CONSUMPTION AND LIVING STANDARDS IN BUENOS AIRES. CONSUMER BASKETS AND INCOME BETWEEN THE LATE COLONIAL AGE AND THE FIRST HALF OF THE 19TH CENTURY

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ABSTRACT

Based on primary sources, baskets of consumption for Buenos Aires are reconstructed for the 1780-1820 period, applying current international methodologies. They build on previous work based on 1835 data. It can be seen that the consumption pattern did not vary substantially in the period and, considering the salary of both urban and rural workers, we are able to establish that standards of living were high and experienced a significant increase after 1835, especially during the 1840s. This placed Buenos Aires among the cities of the Western world with highest welfare ratio levels.

Keywords: Buenos Aires, basket, consumption, living standard, 19th century

JEL Code: N36, N01, N16, N46, N56

RESUMEN

A partir de fuentes primarias se reconstruyen canastas de consumo de Buenos Aires para el lapso 1780-1820, aplicando metodologías en uso a nivel internacional que continúan el trabajo previo elaborado con la misma técnica y con los datos correspondientes a 1835. Se puede observar que la composición del consumo no varió sustancialmente en el período, permitiendo establecer que, teniendo en cuenta el salario de los trabajadores tanto urbanos como rurales, el nivel de vida de estos era

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sustancialmente alto y que tuvo un incremento importante luego de 1835, especialmente en la década de 1840. Este hecho colocó a Buenos Aires entre las ciudades de más alto *welfare ratio* del mundo occidental.

Palabras clave: Buenos Aires, canasta, consumo, nivel de vida, Siglo XIX

1. INTRODUCTION

The profound changes in the Buenos Aires region brought about by the establishment of the Río de la Plata viceroyalty (1776) have already been extensively studied (Halperin Donghi 1972; Santilli 2013; Gelman and Moraes 2015). These changes prompted rapid economic growth, accompanied by an increase in population due to an inflow of migrants coming from the inland regions of the viceroyalty. The new status of the city, by then the capital of the new jurisdiction within the Spanish Empire, brought an increase in both population and bureaucracy which in turn pushed up the demand for food and other goods, thus boosting the rural population in the hinterland involved in production oriented to meeting this demand. The increase in the agricultural tithe provided solid evidence of this situation (Garavaglia 1987). Leather exports passing through the Buenos Aires port—produced in the *litoral de los ríos*—also reflected the consolidation of the city and its port within the Spanish Empire (Moutoukias 1995; Rosal and Schmit 1999; Newland and Ortiz 2001)[1].

In later years, after the loss of Potosí because of the independence war, and its valuable monetary income—called «situado»—, production in the Buenos Aires hinterland shifted to leather exports, salted meat and other livestock products, with cattle-raising becoming the main economic activity. Nevertheless, grain, fruit and vegetables continued to be grown to supply city dwellers. The production of leather, however, the main export product at the time, generated a supply of meat which was far beyond the requirements of both the *saladeros* (meat-salting factories) and the domestic market. This excess supply must surely have affected the city dwellers' basket of consumption. Our research for 1835 shows that meat accounted for 64 per cent of caloric intake, when production oriented to the export of leather was the main component of the local economy—a trend that peaked the following decade (Gelman and Santilli 2018, p. 100). However, if this large share of meat was due to an unprecedented excess supply of meat driven by leather production, we must trace changes in the consumer basket from the late 18th century, when economic growth in Buenos Aires started.

[1] *Litoral de los ríos* is the region that contains the north of the province of Buenos Aires, Santa Fe, Entre Rios and what is today called the *República Oriental del Uruguay*.

The preponderance of meat consumption in Buenos Aires, accompanied by not insignificant consumption levels of wheat bread, conform the image of the relatively high standard of living, supported firmly in the economic growth following 1820 (Newland and Poulson 1998; Arroyo Abad *et al*. 2011).

The aim of this survey is to trace changes in consumption by analysing item variations in the consumer basket of the city of Buenos Aires. This approach is consistent with the methodology used to research the standard of living of the inhabitants of a certain region. Based on Robert Allen's approach (2001, 2013)—which has been discussed in various forums (Humphries 2011; Dobado-Gonzalez 2015; López Losa and Piquero Zarauz 2016; Gelman and Santilli 2018), this tool has been improved to provide a thoroughgoing view of our field of research. Allen's approach provides a benchmark enabling researchers to compare both mankind's consumption and urban living standards over time[2]. It has become the prevailing study in this field of research, using necessary adjustments concerning time and place. In our case, the differences required for its smooth application in Buenos Aires, and the necessary adjustments so that the conformation of the basket does not serve only to compare with that built for other cities (Santilli and Gelman 2014, 2016; Gelman and Santilli 2016) were specified some years ago. For example, the amount of items for each family and the ratio between them and wage and non-wage income of households must be adjusted. The number of calories needed for survival according to work and location, and salary levels as an indicator of households' consumption capability must also be adjusted accordingly. It is also necessary to check whether the salary used to evaluate the consumption capacity of the family, according to the mainstream that of a mason, is representative of the universe under study[3].

