas, *The Economic History of Latin America since Independence* (Cambridge 2003), p. 410. J. H. Coatsworth, 'Notes on the comparative economic history of Latin America and the United States', in W. L. Bernecker and H. W. Tobler (eds.), *Development and Underdevelopment in America: Contrasts in Economic Growth in North America and Latin America in Historical Perspective* (New York 1993). Earlier assessments of the consequences of independence can be found in John H. Coatsworth, 'La independencia latinoamericana: hipótesis sobre los costes y beneficios', in L. Prados de la Escosura and S. Amaral, eds., *La independencia americana: consecuencias económicas* (Madrid 1993), pp. 17-27, and in L. Prados de la Escosura, "The economic consequences of independence", en V. Bulmer-Thomas, J.H. Coatsworth, and R. Cortés Conde (eds.), , *Cambridge Economic History of Latin America* (Cambridge 2006), vol. I, pp. 463-504.

<sup>2</sup> D. C. North, 'Institutions and economic growth: an historical introduction', *World Development* Vol. 17, No. 9 (1989), pp. 1319-32; D.C. North, D. C., William R. Summerhill, and B. R. Weingast, 'Order, disorder, and economic change: Latin America versus North America', in B. Bueno de Mesquita and H. L. Root (eds.), *Governing for prosperity* (New Haven 2000), pp. 17-58; S. L. Engerman and K. L. Sokoloff, 'Factor endowments, institutions, and differential paths of growth among New World economies', in Haber, *How Latin America Fell Behind*, pp. 260-304. The most recent contribution derives from R. H. Bates, J.H. Coatsworth, and J.G. Williamson, 'Lost Decades: Lessons from post-independence Latin America for today's Africa', NBER Working Papers 12610 (2006) <http://www.nber.org/papers/w12610>

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<sup>3</sup> North, 'Institutions'; North, Summerhill, and Weingast, 'Order, disorder'; Engerman and Sokoloff, 'Factor endowments'; D. Acemoglu, S. Johnson, and J.A. Robinson, 'Reversal of fortune: geography and institutions in the making of the modern world income distribution', *Quarterly Journal of Economics* 117, 4 (2002), pp. 1231-94.

<sup>4</sup> Carlos Marichal, 'Beneficios y costes fiscales del colonialismo: las remesas americanas a España, 1760-1814', *Revista de Historia Económica* Vol. 15, No. 3 (1997), pp. 475-505, estimates that 5 million pesos were, on average, sent annually to the metropolis (p. 483). Indies' remittances were, on average, 178 million reales de vellón (8.9 million pesos), according to estimates by Leandro Prados de la Escosura, 'La pérdida del imperio y sus consecuencias económicas', in Prados de la Escosura and Amaral, *independencia americana*, pp. 256-9, 269-70, revised upwards following the suggestions in Marichal, 'Beneficios y costes fiscales'.

<sup>5</sup> Herbert Klein, 'La economía de la Nueva España, 1680-1809: un análisis a partir de las cajas reales', *Historia Mexicana* Vol. 34, No. 136 (1985), pp. 561-609; Carlos Marichal, *La bancarrota del virreinato. Nueva España y las finanzas del Imperio español, 1780-1810* (México, 1999), p. 92. Carlos Marichal and Marcello Carmagnani, 'From colonial fiscal regime to liberal financial order, 1750-1912', in M. D. Bordo and R. Cortés-Conde (eds.), *Transferring Wealth and Power from the Old to the New World Monetary and Fiscal Institutions in the 17<sup>th</sup> through the 19<sup>th</sup> Centuries* (Cambridge 2001), pp. 284-326. There discrepancies as regards the size of this gap and while Klein computed it as 70 %, Marichal thought the difference was 40 %.

<sup>6</sup> John Coatsworth, 'Obstacles to economic growth in nineteenth-century Mexico', *American Historical Review* Vol. 83, No. 1(1978), pp. 80-100, a figure significantly higher than that for the Thirteen North American Colonies in the eve of independence.

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<sup>7</sup> Central America separated from Mexico by 1823, and the Central American Federation only survived until 1838 and led to the creation of five new countries in 1839 (El Salvador, Costa Rica, Honduras, Nicaragua and Guatemala). By 1847 Mexico lost half its territory. In 1830 the Great Colombia, comprising Venezuela, Colombia, Panama and Ecuador, broke up into three countries, Venezuela, New Granada (present-day Colombia and Panama) and Ecuador. The Peru-Bolivia union (new republics in 1824 and 1825, respectively) created in 1836, collapsed in 1839. The Viceroyalty of the River Plate became three separate countries: Uruguay (independent in 1828), and Paraguay, and Argentina.

