Prices and wages in Bourbon Mexico from an international comparative perspective.

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1. Introduction

This article offers evidence on corn prices as well as on nominal and real wages in Bourbon New Spain -from early eighteenth to nineteenth centuries- in support of what could be termed "hypothesis of normality". That is to say, in favor of the idea that the behavior of the variables considered is rather “normal” in a Western pre-industrial economy than not. “Normality” means that the observed levels, rates of growth and trends of prices and wages are basically similar to those in Western Europe. Moreover, in general, when the Bourbon Mexico’s case departs from “normality” it is not because its peculiarities correspond with a pessimistic view on the general performance of the colonial economy. On the contrary, the level, the rate of growth and the trend of corn prices are essentially “normal” – except for its high volatility in certain periods- while meat prices are surprisingly low and nominal and real wages –in particular, those of miners- unexpectedly high in comparison with Europe. Neither is the secular stagnation of nominal wages or the falling trend in their purchasing power from the 1760’s an exclusive characteristic of Bourbon Mexico.

An international comparative approach has been adopted as it is somewhat missing in most of the literature on Bourbon Mexico economic performance. Certainly, that literature, if not abundant, is rich in data and insights [Van Young (1981 and 1992), Florescano (1986), Coatsworth (1990), Garner (1993), Espinosa (1995), Challú (2005), Quiroz (2005) and Arroyo (2007)]. However more emphasis on international comparison is probably necessary. By doing so it is possible to realize that Bourbon Mexico was far from being an exceptional case by international standards in some important respects –i. e. grain prices and purchasing power of wages- or that some trends –i. e. rising prices and falling real wages- are not unequivocal proofs or an especially intense or irreversible crisis of the late colonial economy.

As they result from an ongoing research, the findings presented in this paper are provisional. However, they seem to be solid enough to lead to a partial optimistic revision of mainstream view on some
important aspects of New Spain’s economy before the upheaval following the Insurgency movement that abruptly started in 1810.

Besides this introduction, three sections compose this work. In the first section, the prices of grain in Bourbon Mexico and in contemporary Europe are examined. The second section deals with nominal and real wages. Again, an international comparative perspective is adopted. This work ends up with some concluding remarks.

2. Prices in Bourbon Mexico from an international comparative perspective

In this section, firstly, sources of data are shown. Secondly, the trend and the volatility of grain prices between 1703 and 1812 (roughly the period known as Bourbon Mexico) are examined in comparison with Europe.

2.1. Sources of prices data

The prices of corn in New Spain come from three sources: Arroyo (2007), who draws on Florescano (1986), Garner (1995) and Espinosa (1995). More or less continuous series of prices for Mexico City, the whole of the colony and the Bajío Oriental, respectively, have thus been obtained –see Figure 1. Prices are expressed in grams of silver per liter.

\[1\] Corn was by the main –although not the sole- grain cultivated and consumed in Mexico since pre-hispanic times. In Europe, a similar role was played by wheat.
As can be seen from Figure 1, the three series present similar dynamics. The differences in the levels of prices among the three markets represented by the series seem to respond to a certain economic logic: corn was more expensive in Mexico City (the largest deficitary urban market in the colony) than in New Spain as a whole. In the Bajío Oriental (an important grain-producing area) was cheaper than in the two above-mentioned markets.

The data from Arévalo, an important grain market in inner Spain, from which most grain entering Madrid came, have been kindly provided by Enrique Llopis. Series of prices for different European markets (Arévalo, Gdansk, London and Southern England, Milan, Strasbourg, Utrecht-Groningen and Vienna) are those elaborated by Robert Allen. They are available in the web page of

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2 They have been used in his study on the eighteenth century Castilian wheat market. See Llopis and Jerez (2001).

