



CyP

Revista Cambios y Permanencias

Publicación multi e interdisciplinar
orientada a los estudios sociales

Revista Cambios y Permanencias

Grupo de Investigación Historia, Archivística y Redes de Investigación

Vol. 10, Núm. 1, pp. 403-434 - ISSN 2027-5528

More souls to feed: the population impact on prices in late colonial Alto Peru and Buenos Aires

Más almas para alimentar: el impacto de la población en los
precios en Alto Perú y Buenos Aires

Agustina Vence Conti

Centro de Estudios Económicos de la Empresa y el Desarrollo
Universidad de Buenos Aires
orcid.org/0000-0002-3059-5581

Eduardo Martin Cuesta

Instituto Interdisciplinario de Economía Política de Buenos Aires
CONICET-Universidad de Buenos Aires
orcid.org/0000-0002-2017-2278

Recibido: 20 de marzo de 2019

Aceptado: 25 de mayo de 2019



Grupo de
Investigación
Historia
Archivística y
Redes de
Investigación

More souls to feed: the population impact on prices in late colonial Alto Peru and Buenos Aires*

Agustina Vence Conti
Centro de Estudios Económicos de la
Empresa y el Desarrollo
Universidad de Buenos Aires

Doctora en Historia.

Correo electrónico: agustina.vence@gmail.com

ORCID ID: orcid.org/0000-0002-3059-5581

Eduardo Martin Cuesta
CONICET-Universidad de Buenos Aires.
Instituto Interdisciplinario de Economía
Política de Buenos Aires

Doctor en Historia.

Correo electrónico: cuesta@filo.uba.ar

ORCID ID: orcid.org/0000-0002-2017-2278

Abstract

The aim of this paper is to trace and analyze the price behavior during the eighteenth century in two regions of the Spanish Empire: Alto Peru and Buenos Aires. These two zones had a divergent economic performance; while one of them showed an economic take-off the other became stagnant.

The objective is to compare both regions in order to show how price fluctuations were in fact the result of relative changes in the factor endowments. In this particular case two mass consumption products are considered: meat and wheat.

Based on primary sources, the paper will show us that population and commercial growth translated into a relative increase in the price of wheat with respect to that of meat.

* This paper was written for “Global Prices and Income Project” (<http://gpihp.ucavis.edu>). We would like to thank Peter Lindert, Leticia Arroyo Abad, Carlos Newland and Leonardo Gargiullo for providing insightful suggestions and comments.

In *The Wealth of Nations*, Adam Smith considered the impact of changes of factor endowments on prices. It is necessary to analyze thoroughly the available sources, as well as the price historiography up to the moment, to prove, quantitatively and qualitatively, the moment and conditions of such changes and the differences which took place in Alto Perú and Buenos Aires.

Keywords: Colonial Latin America, Economic History, Prices, 18th century.

Más almas para alimentar: el impacto de la población en los precios en Alto Perú y Buenos Aires

Resumen

El objetivo de este trabajo es analizar el comportamiento de los precios durante el siglo XVIII en dos regiones del Imperio Español: Alto Perú y Buenos Aires. Estas dos regiones tuvieron una performance económica divergente; mientras una mostró un crecimiento, la otra se estancó.

El objetivo es comparar ambas regiones para mostrar cómo las fluctuaciones de los precios fueron de hecho el resultado de cambios relativos en la dotación de factores. En este caso particular, se considerará dos bienes de consume masivo: la carne y el trigo.

Basado en fuentes primarias, este trabajo mostrará que el crecimiento de la población y del comercio se tradujeron en un aumento del precio relativo del trigo respecto al de la carne. En la *Riqueza de las Naciones*, Adam Smith considera el impacto de los cambios en la dotación de factores en los precios. Es necesario analizar a fondo las fuentes disponibles, así como también en la historiografía de precios, para probar, cuantitativa y cualitativamente, el momento y las condiciones de tales cambios y las diferencias que tuvieron lugar en Alto Perú y Buenos Aires.

Palabras Clave: América Latina colonial, Historia Económica, Precios, Siglo XVIII.

Introduction

Economic historians have described the economic development of colonial Spanish America by dividing it into two periods: crisis in the 17th century and growth in the 18th century. In the first years of the 19th century, the wars of independence put an end to a century of growth (Coatsworth and Taylor, 1998).

Two of the most dynamic regions were Alto Peru and Buenos Aires. Both regions experienced GDP and population growth. Although it has never been clear whether productivity growth occurred; there is evidence showing that both regions underwent an economic change (Newland and Coatsworth, 2000). However, it remains to be seen how the population growth and resources relation problem was solved. That is, how these economies were affected by the increase in population. In other regions, such as Central America, Malthusian forces prevented some regions from growing (Reher, 2002).

As off as it may seem, in *The Wealth of Nations*, Adam Smith refers to the characteristics of Buenos Aires' economy and draws an analogy between the latter and the Scottish valleys. Smith states that as a result of the low meat prices and population growth in Buenos Aires, investments in cattle-raising would turn to agriculture in the 18th century. This would change the relative prices of meat and wheat (Newland and Waissbein, 1984) (Fernández López, 1987).

In this paper, we will analyze some aspects of the economy of Buenos Aires by applying some of Adam Smith's postulates. This will be useful to prove the accuracy of Smith's postulates and to analyze how the economy in the 18th century was affected by population growth. However, Buenos Aires' factor endowments differ greatly from the Scottish valleys; it was possible to add new land for production. For comparison purposes, the same postulates will be applied to the Alto Peru region using Potosi's price data. It is not the aim of this paper to analyze what happened in other regions of Hispanic America, but only for comparison purposes have we decided to show the relative price evolution in Colombia and Mexico.

Using new unpublished meat and grain prices for the cities of Buenos Aires and data of Potosi, this paper will analyze the relative price changes resulting from changes in production. This analysis will extend to the first decades of the 19th century to take a look at some effects of the independence war on the economy through the changes in the prices of these products.

Discussions on Prices and Wages in Colonial Latin America

Research on prices and wages in Latin American colonial period appear in the mid-twentieth century (Borah and Sherburne, 1958). However, the important impulse occurred with the development of the so-called "third generation" of the French tradition of "Annales" in the 1960s. A prominent role had in it had the Italian historian Ruggiero Romano. In the framework of the discussions on "modes of production" and the paradigm of "development and dependence", price sources were sought. Among the most outstanding works is that of Enrique Florescano (1986) on corn prices in Mexico, Carmagnani (1963) on Chile and those of Pardo (1972) and Pedraja (1978) on Colombia¹. However, it was not until the 1980s that more jobs appeared. This is the case of the price series for colonial Chile (Ramón and Larraín, 1982), Peru (Macera, 1981), Bolivia (Tandeter and Wachtel, 1983), Cordoba (Arcondo, 1982) (Novara and Palmieri, 1982), Mexico (Garner, 1985) (Crespo, 1995), Ollantaytmbo (Glave and Remy, 1983), Lima (Haitin, 1985), among others. These price series sought to find trends and cycles, in line with the main theoretical lines prevailing at the time.

A first work integrating the advances in the history of prices and wages was that of Johnson and Tandeter (1990), compilation where many of the works of the 1980s appear and the introduction of John Coatsworth invites to look for more series, homogeneous, continuous and extensive, for comparative purposes. New concerns also appear, such as the cost of living and real wages (Johnson, 1990) (Barba, 1999) and the methodological

¹ Also, we could consider two works of Halperin Dongui (1975) (1982).

possibilities with colonial sources were discussed (Romano, 1990). These discussions, inserted in the new historiographical developments of that period, already gave glimpses of new topics (Newland and Coatsworth, 2000). The "new economic history" put on the agenda the problem of "backwardness" of Latin America and its origins, from the perspective of "path dependence" (Coatsworth and Taylor, 1998) (Haber, 1997) (Frankema, 2006). Thus, the history of colonial Latin America took on new relevance.

With the turn of the century, and from the imposition of the discussions of the last years of the 20th century, new historiographical concerns appeared. Among the most noteworthy are the inequality studies², consumption baskets, life standards³, productivity, fiscal pressure⁴, relative prices⁵, food⁶, anthropometry⁷, income distribution⁸ and international comparisons⁹.

Some of the problems that have been corrected, in part, stand out from the sources. These are scarce for the peripheral zones and regions of the Spanish Empire, as much for the little penetration of the imperial bureaucracy as for the low density of population and reduced commercial activity. Therefore, the accounting records of official and / or religious institutions on the margins or borders are not as abundant, as in the central areas of the Spanish empire in America¹⁰.

In general, the available series correspond to cities, due to the availability of sources. Data are more difficult for rural areas. In any case, for the eighteenth century,

² Prados de la Escosura (2007), Coatsworth (2008), Lopez and Perry (2008), Dobado (2009), Frankema (2009), and Dobado and García (2010).

³ Quiróz (2005), Challu (2007), Salvatore, Coatsworth and Challú (2010), Djenderedjian and Martiren (2012) (2015).