<sup>8</sup> Marichal and Carmagnani, 'Colonial fiscal regime', p. 296.

<sup>9</sup> Andrés Gallo and Carlos Newland, 'Globalización y convergencia de precios en el Imperio español 1660-1810', *Revista de Historia Económica* Vol. 22, No. 3 (2004), pp. 573-96, show that the removal of trade restrictions, absence of war, and navigation improvements contributed to moderate price convergence between Chile and Peru, and to lesser extent, between Peru and Spain, over 1660-1810.

<sup>10</sup> R. Grafe and M.A. Irigoin, 'The Spanish empire and its legacy: fiscal re-distribution and political conflict in colonial and post-colonial Spanish America', *Journal of Global History* Vol. 1, No. 2 (2006), pp. 241-267, argue that colonial self-sufficiency rather than transfers to the metropolis was the main fiscal goal of the empire and resulted from negotiations between Creole elites and the imperial authorities.

<sup>11</sup> Cf. a theoretical discussion in P. Bolton and G. Roland, 'The breakup of nations: a political economy analysis', *Quarterly Journal of Economics* Vol. 113 (1997), pp. 1057-90.

<sup>12</sup> According to .M. A. Centeno, 'Blood and debt: war and taxation in nineteenth-century Latin America', *American Journal of Sociology* Vol. 102, No. 6 (1997), pp.

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1565-605, customs revenues between 1820 and 1870 represented, on average, a high percentage of current Government revenues: Argentina (86%), Brazil and Peru (69%), Venezuela (64%), Ecuador (59%), Chile (51%), Mexico (37%), Colombia (34%).

Taxing trade became a persistent feature of Latin American history, cf. J. H. Coatsworth and J.G. Williamson, 'Always protectionist? Latin American tariffs from independence to the Great Depression', *Journal of Latin American Studies* Vol. 36, no. 2 (2004), pp. 205-32

<sup>13</sup> Centeno, 'Blood and debt', shows that most countries in Latin America suffered major wars in the half a century after independence. Argentina with 10 wars leads the group followed by Brazil (6), Uruguay and Mexico (5), Chile and Peru (4) and Colombia (3).

<sup>14</sup> North, Summerhill, and Weingast, 'Order, disorder', pp. 54-55.

<sup>15</sup> C. Marichal, 'Una difícil transición fiscal. Del régimen colonial al México independiente, 1750-1850', in C. Marichal and D. Marino (eds.), *De colonia a nación. Impuestos y política en México, 1750-1860* (México D.F. 2001), pp. 19- 58.

<sup>16</sup> Marichal, *bancarrota del virreinato*, pp. 48-52.

<sup>17</sup> Marichal and Carmagnani, 'Colonial fiscal regime', p. 298.

<sup>18</sup> R. J. Salvucci and L. K. Salvucci, 'Las consecuencias económicas de la independencia mexicana', in Prados de la Escosura and Amaral, *independencia americana*, pp. 30-53.

<sup>19</sup> C. A. Ponzio, 'Looking at the dark side of things: Political instability and economic growth in post-independence Mexico', (2005) (unpublished manuscript), attributes 50% of the reduction in the rate of GDP growth to instability during 1821-67.

<sup>20</sup> A. W. Quiroz, 'Consecuencias económicas y financieras del proceso de la independencia en el Perú, 1800-1850', in Prados de la Escosura and Amaral,

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*independencia americana*, pp. 124-46. P. Gootenberg, *Between Silver and Guano. Commercial Policy and the State in postindependence Peru* (Princeton 1989).

<sup>21</sup> H. Lindo-Fuentes, 'Consecuencias económicas de la independencia en Centroamérica', in Prados de la Escosura and Amaral, *independencia americana*, pp. 54-79.

<sup>22</sup> The complexity of land institutions inherited from the colonial period should be taken into account, in particular, haciendas, ejidos and communal lands with ill defined borders, and Indian communities that linked communal ownership and group identity.

<sup>23</sup> M. de Paiva Abreu and L. A. Corrêa do Lago, 'Property rights and fiscal systems in Brazil. Colonial heritage and the imperial period', in Bordo and Cortés-Conde, *Transferring Wealth and Power*, pp. 327-77; North et al., 'Order, disorder', p. 40.