3 These markets have been considered because: 1) they represent, reasonably well, the diversity of economic conditions (development level, agricultural productivity, extent of the commercialization of agricultural production, etc.) that coexisted in Europe; 2) they are those which have long continuous series (1703-1812) or in which only a very small number of observations is lacking. In the latter case, the procedure has been as follows: in the series of New Spain, the averages of 1779, 1780, 1783 and 1784 and of 1780, 1781, 1783 and 1784 that of 1782, respectively, have been taken as data for 1781 and 1782, respectively, while those of 1811-1812 have been taken from the series of Mexico City prices; in the series of Arévalo, the average of the four years surrounding it has been taken as value of 1789; in the series of Utrecht-Groningen, the data of 1771, 1802 and 1803 come
the International Institute of Social History (http://www.iisg.nl/hpw/data.php).

2.2. Trend and volatility of grain prices in New Spain and Europe

Figure 2 illustrates what have been termed the “hypothesis of normality”.

Figure 2: Trends of grain prices in New Spain and Europe, 1703-1812. (Hodrick-Prescott filter).

As can be seen, the corn price trend between 1703 and 1812 in New Spain, generally speaking, does not stand out either because of its especially high level in terms of silver or because of its rising tendency. The “normality” of New Spain is probably even more perceptible in Figure 2, in which the trend of the colony-wide series is depicted along with those of two European “regional unweighted averages”.4

from that of Amsterdam; in that of Strasbourg those of 1794 and 1795 as for New Spain in 1781 and 1782; in that of Milan, the averages of 1803, 1804, 1808 and 1809, 1803, 1804, 1808 and 1809 and 1804, 1805, 1808 and 1809, respectively, have been taken as data of 1805, 1806 and 1807.
4 “Mediterranean Europe” is formed by the Arévalo and Milan and “Nortwestern Europe” by the London and Utrecht-Groningen.
Divergences in trends are small and occasionally due to lower prices in New Spain. In fact, the longest and bigger deviation of the New Spain’s series from the other two is that from mid 1760’s to mid 1770’s. It is true that the very deep agricultural crisis of 1784-1786 is clearly perceptible but it is just a conjectural phenomenon that came followed a similar movement downwards. Besides, in the late years of the sample, the trend of New Spain prices is very much influenced upwards by the Insurgency movement and the subsequent widespread economic disruption. Otherwise, the New Spain’s trend would have remained much closer to that of Mediterranean Europe.

Contrary to what might be expected, in New Spain, despite its enormous and growing silver production –two thirds of the world total by 1800 [Schmitz (1979)]-, grain prices in New Spain were not higher than in Europe in terms of silver. They did not grow faster either –see Table 1.
Table 1: Logarithmic differences of prices, 1704-1812.

<table>
<thead>
<tr>
<th></th>
<th>New Spain (colony-wide)</th>
<th>Arévalo</th>
<th>London and Southern England</th>
<th>Utrecht/Groningen</th>
<th>Strasburg</th>
<th>Vienna</th>
<th>Gdansk</th>
<th>Milan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>0.012</td>
<td>0.016</td>
<td>0.011</td>
<td>0.012</td>
<td>0.005</td>
<td>0.007</td>
<td>0.003</td>
<td>0.007</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.41</td>
<td>0.32</td>
<td>0.25</td>
<td>0.19</td>
<td>0.23</td>
<td>0.22</td>
<td>0.20</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Source: See Figure 1.

The growth of prices in Bourbon Mexico, measured in logarithmic differences, is close to the upper band of the sample, but is not exceptional, because it is surpassed by Arévalo and is practically equal to that of London and Utrecht-Groningen. On the contrary, what is peculiar to Bourbon Mexico is high volatility: that of Bourbon Mexico is the highest in Table 1. The long term profile of corn prices volatility is shown in Figure 3.

Figure 3: Standard deviation of logarithmic differences, 1718-1812. (15-year moving windows).

Corn prices volatility is relatively high, especially at the beginning of the period under consideration and in the 1780’s and 1790’s, although is lower than that of Arévalo and London by early nineteenth century. This characteristic of Bourbon Mexico corn market could be due to the influence of: a) adverse geographical conditions on the volume of harvest (i.e. cyclical variations in rainfall and temperature); and/or b) problems of commercialization (poor
storage capacity, low integration of regional markets, etc.). These aspects deserve further research as they seem to be potentially influent on this peculiarity of grain prices behavior in Bourbon Mexico.

