The Spanish Empire and its Legacy: Fiscal Re-distribution and Political Conflict in Colonial and Post-Colonial Spanish America

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Recent studies on global history have revived interests on the role of the Spanish empire in the development of the great divergence relatively little. However, other research interests have recently crowded out the field of Latin American economic history. On the one hand, most Latin American scholars have abandoned the field of economic history, probably disillusioned with the economic performance of their countries in he last decades. On the other hand, North American economic historians have recently developed a wide interest in the history and the economy of the their southern neighbours. Yet the outcome of this literature is sobering. Despite the wealth of the contributions, mostly theoretical and aimed at providing explanations of the extraordinary development of the US, these scholars have made barely any difference for our understanding of the Spanish American colonies and modern Latin American nations' economic, political and institutional fate.

During the last few years a wave of comparative studies of the role of institutions and of factor endowments has discovered the potential of the juxtaposition of both former European colonies in the New World for testing diverse, sometimes contradictory, but never definitively conclusive explanations of why, how and when Latin America fell behind or for that matter, when, how and foremost why the US economy forged so much ahead of the rest of the world in the last 200 years. Of these studies two main approaches stand out. One, the *institutional explanation* inspired and developed by North and others is an offspring of previous accounts of the emergence of Britain and of its institutions as the epitome and criterion for its peculiar economic trajectory towards the "Industrial Revolution". The application of North and Weingast's notions of the superior efficiency of Anglo Saxon institutions in the development path of the rest to the study of Latin America development, encouraged another breed of studies: Stan Engerman and Kenneth Sokoloff and Acemoglu et al produced a series of papers developing different arguments around the role of factor endowments, but mainly challenging North et al general arguments. With some exceptions such as John Coatsworth, Steve Haber and more recently Bill Summerhill and James Robinson, most of those scholars were not formerly known as Latin America specialists. As their assumptions and information were derived from second hand sources, they repeated some resilient and questionable portrayals of colonial and modern Spanish America.

This paper differs from both views of the history of the Spanish empire in America and of the resulting trajectories in the postcolonial economies that emerged from it in the early 1800s. It presents a distinct set of explanations for the economic and institutional performance of colonial and modern Latin America, while challenging the fundamentals of both theoretical frameworks available. The first section sketches the main assumptions of the institutional approach, which emphasizes the absolutist and centralist nature of the Spanish empire - and the disorder and instability that followed its downfall. It provides some institutional information contrasting their conclusions. The paper shows that a very different political economy, rooted in the constitution of the state, imperial and national, both in the metropolis and the colonies, resulted in a highly negotiated fiscal and financial set up.

The second section revises the underlying arguments of the factor endowments approach. While agreeing in principle with some of the features of their claims, this paper moves to discuss some of the conclusions derived from a distorted assessment of the Empire's political and economic foundations. In this section, the empirical contribution of this paper sheds light on the re-distributive constitution of the empire's revenue collection, - regional,

sectoral and even political -, that shaped the workings of the Empire for more than 300 years.

The third section highlights the role of history – change and contingency – in moulding the course of events as much as the path dependence established between factor endowments and institutions, which neither of both aforementioned analytical frameworks could resolve. It shows how a contingent event, the imprisonment of the King within the context of the ongoing Napoleonic wars in Europe, produced a major shock in the economic and institutional trajectories of the empire, with fundamental consequences for the future development of these regions. Section four concludes.

I
The institutional explanation

It has become fashionable among North American economists and economic historians to see the history of Spain - and that of her empire - through the lenses of the history of the British Empire. After all, both metropolises emerged out of the late medieval phase of European state formation and consolidation. As 'mother countries' of the two largest early modern Western empires they determined the development of far-flung parts of their worlds.[1] Both empires are credited with, or lambasted for, their institutional, political and social legacy that characterised the state building in the new nations that emerged out of these empires in the late 18th and early 19th centuries. However, the economic and institutional paths that either empire followed could not be more different. This difference has converted the two into a mirror in which to reflect some of the great meta-narratives of the development of the Atlantic world since the 16th century. The classic grand narratives in use compare sets of descriptors for each of these Empires: Spain is described as absolutist, interventionist, centralist, statist, bureaucratic, constitutionally disinclined to grant its subjects much local government but driven to extract revenues from them. England/Britain by contrast is said to have been parliamentarian, treated its colonies with benign neglect most of the time, its constitution granted the colonies far-reaching self-government and the metropolis rarely meddled in their internal economic or political lives. These sets of institutions and constitutional traditions hence help to explain the different economic performance of the successors of these colonies: the modern US and the Latin American republics that emerged between 1780 and 1825.

Most specialist historians of Spain and its Empire would however disagree at least in part with these views. There is a long and exciting historiography that has shown that in both peninsular Spain and its American possessions reality was very different from the absolutist caricature painted so often. Still, the charge of Spanish Absolutism hindering successful political, social and economic development in Latin America in the long run is very much alive. As a consequence political scientists, sociologist and economists (including economic historians) tend to reproduce views like those epitomised by Douglas North and his co-authors. In an early article, contemporary to "Constitutions and Commitment", North laid out the basis for the following comparative studies of both Spanish and English former

[1] In territorial terms the Spanish Empire since the 16th century and the British since the 18th century were a category apart from their Portuguese, Dutch and French competitors.

colonies. He described "a centralized monarchy in Castile […] that defined the institutional evolution of both Spain and Latin America". Spain ultimately relied always on outside sources of revenue, be it from Naples, the Low Countries or the New World and control over these revenues "entailed a large and elaborate hierarchy of bureaucrats armed with an immense outpouring of royal edicts […] designed to provide minute regulation of the economy." [2] North also blamed the uniformity imposed in religion, governance and administration for Latin America's poor performance. And he compared this negatively with an England that supposedly allowed diversity in the political structure of its American colonies, which were ruled largely locally and only mildly regulated through the navigation acts.[3] All this, we are told, was the result of Parliament's triumph over the monarchy. It constrained the crown constitutionally and created a legal and administrative environment conducive to economic development and where the interests of commercial elites and the crown were aligned. [4]

Economic historians' lack of attention to more recent studies on Spain and its empire has contributed greatly to the genesis of an Anglo-Saxon mode of state and empire building, and of modern state formation, build up in apparent contrast to its most powerful competitor. This model has – in the views of many social scientists - transcended change over time. It has become the theoretical anchor for a rich Whiggish historiography on a distinct political, economic and cultural development in modern and contemporary times. This narrative of the differential formation and history of both nation states in the metropolis, the empires and the postcolonial states they conformed is equally simple as efficient in conveying a prescriptive model of successful development.

Much of the more recent research on Spain's political and constitutional set-up is a result of studies that have examined the clearest link that exists between the various participants of the early-modern political game, namely the state's tax regime. The nature of Spain's political and social compact can be exposed when looking at the way in which political actors, crown, Cortes (Parliament), cities, towns, nobility, humble subjects and church bargained over how to finance the state and its military needs. The modes and location of such negotiations, legal challenges in the courts, debate in the king's councils and in the Cortes, or unruly riots in the main square reveal much about where authority was located in this society. Historians have illuminated many aspects of a 'Spanish path to absolutism' through their studies of how decisions over fiscal exactions were made. Elsewhere we have complemented this with another angle of research that has received less attention. An analysis of the *outcome* of these negotiations in terms of the relative tax burden born by the different fiscal districts within the Spanish American possessions offers many insights into the reality of Spanish rule that greatly differs from what is currency in the Neo- Institutionalism textbook.[5]

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[2] DC North, "Insitutions and Economic Growth: An Historical Introduction," *World Development* 17, no. 9 (1989).. This last point is elaborated more clearly in DC North and BR Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *Journal of Economic History* XLIX, no. 4 (1989)..

[3] North, "Institutions and Economic Growth.", p.1329.

[4] Elliott's remark that parliaments could be just as arbitrary and intrusive as kings makes this point more forcefully than most. JH Elliott, "Empire and State in British and Spanish America," in *Le Nouveau Monde. Mondes Nouveaux. L'experience Américaine*, ed. Serge Gruzinski and Nathan Wachtel (Paris: 1996)..

[5] R Grafe and M Irigoin, "Bargaining for Absolutism: A Spanish Path to Nation State and Empire Building" (paper presented at the 74th Annual Conference of Anglo American Historians, London, 7th July 2005). Our

With similar inspiration, economic historians explaining the divergent economic path of European colonies in North and South America over time have focused on the legacy that colonial institutions had on the post-independence period.[6] Neo-institutional interpretations of the aftermath of Independence in Spanish America depict a region absorbed by political divisions, endemic civil wars, despotic rule and disorder, which together wasted the growth potential of these economies. Their interpretation is drawn from political historians who had pointed out the territorial fragmentation, the long civil warfare that prevailed after the end of Spanish rule and the resulting political instability as a corollary of Independence. As a consequence, the institutional explanation for Latin American economic backwardness is anchored in the political disorder that occurred in the postcolonial period, which in turn did not provide the right conditions for economic growth.

> ".. Widespread political instability and violence distinguish much of Latin America. While the US enjoyed an enduring set of political arrangements that both provided to stability and protected markets from predation, most of Spanish America erupted in internecine war. Instability diverted resources from economic activity and channelled them into *caudillo* armies and a variety of praetorian efforts. Instability made impossible to establish institutions that could bring the expected private returns rate from investment closer in line with social returns.**"** [7]

According to North, Weingast and Summerhill, ""The Spanish Crown had long provided an important enforcement mechanism". Without it political disorder followed. Disorder engendered political instability and this caused uncertainty and raised transaction costs, all of which acted as a deterrent to growth. But does causality run from political to economic events? What is instability? What were the ultimate roots of Latin America's political instability?

The NIE approach offers no exploration of other (economic?) causes for the long civil warfare, disorder and weak institutionality that preceded Independence in Latin America. The political constitution that succeeded in modern Latin American republics has been taken for granted. The divergence in the Latin American economic performance after 1800 is sufficiently reflected in the dependent variable: the aggregate data on the national GDP or per capita GDP in comparison with those of the US. Even if the data comes from extrapolations of late 19th century or 20th century estimates, it is apparent that Latin

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comparison of the political economic aspects of Spanish rule in the peninsula with the Spanish American possessions reveals that in spite of all the idiosyncrasies of Spanish rule in America differences both between Spanish European and American possessions - and throughout time - can be easily overdrawn. What set Spain apart as an imperial power from its contemporaries, and especially England/Britain, was the redistributive nature of its fiscal constitution and machinery, and the bargaining for authority that it entailed. Just as in the European context, Spanish American rule relied on a cross subsidisation among various regions. This persisted even after the Bourbon reforms of the later 18th century.

[6] J Coatsworth and J Williamson, "The Roots of Latin American Protectionism. Looking before the Great Depression," *NBER-WP* 8999 (2002), J Coatsworth, "Economic and Institutional Trajectories in Latin America," in *Latin American and the World Economic since 1800*, ed. JC Coatsworth and AM Taylor (Cambridge, Mass: Harvard University Press, 1998), D North, B Weingast, and W Summerhill, " Order, Disorder and Economic Change. Latin America Versus North America," in *Governing for Prosperity*, ed. B Bueno de Mesquita and HL Root (New Haven: 2000)., S. Haber

[7] North, Weingast & Summerhill (2000) p. 41ss.

American countries fell behind.[8] Two obvious questions arise from this framework and their methodology, which the literature has barely considered: What was the warfare or the political strife about and how could these countries afford to battle each other for such a long period of time? Were national boundaries of these countries in the 1860s-80s predetermined?

The prime result of the end of Spanish rule and independence is curiously absent from the institutionalist story: **This was the disintegration of the colonial state**. It resulted not only in the political fragmentation of the empire, but also in the collapse of the fiscal system and monetary regime that had organised the economy in the continent for three centuries. Unlike the US in the years following the Revolution, Independence in Spanish America also meant the disintegration of the largest fiscal and monetary union ever known to that date. As will be shown in next pages, the North et al institutional explanation departs from an incorrect assessment of the institutional set up in Colonial Spanish America.