⁴ Newland and Cuesta (2003).

⁵ Garavaglia (1995) (1999), Newland and Ortiz (2001), Newland and Gallo (2004), Cuesta (2009) y (2012), Cuesta, Moras and Newland (2010), De Moraes (2011).

⁶ For example, Arcondo (2001), Silveira (2005) and Vence Conti and Cuesta (2010).

⁷ Salvatore and Baten (1998), Salvatore (1998), Challú (2009) (2010).

⁸ Gelman and Santilli (2015).

⁹ Acemoglu et al (2001) (2002), Bruhn and Gallego (2008), Dobado (2010), Allen et al (2012), Arroyo Abad et al (2012).

¹⁰ In colonial power centers such as Peru or Mexico, given the presence of complex organizations almost from the beginning of the conquest and colonization, as well as the level of commercial activity, there are numerous accounting records of religious and / or official organizations.

surveys of rural prices have been carried out, seeking to understand the functioning of the real estate market based on the few sales records¹¹. The price of the land and the goods of the local production, be these livestock or agricultural implements, can also be approached from a large mass of data, as in the work of Garavaglia (1995), from the testamentary files (successions) that contain valuations of inventories of properties in succession (called “hijuelas”). In this case they are not single-source records, and it is also difficult to apply the concept of seriality, due to problems not only of gaps in some years, but also because the dispersion in space does not allow to achieve the requirement of homogeneity at the highest-level desirable for the series.

With the growth of some cities in the eighteenth century more sources are available to build price and wage series. It is precisely the work on the eighteenth century, and the availability of these data, allowing regional and international comparisons¹².

Precisely, the most available are sources for price series in the cities, where economic operations were largely recorded. This difficulty between the recording of urban and rural economic activity also affects the feasibility of surveying and constructing wage series.

Wage, as payment to work, is similar to remuneration. In this sense, there's a part of the remuneration that is not wage. There may be large differences in concept between rural and urban areas. To a large extent, the assimilation of "wage" to "income" could be avoided, insofar as there can be non-wage income (that is, part of the salary in currency and part in assets)¹³. It's depends on the monetization of the economy, as well as the configuration of labor relations¹⁴. One of the central questions, when dealing with such broad periods, is clearly that type of relationship that expresses the "wage" that was

¹¹ For example, Saguier (1993).

¹² This can be seen in the work of the Global Prices and Income history Group. <http://gpihg.ucdavis.edu/>.

¹³ Generally, the salary in currency did not usually fluctuate, while the non-monetary part could fluctuate, both in quantity and quality, as well as in relation to the market price of those goods "salary".

¹⁴ Two works that observe the monetization of the wage in one case, and the opposite in the other: see Quiroz (2012) and Torre Curiel (2008).

recorded in the accounting books¹⁵. Many times, the wage relationship was temporary or "sporadic", the exception being the permanent one¹⁶. Taken to the extreme, debt peonage could be understood as "negative salary". Of course, this is a case of operations that are almost fundamentally rural. And the degree of monetization of salary will depend on the degree of commercialization of the urban labor market. For example, while in Buenos Aires the wage is almost completely monetary at the end of the 18th century, the same does not happen in other cities, such as Asunción. Consequently, a series of wages should contemplate both the monetary and the non-monetary part (clothing, meals, "vices", etc.). The problem is that the second part is not so simple to convert into quantifiable values, since its regularity, prices, etc., depend on several factors. Much more complex is the calculation of the rural wage, where there is certainly a use of family labor for subsistence production, using land and / or implements that are part of the labor relationship.

Saving the previous problems, and counting on series of prices and wages, a second methodological stage, which was largely a development theme in the 1990s, is the construction of consumption baskets. These allow us to understand the cost of living and living standards. The central core is the weighting of the consumption or basket, representative and significant. The great majority of the consumption baskets that have been elaborated correspond to religious institutions (convents, for example) interpreting that the consumption of the religious is representative of the average urban consumption. Brown (1990) made an estimate of ethnic character, with a "probable" basket of white and indigenous consumption in Alto Peru. Even so, these baskets are purely urban.

Again, the difficulty lies in finding homogeneous, continuous and complete sources for rural areas. In addition, in rural areas the practice of production for self-consumption or subsistence is almost certain, with which the degree of monetization was surely much lower (or even negligible, in some of them). Another problem is to weigh the consumption basket

¹⁵ For example, a possible salary series, and used by some works, is the "doorman" of the councils. But the goalkeeper's salary used to have a non-monetary part, which for the colonial period society was important.

¹⁶ A permanent case would be the employees of lower rank of the institutions (for example doormen) and cases of sporadic would be the masons or carpenters, in their diverse categories. In rural areas, the reality could be much more diverse.

of the popular sectors (whether urban or rural), where it is likely that there were non-monetary strategies to reach subsistence¹⁷.

For this reason, among others, one of the weak points of the series of prices, wages, consumption baskets and living standards is to what extent they are representative of the reality of a region, since they are reflecting urban markets and habits, in societies where the percentage of the rural population was greater and determinant¹⁸. In this context, the methodological debate between different approaches is understood (Dobado, 2015) (Allen et al, 2015) (Arroyo Abad et al, 2015) (Challú et al, 2015) (Dobado et al, 2014).

However, to conclude this discussion section, it is necessary to agree that there being no more data, we must work with the available ones, taking all possible precautions¹⁹. In recent years the same impulse has not been observed in the search for sources, which characterized the price history between 1960 and 1990. Although there have been studies on "periphery" cities or areas as the case of Cuenca (Poloni, 2006), Santa Fe (Djenderedjian et al, 2012) or Popayán (Torres, 2015)²⁰.

Methodology and Sources

The prices for Buenos Aires have been obtained from the accounting books of the *Convento San Pedro Telmo de los Hermanos Dominicos* (San Pedro Telmo Convent of Dominican Brothers). All ordinary and extraordinary expenses incurred by the Convent

¹⁷ In recent years two different methodologies have been carried out in order to be able to compare prices and wages internationally, without considering the problems of the construction of consumer baskets, which by their nature are diverse. One is to convert prices and wages into grams of gold. The other, make a basket either by number of calories, or a basket of basic subsistence ("bare bones").

¹⁸ And again, we must consider significant differences according to the zones. While in the Río de la Plata the process of urbanization of the population accelerated in the eighteenth century, in other regions such as Paraguay or Upper Peru was much slower.

¹⁹ In this sense, the approach of Williamson (2008) about the scarcity of series is interesting.

²⁰ There has also been interest in observing the impact of the Bourbon reforms on prices and / or wages, for example in Lima (Cosamalon, 2013) or Santiago (Quiroz, 2012).

have been compiled in these books. The prices for Potosi have been obtained from the price data provided by Enrique Tandeter and Nathan Wachtel (1983).

The prices we are working with are denominated in *reales* and the measurement units have been converted for the purposes of comparing both regions. In the case of meat, the measurement unit is the head of cattle. The meat price data provided by Tandeter and Wachtel (1983) have been converted since the unit of measurement they use is the *cuartillo* (1/4 head of cattle). The measurement unit for corn is the kilogram. Consequently, the prices for Potosi (in *cargas*²¹) have been converted. The data provided by the sources are expressed in *reales*²² per *fanega* (dry measure equivalent to 137.20 liters) of grain and in *reales* per quarter of meat²³.

Index rate were calculated base on the average. Finally, the linear trend for each price series has been calculated to analyze secular price changes. We also calculate the ratio in kilograms of meat in terms of grain for the comparison between regions.

Adam Smith, *The Wealth of Nations* and Buenos Aires

The Scottish economist, based on a traveler's tales about Buenos Aires, postulated possible changes in the economy of the region by drawing an analogy with the Scottish valleys. Ulloa's book (Ulloa, 1748), used by Smith as a source, points out that in Buenos Aires the meat price was almost equivalent to the cost of catching cattle (Smith 1776). This is how Adam Smith discovers a pastoral economy plentiful of meat with a small population base. Smith infers that the meat cost derives from a reduced labor force and thus, the meat price is lower than the wheat price. This is due to an increased labor force in grain production, if compared to the labor force in the production of meat – the labor factor is reduced.

²¹ "Carga" (corn) = 138 kg.

²² Each Hispanic American peso contains 8 reales. Each real weigh 3.1 gr. of pure silver (see Table 1).

²³ The quarter was the expression of a quarter of a cow. On average, 270 kg of meat were obtained from each cow.

Based on these data, Smith explains how a change in the relative prices of both products occurs. Smith works on the assumption that a major part of the land has not been used for growing but for cattle-raising. Given the high transportation costs, the only land yielding profits is the surrounding area, which has been used for cereal crops. The unimproved marginal land is used for pasturing and fattening. This leads to meat production being greater than wheat production. As a result, the relative price for the former is lower than the price for the latter (Smith, 1776).

Then, given the high wheat prices and the incentives for investing in the production of wheat, the marginal land would be used for grain production. As a result, cattle-raising would be pushed into the background and the price of meat would increase since the amount of land for pasturing decreased.