In any case, the trend of the corn price in New Spain also presents some peculiarities - see Figure 2. The fall in prices following the peak of 1710 is somewhat sharper but it is interrupted in a shorter time. Starting from the second half of the 1710s, price grows until reaching a historical maximum toward 1750. Soon after corn prices started declining. By mid 1760s, they reached a level similar to that at the beginning of the century. Then, there begins a very quick and sustained increase which becomes a new historical maximum by the middle of the 1780s. A fall, that touches bottom in 1797, is followed by a sharp rise during the rest of the period under consideration. These peculiarities of Bourbon Mexico’s trend seem to be proximately explained by the intensity of the agricultural crises in 1749-1750, 1784-1786 and 1810-1812 and of the price decreases in 1715-1717, 1752-1754, 1763-1764 and 1767-1768.

In spite of these peculiarities, grain prices in Europe and New Spain share some fundamental trend movements. They can be summarized as follows: quick growth up to 1710; great fall until the beginning of the 1720s, when the absolute minima of the period under consideration are reached; recovery up to 1740, although it did not reach the level of 1710; stability during the 1740s; growth from 1750 –slow at first and very quick from the beginning of the 1760s– up to the first 1770s which leads to historical maxima above those of 1710; light setback and recovery until the middle of the 1780s; intense growth until reaching new maxima toward 1800 which is prolonged in some cases with more (London and New Spain) or less (Strasbourg) clarity and not so in the remaining ones, where it became transformed into stagnation (Utrecht-Groningen and Milan) or fall (Vienna, Arévalo and Danzig).

Thus, some attention has been given to the more than superficial similarities found among grain prices series within the Western Hemisphere. The existence of a cointegration relationship between all the series of grain prices is another interesting finding. In other words, there exists a constant long-term relationship between grain prices in New Spain and in Europe.\(^5\) This is rather counterintuitive since differences in the conditions of supply and demand of grains across countries in the sample (demographic growth, level of economic development, commercial legislation, imports, geography, etc.) were enormous. The existence of a cointegration relationship among them suggests the influence of at least a common factor -¿climate?- on markets which, in principle, should considered heterogeneous. In order to determine whether or

\(^5\) The cointegration analysis has been made by Alfonso Novales, to whom I am obliged for his inestimable help. Technical details are shown in Dobado (forthcoming).
not this relationship is spurious, this finding will be carefully taken into consideration in the next stage of this investigation.

3. Nominal and real wages in Bourbon Mexico and Europe

This section starts by showing the sources of the wage data used. It continues with the comparison of the nominal and real wages of three different groups of workers in Bourbon Mexico and in Europe. Following Allen (2001), nominal wages are expressed in grams of silver per day. Wages in terms of grain (corn in New Spain and wheat in Europe) and of meat are considered to proxy real wages. This rather crude assumption is forced by the fact that a long-term consumer price index for Bourbon Mexico has not been constructed yet. In this unsophisticated, and exploratory, approach to deflating nominal wages so that the comparison of their purchasing power over time and between places is made possible, grain plays the role of normal good while meat that of superior good. At this stage of the research, it is only possible to make: 1) a static comparison of nominal and real wages circa 1803; 2) a dynamic comparison based on nominal wages for some selected years (1719, 1732-1738, 1752, 1754, 1756, 1767 and 1790). In spite of its limitations, the evidence available seems solid. Therefore, some preliminary and somewhat surprising conclusions are presented.

3.1. Sources of wages data

The sources of nominal wages are varied. As to late colonial Mexico miners, they had been obtained from a general reference made by Humboldt (1822:1991) at the beginning of the 19th century and the data provided by Velasco (1989) about the silver mine The Valenciana of Guanajuato in 1803. The wages of miners in the Spanish mines of mercury in Almadén in 1803 have been taken from Dobado (1989). For Mexico City, most wages of qualified and unqualified construction workers come from Arroyo (2007) and are available in the web page of Global Price and Income History Group (http://gpih.ucdavis.edu/). Some general references to wages in agriculture from Humboldt (1822:1991) and from Van Young (1981) have also been taken into account. They are consistent with each other. The latter author also provides long, discontinuous, series of agriculture and construction workers in Guadalajara region that this research has not fully exploited yet. Along with data produced by