We built a basket for 1835 (Gelman and Santilli 2018) consistent with the approach mentioned above[4]. In this study, I intend to compare that milestone with the late colonial period and the first half of the 19th century, prior to that year. We understand that the 1835 basket cannot be a valid benchmark for living standards in the late colonial period and the first half of the 19th century, considering the profound political, economic and social changes experienced by urban life in the intervening period. I have reasons to suppose that the standard consumer basket might have

[2] In number 33 (1) of the *Revista de Historia Económica/Journal of Iberian and Latin American Economic History* we can see other contributions to the debate about the method (Arroyo Abad and van Zanden 2015) and Allen's answer (Allen et al., 2015).

[3] Even in Great Britain, the cradle of Allen's works, researchers are now debating some of the basic parameters required for the construction of the basket and its comparison with salaries (Humphries and Weisdorf 2016; Stephenson 2016).

[4] I use the first-person plural to refer to my work with Jorge Gelman. The first-person singular is reserved for my own work.

experienced relevant modifications. The increase in the supply of meat resulting from the growth of exports of leather has already been mentioned. And the incorporation of new products as a result of more open trading, and the need to import products that were produced within the territory of the viceroyalty, such as yerba, etc. may have changed the basket. Although the task of putting together accurate consumer baskets and calculating the welfare ratio (WR) for the late colonial period and the first half of the 19th century is taken from (Gelman and Santilli 2018), the current work, its hypothesis and findings are exclusively my responsibility.

The data for 1835 and 1849 were prepared from the accounts of the Women's Hospital, evaluating three different years, 1822, 1835 and 1849, with the aim of using only one of these records to build a basket that we considered representative of the entire period 1822-1849. We made it clear, however, on that occasion that the work should be continued with the elaboration of other baskets with similar sources that could cover the entire first half of the 19th century. With that aim in mind, I have researched similar sources enabling us to reconstruct consumption baskets from 1796 onwards, as described below[5].

2. SOURCES

For 1796 and 1806, the «libros de procura»—accounting records—from the Convent of San Pedro Telmo, Order of Preachers, volume 5, 1791-1797 and volume 6, 1797-1807 were used. For 1818 and 1819, I resorted to the «libro de gastos, perteneciente al Hospital de la Residencia, que da principio en 1° de enero de 1817» (spending records, belonging to the Hospital of the Residence, beginning on 1 January 1817) held in the *Archivo General de la Nación* (General Archive of the Nation AGN), Room III 35-5-10. For 1835, we have used documents corresponding to the Women's Hospital to be found in AGN Room III 16-9-3, which we had previously studied (Gelman and Santilli 2018)[6].

The issue of the representativeness of the consumption of these establishments in relation to that of the general population can be explored from two angles. The first is to see whether the general population used the same products for food, energy, heating, lighting and clothing as those consumed at the aforementioned institutions. The second aspect concerns the prices paid for the goods; were they the same for the institutions and the general population? Is it possible that institutions had preferential rates? We will attempt to investigate these questions.

[5] For more details see Gelman and Santilli (2018).

[6] Both the 1849 consumer basket and the welfare ratio were reconstructed by drawing upon patterns observed in the 1835 basket adjusted to prices and salaries in 1849.

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Firstly, according to every contemporary testimony (Salas 1982), the institutions attended the same physical open markets, coinciding with most of the population, so they purchased goods which were also available to the public in general. In many instances, produce was sold by the farmers themselves (Arcondo 2002; Salvatore 2018). However, many products could also be found in the ‹pulperías› (grocery stores) and the inventories of such stores indicate a wide diversity of products; in many cases the quantities recorded provide testimony of popularity (Wibaux 2004, 2008).