Smith assumes that population growth and the incentives for grain production would cause the price of meat to increase because of an increase in demand –resulting from a population growth – and would cause the price of grains to decrease because of an increase in production and a wages reduction—for the same reason. Since it is not possible to use more land to produce both goods, producers must choose whether to use the land for pasturing or to use the land for grain growing. The final decision would depend on the activity yielding more profits. At first, cattle-raising would be the activity yielding more profits since the only cost was cattle catching. However, when the price of wheat became such that it would be possible to pay the harvest price, producers noticed that they could obtain more profits from this activity to the detriment of cattle-raising (Smith, 1776).

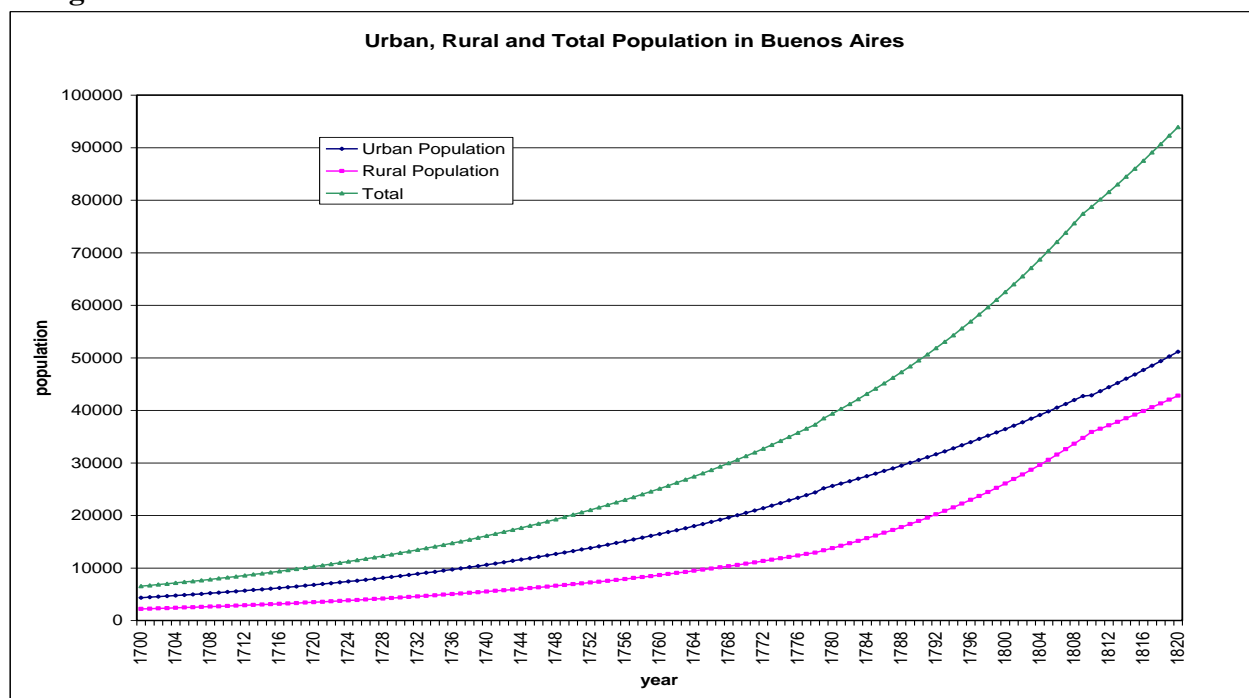
Relative prices in Buenos Aires

Having introduced Adam Smith's thinking, we now turn to look to the region he was inspired by. In the early 18th century, Buenos Aires was inhabited by nearly 5,000 people and occupied a small area on the *Río de la Plata* left bank.

There were hundreds of thousands of heads of cattle in the hinterland. The main domestic export product was leather. Its cost included catching and storage. Leather was sold at a fairly stable average price - one peso per piece of leather. In this context, meat was a by-product of leather production. The land near the city was used for wheat production for local consumption. Labor scarcity implied a higher relative cost; hence, wheat was expensive. In the course of the 18th century, two factors affected the economy and therefore changed the relative prices of meat and wheat: leather price valuation and population growth.

The high price of wheat worked as an incentive attracting a reduced labor force that would work on grain growing thus extending the cultivated land. The scarce population and high wages attracted immigrants coming both from overseas and the Americas. Some available studies show that the population between 1700 and 1820 increased eight times, as shown in the Figure 1 below (Cuesta, 2007).

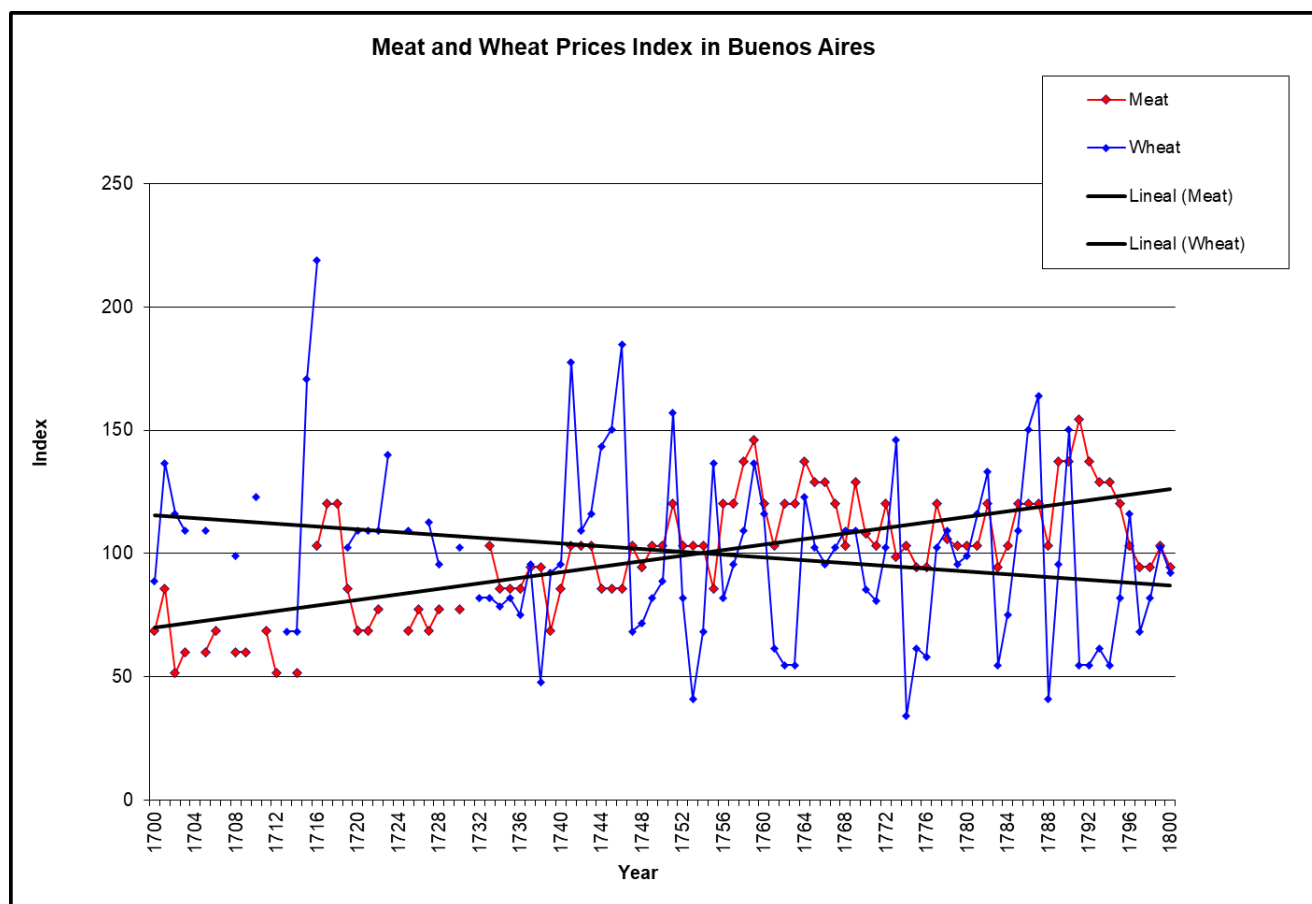
Figure 1



Sources: Documentos para la historia Argentina, Territorio y Población. Padrones de la Ciudad y la Campaña de Buenos Aires, 1726-1810 (1919) and García Belsunce (1976).

Next step is to analyze the price series considering Adam Smith's proposition related to the effect of population growth and livestock production. He said that population growth would displace livestock production into agricultural production and that would impact on the relative prices of both goods. The increase on cultivated land impacted negatively on livestock production (land- intensive product). Having the former higher price, all the available land in the nearest hinterland translated into an increase of grain production displacing cattle far from the urban market. This produced a decrease in wheat price and an increase in meat price. Both effects, taken as a hypothetical case by Smith in 1776, are shown in Figure 2.