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6 Wheat provides more protein than any other grain but corn offers slightly more energy.
Amílcar Challú’s extensive research on wages and living conditions in colonial and post-colonial Mexico, they will be soon utilized.\footnote{Amílcar Challú had the generosity of giving me his data on construction workers in Mexico City, Puebla and San Luis Potosí from 1739 to 1838 prior to the defence of his doctoral dissertation.}

The European money wages are those elaborated by Robert Allen and may be found in the web page of the International Institute of Social History (http://www.iisg.nl/hpw/data.php).

3.2. Nominal and real wages.

As Humboldt (1822:1991) claimed, by early nineteenth century, the wages of Bourbon Mexico miners were certainly high in comparative international terms. His comment is confirmed by the data shown in Figure 6.\footnote{Following Allen (2001), nominal wages are expressed in grams of silver per day.}

![Figure 6: Nominal wages of miners and qualified workers circa 1803.](source)

The nominal wages of the drillers at The Valenciana mine in Guanajuato –taken from Velasco (1989)- are higher (first column in Figure 6) than any of those in the wide sample of nominal wages of European craftsmen of the building trades. Only the nominal wages of those workers in London surpasses that of the carpenters employed in the said mine –from Velasco (1989) as well- or that offered by...
Humboldt (1822:1991) as representative of Bourbon Mexico miners in general (third and fourth columns in Figure 6, respectively). The nominal wage gap between late colonial Mexico and Europe is substantial. This is particularly true in the cases of Central, Eastern and Southern Europe.

To some extent this is certainly a striking result. However, it might be argued that it is all the more reasonable to find high nominal wages in terms of silver in a country that, by early nineteenth century, was producing two thirds of total world silver output [Schmitz (1979)].

The first impression that wages of miners and of qualified workers in general were relatively high in late colonial Mexico is confirmed in Figure 7 which shows wages in terms of grain.9

Figure 7: Grain wages of miners and qualified workers circa 1803.


Again, grain wages in New Spain appear in the top positions within the sample. Their difference relative to grain wages in most leading European towns is quite significant.

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9 Grain prices are those presented in Section 2. Garner’s (1993) colony-wide prices in 1803 have are used to calculate grain wages in Guanajuato and other mining center of the colony. Those prices were probably higher than in Guanajuato –as suggested by Figure 1- which might bias downwards the resulting grain wages shown in the first and third columns of Figure 7. As to European markets, in most cases, grain prices in 1803 have been used. When this was not possible, as in Amsterdam, the closest years to 1803 have been chosen.
This finding should not come as a surprise. It is already known—see 2.2 below—that grain was not comparatively expensive in Bourbon Mexico in terms of silver. In contrast to what might be expected, corn prices do not seem to reflect any abundance of silver producing a particular version of the "Dutch disease". On the contrary, nominal wage were high. Thus, it is not strange to find a genuinely high real wages in terms of a normal good such as grain in late colonial Mexico within that section of the labor market with which we are dealing so far. What in terms of superior goods? The answer is giving in Figure 8.10

Figure 8: Meat wages of miners and qualified workers circa 1803.


The impression that miners and qualified workers in late colonial Mexico might enjoy very favorable living conditions by international standards is reinforced when their purchasing power in terms of a superior good of high nutritious quality such as beef is examined. In fact, differences in meat wages are far bigger than in nominal or grain wages: a daily wage of a miner in New Spain might buy more than three times that of a craftsman in Amsterdam and

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10 Meat prices have been directly taken from Arroyo (2007) who, in turn, refers Quiroz (2005) as the source of the original data on meat prices in Mexico City. This fact might bias prices onwards—assuming that, in general, the price level in Mexico City was higher than in smaller towns—but the real effect on the calculations shown in Figure 8 is still unknown as studies on the price on meat in other local markets are missing.
more than four times that of London craftsmen. Given the differences in per capita GDP between late colonial Mexico and those Western European areas leading modern economic growth, this might be a shocking and counterintuitive finding to most scholars.