<sup>24</sup> J. Jaramillo Uribe, J. A. Meisel, and M. Urrutia, 'Continuities and discontinuities in the fiscal and monetary institutions of new granada, 1783-1850', in Bordo and Cortés-Conde, *Transferring Wealth and Power*, pp. 414-50.

<sup>25</sup> Cf. J. Adelman, *Republic of capital. Buenos Aires and the Legal Transformation of the Atlantic World* (Stanford 1999).

<sup>26</sup> S. Amaral, 'Del mercantilismo a la libertad: las consecuencias económicas de la independencia argentina', in Prados de la Escosura and Amaral, *independencia americana*, p. 204.

<sup>27</sup> M. H. Pastore, 'Crisis de la Hacienda pública, regresión institucional y contracción económica: consecuencias de la independencia en Paraguay, 1810-1840', in Prados de la Escosura and Amaral, *independencia americana*, pp. 164-200.

<sup>28</sup> Coatsworth, 'Obstacles', p. 84. This figure was significantly higher than the one estimated for the Thirteen North American Colonies.

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<sup>29</sup> R. Findlay, 'International trade and factor mobility with an endogenous land frontier. Some general equilibrium implications of Christopher Columbus', in E. Helpman and J. P. Neary (eds.), *Theory, policy and dynamics in international trade* (Cambridge 1993), pp. 38-54.

<sup>30</sup> R. Prebisch, *The Economic development of Latin America and its principal problems* (New York 1950); Y.S. Hadass and J.G. Williamson, 'Terms of trade shocks and economic performance, 1870-1940: Prebisch and Singer revisited', *Economic Development and Cultural Change* Vol. 51, No. 3 (2003), pp. 629-56.

<sup>31</sup> J. G. Williamson, 'Real wages inequality and globalization in Latin America before 1940', *Revista de Historia Económica* Vol. 17 (1999) (special issue), pp. 101-42; J. H. Coatsworth, 'Structures, endowments, and institutions in the economic history of Latin America', *Latin American Research Review* Vol. 40, No. 3 (2005), pp. 126-44, suggests a positive association between inequality and per capita income since independence.

<sup>32</sup> P. Krugman and A. J. Venables, 'Globalization and the inequality of nations', *Quarterly Journal of Economics* 110, 4 (1995), pp. 857-80, posit that under gradually falling transportation costs, as was the case during the 1820-1870 period, growing inequality would take place.

<sup>33</sup> P. Schöller, 'L'evolution séculaire des taux de fret et d'assurance maritimes 1819-1940', *Bulletin de l'Institute de Recherches Économiques et Sociales* 17, 5 (1951), pp. 519-57.

<sup>34</sup> *Ibid.* p. 543. Freights to Buenos Aires and Valparaiso became equal by 1868 when, by 1850, transports costs to Chile were, at least, one-third higher than to Buenos Aires.

<sup>35</sup> J. L. Gallup, J. D. Sachs, and A. D. Mellinger, 'Geography and economic development', *International Regional Science Review* Vol. 22, No. 2 (1999), pp. 179-232

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<sup>36</sup> J. H. Coatsworth, 'The decline of the Mexican economy, 1800-1860', in Reinhard Liehr (ed.), *América Latina en la época de Simón Bolívar. La formación de las economías nacionales y los intereses económicos europeos 1800-1850* (Berlin 1989), pp. 27-53.

<sup>37</sup> Quiroz, 'independencia en el Perú', pp. 134-6; Gootenberg, *Silver and Guano*, pp. 161-2.

<sup>38</sup> Lindo-Fuentes, 'independencia en Centroamérica', p. 60.

<sup>39</sup> *Ibid.*, pp. 65-6.

<sup>40</sup> S. H. Haber and H. S. Klein, 'Consecuencias económicas de la independencia brasileña', in Prados de la Escosura and Amaral, *independencia americana*, pp. 153-8.

<sup>41</sup> Amaral, 'Del mercantilismo a la libertad', p. 208

<sup>42</sup> The price index of the United Kingdom's exports has been employed to deflate current exports. The result provides a measure of the purchasing power of Latin American exports as the U.K. was the main trading partner of the new republics.