Figure 2

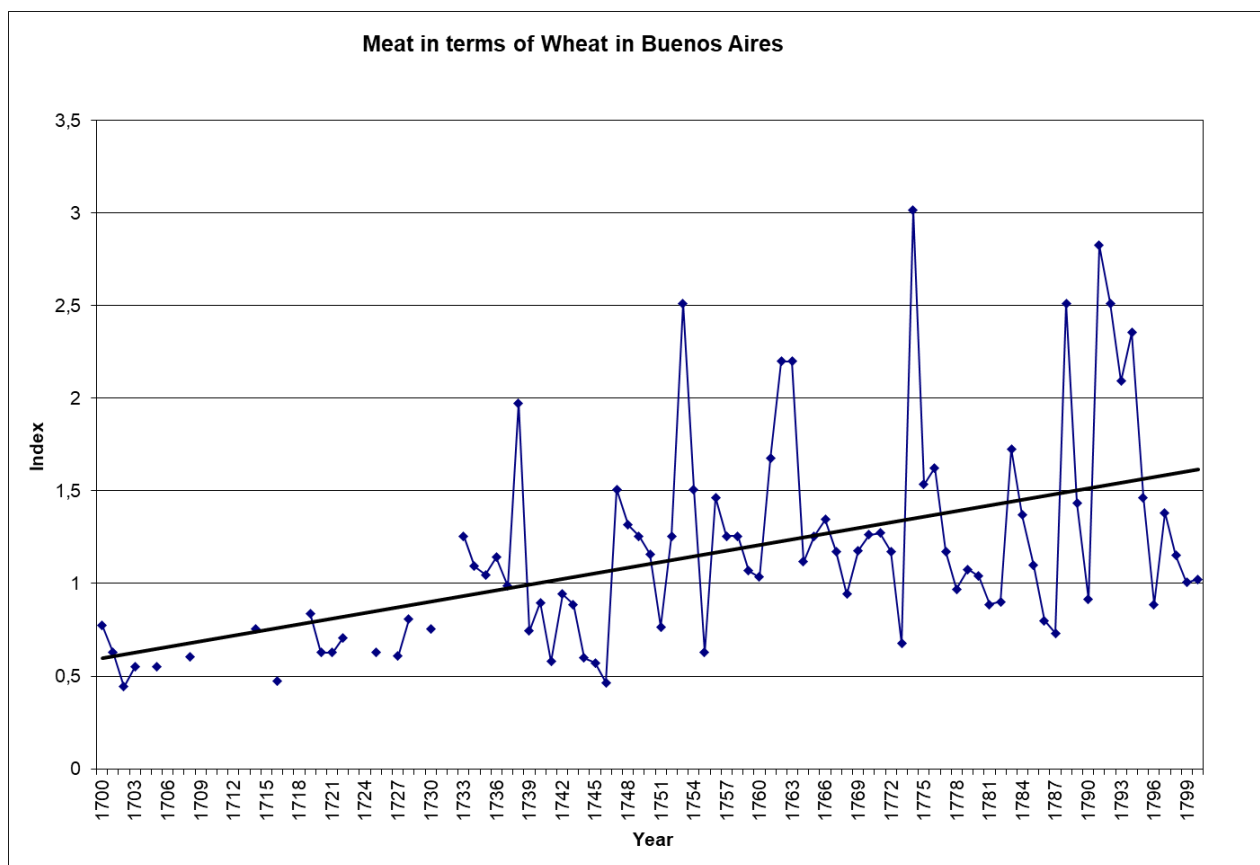


Sources: Cuesta (2009).

The figure above shows the price indexes of meat and wheat in the city of Buenos Aires in the 18th century. According to contemporary writers, these were typical local products and were the most traded in the local market (Ulloa, 1748) (Ulloa, 1826) (Concolocorvo, 1773). Some researchers estimate that by 1750 meat consumption in 25 to 30 thousand heads of cattle (Garavaglia, 1995). Livestock had been slaughtered in stockyards near the city since the early century and carried to the square for retail sale (Lafuente Machain, 1946). According to a story of that time, meat was carried in quarters to the square by carts or wagons. In the afternoon, meat was sold at low prices since it was not possible to preserve it (Concolocorvo, 1773).

Figure 2 clearly shows the meat price upward trend and the wheat price downward trend. Both trend lines cross each other near the mid-century line. These data prove Smith's hypothesis on Buenos Aires, though the slope is not as steep as he believed. It should be noticed that Smith did not consider a critical element. In *The Wealth of Nations*, this explanatory chart is applied as an analogy to the Scottish case. In the Scottish case, there is absolutely no doubt that the endowment of land was fixed. Smith assumed the same happened in Buenos Aires. Land availability in Buenos Aires was directly related to the advance over the southern border. Research studies show that in the 18th century, the production extended to other areas as population grew (Mayo, 2000) (Garavaglia, 1995).

Figure 3



Sources: Cuesta (2009).

The previous Figure 3 shows the meat evolution in terms of wheat (in kilograms). The upward trend means that the meat price was greater than wheat. To obtain the same amount of meat, a greater quantity of wheat was necessary. This supports the idea expressed above.

Leather and Meat

In the 18th century, the main local product for export in Buenos Aires was leather. Given the export figures, a major part of the livestock production was closely related to the

exportable good production. In the early 18th century, the leather export demand was so important that even if meat was a by-product, the meat supply exceeded the meat demand.

The leather quantity in 1750 compared to the cattle demand for meat consumption in the city is a relevant fact. Fifty thousand pieces of cow leather were exported whereas the demand for cows in the city was thirty thousand. Until the 1760s, it was common for the town council, known as the *Cabildo*, to issue ordinances prohibiting cattle slaughtering far from the city only for obtaining leather. The town council's intention was to have a regular income derived from meat in the city. (*Documentos*, 1919).

The stories of that time would describe the situation as one in which whenever a piece of meat dropped from the butcher's cart, no one seemed to bother to pick it up given the low price of meat. According to other stories, the *gauchos* sometimes would slaughter a cow only to take its leather and to eat and cook its tongue. What remained was thrown away. The relative abundance of meat and other by-products derived from leather is also reflected on the farm furniture: cow skulls were used as chairs, horns were used as drink containers, and the most common food was *asado*²⁴.

Smith's hypothesis on the effects of a population growth (see Figure 1) and of a change in prices is reinforced by proving that the demand for meat exceeded the demand for leather in the last quarter of the 18th century. Again, Smith's hypothesis is proved in the following case. The livestock production was displaced to a land far from the urban area and the port and thus, the leather and meat prices increased in the city as a result from an increase in transportation costs.

This was a more noticeable change as of the end of the 18th century, when the production of salted meat began. Although labor was still scarce and wages were high, the low price of raw materials encouraged salted meat production for consumption by slaves working in Caribbean and North American plantations.

²⁴ For an "*asado*" description see Vence Conti y Cuesta (2010).

The price series and research studies on land and exports in Buenos Aires support Adam Smith's hypothesis on the changes in the relative prices within the region.

Independence Effects

There is no doubt that the independence revolutions and armed conflicts that followed had a substantive impact on the economy. In Buenos Aires, the effects on meat and wheat production and prices were significant (Newland and Ortiz, 2001).

The 1810 Independence Revolution reduced barriers and export taxes – including leather and salted meat exports – thus causing leather exporters' income to increase by 300%. This led investment and labor to turn to livestock production. Therefore, wheat production was affected by a decrease in investment and labor. As a result, the wheat price increased. Again, a change in the relative prices occurred and the price of wheat increased compared to the price of meat. In more than ten years following the Independence, the whole 18th century process reversed. The way in which the areas were used also changed. The area used for livestock production was extended. Such area having a high rate of profit also caused the land and livestock prices to increase. The high leather and salted meat export rates of return caused meat production to turn to exports, thus leaving the domestic market with no provisions and causing the domestic meat price to increase.

Table 1

	1810	1820
Population	80,040	93,919
Price of wheat (reales/kg)	28	20
Price of meat (reales/kg)	12	32.2
Land price (reales/ha)	1.6	2.72
Land occupied (hectares)	5.1	12.4

Sources: Newland and Ortiz (2001); Cuesta (2007); Garavaglia (1995); Johnson (1990).

The effects on agricultural production were also significant. Labor and capital having turned to livestock production, the agricultural production gave way to the former and the final price of wheat in the urban market increased. After Buenos Aires economy opened to the global market, wheat in Buenos Aires was rapidly replaced by wheat imported from the United States because of its lower price. This is how the cattle-raising profile of Buenos Aires economy was outlined until the end of the 19th century. In the 1880s, the structural conditions would change, and the Buenos Aires *pampas* would become the World's First Exporter.