The Spanish American institutional set up.

Historians of the Finances of the Spanish Empire in America claim that the fiscal design of colonial Spanish America differed from that in the metropolis in that it was more 'modern'. As evidence for the modern absolutist design in the imperial finances Klein and TePaske point to "first officials that went with the *conquistadores* were royal tax officials."[9] In fact, in setting up a fiscal system in the New World Spain took recourse to a typically eclectic mixture of institutional precedents from various parts of the Hispanic monarchy rather than grand new designs. It is unclear what a modern fiscal system would have been. Presumably, modern in these authors' words should be equated with more absolutist, rational (in a bureaucratic sense), centralist and featuring clearer rules and uniformity as to who had to pay what, where and when. [10] In practice it often appears that the imperial fiscal system and the political economy of taxation differed from Spain's or Castile's only insofar as the availability of greater fiscal resources from labour and silver 'discovered' in America created a fiscus in expansion rather than in retreat.

A centralised system would presumably require clearly identified authorities with tax raising capacity, and clear jurisdictional definitions. Yet, there was **no single fiscal jurisdiction** in the Spanish empire in America. Instead a series of autonomous but interdependent fiscal districts was organised into a rather loose network. A number of matrix treasuries - at the main administrative centres and ports - collected revenues and bookkeeping documents from sub-*cajas*. In Peru, e.g. Lima was the *caja general*, Trujillo, Huamanga, Cuzco and Arequipa functioned as *cajas principales* and Arica and Pasco were subordinates. In the River Plate after the creation of the Viceroyalty, Buenos Aires performed as the main treasury

[8] The main source of information for this scholarly is A Maddison, *Phases of Capitalist Development* (Oxford: Oxford University Press, 1982).
[9] Elsewhere, however, the same authors indicate that Spanish monarchs used "institutions and officials which had consolidated royal power in Spain during the Reconquest"J TePaske and H Klein, *The Royal Treasuries of the Spanish American Empire*, vol. Vol.3 Chile and the Rio de la Plata (Duke University Press, 1982). Vol 1. Introduction (in CD).
[10] HS Klein, *The American Finances of the Spanish Empire. Royal Income and Expenditures in Colonial Mexico, Peru, and Bolivia, 1680-1809* (Albuquerque: University of New Mexico Press, 1998), p.2. .

district. Thereafter Potosi, Arequipa, Quito or Santiago became intermediaries in the machinery of revenue collection within the empire. Allegedly, fiscal surpluses were sent from the smaller local *cajas* to the main treasuries but the accounts of individual treasury districts, which we will discuss in more detail below, show that there was no centralization in the administration of the tax collection in the empire. Instead each particular main *caja* (treasury district) related to the overarching *Real Hacienda*, the Royal Treasury, or to the *Contaduria Mayor del Consejo de Indias* (Treasury Office of the Indias Council). Nor did the **fiscal jurisdiction** keep pace with the political administrative structure of the colonial government. The *cajas*, the local treasury districts, were created and closed according to the income they were able to yield. In the case of New Spain and the River Plate, the treasuries network seemed to be more organically related to the vice regal capital. Most of the *cajas* in these two viceroyalties were established in the third quarter of the 18th century. The hierarchy of *cajas*, and their integration in a vice regal network is much less clear in the case of Peru and Upper Peru, where most of the local treasuries were created in the 16th and 17th century, and where some had been closed by the 1780s.[11]

Nor was there **a single authority** responsible for the collection and management of revenues in Spanish America. On the one hand, royal officials were the tax collectors but the church received some revenues for the Crown and vice-versa reflecting the unique link between ecclesiastical and temporal authority in the Spanish monarchy.[12] Although fiscal accounting was clear in distinguishing between the church and state in the origins of the revenues, several similar imposts being collected either by the church or the state blurred the difference for those liable to pay and the collectors. Several officials assigned with specific tasks, within each *caja* had a share in the responsibility of gathering and spending the royal monies.[13] Treasury officials were subjected to periodic inspections by the auditing bureau in the colony or by specially appointed investigators.[14] The tendency of the central authorities was to eliminate regional differences, as the Council of the Indies' aim was to standardise practices throughout the empire. But the centralisation of authority was more apparent than real.[15]

Nominally, each *caja*, and its officials were dependant to the *Contaduria Mayor* of the Council of the Indies.[16] The bureaucracy was sophisticated but the extensive nature of local control, time lags in reporting and the existence of several intermediate levels meant that the Crown rarely had an accurate idea of what had been collected and spent. As so often repeated reports and envoys from Madrid and the reiteration of royal orders can be taken as a measure of the system's ineffectiveness. Practical barriers hindered a greater degree of

[11] See appendix for details

[12] Under the *real patronato de las Indias* the king, as patron of the Church of the Indies, acted as the Pope's vicar in ecclesiastical administration, so that royal agents administered ecclesiastical taxes and nominated church dignitaries. JL Phelan, "Authority and Flexibility in the Spanish Imperial Bureaucracy," (1967): 52..

[13] Yet, the relation between these officials was one of mutual distrust, conflicting standards and overlapping functions. Ibid.: pp.53-55..

[14] In 1605 Philip III created the first Tribunales de Cuentas in Lima, Bogota and Mexico to survey and to control the returns of the system, a supervisory and auditing agency, which oversaw the work of the royal treasury officials. TePaske and Klein, *The Royal Treasuries of the Spanish American Empire.*, vol 2 fn4.

[15] Phelan, "Authority and Flexibility in the Spanish Imperial Bureaucracy," pp.55,51..

[16] "These tax books were the King's private source of information and his guarantee that his taxes were being collected and his accounts being paid. As such these records were intended by the crown to give it the best picture available of its fiscal resources" Klein, *The American Finances*, p.4..

centralisation. Still, Elliott has argued "the extraction of revenues from silver rich societies demanded a strong state structure in order to mobilise their extractive resources. […] and the deployment of an army of administrative, judicial and financial officials, whose activities (the Crown) carefully monitored."[17] Equally, Klein insists "the remittances of bullion from the Indies demanded close royal control over the workings of the transatlantic trading system."[18]

However, there is a paradox. Throughout the colonial period the investment of the crown into the administration of the colonies was low. The total sums spent on salaries of civil officials represented three per cent of total revenues of New Spain, twelve per cent in 16th Century New Granada, and the same in Peru throughout the period. Only in Charcas, in Upper Peru, expenditure on administration reached 40% but it "started to converge with Peru and Mexico in the last third of the 18th century".[19] Charcas was overwhelmingly an administrative settlement in the centre of a wider dependent region. It was the site of the *Audiencia* and several major institutions like a university, which explains its large administrative expenditure. Klein speculates that the low ratios in practically all the other districts reflect the relative efficiency of the centralising administration. But there is preciously little evidence on the local or regional level for high degrees of efficiency and/or effectiveness. Nor would it appear that generalised coercion explains the low cost of administration. Instead the answer seems to lie in a development that had peninsular Spanish precedents, namely the 'outsourcing' of important fiscal functions to private individuals whose receipts never really figured in the public accounts.[20] The empire suppressed resistance and exerted control thanks to a particular arrangement of negotiation with its own officials and subjects, the co-optation of its extended bureaucracy and the increasing privatisation of the management of the royal funds by private individuals. This was effective in order to keep the status quo but not very efficient and ran certainly against any centralising tendency.[21]

Uniformity of the tax system should imply a single fiscal constituency, guaranteeing that there were no systematic differences in the subject's treatment as a tax payer and we would assume in such a system that the tax rates applicable in individual territories and for different activities were at least similar. But there was **no single fiscal constituency** in Spanish America as the subjects were divided into the *república de indios* (indigenous population) and the *república de espanoles* (Europeans). The co-existence of two distinct 'commonwealths' within a single geographical area created overlapping jurisdictions. There were early fiscal privileges to indigenous communities as Indian labour was a privilege granted to *conquistadores* and first *encomenderos*. Effectively indigenous communities traded tribute for ownership guarantees of their communal lands. For long periods of time Indian traders were exempted from paying the important sales tax, the *alcabala*. Equally, the Catholic Church remained a separate but interdependent fiscal domain. Colonials were not equal before the *Hacienda*.

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[17] Elliott, "Empire and State in British and Spanish America," pp.368-69..
[18] Klein, *The American Finances*, p.5..
[19] Ibid., for Peru p. 47, New Spain p. 95, Charcas p. 23. For New Granada in the 16th Century, own estimates from H Tovar Pinzon, *El Imperio Y Sus Colonias. Las Cajas Reales De La Nueva Granada En El Siglo Xvi* (Bogota: Archivo General de la Nación, 1999)..
[20] J Lynch, "The Institutional Framework of Colonial Spanish America," *Journal of Latin American Studies* 24 (1992): p.81.
[21] Grafe & Irigoin (2005)

The *alcabala* also illustrates that there was **no uniform tax rate.**[22] Even after the *alcabala* was extended to the indigenous population there were still different rates in different regions, and for different products: in the late 18th century they ranged from 4% in Buenos Aires, 6% in both Perus and 8% in Mexico (lowered to 6% in 1790). The effective burden has been estimated from 4.5% to 7% in Peru and from 1.7% to 2.4% in Upper Peru in the late eighteenth century.[23] There were also different concepts for the *alcabalas* (*viento, mar, de Castilla, cabezón*) applicable in the same territory. These were taxes on goods varying according their origin or charged differently upon exchanges, whether realised overland or by sea. In 1776 the *alcabala* was extended to staple foodstuffs (*chuño, charqui, ají, aguardiente*), as well to tobacco, sugar and native textiles in Peru. However, when in subsequent years the Crown tried to charge the tax on grain and maize, Indians in Upper Peru revolted; when the Crown suggested a higher rate for the same tax in New Granada the reaction was similar.[24]

The above discussion contrasts sharply with the notion of a relatively modern fiscal administration at the service of a predatory, absolutist, all-powerful Spanish state that insitutionalist approach has painted. The crown had no means to impose a uniform tax system on its subjects in the colonies. Instead the patchwork reality of fiscality in the colonies illustrates that Spanish imperial rule was to a surprising degree the result of negotiations between the crown, its own bureaucracy and different economic interests in the colonies.

II
The factor endowments explanation

The factor endowment approach was conceived as an alternative set of analytical tools to challenge the institutional pre-eminence in explaining the differential path of developments in the Americas. Although not always very clearly pointed, the initial argument raised the fundamental question - and critique - of the institutionalist argument: where did the differences in institutions come from? And why did the institutional heritage of Britain not produce a satisfactory pattern of growth throughout all her former colonies? Certainly the development of the US differs as much from that of the Spanish American nations' as Zimbawe's. Authors like Engerman and Sokoloff, among others, have shown clearly that the notion of some national –institutional- heritage is barely related to economic performance, as opposed to what institutionalists would like to believe. The former argue instead that factor endowments and inequality were the sources of differences in the economic and institutional trajectories of the various European colonies. The focus shifted to the extremely distinct resource environments in which British and Spaniards settled in the New World after 1500. It was claimed that this initial asymmetry led to "very different degrees of inequality, and [they aim to show] how these differences may have persisted over time and

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[23] By late colonial times its yield represented fourteen percent of total revenues in Peru, twenty-four in percent Chile and 6% in the Upper Peru. Already in 1780 *alcabalas* rendered to the Mexican Treasury **more than silver taxes**. C Marichal, *La Bancarrota Del Virreinato: Nueva Espana Y La Las Finanzas Del Imperio Espanol 1780-1810* (Mexico: 1999).