<sup>43</sup> British investment was also deflated by the price of the U.K. exports, as investment was used, at least, in part, to purchasing capital goods and raw materials from Britain. British investment amounted to more than three times French investments and more than four times U.S. investments in Latin America by 1913 (computed from figures in C. Marichal (ed.), *Las inversiones extranjeras en América Latina, 1850-1930. Nuevos debates y problemas en historia económica comparada* (México, 1995), Appendix).

<sup>44</sup> I. Stone, 'British direct and portfolio investment in Latin America before 1914', *Journal of Economic History* Vol. 37, No. 3 (1977), pp. 690-722.

<sup>45</sup> L. K. Salvucci and R. J. Salvucci 'Cuba and the Latin American terms of trade: old theories, new evidence', *Journal of Interdisciplinary History* Vol. 31, No. 2 (2000), pp. 197-222.

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- <sup>46</sup> R. J. Salvucci, 'The Mexican terms of trade, 1825-1883: calculations and consequences' (1993) (mimeo).
- <sup>47</sup> J. A. Ocampo, *Colombia y la economía mundial 1830-1910* (Bogotá, 1984), pp. 89, 98.
- <sup>48</sup> N. H. Leff, *Underdevelopment and development in Brazil* (London, 1982), 2 vols., I, p. 83.
- <sup>49</sup> C. Newland, 'Exports and terms of trade in Argentina, 1811-1870', *Bulletin of Latin American Research* Vol. 17, No. 3 (1998), pp. 409-16.
- <sup>50</sup> J. Díaz, R. Lüders, and G. Wagner, , 'Economía chilena 1810-1995: evolución cuantitativa del producto total y sectorial', Pontificia Universidad Católica de Chile, Instituto de Economía, Documento de Trabajo n° 186 (1998).
- <sup>51</sup> Salvucci, 'Mexican terms of trade'.
- <sup>52</sup> A. Baptista, *Bases cuantitativas de la economía venezolana 1830-1995* (Caracas, 1997), pp. 86-90.
- <sup>53</sup> Braun, J., M. Braun, I. Briones, and J. Díaz, 'Economía chilena, 1810-1995. Estadísticas históricas', Pontificia Universidad Católica de Chile, Documento de Trabajo 187 (1998).
- <sup>54</sup> Leff, *Underdevelopment*, p. 82.
- <sup>55</sup> Ocampo, *Colombia*, p. 93.
- <sup>56</sup> Salvucci and Salvucci, 'Cuba and Latin American terms of trade', p. 216. P. Gootenberg, *Between silver and guano*.
- <sup>57</sup> Newland, 'Exports', p. 412.
- <sup>58</sup> Salvucci and Salvucci, 'Cuba and Latin American terms of trade', pp. 204-7.
- <sup>59</sup> This is Newland's 'Exports' argument for Argentina.



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<sup>60</sup> That is, when an increase in production depresses the price of exports relative to imports so much that the gains in output are swamped by the loss of purchasing power for imports. Cf. J. Bahgwati, 'Immiserizing growth: a geometric note', *Review of Economic Studies* Vol. 25, No. 3 (1957-58), pp. 201-5, for a theoretical discussion of the concept.

<sup>61</sup> C. Newland and J. Ortiz, 'The economic consequences of Argentine independence', *Cuadernos de Economía* 115 (2001), 275-90.

<sup>62</sup> Cf. A.L. Arroyo Abad, 'Inequality in a small open economy: Latin America in the 19th century', paper presented at the Seventh Conference of the European Historical Economics Society (Lund 2007).

<sup>63</sup> The export-led growth approach has been rejected for Brazil and Mexico by Leff, *Underdevelopment*, and L. Catao, 'The failure of export-led growth in Brazil and Mexico c. 1870-1930', University of London Institute of Latin American Studies Research Papers No. 31 (1992).

<sup>64</sup> Cf. I. B. Kravis, 'Trade as a handmaiden of growth: similarities between the nineteenth and twentieth centuries', *Economic Journal*, 80 (1970), pp. 850-72. Thus, D. C. M. Platt, 'Dependency in nineteenth-century Latin America: an historian objects', *Latin American Research Review* Vol. 15 (1980), pp. 113-30, view that the break with Spain reintroduced an unwelcome half century of 'independence' from foreign trade and finance seems to be exaggerated.