Relative Prices in Potosi

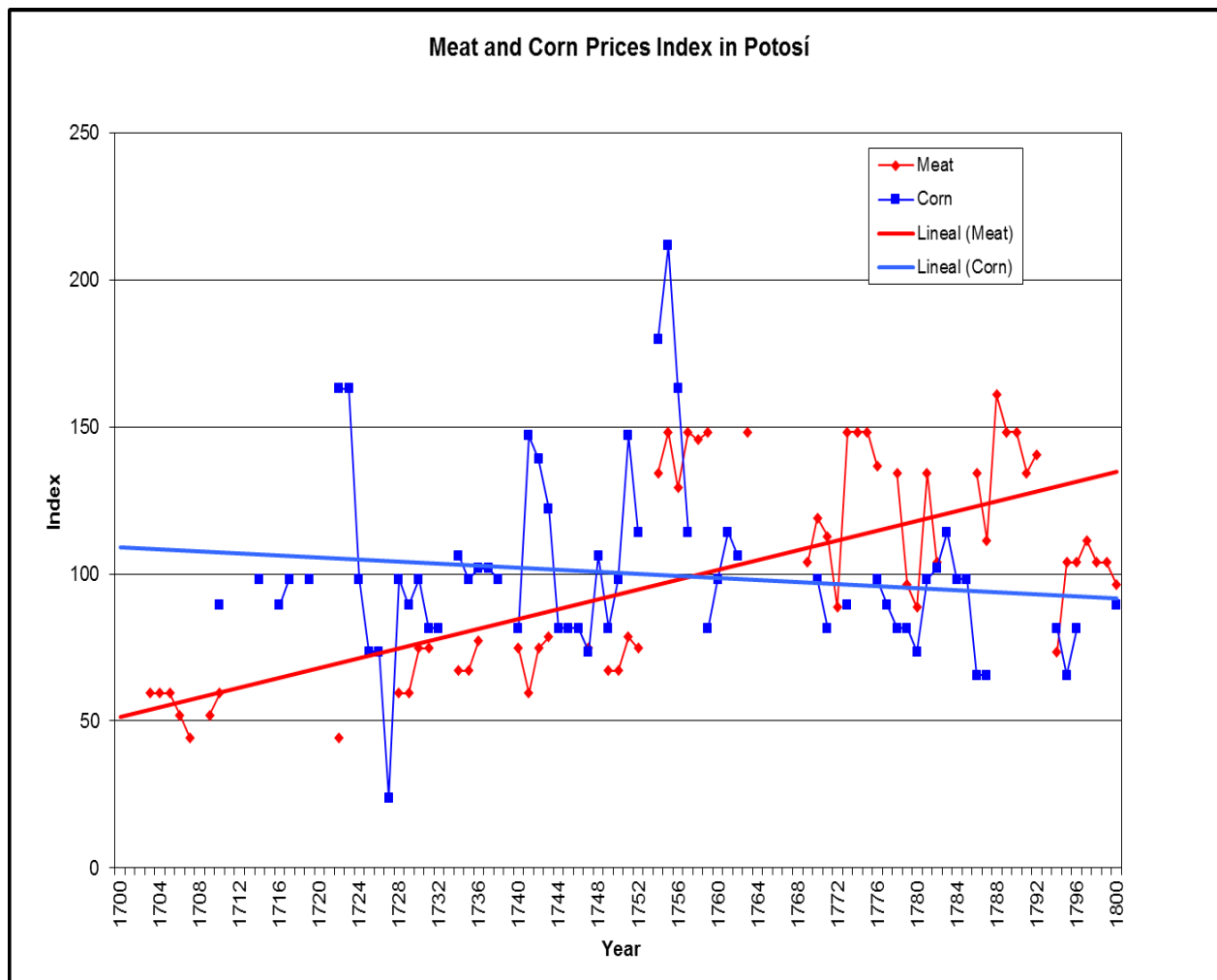
In the 17th century, Potosi was the most important city of the Spanish Empire in the Americas. Situated over 7,000 meters above the sea level, in the center of the highland Andes, Potosi's main production was silver extraction and coinage. The importance of this city can be measured by considering that Potosi coins were a kind of international currency circulating around the world during the 17th century and part of the 18th century (Lazo, 1992).

By the beginning of the 18th century, Potosi had a population of 600,000. The city being at the foot of *Cerro Rico*, in the middle of a desert, meat and grains supply was exclusively provided by the agricultural and livestock producers from other regions.

Between 1715 and 1720, the population decreased by 25% because of a smallpox epidemic. However, we can see that throughout the century the population increased 20% by year 1800 (Tandeter and Boleda, 1992).

Applying Adam Smith's postulates in this area implies using prices of corn (corn was more important than wheat in the Andes) and meat. The next figure shows the price of a kilogram of meat in terms of a kilogram of corn for the city of Potosi in the 18th century.

Figure 4



Sources: Johnson and Tandeter (1990).

We can observe an upward trend in the price of meat and a downward trend in the price of corn. Analyzing the evolution of corn and meat prices in Potosí during the 18th century (figure 4), the steep slope of meat is explained by the impossibility of adding new land after a period of low prices during the first 30 years (1700-1733), the meat price started to go upwards until 1750, after which a steady period followed before going downwards again by the end of the century. The case of corn is different because of its steep ups and downs. After reaching its peak by the 1750s, wheat prices trend became much steeper downward trend by 1790.

To explain the turning point in the agricultural prices in the 1760's, we must mention the important role played by the weather on wheat price changes. As an example of the rise in prices caused by the changes in the weather conditions, we can mention the fact that in 1723 the wheat price reached 40 *reales* due to the 1721, 1722 and 1723 droughts along with an epidemic that devastated the population between 1719 and 1790. The sudden weather changes and excessive rains in 1753, the 1732, 1733, 1734, 1741, 1742, 1755, 1783, 1784 droughts and the epidemics in 1719, 1720 and 1732 (Tandeter and Wachtel, 1983) that were contemporaneous to or prior to the droughts that caused the prices ups and downs were pronounced. This highly positive correlation between weather changes and the rise in prices is not only a characteristic of the Potosi economy, as Tandeter and Wachtel point out. It can also be seen in other dominated areas in the Americas and in Europe. As regards demographic development, Potosi started to recover in 1734 after the epidemic that devastated the region between 1719 and 1720 (Tandeter and Wachtel, 1983). For both authors, the rise in prices that occurred between mid 1730's and the end of the 1760's had two reasons: a) the recovery of demographic values and b) the bad weather conditions. At the same time, prices setback is supposed to have been caused by an increase in production outnumbering the population due to better weather conditions.

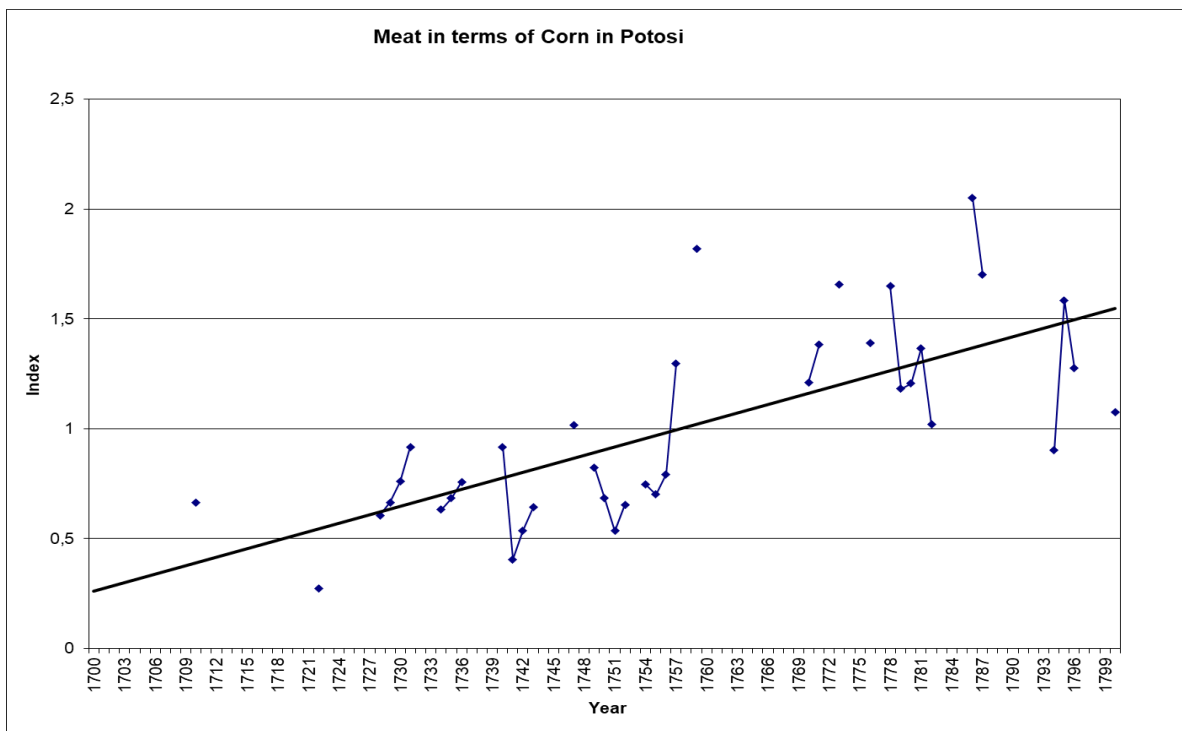
Despite having the same trend as grains, the evolution of livestock production, in this case meat prices were much more stable throughout the century, as mentioned before. The period between 1700 and 1728 was one of low meat prices, lower than 10 *reales* a head of cattle. From 1728 to approximately 1754, prices started to steadily increase (from 8 *reales* a carcass up to 18 *reales*). Such increase would continue until 1790 (even reaching 22 *reales* a head of cattle) and would come to a downward circle by the end of the 18th century.