[24] S O'Phelan Godoy, "Las Reformas Fiscales Borbonicas Y Su Impacto En La Sociedad Colonial Del Bajo Y Alto Peru," in *The Economies of Mexico and Peru During the Late Colonial Period, 1760-1810*, ed. N Jacobsen and H.J. Pule (Berlin: Colloquium Verlag, 1996)..

affected the course of development through their impact on the institutions that evolved".[25] The extractive nature of the European empires, the (forced) introduction of Africans to work as slaves (to use here "migration" is an euphemism), disparities in human capital and the success of colonial elites at securing - and extending - their political influence were the result of such original disparity.

Since the inception of this analytical stream it was criticised for the implicitly path dependent nature of the argument, which in later versions evolved into an even more ambiguous response to the "sins" of an original institutional set up, as the bedrock of all differences. The revised argument argued that the availability of extractive resources, whether silver, land or labour, installed a very unequal access to wealth and political leverage that subsequently crystallised in the Spanish part of the Americas. By contrast, much less favoured colonies in North America – at least in terms of valuable resources at the time of the "discovery" and conquest 16th century – engendered a more equal distribution. The larger political leverage of the elites in Spanish America was the source of the great wealth inequality that features Latin America today. This contributed to the evolution of institutions, which protracted the original inequalities in former Spanish colonies, and hence prevented the occurrence of faster, intensive and sustained growth thereafter. Thus, Spanish colonial institutions protected "the privileges of the elites and restricted opportunities for the broad mass of the population to participate fully –like in the post revolutionary US – in the commercial economy even after the abolition of slavery".

There are several problems with this argument. For one thing, it is not clear how to characterise the initial extremely unequal distribution of income, rents and power if not by some institutional or technological (warfare) differences at the time of the "conquest". Which of course moves the argument closer to the institutionalists than Engerman/Sokoloff profess to be. However, for the purpose of our paper we are more interested in the role ascribed to factor endowments in setting on the following institutional path of development, and hence of economic performance. Rights to land and labour, or to exploit metal resources, which colonies were differentially endowed with, are at the root of the initial inequality within and across colonies. "The initial conditions had lingering effects, not only because certain fundamental characteristics of New World economies were difficult to change, but also because government policies and other institutions tended to reproduce them".[26] Thus inequality tended to reproduce itself, ad infinite. It was fostered by unequal institutions rooted in the different set of factor endowments given at the time of the conquest. And the opposite is logically derived to be true in the other case: North American factor endowments promoted a more equal institutional set up, which transpired in the greater equality in the distribution of income and political power. One piece of evidence these authors elaborate on is the access to suffrage (e.g. the right to vote) or franchise (e.g the right to vote in public elections, especially for members of parliament). This was allegedly more extended and earlier in North American than in Spanish America.[27] Other

[25] S Engerman and K Sokoloff, "Institutional and Non-Institutional Explanations of Economic Differences," *NBER WP*, no. 9989 (2003)., alsoK Sokoloff and S Engerman, "Institutions, Factor Endowments and Paths of Development in the New World," *Journal of Economic Perspectives* 14, no. 3 (2000). S Engerman and K Sokoloff, "The Evolution of Suffrage Institutions in the New World," *NBER-WP*, no. 8512 (2001).

[26] Ibid, p 223

[27] Ibid, p 225. It is notable the absence of references to the male universal rights to vote granted by electoral laws in some provinces of Argentina, as early as in 1821. Polls were repeated since, if electoral turnout was low.

indicators employed are land ownership and investment in public schools.[28] In sum, inequality protracted more inequality, and it was originated in the initial endowments of economic factors. Subsequently, persistent inequality reinforced by institutions "may in turn have affected growth".[29]

Other authors, too, have highlighted the extractive nature of the colonial bound and its detrimental effects on equality or on the institutional design. Acemoglu et al have produced a series of essays in which they compare the colonial origins of different present days economies. They, like Engerman and Sokoloff have a very exact, in theory but crude in reality, idea of what the Spanish empire was in terms of institutions and exploitation of the available resources, land, labour or metal ores. Paradoxically, all of them share the assumption that some pre-existing ad hoc factor (institutional or otherwise) created an unequal distribution either of resources or of power and income, or rents. This, in turn, established unequal, extractive and hence failed institutions, which made it impossible for the post-colonial states to follow the theoretically expected path to growth, sometimes equated with industrialization.[30] It is very difficult to distinguish either the institutional nature or the factor endowments origins of the presumed unequal access to resources and decision-making.

The resource endowment literature has provided an important corrective to the institutionalist approach in stressing the vast differences that, in terms of population density and raw materials availability, did shape institutional responses. However, it has accepted without contest the same very crude characterization of the institutional set-up of Spanish colonialism that had limited the insights of the original institutionalist argument. Just as the absolutist caricature painted by NIE was far from the reality of Spanish rule in the Americas, the relation between resource endowments and growth was shaped in more complex ways through this form of colonial rule than Engerman/Sokoloff or Acemoglu et al. would make us believe. What distinguishes our approach from those mentioned above is the very characterization of the Spanish rule in America.

Strikingly the authors overlook the fact that native and African Americans did not enjoy political and civil rights until 1974 and 1962 respectively, in regards about issues like equality. Most of the constitutions in post independent Spanish American republics granted franchise to wide range of their population, some with some (wealth) requirements upon who could be elected, and lesser on who could be an elector. Certainly, the number of those enfranchised who used to vote was higher in the US than in comparable nations in the South

[28] This is also confuse at times in following Engerman and Sokoloff' argument, as the latter is often substituted for literacy rates, or franchise is substituted for electoral turnout. Ultimately, concentration of land ownership and deficient investment in education can be both the results of failing macroeconomic situations or recurrent fiscal crisis. M Irigoin, "Macroeconomic Aspects of Spanish America Independence. The Effects of Fiscal and Monetary Fragmentation, 1800s-1860s," *Universidad Carlos III Departamento de Historia Economica Working Papers* 03-09 (2003).

[29] Ibid, p 228.

[30] As in the case of North & Weingast (1989) orD Acemoglu, S Johnson, and J Robinson, "Institutional Causes, Macroeconomic Symptoms: Volatility, Crises and Growth," National Bureau of Economic Research- Working Paper Series, no. 9124 (2002), D Acemoglu, S Johnson, and J Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *NBER working paper* 7771 (2000), D Acemoglu, S Johnson, and J Robinson, "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution," *NBER working paper* 8460 (2001).

It is certain that the different availability of resources –commodities tradable in the world economy of the time - was huge at the time of arrival of Europeans to the New World. There were also differences in the reservoirs of labour and capital available; all of which engendered not only different economic and institutional paths in the colonies but also in the metropolis in the 16th and 17th century. Yet by the late 18th century, silver was the main tradable moving the wheels of global trade. It constituted still one third of China imports through Canton only. Silver had been overwhelmingly the commodity most valuable in the exchanges with China and the East Indies and it was differentially available in Spanish America. Naturally its production was dear to the interests of the Spanish crown. Probably, the role of Spanish America in the production and export of silver and the place of silver in the phenomenal developments of the modern global economy justify the generally accepted idea of Spain as the extractive metropolis. However, the Spanish empire in America - as the state in the metropolis – was not exactly a machine to draw resources from the colonies to the extent it has been assumed since the times of Adam Smith. And yet, stressing either Spain's institutional design - Absolutism – or the fact that Spain had conquered the lands where silver resources were more abundant, the association of Spain with an extractive imperial metropolis prevails in all the above-mentioned studies, ranging from Earl Hamilton to Acemoglu and others.

Resources and revenues in the finances of Spain's Empire in America.

The clearest illustration of the nature of Spanish American rule is provided by the large amount of fiscal data available. Using the accounts of colonial treasury districts in today's Mexico, Ecuador, Peru, Chile, Bolivia, Argentina, Uruguay and Paraguay to create two five-year samples, Tables 1 and 2 below show the basic outlines of colonial fiscality even if data for much of the Caribbean, Central America and New Granada (Venezuela and Columbia) are not available. [31] The first observation has to be the sheer size of the Spanish colonial treasury. The sum of income raised only in those districts for which we have data equalled about 255 million pesos in the first sample period shown, 1785-89. This amount was nearly equal to the total silver imports of China –through Canton – from 1719 to 1833.[32] Ten years later, in our second sample royal income had increased to almost 420 million pesos. The overwhelming size of the treasury of the Viceroyalty of New Spain (Mexico) only is apparent. It might be helpful to put the orders of magnitude into the perspective of global history. The value of total trade between the US and UK for the six year period 1795 to 1801 was 270 million pesos. Estimates of the total capital stock of the US, including public debt bonds, bank and insurance companies stocks plus stocks from turnpike and canals construction companies altogether in circulation after the Louisiana Purchase in 1803, put them at about 122 million pesos. The annual average value of English East India imports from China in the late 18th century was six million pesos or less than 3.5 percent of the yields of the annual treasury of New Spain only.

These comparisons underpin the global significance of resources raised in the Spanish colonies. However, a comparison with the size of transfers from these Spanish American

[31] For a description of the data set see Appendix 1.

[32] M Irigoin, "Bringing the New World Back into Global History (and the Origins of Another Great Divergence?): Spanish American Silver Bound to China on North American Vessels, 1780s-1820s." (paper presented at the DRCLAS Latin American History Workshop, Harvard University, apr 6th 2005).

treasuries to Spain shows that the perception of a colonial system based on extraction of resources towards the metropolis is fatally flawed. Surely Spain benefited from private transfers from the colonies, but in terms of the size of the colonial *fiscus,* transfers to the motherland were modest. In fact, they fade in relation to intra-colonial transfers, i.e. payments made between treasury districts within the colonies. Column 3 illustrates the degree to which Spanish colonial rule shifted financial resources around different colonies. The values represent the balance of incoming and outgoing intra-colonial transfers for each macro administrative region. Between 16 and 45 percent of the income raised in colonial Spanish districts in the late 18th century was not spent in the same district even though it remained in the colonies. These proportions raise immediate question about how such an all pervasive system of re-distribution of fiscal resources within the colonies themselves could function, be maintained and what it means for our understanding of the nature of Spanish rule. The tables illustrate three basic features of Spanish imperialism. Firstly, its global importance given the size of resources it raised is obvious. Secondly, it was a huge re-distributive machinery. Crucially, however, remittances to the metropolis were only a small part of this re-distribution. More important was a spatial re-distribution within the colonies. Thirdly, this was a colonial sphere that was self-sufficient in fiscal terms thanks to the transfers send between colonial treasury districts.

Table 1 Income, transfers to Spain and net intra-colonial transfers between macro-regions 1785-89, Spanish pesos

	Actual income	Net intra-colonial	To Spain
New Spain	176,854,695	-39,770,020	10,558,867
Peru	43,133,235	1,030,538	1,228,049
Upper Peru	15,317,565	-2,498,928	
Chile	4,693,050	976,468	4,221
Rio de la Plata	15,195,900	7,070.009	

Table 2 Income, transfers to Spain and net intra-colonial transfers between macro-regions 1796-180, Spanish pesos

	Actual income	Net intra-colonial	To Spain
New Spain	337,941,470	-43,313,788	21,573,595
Peru	29,317,105	1,060,755	12,262
Upper Peru	16,295,275	-1,432,247	
Chile	14,293,540	353,976	5,945
Rio de la Plata	18,863,575	8,008,496	

It is surprising that the existence of a system of large intra-colonial transfers like those in Spanish America has attracted very little scholarly attention. Local and regional studies have stressed their importance in many parts of the Empire. Yet, there has been next to no analysis of what their role in the larger set-up of Spanish rule was despite the fact that – to the best of our knowledge – this was a truly exceptional feature of Spanish imperialism not reproduced in any other colonial setting. The existence of very substantial transfers between

treasury districts in a colonial sphere, which as a whole was fiscally self-sufficient, complicates the analysis of the fiscal nature of Spanish imperialism considerably. While there is little evidence that (at least by the late 18th century) the relation between metropolitan Spain and its colonies was overwhelmingly characterised by the extraction of surplus, it would still be possible that the intra-colonial transfers reflected an economy based on the extraction of labour and precious metals or of wide spread rent-seeking. Therefore it is paramount to understand better the flows of revenues between different colonial districts.