<sup>65</sup> R. H. Bates, J.H. Coatsworth, and J.G. Williamson, 'Lost Decades: Lessons from post-independence Latin America for today's Africa', NBER Working Papers 12610 (2006) <http://www.nber.org/papers/w12610>

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<sup>66</sup> Ponzio, 'Looking at the dark side'. Quiroz, 'independencia en el Perú', pp. 129-33, 143; R. Dobado and G. Marrero, 'Minería, crecimiento y costes de la independencia en México', *Revista de Historia Económica* Vol. 19, No. 3 (2001), pp. 573-611.

<sup>67</sup> Coatsworth, 'Decline', computed from p. 41, Table 2. Between 1800 and 1877 a -0.2 % yearly decline would have taken place. A. Maddison, *The world economy: Historical statistics* (Paris, 2003), p. 191, in turn, assumed a smaller drop than Coatsworth for 1820-70. This view is shared by E. Cárdenas, 'A Macroeconomic interpretation of nineteenth-century Mexico', in Haber, *How Latin America Fell Behind*, pp. 65-92.

<sup>68</sup> R. J. Salvucci, 'Mexican national income in the era of independence, 1800-1840', in Haber, *How Latin America Fell Behind*, pp. 234-5

<sup>69</sup> J. H. Coatsworth, 'Mexico', in J. Mokyr, ed., *The Oxford encyclopedia of economic history* (New York, 2003), III, pp. 501-7; also J. H. Coatsworth, 'Structures, endowments, and institutions in the economic history of Latin America', *Latin American Research Review* Vol. 40, No. 3 (2005), pp. 126-44.

<sup>70</sup> E. Sánchez Santiró, 'El desempeño de la economía mexicana tras la independencia, 1821-1870: nuevas evidencias e interpretaciones', Paper presented at the Conference "Obstáculos al crecimiento económico en Hispanoamérica y España, 1790-1850", Fundación Ramón Areces, Madrid, May 2007

<sup>71</sup> Salvucci and Salvucci, 'independencia mexicana', p. 41.

<sup>72</sup> P. Fraile, R. J. Salvucci, and L. K. Salvucci, 'El caso cubano: exportaciones e independencia', in Prados de la Escosura and Amaral, *independencia americana*, pp. 80-101.

<sup>73</sup> A. Santamaría, 'Las cuentas nacionales de Cuba, 1690-2005' (2005) (mimeo). A similar rate of growth is obtained over 1830-60.

<sup>74</sup> Leff, *Underdevelopment*, I, p. 33.

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<sup>75</sup> Baptista, *Bases cuantitativas*, pp. 28, 58. Output per head grew at yearly rate of 2.2% between 1830 and 1850, that falls to 0.9% when it is computed between 1830 and 1870.

<sup>76</sup> S. Kalmanovitz, 'La economía de la Nueva Granada' (2005) (mimeo).

<sup>77</sup> Díaz, Lüders, and Wagner, 'Economía chilena'.

<sup>78</sup> C. Newland, 'Economic development and population change: Argentina, 1810-1870', in J. H. Coatsworth and A. M. Taylor (eds.), *Latin America and the World Economy Since 1800* (Cambridge, MA, 1998), pp. 207-22; Newland, 'Exports'; C. Newland and B. Poulson, 'Purely animal: pastoral production and early Argentine economic growth 1825-1865', *Explorations in Economic History* Vol. 35, No. 3 (1998), pp. 325-45.

<sup>79</sup> Newland and Poulson, 'Purely animal', p. 328; Newland, 'Economic development', p. 212.

<sup>80</sup> Population figures come from Newland, 'Economic development', p. 218.

<sup>81</sup> Assuming alternatively that Uruguay's per capita GDP grew as Argentina's average, that includes the backward interior provinces, would probably cast an underestimated figure.

<sup>82</sup> Bates et al., 'Lost Decades'.

<sup>83</sup> L. Prados de la Escosura, "Improving the Human Development Index: New Historical Estimates", Universidad Carlos III (mimeo) (2007); J. D. Sachs, 'Tropical underdevelopment', NBER Working Paper Series no. 8119 (2001); J. W. McArthur and J. D. Sachs, 'Institutions and geography: Comment on Acemoglu, Johnson and Robinson (2000)', NBER Working Paper Series 8114 (2001).

<sup>84</sup> D. C. North, *Institutions, institutional change and economic performance* (Cambridge, 1990), p.102; Engerman and Sokoloff, 'Factor endowments', pp. 260-304; North et al., 'Order, disorder', p. 19.