Tandeter and Wachtel (1983) question is whether agriculture developed to the detriment of livestock production, as the prices of both products evolved inversely during the same chronological phase. We can find an answer to that question in Adam Smith. At the very beginning, the abundance of lands, or better said, the fact that marginal land for cattle pasturing and fattening purposes were added, along with the low costs of harvesting

said land, caused the meat price to be lower, whereas the high wheat price was due to a shortage of lands used for crop growing (hinterland) and scarce labor force. The high wheat prices depended negatively on the increase in its production. The more territory used for agriculture (because of a difference in price), the more livestock production had to turn to more remote areas being less fertile, all of which caused the relative prices of both products to change. This process became more evident by the 1760's, when the changes in the wheat relative prices became clear compared to the price of meat.

In spite of this change in the relative prices being due to the fact that livestock production turned to agricultural production as in Buenos Aires, it is important to notice that this displacement was different from that related to the use of the space. Land available in the highlands was already established, therefore, an increase in the cultivated area implied a reduction of the area used for livestock production. This probably explains why the changes in the relative prices were bigger here than in Buenos Aires.

Figure 5



Sources: Tandeter and Wachtel (1983).

The Figure 5 shows the meat evolution in terms of corn (in kilograms). As we can see, the slope of Potosi's is steeper than that of Buenos Aires, which means that more corn is needed for the same amount of meat. Potosi case is closer to what Adam Smith postulate for Buenos Aires.

Table 2

	1800	1820
Population	800,000	700,000
Price of corn (reales/kg)	22	24
Price of meat (reales/kg)	13	26

Sources: Prices in Tandeter and Wachtel (1983); population in Humphreys (1940).

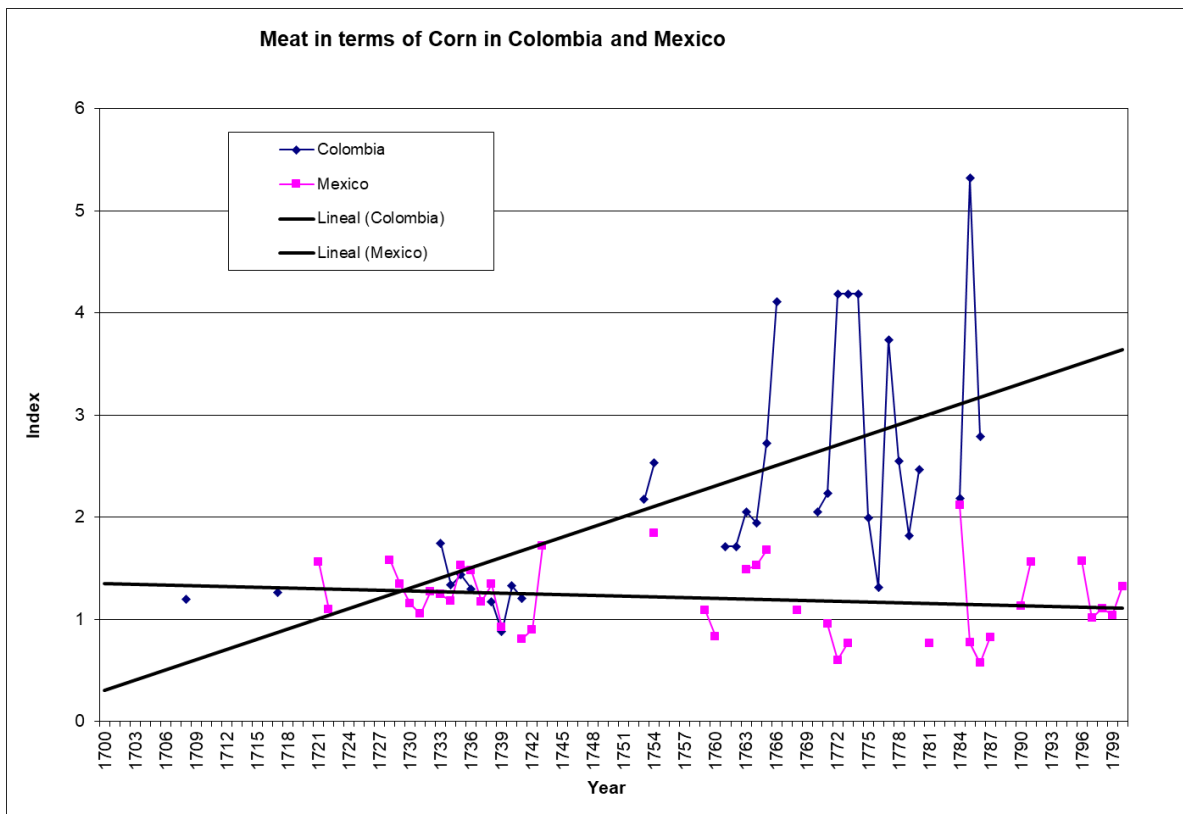
Independence war effects

Between 1810 and 1824, the area of Alto Peru, whose center was Potosi, was the main playground of the Spanish-American independence wars. The data available for post-independence prices show an increase in all prices. But unlike Buenos Aires, where relative prices changed because of foreign trade, in Potosi prices increased because war took place there. A large part of the wealth of the region was devastated by the different armies, thus vanishing the silver wealth and causing mining productivity to decrease.

Even though it is not the aim of this paper to make a comparison with other regions of Hispanic America, we do not want to miss the opportunity of observing what happened with meat and corn price in other parts of the Empire.

For Colombia and Mexico, the price data comes from edited sources. The meat and corn prices are used for comparison matters. In the next figure we present the meat evolution in terms of corn measure in kilograms.

Figure 6



Sources: for Colombia in Pardo (1972); for Mexico in Quiroz (2005) and Florescano (1986).

It is observed that in Bogota the relative prices have the same slope as in Buenos Aires and Potosi, but it is steeper than the latter. One hypothesis might be the impossibility to expand the frontier crowding out meat production. However, the Mexican case is different. In this particular case, meat and corn price behavior follows an opposite path: the meat price has a downward trend while corn has an upward trend.

Conclusions

Adam Smith's arguments about the economy in Buenos Aires were challenged in this paper by means of an analysis of the data on available prices. Meat and wheat prices between 1700 and 1820 helped prove the change in the relative prices of these products.

Adam Smith's hypothesis established that such change would be caused by the incentive of wheat prices being higher than meat prices, and by the population increase.

However, the change in the relative prices between 1700 and 1800 was not significant. Smith did not consider the existence of large portions of available land ready to be used for production. Population growth in the area of Buenos Aires caused the agricultural production to increase and, at the same time, new lands in the border to be added for livestock production. Therefore, no Malthusian limitations were spotted in the demographic increase.

With the aim of comparing this economic process to that of another region of Spanish-America, the same postulates on the economy of Alto Peru were applied. Evidence was found of a process like that of Potosi. However, the change in the relative prices was larger in Potosi than in Buenos Aires. In Alto Peru, the endowment of land was limited and that is why the increase in the agricultural production meant using lands that were formerly used for livestock production. Because of this, the reduction in the meat supply implied an increase in its price.

Finally, we tried to discover the effect of the independence revolutions in both regions, considering the process of change in the relative prices in the 18th century. Potosi suffered the consequences of being the main scenario of the independence wars. The prices of both products increased as a result of a decrease in the production and an increase in consumption. In Buenos Aires the consequences were very different. Trade openness (free trade) caused profits from the leather production to increase. At the same time, salted meat exportation was boosted. This brought two consequences. First, production factors were applied to livestock production, since the return on investment was bigger than in the case of the agricultural production, which went down. Second, there was a struggle between domestic consumption and meat exportation. Perhaps, 1818 was the most critical year: for the first time in 300 years' meat was scarce in Buenos Aires.

In a future agenda, it is expected to calculate and analyze the relative prices for other regions, such as Mexico and Colombia, which were presented in the last figure, and compare both regions with the available data.