In both periods reported above in Tables 1 and 2 the pattern of re-distribution between the larger regions, New Spain, Upper Peru, Peru, Chile and Rio de la Plata is identical. New Spain suffered a colossal negative balance of transfers as mentioned above. Unfortunately, there is no comparable data for the receiving regions. New Spain revenues flowed through the main colonial centre in the Caribbean – Havana- to the other Spanish West Indies. But also greatly benefited Louisiana, Florida, other smaller Spanish possessions in northern Mexico and California, or was channelled to the Philippines via the famous Manila Galleon. In South America Peru overall was a net recipient, as were Chile and more generously the Rio de la Plata. Upper Peru was a net payer. Note again that the sums of net payments will not add up since important regions, especially New Granada, are missing. Nevertheless, these overview data give a taste of the order of magnitude of net transfers involved.

Table 3 Net transfers between Spanish American treasuries 1785-89, Spanish pesos.
Table 4 Net transfers between Spanish American treasuries 1796-1800, Spanish pesos.
(see appendix 2)

Behind the macro-region totals there is an even more complex picture of individual cajas reported in Tables 3 and 4 shown in appendix 2. In the first sample, 1785-89, out of a total of 54 districts for which we have data, 17 received positive net transfers and for seven these transfers were the main source of income. Ten years later (1796-1800) 19 out of 54 treasuries were subsidised and one in four depended on transfers for the largest share of their resources. Only a small number of *cajas* received and paid out about the same amount or did not transfer or receive any money at all, and these were mostly fiscally unimportant districts. And the story is even more complex on a year on year basis. Some districts enjoyed a permanently positive balance of net-transfers, others were constantly sending out more than they received, but a substantial number was net recipient in some years, payer in others. Maps 1 and 2 illustrate the spatial distribution of net payers (dark grey/red), net recipients (light grey/green) and those that had zero net transfers (very light grey/yellow) in the later sample for Mexico and the two Perus.[33] The geographical distribution would suggest that coastal *cajas* were more likely to benefit from positive net-transfers. This contrasts with a notion generally accepted in the historiography that attributed the transfer of revenues almost exclusively to the defence needs of the Spanish Empire in America. Obviously, coastal areas played a large part of the defence of the colonies, but so did areas bordering on hostile neighbours as the north of Mexico or those adjacent to the Portuguese sphere of influence, like Paraguay. Hence, not all military outposts were at the coast. Nor were all

[33] Note that the actual borders between treasury districts within the same *intendencia* are not known. Thus borders in the form of clearly identifiable straight lines introduced between e.g. Bolanios and Guadalajara districts are for the purpose of illustration of spatial distribution only and do not pretend to reflect the accurate size of either district.

coastal areas military outposts; Lima is a case in point. The maps confirm that military need was only one of several driving forces of intra-colonial transfers.

If defence was argued to be the driving principle on the expenditure side of colonial balance sheets, the exploitation of mining and labour resources was seen as the key feature on the income side. This is the core preposition accepted by institutionalists and resource endowment advocates alike: Spanish colonialism was rooted in the collection of rents from the exploitation of silver deposits and indigenous (and to a lesser extent slave) labour either because the predatory structure of the Spanish state created a colonial society based on such rent seeking or because the available resource endowment simply made it the obvious choice. Thus we would expect mining districts and those relying on Indian agricultural labour to be associated with lower or negative net transfers. The data published by TePaske and Klein have allowed us to investigate the sources of income and destinations of expenditure for individual *cajas* for our two sample periods and re-classify them into broad categories. (See appendix 1 for details on the data.)

On the income side we distinguish between the categories mining, agriculture, trade and consumption and church, in addition to the already used intra-colonial transfers. The guiding principle of our sectoral classification was tax incidence, i.e. which sector of the economy was burdened by a particular tax. Therefore, we diverge from most other authors who have used these data in two important points. Income from monopolies has been assigned to the sectors most likely to be burdened.[34] For the same reason we unite taxes on labour and production under the same heading as long as they were born by the same sector.[35] Secondly, we exclude the large number of administrative taxes from our analysis, since it is not clear who bore them.[36] The church category picks up taxes collected by the church but belonging to the crown (recall our discussion above of the less than clear-cut borders between church and state) and income the state derived from the so-called *temporalidades*, the confiscation of Jesuit property in the late 1770s. On the expenditure side, we have isolated military spending, and transfers to Spain in addition to the intra-colonial transfers.

It should be noted that we do not claim that the tax burden on individual sectors reflects the composition of the real economy very closely. Several authors have questioned the suitability of using fiscal receipts to proxy other trends in the economy.[37] Our aim here is not to measure the performance of the economy but to analyse the performance of the state. But the data do allow us to investigate the relationship between particular sources of income and patterns of expenditure on the one hand, and net intra-colonial transfers on the other. Table 5 below reports the results of a simple OLS regression model investigating the strength of the relationship for the two sample periods. Models 1 and 3 report results respectively for each period introducing as independent variables the income derived from the four sectors identified above (mining, trade and consumption, agriculture and church), as well as

[34] For instance we count monopoly income from alcohol taxes as trade and consumption; and income from the mercury monopoly is classified as mining. See Appendix 1 for details.
[35] Thus, Indian tribute (in its origin a labour tax) and the tenth (*diezmo*) on agricultural production are both subsumed in agriculture.
[36] Even without administrative taxes our categories covers a very high percentage of total income. See Appendix 1 for the share of income actually encompassed by our categories.
[37] This was the main purpose of the initial analysis for which Te Paske and Klein collected this superb data base..

expenditure spent on military expenses. If the standard notion of intra-colonial transfers as a simple means to fund defence was true we would expect this explain much of the transfers. We add a dummy variable for large seaports. The larger seaports of the colonial Spanish America were the points were the silver economy met with international trade. Therefore we wanted to investigate if treasury districts centred around one of the large ports were more or less likely to receive intra colonial transfers.

Table 5 Regression results: dependent variable net transfers

	1		2		3		4	
	1785-89		**1785-89**		**1796-1800**		**1796-1800**	
Mining Income	-0.352	***	-0.375	***	0.004		-0.032	
Trade/Cons. Income	-0.402	***	-0.391	***	-1.410	***	-1.369	***
Agriculture Income	-0.792	**	-0.867	**	-0.123		-0.223	
Church Income	-0.578	***	-0.562	***	0.302	***	0.247	***
Military Expenditure	0.409	***	0.425	***	0.602	***	1.046	***
Remittances to Spain			-0.218	***			-0.273	***
Sea Port	348242	***	390792	***	269565	***	151747	**
Constant	-12842		-6286		-47663		-52443	
N	263		262		273		273	
adj. R2	0.60		0.61		0.82		0.86	

*** = Significant at the 1% level; ** = Significant at the 5% level

Regression 1 for the period 1785-89 shows that higher income derived from mining is strongly associated with lower net transfers, but the coefficient is rather small. In fact, it seems that agricultural areas were much more punished by the system of re-distribution of resources, with an additional peso derived from agricultural taxes being associated with 0.8 pesos less in net-transfers, twice the rate of either mining or trade. Thus to the extent that there was an extractive element to the structure at this point in time, districts that received much of their income from agriculture did receive lower or negative transfers while mining districts fared well. The relatively high negative coefficient for church is surprising. Income derived from the Church was generally larger in the big administrative centres, which we might have expected to receive larger net-transfers. A look at the raw data suggests that in the earlier period this variable was driven by exceptionally large income from the sale of Jesuit property in the early years after their expulsion. Thus we would not put too much weight on this result. We do find that districts with higher military spending got larger net transfers, though this variable is not driving the story as strongly as the historiography would make believe. A peso of additional military spending was associated with 0.4 pesos of more net transfers. Neither mining nor military needs or transfers to Spain determine the results to the extent that the traditional story would make us believe. Instead, being a seaport was an exceptionally good thing in order to receive more net transfers given that the average net income of *cajas* in this period was about 770,000 pesos.[38] In fact, the results show that sea ports were associated with higher net transfers even if we control for the impact of defence needs.

[38] It should be noted thought that size distribution was very large ranging from a few thousands to 40,000,000 pesos in Mexico.

These results also holds true if we include as an additional variable the transfers to the metropolis in regression 2. Those districts that did transfer funds to Spain received smaller net-intra colonial transfers. The coefficient is not large but it illustrates that the system of intra-colonial transfers functioned largely independently of any transfers to Spain. Introducing, remittances to Spain does not change the coefficient for seaports notably. Again, we interpret this as evidence that seaports did receive intra-colonial transfers independently of being or not regions from which remittances to Spain were shipped. It seems that seaports attracted intra-colonial transfers due to their role in international trade alone not because they had larger military needs or organised remittances to Spain. The results also confirm that transfers to Spain were not the pivotal part of the system of re-distribution of resources. Instead the fiscal system in Spanish America evolved around a system of distribution of funds between macro-regions within the colonies on the one hand, and within those macro-regions on the other, causing in some cases a substantial geographical split between regions of tax collection and regions where the expenditure took place.

Treasuries in the Spanish Empire were always under strain and the late 1780s were no different. However, by the late 1790s the pressure from the European wars was also increasingly felt in the colonies. Locally defence spending increased as the colonies were under threat. Overall intra-colonial transfers increased as well as shown in tables 1 and 2. Many historians have discussed the signs of increasing stress on the system in this period immediately before the disintegration of colonial order.[39] Did the Empire strike back under the thus increased strain and increase the fiscal pressure? And if so who shouldered the burden? Regressions 3 and 4 give some answers. Clearly net-transfers were more directly channelled into areas with large military expenditure. But apparently the pressure was not put on our classic 'extractive sectors', mining and agriculture. Instead they were, relatively speaking, off the hook returning insignificant coefficients. So were the main administrative centres, if we accept church income as a proxy for them. They received more net transfers now that the exceptional income from Jesuit possessions began to dry up.

The main burden, it seems, was levied on trade and consumption. Though the bonus of being a seaport was now smaller, it was still very large. What emerges here is a picture rather different from the story of an extractive economy. Under strain the burden, previously quite evenly distributed between sectors, though unevenly distributed geographically, shifted more towards trade and consumption taxes, predominantly in the interior, reinforcing further the unequal distribution in spatial terms. This is a very interesting finding: In an allegedly extractive economy rule by an absolutist predator state (*fiscus*) the main source of revenues was trade and consumption, and in particular within the domestic economy. Latin American historians have stressed this feature of the colonial state following Sempat Assadourian's seminal contribution. However, a cruder picture of the imperial economy and its rule portrayed elsewhere resulted in many economic historians overlooking the scope and strength of non-metal production and overall commerce in the interior of the colonies.

It is instructive to focus on a few treasury districts, listed in table 6 below, where we know that mining was definitely the predominant sector, to understand better the role of mining within the larger revenue collection in the colonies. By the late 1790s, mining districts

[39] Marichal (1999)

received overall about 50 percent of their income (excluding intra-colonial transfers) from mining, down from 58 percent ten years earlier. The historiography has long stressed that mining districts were often the centres of large-scale agricultural production needed to supply the mining workforce. Not surprisingly, we find that in a number of mining towns the share of agricultural tax income was close to or even higher than what was collected from mining. However, in many of mining districts trade and consumption contributed a rather large share of the income. In fact, the fall in the relative share of revenue derived from mining between the late 1780s and the late 1790s by eight percent was accompanied by a corresponding rise in the share of income from the respective second most important sector. If we take the respective second largest sector, in most cases, trade and consumption, in a few, agriculture, we observe that by the late 1790s it contributed on average more than 30% to the total non-transfer income of these main mining centres. In places like San Luis Potosi (New Spain) trade contributed as much as mining.