That said, did the general population buy the same products as the institutions? Archaeological research has demonstrated that the basic goods consumed were the same for the general population, at least as far as can be reconstructed by archaeology. An archaeological dig from a construction project during the mid-19th century showed that animal remains consumed by workers were 46 per cent from bovine, 22 per cent from ovine, 13.5 per cent from chicken and minor percentages from other poultry and pork (Silveira 2005, p. 111). It can be said that this finding would form a bare bone basket (BBB), whereas the consumption information rebuilt with our sources forms a respectable basket (RB). Taking into account the income level and purchasing power of most of the inhabitants of Buenos Aires—which will be analysed later—it can be assumed that they could gain access to a RB. Quoted text from Silveira also provides qualitative testimonies regarding the consumption patterns of wealthier sections of the population, which were, of course, higher in quality than the RB (2005, p. 100). Other research mentions similar consumption data[7].

Regarding prices, the real prices paid for products have been used. It can be surmised that, given the nature and quantity of goods purchased by these institutions, they were able to obtain special rates. I have compared the prices paid with series elaborated in previous approaches (Gelman and Santilli 2014b) and series elaborated by other researchers, such as Barba (1999), Guzmán and Schmit (2019) and Schmit (2019), although it is only possible to compare trends because these authors used wholesale prices. From this comparison, it follows that the prices paid by the aforementioned institutions are similar to those paid by the population as a whole.

Therefore, it is clear that the sources reflect basic food and clothing accurately, as well as the availability of goods to all social and economic levels of the population. This means that, these institutions purchased products in the same places as the general public and also paid similar prices for them.

[7] See an analysis of kitchen utensils (Marschoff 2013), elite group testimonies (Mansilla 1966) and Anibal Arcondo's punctilious research (2002) on some special features of food staples in Buenos Aires.

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The sources contain a detailed record of the daily purchases made by each establishment, ranging from food to firewood, from beverages to textiles, as well as salaries and other payments made to the staff and other workers. The records inform about the amount of goods purchased and the corresponding payment, expressed in *reales* for both 1796 and 1806 and in *pesos fuertes* of 8 *reales* for 1818 and 1819[8]. Many entries only record the amount paid, «for 2 *reales* worth of milk», «for a *peso* worth of bread that the baker did not bring», etc. In other cases, the records contain measures which are unfamiliar to us and cannot be converted into well-known values; this has sparked other studies based on historical data in an effort to convert unknown measures to standard parameters. «For two *vejigas* [bladders] of fat», «for a *carretada* [cartful] of firewood», «a *sarta* [string] of silverside fish», etc. Although this might lead to some distortions in the baskets under study, these items did not represent a significant expenditure in the accounting records of each establishment. I have taken quantities and unit prices from the same source. Salaries of all categories or workers and the whole period were taken from our previous work (2014a).

Everything that was acquired according to the specificity of each establishment (medicines, paper, articles related to religiosity, etc.) was not considered in the forecast. Also, when I analyse each processed basket, I include reservations about certain consumptions that could be specific, such as fish for the convent or chickens for the hospital as we will see, but because of their exiguous consumption, they did not acquire general relevance[9]. There is not a notable difference between the consumption of priests, nurses and patients. So far, no particular sources have been found to calculate baskets of consumption, such as private diaries or accounting notes for private establishments, and similar sources have been used by other works on prices, wages and living conditions (Larrain Melo 1980; Johnson 1990; Barba 1999; Cuesta 2009; Arroyo Abad 2013b; Gelman and Santilli 2014b; Guzmán 2018).

3. METHODOLOGICAL ADJUSTMENTS

Another complication to be dealt with regarding the consumer basket concerned the amount of people who were fed in each convent or hospital.

[8] In line with current historical works on this period, I use *peso fuerte* as opposed to the so-called *peso papel* (paper currency) that began circulation in Buenos Aires in 1821 in place of silver coins minted in Potosí.

[9] Archaeological digs in convents have demonstrated fish consumption during the 18th century in the institutions mentioned (Silveira 2005, p. 113). Furthermore, the use of chicken for medicinal soups and its consumption as a staple must be taken into account (Alzate Echeverry 2012). See footnote 20.

I do not have a record of individuals who lived there and were provided with food, light, soap and/or clothing. This has been a recurrent problem, one that arose in our previous works (2016a, 2018) and those of other researchers. In this work, I have used the same approach; the total caloric intake is calculated by multiplying the quantities of goods by their caloric value and verifying the share of each item in the yearly total calories provided. These percentages are then applied to the minimum consumption of 1,941 daily calories per individual (Allen 2001) in general use currently.

Based on this approach, I consequently distinguish between two types of baskets. Firstly, a basket rebuilt from the verified consumption per person, that is from knowing the total goods procured and the number of people who consumed them, which I call the Real Basket[10]. Secondly, an Estimated Basket, calculating consumption from percentages of the total estimated and minimum levels of consumption, as described in the previous paragraph.