Sources

1. *Acuerdos del Extinguido Cabildo de Buenos Aires (AECBA)* (1928). Series II, Vol. VIII, pp. 287-289.
2. Concolocorvo. (1773). *El lazarillo de ciegos caminantes*. Buenos Aires: Emecé, (edición de 1997).
3. *Documentos para la historia Argentina: Padrones de la ciudad y la campaña de Buenos Aires, 1726-1810* (1919), Facultad de Filosofía y Letras, Universidad de Buenos Aires, Vols. X and XI.
4. Humphreys, R. (1940), *British Consular Reports on the Trade and Politics of Latin America*, London, The Royal Historical Society.
5. Smith, A. (1776), *An inquiry into the Nature and Causes of the Wealth Of Nations*, Indianapolis, Liberty Classic (1984 edition).
6. Ulloa, J. J. y Ulloa, A. (1748), *Relación histórica del viaje a la América meridional*. Madrid: Antonio Marín.
7. Ulloa, J. J. y Ulloa, A. (1826), *Noticias secretas de América*. Buenos Aires: Mar Océano (edición de 1953).
8. Global Prices and Income History Group. [http://: gpihgw.ucdavis.edu/](http://gpihgw.ucdavis.edu/)

Bibliography

1. Acemoglu, D.; Johnson, S. and Robinson, J. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *The American Economic Review*, 91(5), pp. 1369-1401.

2. Acemoglu, D.; Johnson, S. and Robinson, J. (2002). Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution. *Quarterly Journal of Economics*, 117, pp. 1231-1294.
3. Allen, R.; Bengtsson, T. and Dribe M. (eds.) (2005), *Living Standards in the Past*. Oxford: University Press, Oxford.
4. Allen, R.; Murphy, T. and Schneider, E. (2012). The Colonial Origins of the Divergence in the Americas: a Labour Market Approach. *The Journal of Economic History*, 72(04), pp. 863-894.
5. Allen, R.; Murphy, T. and Schneider, E. (2015). Una de cal y otra de arena: Building comparable real wages in a global perspective. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp 61-75.
6. Arroyo Abad, L. and Van Zanden, J. L. (2015). Optimistic but flawed? A reply. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp 77-82.
7. Arroyo Abad, L. and Van Zanden, J. L. (2012). Between Conquest and Independence: Real wages and demographic change in Spanish America, 1530–1820. *Explorations in Economic History*, 49(2), pp. 149-166.
8. Arcondo, A. (1982). *El ocaso de una sociedad estamental*. Córdoba: UNC.
9. Arcondo, A. (2001). *Historia de la alimentación en Argentina, desde los orígenes hasta 1920*. Córdoba: Editorial Ferreira.
10. Coatsworth, J. and Taylor, A. (1998). *Latin America and the World Economy since 1800*. Cambridge: MA, Harvard University Press.
11. Barba, F. (1999). *Aproximación al estudio de los precios y salarios en Buenos Aires desde fines del siglo XVIII hasta 1860*. La Plata: UNLP.
12. Borah, W. and Cook, S. (1958), *Price Trends of Some Basic Commodities in Central Mexico, 1531-1570*. Berkeley and Los Angeles: University of California Press.
13. Brown, K. (1990). Price movements in 18th century Peru. In Johnson, L. and Tandeter, E. (comp.). *Essays on the Price History of Eighteenth-Century Latin America*. University of New Mexico Press.

14. Bruhn, M. and Gallego, F. (2008). Good, Bad, an Ugly Colonial Activities: Studying Development across the Americas, *Policy Research Working Paper*, 4641, The World Bank.
15. Campbell, R. (1982). *Adam Smith*. New York: St. Martin.
16. Carmagnani, M. (1963). *El salariado minero colonial*. Santiago de Chile.
17. Challu, A. (2007). Grain Markets, Food Supply Policies and Living Standards in Late Colonial Mexico. (PhD Dissertation). Harvard University.
18. Challu, A. (2009). Agricultural Crisis and Biological Well-Being in Mexico, 1730-1835. *Historia Agraria*, 47, pp. 21-44.
19. Challu, A. (2010). The Great Decline: Biological Well-Being and Living Standards in Mexico, 1730-1840. In Salvatore, R., Coatsworth, J. and Challú, A. (eds.), *Living Standards in Latin American History: Height, Welfare, and Development, 1750-2000* (pp. 23-67). Cambridge, Harvard University Press.
20. Challú, A. and Gómez-Galvarriato, A. (2015). Mexico's real wages in the age of the great divergence, 1730-1930. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp 83-122.
21. Coatsworth, J. (2008). Inequality, Institutions and Economic Growth in Latin America. *Journal of Latin American Studies*, 40, pp. 545-569.
22. Cosamalón Aguilar, J. A. (2013). Precios y sociedad colonial (1700-1810): transformaciones en los mercados y ciclos económicos en Lima. *Historia Mexicana*, 63, 1(249), pp. 51-109.
23. Crespo, H. (1995). Los precios del azúcar en Nueva España. Tendencias seculares y comportamiento cíclico. In García Acosta, V. (Coord.), *Los precios de alimentos y manufacturas novohispanos*. Mexico: Centro de Investigaciones y Estudios Superiores en Antropología Social.
24. Cuesta, M. (2007). Aspectos Económicos de la población porteña en el siglo XVIII. *Papeles de Población*, 49.
25. Cuesta, M. (2009). *Precios, Población, Impuestos y Producción. La economía de Buenos Aires en el siglo XVIII*. Buenos Aires: Temas.
26. Cuesta, M.; Moras, I. and Newland, C. (2010). Prices, Wages and Economic Change. The Espacio Peruano Region. *Anuario de Estudios Bolivianos*, 16, pp. 311-325.

27. Cuesta, M. (2012). New data on an old issue. Prices in Buenos Aires in the 18th century. *Colonial Latin America Historical Review*.
28. De Moraes, M. I. (2011). Las fuentes hacendísticas para el estudio de los precios y salarios de Montevideo colonial. *Informe Auxiliar N° 3 del proyecto de investigación: Caracterización socio-demográfica y económica de las sociedades pre-industriales de la Cuenca del Río de la Plata*. Comisión Sectorial de Investigación Científica de la Universidad de la República.
29. Djenderedjian, J. and Martiren, J. (2012). Los precios de los bienes en las fronteras bravías del Río de la Plata colonial: Santa Fe durante la primera mitad del siglo XVIII. *América Latina en la Historia Económica*, 20(2).
30. Djenderedjian, J. and Martirén, J. (2015). Precios, producto agrario y niveles de vida en las fronteras rioplatenses, 1700-1810: una nueva mirada sobre el crecimiento económico tardocolonial. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp. 123-152.
31. Dobado, R. (2009). Herencia colonial y desarrollo económico en Iberoamérica: una crítica a la “nueva ortodoxia”. In Llopis, J. and Marichal, C. (eds.), *Obstáculos al crecimiento económico en Iberoamérica y España, 1790-1850* (pp. 253-291). México-Madrid: Instituto José Luís Mora y Marcial Pons.
32. Dobado, R. (2010). Prices and wages in Bourbon Mexico from an international comparative perspective. In Morilla, J.; Hernández Andreu, J., García Ruiz, J., and Ortiz Villanos, J.M. (eds.), *Homenaje a Gabriel Torella. Las claves del desarrollo económico y social* (pp. 85-102). Madrid: Universidad de Alcalá.
33. Dobado, R. and García Montero, H. (2010). Colonial Origins of Inequality in Hispanic America? Some Reflections Based on New Empirical Evidence. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History*, XXVIII, 2, pp. 253 – 277.
34. Dobado, R. (2015). Pre-independence Spanish Americans: por, short and unequal or the opposite? *Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp 15-59.

35. Dobabo, R. and García Montero, H. (2014). Neither So Low nor So Short: Wages and Heights in Bourbon Spanish America from an International Comparative Perspective. *Journal of Latin American Studies*, 46, pp 291-321.
36. Engerman, S. and Sokoloff, K. (1997). Factor Endowments, Institutions, and Differential Paths of Growth among New World Economies: A View from Economic Historians of the United States. In Haber, S. (ed.). *How Latin America Fell Behind: Essays on the Economic History of Brazil and Mexico, 1800-1914* (pp. 260–304). Stanford University Press.
37. Fernández López, M. (1976), Valor, trabajo y capital. Ensayo sobre *La riqueza de las Naciones* y el primer pensamiento económico argentino. In Orayen, R. (comp.), *Ensayos actuales sobre Adam Smith y David Hume*, Buenos Aires, Instituto Torcuato Di Tella.
38. Fernández López, M. (1987). Buenos Aires presente en la Riqueza de las Naciones. *El Economista*, Buenos Aires: August 15.
39. Florescano, E. (1986), *Precios del maíz y crisis agrícolas en México*. México: Ediciones Era.
40. Frankema, E. (2006). The Colonial Origins of Inequality: Exploring the Causes and Consequences of Land Distribution. *Research Memorandum GD-81*, Groningen Growth and Development Center.
41. Frankema, E. (2009), *Has Latin America Always Been Unequal?* Brill, Leiden.
42. Garavaglia, J. C. (1995). Precios de los productos rurales y precios de la tierra en la campaña de Buenos Aires: 1750-1826. *Boletín del Instituto de Historia Argentina y Americana Dr. Emilio Ravignani*, tercera serie, 11, pp. 65-112.
43. Garavaglia, J. C. (1999). *Pastores y labradores de Buenos Aires. Una historia agraria de la campaña bonaerense, 1700-1830*. Buenos Aires: Ediciones de la Flor.
44. García Belsunce, C. (1976). *Buenos Aires: su gente, 1800-1830*, Buenos Aires: Sudamericana.
45. Garner, R. L. (1985). Price Trends in Eighteenth-Century Mexico. *Hispanic American Historical Review*, 65(2), pp. 279-325.
46. Gelman, J. y Santilli, D. (2015). Salarios y precios de los factores en Buenos Aires, 1770-1880: una aproximación a la distribución funcional del ingreso en el largo plazo.