Table 6: share of non-transfer income in major mining centres derived from mining and second most important sector 1796-1800. In percentages.

Caja	**Mining**	**Trade&Consumption**	**Agriculture**
Arica	68.96	29.79	
Carangas	31.94		44.44
Oruro	39.87	13.64	
Potosi	58.63		25.84
Trujillo	39.28		45.59
Vico Y Pasco	69.41		10.09
Bolanos	38.55	58.34	
Durango	65.16	18.42	
Guanajuato	60.10	16.14	
Pachuca	47.68		17.20
Rosario	40.32	41.10	
San Luis Potosi	41.33	39.03	
Sombrerete	43.74	30.75	
Zacatecas	65.38	25.68	
Zimapan	58.99	26.20	
Chucuito	19.32		60.00

Over a period of increased fiscal pressure the share of non-mining income increased considerably, suggesting a shift in the relative burden. We see clear evidence that the largest sector in these mining areas was over time paying a smaller proportion of total tax revenue. Since we have no way of knowing how large each sector in any of the individual districts was we can only offer conjectures. Yet, the sample of mining towns casts doubt over the assumption that the contribution that each sector made to total income was strongly correlated to its share of the local economy. Other observations point in a similar direction. Buenos Aires was in the late 18th century a fast growing commercial hub and main seaport. Yet, its accounts bear no witness to this. Its non-transfer income consisted to only 2,6 percent of trade and consumption taxes in the first sample, 4.3 percent in the later sample.

We argue that the remarkably low income derived from what we know were dominant sectors has to be explained within the larger picture of the political economy of the empire. Our discussion above of the fiscal set-up of the empire and the transfers illustrates that, rather than being a centralised system servicing simply the need of a metropolis, this was a complex structure that gave much power of negotiation in fiscal matters to local elites. In an earlier paper we have shown that this negotiated rule in the colonies can be explained by the powerful role played by local mining entrepreneurs and large merchant interests.[40] Our analysis, which echoes recent political historiography provides an interpretation of the nature and role of Spanish rule in American which seems more accurate than the absolutist story of a king and bureaucracy that were all powerful still accepted by many social scientists. The alignment of interests of elites and crown is the key to understanding how the Empire remained one unit for 300 years and, moreover, survived in the face of superior military power from its competitors.

The data presented above are consistent with this interpretation. It seems likely that powerful mining elites in the silver districts and mercantile elites in commercial centres knew to avert increasing impositions on economic activities they were directly interested in. In the face of fiscal need the burden was rolled over on softer targets, such as trade and consumption or agriculture in mining towns, where a large and cash-rich population lived. The large number of small settlements in the interior, stretching from the coast to the highlands, organised around the local production of foodstuffs, services and some manufactured goods for urban or mining centres. These districts obtained most of their income from the intermediation of goods, foreign (European, oriental or from other colonies which supplied a great deal of consumer goods) or locally produced. Here, trade and consumption was often the only revenue sources available and local interests were too weak to influence policy. In the main trade centres commercial elites were strong but deflecting the fiscal burden was more complicated for lack of alternatives.

Yet the redistributive nature of the Spanish Empire offered a way out. Notably, the largest net recipients of transfers were major commercial centres. Here the redistributive nature of the Empire and commercial development went hand in hand. Commercial elites kept trade taxes low that fostered trade, and more trade made commercial elites more powerful and resourceful in their defence of commercial and fiscal privileges. But this 'virtuous' cycle (from the point of view of the elites) was only possible because transfers from other regions picked up the tab not only for defence costs but for much of the civil administration as well. Remittances meant that silver in bars and coins, was ready for trade.

Elsewhere, we have provided estimates for the injection of liquidity that these extra revenues from the transfers provided in some places. Some of them were port cities like Buenos Aires, Havana or Cartagena (in present day Colombia).[41] The port in the southern coast of the Caribbean received about 17 million pesos from the interior regions in New Granada over the period 1776-1810. These extra revenues resulted in an increase of 25 pesos per capita –if

[40] Grafe & Irigoin (2005)

[41] Following pages draw from Irigoin, "Bringing the New World Back into Global History (and the Origins of Another Great Divergence?): Spanish American Silver Bound to China on North American Vessels, 1780s-1820s." Cartagena had 118,242 inhabitants in the region (1777) and pop of the port grew from 14,000 to 25,000 in 1810.

considering the whole district population, or an impressive 119 pesos extra for every inhabitant of the town at the port. In Havana, the economic effects of these transfers of revenues were even more spectacular. The free population in the island enjoyed an additional 24 pesos per capita from remittances in the 1770s, and 23 pesos in the 1790s. Not surprisingly the free population of the island had increased by 46 percent in 15 years.[42] The total population rose 60 percent in the same period, as the number of slaves –the main 'input' for sugar production and exports- doubled.

Indeed, the very existence of the transfers created substantial amounts of additional demand in these local and regional economies. Ordinary revenues originated from trade grew accordingly, as population and the value of non-silver exports did in these three cities.[43] Customs revenues skyrocketed. In Buenos Aires and Havana, for instance, Customs yield increased 10 times from 1778 - 54,000 pesos - to an average of 520,000 pesos in 1803-05.[44] Cubans increased their spending on foreign goods (Spanish, from other colonies and from outside the empire) from 18 pesos per free person to 57 pesos in 1792 not withstanding the rapid population increase in the period.[45]

It is no wonder that these regions became the fastest growing parts of the Empire. Indeed, this extraordinary performance of colonies with such different factor endowments – one with plenty of free land and scarce native population in the remote River Plate: pastoral Buenos Aires, the other located in the centre of the Caribbean basin specialised to labour intensive commercial agriculture: the sugar island Cuba - with so dissimilar sets of property rights on labour and land - dear free labour in the former and slavery in the latter – has been noted by some scholars. Cuba and Buenos Aires are the benchmark cases for the differential trajectory from the rest of the Spanish colonies by 1800 identified by John Coatsworth.[46] Along the lines of his institutionalist assumptions, Coatsworth explains the superior rate of growth of these colonies with the relatively higher degree of openness to trade, measured by the usual addition of exports and imports. At least in one aspect this characterisation is wrong: both Cuba (Havana) and Buenos Aires were major re-export ports, so data on trade includes goods which finally were consumed and produced elsewhere, but taxed at these ports. The other, more important, fact that is overlooked in this institutional explanation is that both economies, like Cartagena in New Granada and other smaller ports elsewhere in Spanish America, were favoured recipients of transfers of revenues - silver- from distant interior regions. Thus, additional revenues privately managed resulted in greater liquidity and ability to trade, improved purchasing power of exports, subsidies for consumers and additional revenues from trade.

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[42] Ibid, Free population in 1774: 128,287 and 187,711. Slave population in the same period moved from 44,000 to 84,500.

[43] Buenos Aires population at the city port grew from 24,205 inhabitants in 1776 to about 40,000 in the 1800s..

[44] This should be considered the lowest estimate for the growth of imports in the River Plate port, as the Custom data is the benchmark for legal trade. Contraband was the norm in the River Plate as early as the 17th century.

[45] Irigoin, "Bringing the New World Back into Global History (and the Origins of Another Great Divergence?): Spanish American Silver Bound to China on North American Vessels, 1780s-1820s."

[46] Coatsworth, "Economic and Institutional Trajectories in Latin America."

To have an idea of the overall scale of the additional resources pumped into some of these areas by means of the re-distribution of revenues within the empire, we have combined the data on net transfers from or to these treasuries for which have population data available.

Table 7 Net transfers per capita for selected treasury districts 1796-1800

Caja	**Net transfers pc**
La Paz	-5.72
Potosi	4.75
Mendoza	-0.16
Buenos Aires	19,85
Catamarca	-0.08
Corrientes	-0.03
Salta	0.00
San Juan	0.00
Santa Fe	-0.11
Santiago del Estero	0.00
Tucuman	-0.05
La Rioja	-0.03
Arequipa	-3.34
Cuzco	-5.17
Huamanga	-5.03
Lima	6.67
Trujillo	-10.22
Durango	-2.54
Guadalajara	-1.21
Guanajuato	-1.74
Mexico	-2.81
Oaxaca	-0.50
Puebla	-0.09
San Luis Potosi	-2.68
Zacatecas	-4.91

The results are clear. While a great many districts paid moderate amounts of net transfers a smaller number of places received large per capita subsidies. The per capita figures illustrate even more powerfully the way in which fiscal re-distribution created regional inequalities. These were of course man-made regional inequalities rather than inequalities caused by resource endowments. The transfers paid to places like Havana, Buenos Aires and Cartagena enriched and empowered elites both in the sending region as well, and more obviously, in the receiving areas. This was so because the actual system of transfer- management and transportation -was largely privatised. The need for cash advances or debts, plus the lack of an infrastructure at the disposal of colonial governments to ship the monies left the transfers in the hands of large mercantile interests that used these funds to finance goods trade, make arbitrage gains and simply earn commissions.[47] The alignment of interests between colonial officials who ordered the transfers and wealthy locals was the secret that kept the system going. Potosi merchants in fact needed the movement of the annual *situado* to the port of

[47] Grafe& Irigoin (2005)

Buenos Aires to finance the purchase of imported goods. Mexico City merchants benefited paradoxically from the sending of vast amounts of money to Havana by paying themselves with the funds for military supplies and many other goods for Havana.

The resource endowment explanation of Latin American (non-) development rightly points to the vastly different conditions applying in the different parts of Latin America regarding the availability of natural resources and labour. Yet, the impact of these differences in comparative resource richness was broken and deflected through the prism of the political economy of the (non) Absolutist Empire. The latter gave large power of negotiation in fiscal matters to local elites who often knew to use it to their advantage. Their simplistic portrayal of the political economy of Spanish rule betrays both Engerman/Sokoloff and Acemoglu and al in their attempt to dissect the impact on resource endowments and institutions. Spanish colonizers found greatly divers resource endowments on their arrival. Yet, the system of redistribution of revenues over distant regions financed the expansion and maintenance of the largest territorial empire, single custom and monetary union of modern times in the West. As early as the 1590s the system was in place. Cartagena in New Granada received an average of 108,000 pesos per annum as extra revenue from neighbouring regions, which represented 65 percent of the total income of the *caja*. Of these, 87, 000 pesos on average were sent to Spain in the decade.[48]

The economic inequalities that this system produced in the interior of the Empire in America by the early 19th century were to a large extent the outcome of a man-made phenomenon. The intra-colonial transfers altered substantially the spatial availability of resources for investment and consumption, in accordance with the changing rhythm of global trade. Note the relative change in the transfers to Lima (sent forward to Panama, Acapulco and the Pacific), in favour of remittances to the port in the South Atlantic (Buenos Aires, from where silver reached China and the East Indies).[49] The system of fiscal re-distribution between treasury districts served its purpose from the point of view of the Spanish Empire. It guaranteed military defence, it made the colonies self-sufficient, and it kept local elites' interests aligned with those of the crown by fostering a remarkable economic growth at least in the 18th century in some colonies. Yet, it also made different parts of the colonies dependent on one another. And then disaster struck in the form of a Frenchman.