The explanation for the high level of wages in terms of meat in New Spain mainly lies on the low prices of beef—see Figure 9.

Figure 9: Prices of meat in Mexico and European towns, 1702-1810. (3-year moving averages)

Thanks to Quiroz (2005), it is already known that beef was relatively cheap in Bourbon Mexico. Factor endowment in Northern Mexico was very favorable for extensive cattle rising. The work by the above-mentioned Mexican scholar shows that cattle came to Mexico City from distant, northern-central and northern, areas of New Spain (Guadalajara, Michoacán, El Bajío, Zacatecas, San Luis Potosí, Nayarit, Sinaloa, Durango, Coahuila and Monterrey). In contrast to European towns, beef was far from being a superior good among Mexico City inhabitants. It was consumed in big quantities in Mexico City not only by the elite but also by the commoners: "Consuming meat was not a privilege among the capital town’s society." In fact, Quiroz (2005) claims that per capita consumption of meat in Mexico City was much higher than in Europe, which seems to be the case. In

1767 per capita consumption of meat in Mexico City was estimated at almost 150 kilos annually. In contrast, the basket of goods designed by Allen et al. (2005) for Northern Europe only includes 26 kilos. Very likely, that difference also applies to other towns and mining centers in the colony.

New Spain shares with Europe –Amsterdam excluded- a secular trend of increase in meat prices that, by early nineteenth century, resulted in a reduction in the purchasing power in terms of this good of most wage earners. But, still, the difference in levels enormously favored late colonial Mexico, except when compared with Vienna. Besides, at the very end of the period under consideration, the upward surge in meat prices in New Spain mostly responded to the intense economic shock caused by the Insurgencia movement starting in 1810 [Quiroz (2005)].

Thus, the notion that the real wage of miners and other qualified workers were comparatively high in comparison with those in some of the most developed areas of the early modern world economy seems to be consistent with the evidence available circa 1803. In spite of this, the problem of standard of living in late colonial Mexico still remains unsolved. As Allen (2001) posits, living standard depend on the days worked per year. Conclusive evidence on such a crucial variable in mining as well as in other productive sectors is missing. Under the assumption that the days worked per year by miners and qualified workers were similar across the sample, which is an excessive simplification, the conclusion that a genuine high standard of living characterized this particular section of the New Spain labor market may hold. Sources used in this work –Humboldt (1822:1991) and Velasco (1989)- point at the existence throughout the economy of the colony of a six-day week of work and pay. But they do not inform on the weeks worked per year. In any case, the bottom line is that the picture of living standards that emerges from data on prices and wages –see figures 7 and 8- would be distorted only if that number was very different –much lesser in Bourbon Mexico the in Europe. Moreover, this difference should be as big as to be unlikely.

Thus, it seems that living standards of miners and qualified workers –measured by the power purchasing power of nominal wages in terms of grain and silver- were higher in late colonial Mexico than in contemporary Europe. That brings into question the idea, much extended among many specialists of the Spanish colonialism in America, that presents mining in New Spain as an extreme example of unequal and “extractive” institutions with long term adverse effects on economic development [Engerman and Sokoloff (1994, 2002 and 2005) and Acemoglu, Johnson and Robinson (2002)]. Irrespective of the effects on growth, that view of colonial Mexico mining is at odds

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12 Quiroz (2005), p. 43.
with the evidence available. It is difficult to accept that the living standard of miners in late colonial Mexico should be regarded as a conspicuous case of inequality and “extraction”. On the contrary, miners in Bourbon Mexico basically were a free, mobile and well-paid group of workers [Humboldt (1822:1991), Brading (1983), Velasco (1989), Swann (1990), Garner (1993) and Dobado and Marrero (2006)].

If we now turn our attention to the conditions of unqualified workers, the findings are somewhat different. However, they still continue to reveal wages of medium or high level on an international scale, especially, as one can already imagine, in terms of meat.