- Revista de Historia Económica / Journal of Iberian and Latin American Economic History (New Series)*, 33, pp. 153-186.
47. Glave, L. y Remy, M. (1983). *Estructura agraria y vida rural en una región andina. Ollantaytambo entre los siglos XVI y XIX*. Cuzco: Archivos de Historia Andina, Centro de Estudios Rurales Andinos Bartolomé de las Casas.
 48. Gootenberg, P. (1990). Carneros y Chuño: Price Levels in Nineteenth Century Peru. *Hispanic American Historical Review*, 70(1), pp. 1-56.
 49. Haber, S. (ed.) (1997). *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800-1914*. Stanford University Press.
 50. Haitin, M. (1985). Prices, the Lima Market, and the Agricultural Crisis of the Late Eighteenth Century. *Jahrbuch für Geschichte Lateinamerikas*, 22, pp. 167-198.
 51. Halperín Dongui, T. (1975). Una estancia en la campaña de Buenos Aires, Fontezuela, 1753-1809. In Florescano, E. (comp.) *Haciendas, latifundios y plantaciones*, México: Siglo XXI.
 52. Halperín Dongui, T. (1982). *Guerra y Finanzas en los orígenes del Estado Argentino*. Buenos Aires: Universidad de Belgrano.
 53. Hollander, S. (1973). *The Economics of Adam Smith*. London: Heinemann.
 54. Johnson, L. and Tandeter, E. (comp.) (1990). *Essays on the Price History of Eighteenth-Century Latin America*. University of New Mexico Press.
 55. Johnson, L. (1990). Salarios, precios y costo de vida en el Buenos Aires colonial tardío. *Boletín del Instituto de Historia Argentina y Americana "Dr. Emilio Ravignani"*, m. 2, 1990.
 56. Lafuente Machain, R. (1946). *Buenos Aires en el siglo XVIII*. Municipalidad de la ciudad de Buenos Aires, Emilio Coni.
 57. Lazo García, C. (1992). *Economía Colonial y el Régimen Monetario. Perú: siglos XVI-XIX*. Lima: Banco Central de Reserva del Perú.
 58. López, J. H. and Perry, G. (2008). Inequality in Latin America: Determinants and Consequences. *Policy Research Working Paper 4504*, World Bank.
 59. Macera, P. (1981). *Los precios en el Perú, siglos XV a XIX*. Lima: BCP.
 60. Mayo, C. (ed.) (2000), *Vivir en la frontera: la casa, la dieta, la pulpería, la escuela*. Buenos Aires: Biblos.

61. Newland, C. and Waissbein, D. (1984). Una nota sobre Adam Smith, Ulloa y la economía de Buenos Aires. *Revista de Historia Económica*, 2(1), pp. 161-167.
62. Newland, C. and Coatsworth, J. (2000), “Crecimiento económico en el Espacio Peruano, 1680-1800. Una visión a través de la agricultura”, *Revista de Historia Económica*, vol. 18, no. 2, pp. 277-393.
63. Newland, C. and Ortiz, J. (2001). The Economic Consequences of Argentine Independence. *Cuadernos de Economía*, 38(115), pp. 275-290.
64. Newland, C. (2002). Evolución macroeconómica del Espacio Peruano, 1680-1800. *Economía*, 20(49), pp. 63-84.
65. Newland, C y Cuesta, M. (2003). Revueltas y presión impositiva en el espacio peruano, 1691-1790. *Revista de Historia Económica*, 20(3), pp. 477-501.
66. Newland, C. y Gallo, A. (2004). Globalización y convergencia de precios en el Imperio Español, 1660-1810. *Revista de Historia Económica*, 22(3).
67. Novara, J. y Palmieri, H. (1982). *Contribución a la historia de los precios en Córdoba, 1897-1907*. Córdoba: Universidad Nacional de Córdoba.
68. Olivera, J. (1978). El Teorema de Adam Smith. In Orayen, R. *Ensayos Actuales sobre Adam Smith y David Hume*, (pp. 9-20). Buenos Aires: Editorial del Instituto.
69. Pardo, A. (1972). *Geografía económica y humana de Colombia*. Bogotá: Ediciones Tercer Mundo.
70. Pedraja, R. de la (1978). *Los precios de los comestibles en la época del virreinato, 1740-1810*. Bogotá: CEDE.
71. Poloni, J. (2006). *El mosaico indígena: movilidad, estratificación social y mestizaje en el corregimiento de Cuenca (Ecuador) del siglo XVI al XVIII*. Quito: Abya-Yala.
72. Prados de la Escosura, L. (2007). Inequality and Poverty in Latin America. A Long-Run Exploration, In Hatton, O'Rourke and Taylor (eds.). *The New Comparative Economic History*, (pp. 291-315). Cambridge: The MIT Press.
73. Quiroz, E. (2005). *Entre el lujo y la subsistencia: Mercado, abastecimiento y precios de la carne en la ciudad de México, 1750-1812*. México: El Colegio de México.
74. Quiroz, E. (2012). Variaciones monetarias, impulso urbano y salarios en Santiago en la segunda mitad del siglo XVIII. *Historia (Santiago)*, 45(1), pp. 91-122.

75. Ramón, A. y Larraín, J. (1982). *Orígenes de la vida económica chilena: 1659-1808*. Santiago, Centro de Estudios Públicos.
76. Reher, D. (2002). ¿Malthus de nuevo? Población y economía en México durante el siglo XVIII. *Historia Mexicana*, XLI, 4, pp. 615-664.
77. Rodríguez Braun, C. (1997). Early Smithian economics in the Spanish empire: J. H. Vieytes and colonial policy. *The European Journal of the History of Economic Thought*, 4(3), pp. 444-454.
78. Romano, R. (1990). Considerations on price history. In Johnson, L. and Tandeter, E. (comp.). *Essays on the Price History of Eighteenth-Century Latin America*. University of New Mexico Press.
79. Romano, R. (1993). *Coyunturas opuestas: la crisis del siglo XVII en Europa e Hispanoamérica*. México: Fondo de Cultura Económica.
80. Saguier, E. (1993), *Mercado inmobiliario y estructura social*. Buenos Aires: CEAL.
81. Salvatore, R. and Baten, J. (1998). A Most Difficult Case of Estimation: Argentinian Heights, 1770-1840. In Komlos, J. and Baten, J. (Eds.). *The Biological Standard of Living in Comparative Perspective*, (pp. 90-96). Franz Steiner Verlag, Stuttgart.
82. Salvatore, R. (1998). Heights and Welfare in Late-Colonial and Post-Independence Argentina. In Komlos, J. and Baten, J. (Eds.) *The Biological Standard of Living in Comparative Perspective* (pp. 97-121). Franz Steiner Verlag, Stuttgart.
83. Silveira, M. (2005). *Cocina y comidas en el Río de la Plata*. Neuquén: Universidad Nacional del Comahue.
84. Skinner, A. and Wilson, T. (1975), *Essays on Adam Smith*, Oxford, Clarendon Press.
85. Smith, R. S. (1957). The wealth of Nations in Hispanic America, 1780-1830. *The Journal of Political Economy*, 65(2), pp. 104-125.
86. Tandeter, E. y Watchel, N (1983). Precios y producción agraria. Potosí y Charcas en el siglo XVIII. *Desarrollo Económico*, 23(90), pp. 197-232.
87. Tandeter, E. y Boleda, M. (1992), *Poblaciones andinas. Evolución poblacional en los siglos XVII y XVIII*. Buenos Aires: Alianza.
88. Torre Curiel, J. R. (2008). Comerciantes, precios y salarios en sonora en el periodo colonial tardío. Caracterización de un circuito comercial cautivo. *Historia Mexicana*, 58(2), pp. 595-656.

89. Torres, J. (2015). El comportamiento de los precios en una economía preindustrial: Popayán, virreinato de Nueva Granada, 1706-1819. *Cuadernos de Economía*, 34(66), pp. 629-680.
90. Vence Conti, A. y Martín, C. (2010), *El gusto de los otros. Un recorrido histórico por las gastronomías de Asia y América*. Buenos Aires: Temas.
91. Williamson, J. (2008). History without Evidence: Latin America Inequality since 1491. paper presented at the *Mini-Conference A Comparative Approach to Inequality and Development: Latin America and Europe*, Madrid, May 8-9.