III
The role of Contingency: History matters

When in May 5th 1808 Charles IV was imprisoned by French troops, Napoleon forced the abdication of Ferdinand VII, the crown prince. The Emperor placed his brother Joseph on

[48] Own estimates from Tovar Pinzon (1999)

[49] Irigoin, "Bringing the New World Back into Global History (and the Origins of Another Great Divergence?): Spanish American Silver Bound to China on North American Vessels, 1780s-1820s." Lima, and the overall economy of Peru, reached its peak of splendour and prosperity in the first half of the 17th century, and declined slowly over the 18th century. Contrarily, the establishment of the new Viceroyalty in the River Plate, in the south Atlantic echoes the current expansion of the Atlantic trade, and of the Dutch, English and North American merchants visiting the colonial ports in South America.

the throne of Spain and quickly demanded a regular transfer of silver money similar to that, which hitherto had maintained Spain at war. Political historians have seen in this incident the turning point for the Revolution that led to Independence and the birth of modern republics in Spanish America. The Revolution in Spanish America has often been included among the other Bourgeois Revolutions of the 18th century. Yet, the event cannot be compared with the final deposition of Charles II in 1649 or Louis XVI in 1792. The Spanish king kept his head on his shoulders, but lost a great deal of his empire and his own authority in Spain. Unlike the Glorious, the American or the French Revolution, the ensuing revolution in Spain and Spanish America after 1808 resembled more an act of restoration. It was the restoration of sovereignty, which was devoid of meaning and effect because of the estrangement of the king. Had the king been killed, the problem would have probably been simpler: "another king" would have been necessary. With the king alive, the matter was who else could play his part in the constitutional arrangement that had organised the state and the empire for more than 300 years.

It could be argued that, unlike France or Britain where revolutions occurred against the king, Spain went through a revolution in spite of the king. With the king in prison and a subrogate sovereign, the constitution of the Spanish state and empire revealed itself. Both in the metropolis and the colonies, the corporations that embodied the local representation, the *juntas*, hastened to fill the vacuum while trying several constitutional recipes to replace momentarily the king. In theory, the sovereignty returned - if fragmented - to the true sovereign, the *vecinos* of a town. A similar dis-aggregation and disagreement occurred among the constituents on the other side of the Atlantic. Interestingly, the "revolution" or the reaction of local powers began in remote highlands of Upper Peru and the coast of the river Plate in 1809. As its first measure, the Junta in the viceregal capital set off troops towards Potosi to gather a comprehensive political representation for the whole of colony and to secure the continuation of the revenue transfers.

However, the ultimate arbiter of the system of revenue re-distribution between colonial regions, which had existed for three centuries, had disappeared. With the absence of the king – and the constitutional impediments to replace him - the empire imploded. This unexpected vacuum in the fiscal and political system led to strife over revenues in the colonies. As deficits recurred in the local treasuries because of administrative disarray and demands to equip - either patriot or royalist - armies, the interruption of the subsidies further aggravated the fiscal position of each emerging state. Competition for revenues and resources was unleashed among regions as the re-distributive nature of the Empire collapsed. Fiscal receipts or mint houses fell into the hands of new local authorities or the "private sector". Thus, local elites established where former fiscal and political authorities resided in the empire found the means to "break free". The fiscal disintegration of the empire opened a political fragmentation of the former colonies. The observed political fragmentation that resulted from Independence mirrored what happened to the structure of the imperial fiscal machinery. On the basis of controlling the regional treasury, and by grabbing the old colonial revenues, regional elites could defend their economic interests and be part of the dispute over the design of the new revenue collection unit, the republican state. Disorder and civil war followed suit.

Indeed, post-independent political boundaries emerged from within the existing colonial fiscal divisions. New governments constituted in those sites where the colonial local treasuries were located. Before the Revolution these treasury districts were an integral part of

the imperial fiscal network that organised the distribution and extraction of revenues. The near equivalence of sites of the former fiscal administration and the ensuing political units that emerged after the Revolution is telling. Those units, provinces or states, became to a great extent fiscally and politically autonomous. Some of them were bound to each other in loosely defined constitutional (federal, confederate or consolidated) national states. More often though, they were related to each other by the continuous warfare that characterised nineteenth century Latin American political development. Given the colonial structure of redistribution of revenues, with Independence immediate benefits *of beggar thy neighbour* strategies were great.

The compact and consensus that had existed in Spain and its colonies, had to be built from scratch. The resulting disorder and instability revolved around the creation of new fiscal and political fundamentals both in the metropolis and each of the colonial main treasuries. It could be argued, that the painful legacy of Spanish imperial rule in America was not primarily a consequence of its absolutist nature. Instead, its unique system of internal re-distribution of revenues created strong centrifugal tendencies in the absence of the ultimate and legitimate arbiter. In North America the nation state emerged out of the aggregation of previously separated colonies. In Spanish America a previously unified political and economic unit collapsed into a large number of poorly defined and legitimated nation states. The Spanish path to empire building turned out to be ill-suited base for nation state building.

IV

Conclusions

We started this paper with a discussion of the merits and flaws of a now very extensive literature that compares former Spanish and British colonies in order to identify the conditions that favour - or hindered - economic growth in the longer run. As Engerman and Sokoloff point out, the Americas are in some senses a natural experiment that can enlighten many of the larger issued of long-term growth. We argued that, broadly, two approaches have developed. One sees the origins of North American success and Latin American failure in the institutions that were introduced by the respective colonial overlords. The other is more deterministic and sees the root of differential development in the natural endowments that European colonisers found in their newly conquered territories. These it is argued created a much greater degree of inequality in the Spanish hemisphere, which became enshrined in the institutional set-up of these colonies and their successor states and thus perpetuated itself.

The insitutionalist approach claims that Spain's predatory absolutist state forced the colonies into an economic development based on the exploitation of natural resources and indigenous labour. This in turn created an economy rife with rent-seeking which stifled investment and production and in the longer term seriously constrained Latin America's growth potential. In section 1 we have confronted this claim with the reality of the structure of the fiscal system in Spanish America. We have argued that the colonies far from being the mercy of a powerful extractive machine in the form of a strong colonial bureaucracy were in fact surprisingly autonomous in fiscal terms. The lack of a single fiscal constituency, of uniform tax rates, of centralisation of the system all point in the same direction: the tax

system in the colonies depended to a very large degree on local and regional decision-making. The relationship between the crown and colonial elites was one of negotiation not of command. The murky reality of Spanish colonial fiscality shows clearer than any other indicator that it is wrong to depict Spanish colonial rule as absolutist, bureaucratic and extractive in the ways the institutionalists have done.

The factor endowment approach returns more to economic fundamentals, namely the availability of land, labour and raw materials, that existed in the respective colonies. Here it is argued that Spanish colonies, blessed with large amounts of silver and labour, featured a very unequal income distribution from the very beginning as a consequence of the concentrated control over these valuable resources. Over the course of 300 years of colonial rule this unequal distribution became enshrined in the political and social institutions of the colonies reducing investment and ultimately damaging growth. Factor endowments obviously provided for great differences in the economic potential of Spanish colonial districts. However, in section two we have argued that an analysis of the fiscal set-up of the colonies showed that we can understand their impact only if we understand the nature of Spanish rule. Again, as in the case of the insitutionalist approach we feel that the way Spanish rule is characterised is inaccurate.

What our analysis of the colonial Spanish America fiscal data show is that this was not a system primarily aimed at the extraction of resources or revenues from the colonies for the benefit of the metropolis. Instead it aimed at making the colonies self-sufficient and the Spanish empire was successful in that. But self-sufficiency was only possible because intra-colonial transfers covered the needs of those regions that either could not or would not raise sufficient revenue to pay for their defence and administrative expenditure, In this sense, Spanish colonial rule did the job well – the transfers enabled the empire to expand into unsettled territories from the Californias to Patagonia, with presence and commerce in both oceans. It defended itself against enemies that were militarily superior at least by the late 17th century and let the colonial economy grow at a reasonable rate. Yet, again it is important to keep the political economy foundations of this system in mind. It worked because within a negotiated rule the alignment of interests between local elites and crown kept it working. This depended crucially on the king as the accepted ultimate arbiter of the system. Once, we have established the role of the crown within this institutional set-up it becomes clear why the system was thrown into total disarray in the aftermath of the imprisonment of the Spanish king at the hands of Napoleon.

With the abduction of the king, the common source of sovereignty of the empire and the system of intra-colonial transfers collapsed. In its wake, conflict between districts that had depended on transfers and those that had been net payers was unavoidable. The outbreak of the system meant that many *cajas* could not sustain their spending without transfers; thus the otherwise inequality - regional and sectoral – became apparent when each polity at those fiscal districts sought the means to carry on. This suggests that economic causes, the income shortfall and the needs for new sources of revenues in these *cajas*, drove the political and military conflicts that plagued Latin America after Independence. We suggest that the causality between economic strain and political conflict was exactly the opposite of that suggested by the institutionalists, who claimed that the political strife, disorder and instability in the aftermath of independence determined the poor economic performance of modern Latin America in the 19th century. But our story is not one of a re-distribution of resources

on the basis of factor endowments either. The unequal access to fiscal resources that caused the political strife during and after independence was largely man-made. It was the outcome of intra-colonial transfers not of simple resource endowments and the estrangement that followed the novelty of having a ruler who was impeded to rule.

Ultimately our reading of the fiscal and political history of the late colonial and early post colonial phase in Latin America puts the importance of contingency – history - back centre stage among normative theoretical arguments. The complex fiscal system of cross-subsidisation of treasury districts in colonial Spanish America owed a lot both to resource endowments and to the negotiated character of Spanish rule. Yet, it was a chance event, the imprisonment of a king that created a vacuum in the legitimate authority of the ruler that brought the whole system down. Because regions had depended on one another this was the one shock the system could not withstand. Economic conflict over revenues led to interregional war and territorial fragmentation. The latter in turn destroyed the western world's largest customs and monetary union reinforcing the fragmentation of previously integrated markets further cutting off regions from vital supply lines and centres of demand. The economic cost was huge. Indirectly we could blame Spanish institutions for them, but only insofar as they created a system that was successful as long as common legitimate rule was uncontested but created incentives for regions to use beggar-thy-neighbour strategies when that common sovereignty was destroyed through a truly external shock.

Appendix 1

The data for the analysis of the treasury districts are derived from the accounts transcribed and published by J.J. Te Paske and H. Klein available in print and online. The geographical area covered includes the Viceroyalties of Rio de la Plata and Peru as well as New Spain, i.e. today's Argentina, Uruguay, Paraguay, Chile, Bolivia, Peru and Ecuador. Missing is data for New Granada, today's Columbia, Venezuela and Central America. Data cover the entire colonial period. However, there are many more missing accounts for individual districts in the earlier period than in the later ones.

Of the 72 local treasuries studied over a period of more than 250 years, 14 *cajas* were created before 1600, corresponding to Mexico and Veracruz (1520s), Cuzco and Lima (1530s) Santiago de Chile, Merida and Guadalajara in the 1540s, Potosi, Zacatecas and Huancavelica in the 1550-70s, Durango, Acapulco, Arequipa and Arica by the 1590s. Another 17 *caja*s were created during the 17th century. Between 1700 and 1760 ten new *cajas* were established, and from the reign of Charles III in the 1760s 27 more treasury districts appeared. Eighteen of these were established in the newly created Viceroyalty of the River Plate along the route the silver took to the Atlantic from Potosi to Buenos Aires. The others were created in the outer regions of New Spain where North American merchants obtained silver. In the north of Mexico Chihuahua and Saltillo became *cajas*, and around the Campeche bay in the Gulf of Mexico: Arispe and Rosario, in California San Blas. Only two *cajas* were abolished or superseded in the 17th century and eight in the 18th Peru, only two *cajas* were abolished in the 17th century: Castrovirreyna and Chachapoyas. Cuba had 23 *cajas* and in New Granada there were 18, four main ones (Cartagena, Bogotá, Popayan and Panamá), which gathered 67% of total royal revenues. [50]

The choice of time periods was based on considerations both of quality of data as well as historical events. Both periods 1785-89 and 1796-1800 are at least a number of years after the large uprisings in Upper Peru that had seriously impacted on tax collection. They also cover a period that is generally understood to have been that of the major impact of the Bourbon Reforms but fall in the period before the first conflicts that would lead to Independence. Compared to the first sample the second reflects already the increasing pressure for resources that the Spanish Crown must have felt in the European Wars.