In figure 9, nominal wages of unskilled workers are shown.13

Figure 9: Nominal wages of unqualified workers circa 1803.

![Graph showing nominal wages of unqualified workers circa 1803.](http://www.iisg.nl/hpw/data.php)


If we do not considerer Guanajuato “faeneros” real miners but unskilled workers, the comparison with European laborers in the building trades places them in a very favorable position in terms of

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13 It is reassuring that the general Humboldt’s reference to wages in Central Mexico is identical to the daily wage of temporary workers in the haciendas of Guadalajara found by Van Young (1981). As to the datum of Guanajuato –from Velasco (1989)–, it is not clear whether or not it belongs to unskilled miners or, which is more probably, to the least qualified workers in the surface facilities of The Valenciana mining company. The Spanish word “faenero” that appears in the original source might not have had an unequivocal meaning. Nowadays, it means agricultural laborer according to the Real Academia Española.
nominal wages. Late colonial Mexico agricultural laborers rank in intermediate positions within a sample of urban unskilled workers. In any case, Bourbon Mexico’s economy does not seem to be based on “cheap labor”. This idea is reinforced by additional evidence. In 1803, wages of laborers in construction works reached 9.1 silver grams in Mexico City (almost as in Amsterdam) while only 6.3 in San Luis Potosí (less than in Antwerp but more than the least qualified miners in Almadén, Spain) [Challú (2005)]. In 1804 and 1806, laborers employed by the municipal government of Guadalajara were paid a daily wage of 7.6 grams of silver per day ([Van Young (1981)].

In Figure 10 the comparison in terms of grain wages is depicted.

Figure10: Grain wages of unqualified workers circa 1803.


No significant change is perceptible: Guanajuato “faeneros” remain second only to London and agricultural laborers in intermediate positions. As might be expected, things look very different if viewed in terms of meat. Once again differences in meat wages are quite significant. Even unqualified agricultural workers in late colonial had a bigger purchasing power in terms of this superior good than urban laborer in Europe –see Figure 11.
Thus, under the assumption that days worked per year was no substantially lower in New Spain than in Europe, unqualified workers in the colony might have enjoyed higher living standards than those in the most developed areas of the world by early nineteenth century.

An aspect of great interest, which is just outlined here, is that of the salary dynamics in the long term. The data prepared by Arroyo (2007) and by Challú in his doctoral thesis in course make it possible to do so as they cover most of eighteenth and early nineteenth centuries. More limited, but not lacking in interest, is the view on the wages of the construction workers in Guadalajara that is taken from the data which appear in Van Young (1981). They are shown next in figures 12, 13 and 14. Nominal, grain and meat wages in Guadalajara are compared again with those in Antwerp, Amsterdam and London, the highest in Europe.

The money wages of unqualified construction workers in Guadalajara at the end of the 18th century and the beginning of the 19th one are only surpassed by those in the capital cities of the two most developed countries in Europe (Great Britain and Holland). Even those in Antwerp, located in another of the economically advanced areas, are lower. Unlike the London money wages, which register a considerable growth, the others ones stay constant. Thus, the dynamics of nominal wages in Guadalajara, and probably in the rest of the colony, are identical to what might be termed the “general case” in the Western Hemisphere.
Figure 12: Wages in grain of unqualified construction workers in Guadalajara, Antwerp, Amsterdam and London, selected years.


The comment on Figure 13 is somewhat more complicated. The initial levels of the Guadalajara wages expressed in grain are certainly high by contemporary European standards: they match them or surpass them clearly in 1774-1775. The later fall is also clear. However, with more or less intensity and with peculiar rhythms and oscillations, something not very different happens in the European developed countries at that time. The setback in grain wages in all the cities under study is obvious in 1806. In other European cities, particularly in the Central and Mediterranean Europe, the levels had to be even lower and the fall probably bigger. In the eve of the Insurgency movement, grain wages in Guadalajara were almost identical to those in the most developed areas of Western Europe. The fall in grain wages in Guadalajara, which likely is similar to that experienced in most of the colony, may hardly be considered an idiosyncratic phenomenon. By the same token, it should not be taken as an unequivocal proof of the irreversible crisis of the colonial economy.
As expected, meat wages in Guadalajara are substantially higher than those in Amsterdam and London. It is very likely that the difference is underestimated in Figure 13 as Jalisco was an important cattle rising area. This fact probably implied lower prices than in Mexico City, whose prices have been used to calculate meat wages in Guadalajara. By early nineteenth century, in response to the increase in meat prices in New Spain, differences were much smaller than in the 1770’s but still the purchasing power in terms of this superior good was significantly bigger in Guadalajara.