In terms of availability of data there are only relatively few missing observations (considering an average of 61 possible accounts in each year): Sta Cruz de la Sierra, Corrientes, Maldonado, Puebla, Michoacan in 1785; Sta Cruz de la Sierra, Corrientes, Puebla, Michoacan, La Paz, Carabaya, Jauja in 1786; Puebla, La Paz, Jauja, Catamarca, Stgo de Estero, Durango, Chihuahua in 1787; Sta Cruz de la Sierra, Puebla, La Paz, Jauja, Presidio del Carmen in 1788; Maldonado, Carabaya, Jauja in 1789; Chihuahua, Chucuito, La Rioja in 1796; Oruro, Tucuman, Chucuito, La Rioja, Catamarca, Carabaya, Merida in 1797; Catamarca, Tucuman, La Rioja, Carabaya in 1798; Charcas, Chucuito, Carabaya, Presidio del Carmen in 1799. Except for Charcas, Puebla, and La Paz these were not major treasury districts.

While these sorts of data are necessarily subject to errors, most of the criticisms against their use have been directed at how well they can represent the 'real economy' behind them. Therefore, we explicitly refrain from interpreting them as a mirror of the actual size of sectoral composition of the treasury

[50] For Cuba see JJ TePaske, "Integral to Empire. The Vital Peripheries of Colonial Spanish America," in *Negotiated Empires. Centers and Peripheries in the Americas, 1500-1820*, ed. Christine Daniels and Michael V. Kennedy (New York and London: Routledge, 2002), p.32. For New Granada see J Jaramillo, A Meisel, and M Urrutia, "Continuities and Discontinuities in the Fiscal and Monetary Institutions of New Granada," in *Transfering Wealth and Power from the Old to the New World*, ed. Michael D Bordo and Roberto Cortes-Conde (New York: Cambridge University Press, 2001)..

districts. But we argue that they do tell us something about which sector of the economy was contributing more to the *fiscus* and crucially how resources were transhipped from one district to the next.

The logic of Te Paske and Klein's organisation of the information has to do with the way in which taxes were collected. This was most apparent in the case of revenues from trade and consumption, and from urban rather than rural sources of revenues. Taxes on mining and tribute were directly and proportional to the growth of output and of population and evasion was low. However taxes on trade and consumption were less effective and less tightly related to volume and values because of exemptions and changing bases or rates or lagged valuations. The situation was even more complex with regard to the various crown monopolies such as those on tobacco, *pulques* and *azogue*, and a myriad of other specific taxes and contributions. [51] The accounts presented by Klein and TePaske for the individual treasury districts reveal strong local idiosyncrasies but we know too little about the incidence of these taxes to assess them properly.

In a first step, we tried to determine the net incomes and net expenditure for each *caja* and each year. For this purpose we subtracted all entries that relate to carry-overs and deposits from our net totals. Since it was not our aim to establish how much money these *cajas* actually had at any given point in time we left those amounts that were meant to be collected in a given year but not actually collected in the net totals of that years but subtracted all amounts collected in a given year but pertaining to previous or future years. By applying this routine to five consecutive years we hope that possible errors resulting from undetected carry-overs and the notorious delays in payments could be minimised.

We then re-classified every single item for each *caja* in order to analyse the composition. On the income side the overriding principle was one of tax incidence, i.e. which sector of the economy was likely to bear the burden of taxation. For this purpose we created the categories transfers, transfers to Spain, mining, agriculture, trade&consumption, and church, the latter including the income from the so-called *temporalidades*, resources derived from the expropriated property of the Jesuits.

Our category transfers only includes payments from (income side) or to (expenditure) side other treasury districts in the colonies, not those from or to Spain. At times the destination/source treasury of transfers is clearly identified but often it is just registered as going to/coming from other districts. Thus it is impossible to closely follow the money trail through the districts. Klein and TePaske subsumed these in military expenditure, which we think clearly misrepresents them. Some districts have income classified as 'to Spain', clearly money collected by larger districts and earmarked for Spain, though it should be stressed that their amounts did not usually coincide clearly with the money actually registered as going to Spain on the expenditure side.

Some income headings were not easily allocated, in general we concurred with the categories given by TePaske and Klein's appendix, but amended them where necessary a) because our broad categories are differently defined or b) where TePaske and Klein do not reflect tax incidence. E.g. we argue that the Indian tribute would have burdened agriculture simply because it was paid by the Indian agrarian communities. As opposed to most authors we also include the monopolies according to their incidence, thus *pulques* are included in trade and consumption while *azogues* (mercury) fall into mining. For each *caja* some sources remained unclassified either because they were indeterminate (such as *hacienda en general*) or because they belonged to administrative income, such as *papel sellado* or penalties collected by the courts, which could have burdened any sector.

[51] Klein, *The American Finances*..

Overall, however, more than 70 percent of all income was part of one of these categories while the remainder was mostly administrative income. In most cases our categories comprised more than 85 percent of income with a few extreme cases lowering the average. The latter were excluded from the analysis whenever sectoral information mattered. On the expenditure side we identified in addition to the transfers the amounts of money spent on military purposes. Overall, this process produced a data set with about 270 observations for each five-year period.

Appendix 2

Table 3 Net transfers between Spanish American treasuries 1785-89, Spanish pesos.

Caja	1785	1786	1787	1788	1789	1785-1789
Acapulco	-136,607	-86,926	-201,861	-112,294	12,000	-525,688
Arispe	222,814	166,466	12,779	102,710	-64,391	440,378
Bolanos	-145,591	-123,865	-170,805	-113,153	-25,117	-578,531
Campeche	82,285	22,032	18,966	0	0	123,283
Chihuahua	27,667	-279,317		113,054	-355,068	-493,664
Durango	-465,376	-694,376		-134,003	-78,719	-1,372,474
Guadalajara	-864,411	-258,043	-457,038	-517,639	-453,203	-2,550,334
Guanajuato	-1,160,293	-521,560	0	-1,135,915	-1,147,683	-3,965,451
Merida	0	-69	-396	24,424	31,950	55,909
Mexico	-1,699,584	-1,795,432	-3,748,611	-5,289,949	-4,370,736	-16,904,312
Michoacan				0	0	0
Oaxaca						
Pachuca	-74,883	-107,315	-156,074	-85,331	-129,257	-552,860
Pres del Carmen	0	0	12,347		0	12,347
Puebla					0	**0**
Rosario	-413,056	-170,318	-170,318	-403,575	-390,240	-1,547,507
Saltillo						
San Luis Potosi	-654,983	-182,217	-462,022	-946,393	-939,688	-3,185,303
Sombrerete	0	-102,742	-62,320	-74,644	-95,094	-334,800
Tabasco	-2,774	-6,457	0	-10,446	-8,660	-28,337
Veracruz	-563,993	-4,801,805	483,413	-699,774	-258,778	-5,840,937
Zacatecas	-478,268	-310,057	-575,536	-343,390	-528,000	-2,235,251
Zimapan	-78,496	-47,609	-58,036	-52,629	-49,718	-286,488
Net New Spain	-6,405,549	-9,299,610	-5,535,512	-9,678,947	-8,850,402	-39,770,020
Potosi	33,621	-665,542	-419,300	-78,340	325,241	-804,320
Charcas	-92,185	-55,362	6,010	19,040	-42,705	-165,202
La Paz	0		0		-290,011	-290,011
Oruro	-92,065	-86,443	-19,825	-220,478	-83,199	-502,010
Arica	-37,200	-75,250	-67,946	-73,412	-58,590	-312,398
Carangas	-48,866	-10,770	-12,788	-20,855	-8,000	-101,279
Cochabamba	0	0	-30,653	0	0	-30,653
Chucuito	-19,516	-38,579	-46,995	-64,260	-123,653	-293,003
Sta Cruz de la S.			0		0	0
Net Upper Peru	-256,211	-931,946	-591,497	-438,305	-280,917	-2,498,876
Santiago de Chile	-47,186	-3,139	-15,802	-33,216	-25,365	-124,708
Valdavia	75,040	62,876	43,009	64,717		245,642
Concepción	180,054	197,662	163,322	128,248	168,524	837,810
Mendoza	0	0	0	0	-1,650	-1,650
Chiloe	16,000	-16,197	1,504	-13,918	31,985	19,374
Net Chile	223,908	241,202	192,033	145,831	173,494	976,468
Buenos Aires	1,111,585	1,563,373	1,262,196	1,168,050	1,492,037	6,597,241
Montevideo	78,652	47,204	60,394	78,652	44,001	308,903
Catamarca	-1,019	0	0	0	-300	-1,329
Cordoba	-1,464	0	0	-1,009	0	-2,473

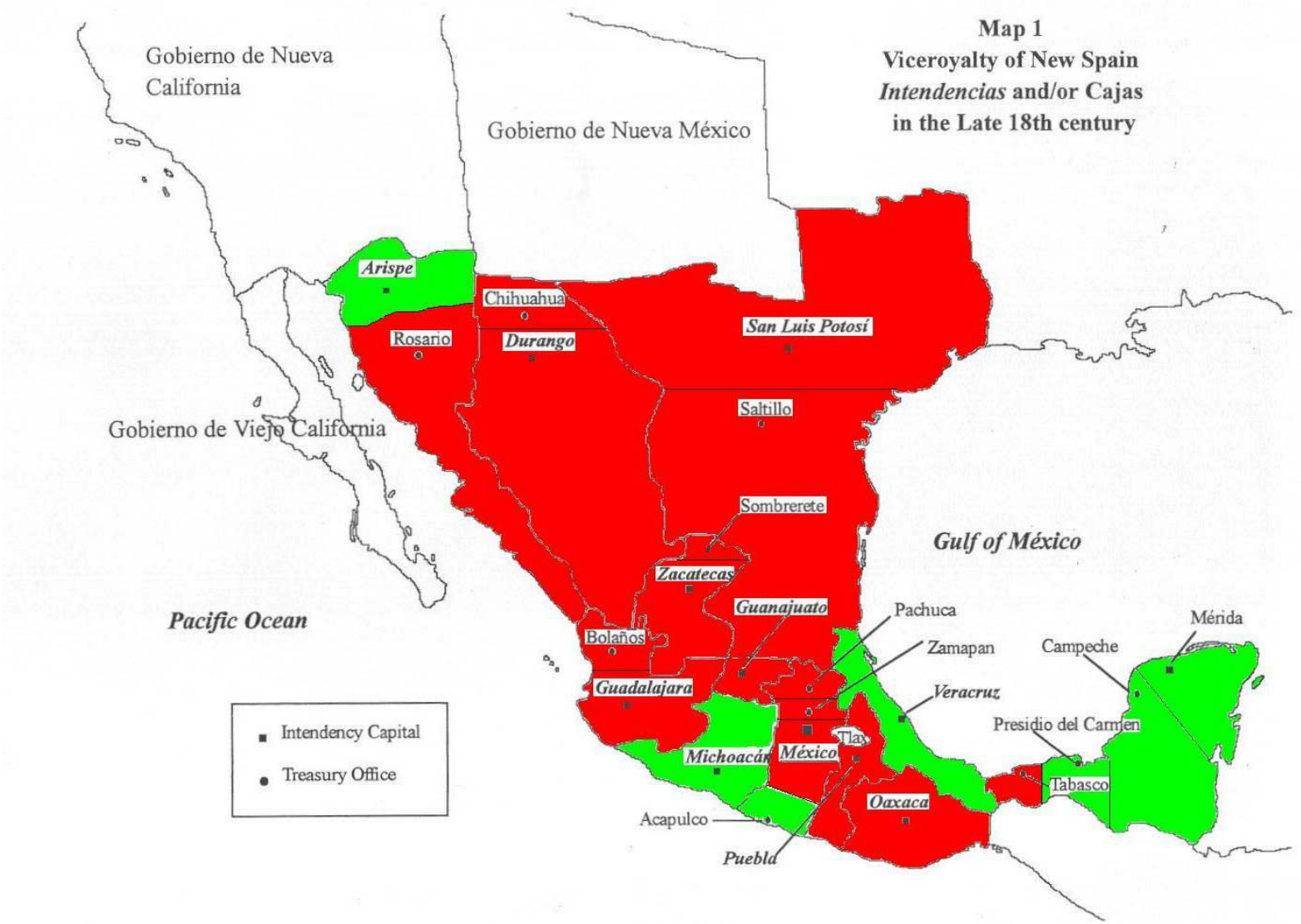
Corrientes			0	636	0	636
La Rioja	0	0	0	0	-1,554	-1,554
Maldonado		15,000	59,020	6,000		80,020
Paraguay	0	0	0	0	4,350	4,350
Salta	99,750	0	0	0	0	99,750
San Juan	-1,583	-1,138	0			-2,721
Santa Fe	0	0	519	0	-13,343	-12,824
Santiago d Estero	0	0		0	0	0
Tucumán	0	0	0	0	0	0
Net River Plate	1,285,921	1,624,439	1,382,129	1,252,329	1,525,191	7,070,009
Arequipa	86,301	9,356	-37,525	-109,320	-143,712	-194,900
Carabaya	0		-28,983	11,016		-17,967
Cuzco	0	0	-88,739	17,394	55,693	-15,652
Huamanga	0	0	0	0	41,047	41,047
Jauja	-17,035		0			-17,035
Lima	961,292	1,085,304	1,598,264	-970,135	1,017,861	3,692,586
Trujillo	-335,375	-92,233	-205,334	-239,022	-164,256	-1,036,220
Vico Y Pasco	-81,094	-100,387	-150,179	-120,163	-251,550	-703,373
Quito	-222,099	633	1,404	0	64,689	-155,373
Guayaquil	-97,912	-80,224	-79,704	-50,118	-52,999	-360,957
Loja Y Cuenca	-55,028	-51,998	-2,608	-37,599	-54,385	-201,618
Net Lima	239,050	770,451	1,006,596	-1,497,947	512,388	1,030,538

Table 4 Net transfers between Spanish American treasuries 1796-1800, Spanish pesos.

Caja	**1796**	**1797**	**1798**	**1799**	**1800**	**1796-1800**
Acapulco	9,068	-221,546	111,887	760,174	0	659,583
Arispe	7,991	121,930	-31,208	38,394	-74,294	62,813
Bolanos	-166,354	-175,024	-92,886	-119,258	-52,739	-606,261
Campeche	129,415	109,817	48,526	0		287,758
Chihuahua		369,617	-144,673	-119,688	-289,459	193,203
Durango	-414,352	-438,907	-362,254	-451,617	-340,939	-2,008,069
Guadalajara	-891,158	-794,075	-674,100	-798,555	-604,308	-3,762,196
Guanajuato	-815,528	-1,094,892	-772,979	-1,040,253	-733,942	-4,457,594
Merida	-38,930-	0	-53,524	104,847	-8,288	4,105
Mexico	-2,642,896	-414,447	-5,654,864	-5,688,342	-6,604,538	-21,005,087
Michoacan	0	11	344	-5,565	6,286	1,076
Oaxaca	-100,474	-207,347	-408,265	-366,776	-255,236	-1,338,098
Pachuca	-151,935	-67,284	-88,606	-15,727	-110,340	-433,892
Pres del Carmen	58,279	-11,467	0		-902	37,791
Puebla	24,822	-470,506	-22	-2,461	78,338	-369,829
Rosario	-295,668	-292,644	-203,929	-868,596	32,560	-1,628,277
Saltillo	-248,105	-197,054	-278,672	-259,239	-783,818	-1,766,978
San Luis Potosi	-1,038,626	-815,608	-704,412	-785,,869		-3,344,,515
Sombrerete	-211,103	-141,744	-228,691	-169,416	-140,736	-891,690
Tabasco	-6,379	0	0	0	0	-6,379
Veracruz	-304,122	505,737	300,078	-1,175,557	2,438,954	1,765,090
Zacatecas	-711,042	-858,119	-704,891	-750,685	-700,194	-3,724,931
Zimapan	-144,277	-164,511	-113,198	-94,895	-78,124	-595,005
Net NewSpain	-7,951,374	-5,258,063	-10,056,429	-11,809,084	-8,238,838	-43,313,788

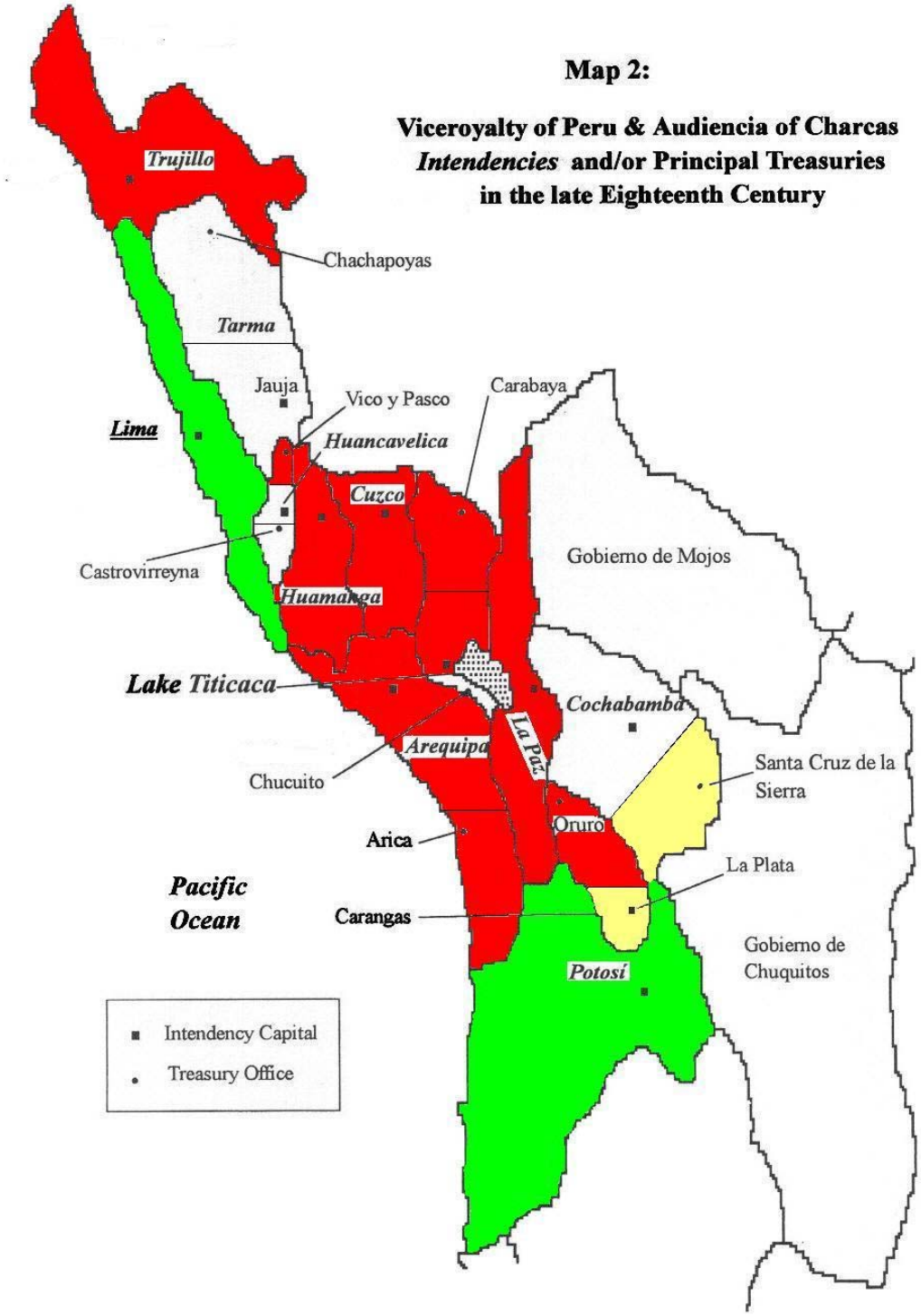
Potosi	435,755	265191	36041	54778	39990	831755
Charcas	0	0	0		0	0
La Paz	0	0	-421,506	-156,500	-566,518	-1,144,524
Oruro	-110,753		-99,395	-84,465	-30,000	-324,613
Arica	-49,396	-65,582	-78,575	-54,776	-58,762	-307,091
Carangas	-6,857	-11,934	-34,427	-17,000	-28,022	-98,240
Cochabamba	0	0	0	0	0	0
Chucuito			-149,388		-240,146	-389,,534
Sta Cruz de la S.	0	0	0	0	0	0
Net Upper Peru	268,749	187,675	-747,250	-2,579,63	-883,458	-1,432,247
Santiago de Chile	0	0	0	0	0	0
Valdavia	96,141	106,815	49,061	37,298	54,288	343,603
Concepción	0	0	0	0	0	0
Mendoza	0	0	-3,185	-1,974	-1,907	-7,066
Chiloe	20,032	12,953	-1,759	-7,213	-6,574	17,439
Net Chile	116,173	119,768	44,117	28,111	45,807	353,976
Buenos Aires	1,111,678	1,242,167	1,456,001	1,034,544	2,317,940	7,162,330
Montevideo	42,897	99,984	85,387	67,926	219,550	515,744
Catamarca	0			-5,000	0	-5,000
Cordoba	0	0	0	0	-12,000	-12,000
Corrientes	-372	-1,442	-1,000	0	0	-2,814
La Rioja			-1,184	0	0	-1,184
Maldonado	45,358	29,324	29,875	12,714	107,978	225,249
Paraguay	56,135	0	0	51,897	28,463	136,495
Salta	0	0	0	0	0	0
San Juan	37		0			37
Santa Fe	3,972	-5,671	-3,505	-2,273	755	-6,722
Santiago d Estero	0	0	0	0	0	0
Tucuman	-3,639	0	0	0	0	-3,639
Net River Plate	1,256,066	1,364,362	1,565,574	1,159,808	2,662,686	8,008,496
Arequipa	-98,886	-274,253	-83,855	-56,135	-116,232	-629,361
Carabaya	-91,991					91,991
Cuzco	-181,581	-211,038	-160,433	-81,356	-194,993	-829,401
Huamanga	-149,952	-106,126	-129,212	-147,637	-119,982	-652,909
Jauja						
Lima	1,491,660	1,507,814	1,293,636	1,132,459	1,289,277	6,714,846
Trujillo	-167,346	-202,616	-158,675	-207,488	-168,441	-904,566
Vico Y Pasco	-444,014	-368,322	-481,353	-399,684	-37,001	-1,730,374
Quito	-59,616	-75,797	-63,199	-119,326	-98,412	-416,350
Guayaquil	-16,340	-22,613	-48,817	-8,140		-95,910
Loja Y Cuenca	-70,326	-65,747	-65,285	-52,307	-49,564	-303,229
Net Lima	211,608	181,302	102,807	60386	504,652	1,060,755

Note: cells in blank = no data


Map 1
Viceroyalty of New Spain
Intendencias and/or Cajas
in the Late 18th century
Gobierno de Nueva California
Gobierno de Nueva México
Gobierno de Viejo California
Pacific Ocean
Gulf of México
Arispe
Chihuahua
Rosario
Durango
San Luis Potosí
Saltillo
Sombrerete
Zacatecas
Guanajuato
Bolaños
Guadalajara
Michoacán
México
Tlax
Pachuca
Zamapan
Veracruz
Campeche
Mérida
Presidio del Carmen
Tabasco
Oaxaca
Acapulco
Puebla
Intendency Capital
Treasury Office

Map 2:

Viceroyalty of Peru & Audiencia of Charcas
***Intendencies* and/or Principal Treasuries**
in the late Eighteenth Century



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