In other words, living standards in Guadalajara during late eighteenth and early nineteenth centuries were probably higher than they were in the “general case” and followed the same trend as they did in Europe, excluding London.

One of the main finding of this first exploration of prices and wages in Bourbon Mexico is the difference in some relative prices between New Spain and Europe. While higher prices of grain and meat and lower real prices of labor might be expected because of the abundance of silver and of the economic backwardness in the Spanish colony, what is found is something quite different. A hypothesis that might deserve to be assessed by further research is that New Spain’s economy was partially an “economy of frontier” in which Northern and North-central regions, as opposed to those in South-central and Southern areas of the colony, were relatively rich in natural resources and scarce in labor. Besides, agricultural and mining institutions in the “Northern sector” of this dual economy, in which the presence of
pre-hispanic and early colonial legacy was weaker or non-existant, would also be more favourable for economic growth.

Regional differences in labor markets (productivity, level and trends of nominal and real wages, ratio of wage earners to economically active population, etc.) were probably not minor and should be explored as well.

4. Concluding remarks

1) The level of corn prices in Bourbon Mexico, expressed in grams of silver, is similar to those of wheat in the European countries of the sample. Corn, then, was not comparatively expensive from an international perspective. It does not seems, therefore, that the Bourbon Mexico’s economy should suffer from any “Dutch disease” in spite of the spectacular increase of silver production in the 18th century.

2) New Spain and Europe basically share the same trend of grain prices all through the eighteenth century. The growth in prices does not convert Bourbon Mexico into a “special case”. In early nineteenth century, the Insurgency movement made an important contribution to the rise in prices.

3) Peculiar to the Bourbon Mexico corn price series is a higher volatility which probably responds to some differential characteristics of the agricultural sector. It is necessary to improve our knowledge about the way in which grain markets in New Spain operated.

4) At least in an important aspect –long term behavior of grain prices- of pre-industrial economies, New Spain does not seem to be different from Europe, including its most developed areas. Grain-price behavior in Bourbon Mexico might hardly be considered a symptom of a crisis specific to the colonial economy.

5) Grain prices across a sample of markets in the Western Hemisphere are co-integrated. This might result from the influence of a common factor –climate?. Further research is needed on this interesting finding.

6) Circa 1803 wages in late colonial Mexico were not low by international standards. On the contrary, nominal and real wages compare very favorably with those in Europe, including their most developed areas, are high. That is especially true in the cases of miners and meat wages.
7) The evolution of wages across the sample is similar. By early nineteenth century, New Spain basically belongs to the same “general case” as most European countries: real wages were lower than several decades before.

8) From an international comparative perspective, Bourbon Mexico’s economy does not seem to be based on low nominal or real wages. In particular, mining was a high-wage economic activity. Some interpretations of the colonial economy -especially of mining- which describes it as being characterized by extremely unequal or “extractive” institution, do not seem to be consistent with the evidence available on wages.
Bibliographical references:


ARROYO, L. (2007), “Prices in Mexico”


-- (forthcoming), “Grain prices similarities across the Western Hemisphere in eighteenth and early nineteenth centuries”.


GARNER, Richard L. (1993), Economic Growth and Change in Bourbon Mexico, University of Florida Press, Gainesville, etc.


QUIROZ, E. (2005), Entre el lujo y la subsistencia. Mercado, abastecimiento y precios de la carne en la ciudad de México, 1750-1812, El Colegio de México, etc., México.


VAN YOUG, E. (1981), Hacienda and Market in Eighteenth Century Mexico, University of California Press, Berkeley, etc.