Another benchmark used by researchers worldwide is the so-called Bare Bone Basket (BBB)—a subsistence basket—build with a minimum of 1,941 calories made up of basic staples for any location in the world. Furthermore, a RB with the same minimum calories but allowing for a different combination of items is also used (Allen *et al*. 2011; Allen 2013). I have selected the RB approach, incorporating all the items, since my objective is to trace continuities and changes in basket composition as a whole between the late 18th century and the first half of the 19th century[11]. Another item to analyse is how townspeople dealt with rising prices and products that were difficult to acquire—how and when they resorted to a minimum basket of subsistence (BBB). Even though this is not the main issue under study here, some relevant remarks will be included.

Allen revised his approach in response to criticism, increasing the total caloric intake to 2,100 daily calories *per capita* (Allen 2013). No matter how appropriate this decision was, previous calculations made by Allen and others who relied on his method have not been revised. Therefore, the benchmark figure of 1,941 daily calories will be used for making comparisons through time. Interestingly, when the total amount is modified to trace changes in basket costs (a point which Allen himself overlooks), there is a 5 per cent variation between the basket of 1,941 calories and that of 2,100 calories, the same as found by Allen.

Apart from resorting to caloric percentages in order to estimate consumption, and given the shortcomings already mentioned (lack of data on consumers of listed items), a similar method has been applied to

[10] Real because it has been built with the consumption *per capita*. See a reconstruction of this type for Montevideo in Moraes and Thul (2015).

[11] We calculated a BBB in another article. The result was a basket 31.6 per cent poorer than the Respectable basket (2018, pp. 101-102).

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integrate the cost of soap, lighting and heating. Purchases of these items have been calculated as a percentage of total food expenditure and the resulting amount has been applied to the cost of the food basket. In any case, it was necessary to make some adjustments and some reasonable assumptions as a result of the lack of data. I will mention this issue when dealing with the adjusted basket.

When it comes to clothing expenditure, the same method used in our previous work (2018) has been applied. In that study, Allen's benchmark of a 5-m-long piece of the most ordinary fabric available, per person on a yearly basis, was used for an RB. In order to include it in the basket, I divided that value by 365 days. Linen turned out to be the most common fabric, and the price of a *vara* [Spanish unit measure] was calculated from the sources themselves.

Unfortunately, there are no available data on the cost of rent in Buenos Aires, apart from the figures provided by Lyman Johnson for the 1770-1812 period (1990, p. 152), for rental properties in the *Cabildo* of Buenos Aires. According to these data, in 1796 the cost of housing would take 60 per cent of a mason's salary—an amount Johnson himself deems unaffordable for urban workers. Hence, I have applied Allen's method, which estimates that the cost of rent was equal to 5 per cent of food expenditures for an individual basket and thus would lead to 15 per cent, considering family make-up in those days.

On this issue, the nuclear family consisting of four members—two parents and two children—has been the subject of some debate (Humphries 2011), especially the assumption that women and children's lower consumption should be regarded as representing three consumer baskets instead of four. According to the 1810 census, the number of children living with their parents was between 1.3 and 1.8 in two surveyed quarters of Buenos Aires. In 1827, the figures ranged between 1.2 and 1.5. However, the total per household was higher, around 6, because family and non-family members and/or slaves lived together under the same roof (Dmitruk 2011, pp. 97-101)[12]. It is reasonable to assume that this figure includes other adults who also contributed to the household's income. However, despite this discrepancy that calls for a more detailed study of family structure in early 19th-century Buenos Aires, I have applied the two-children-per-family benchmark, in order to enable a comparative analysis with other baskets worldwide.

In the next section I will analyse the composition of the baskets we have surveyed.

[12] See Szuchman (1988); Di Meglio (2006); Dmitruk (2014) and Masse (2008) who worked with censuses from the first independent stage, focusing in particular on the size of the family and the number of children living together.

4. THE 1796 AND 1806 BASKETS

As noted in the sources, our baskets have been constructed using the accounting books of a convent; that is to say that priests, seminarians, employees, workers and officials consumed the goods purchased by the institution. Not all the bread that was consumed has been included in the 1796/1806 records because, according to Alberto Salas (1982), bread was baked and delivered from the religious order's farms. The convent only bought bread when regular supplies ran short, «because the Baker did not bring enough»—they would buy one *peso* worth of bread. To bridge that gap, I have estimated the ratio between bread and meat for 1835 in calories, with bread accounting for 35.7 per cent of meat's caloric share. By 1818, the ratio increased to 48.7 per cent. The reason for this might lie in the steady increase in the price of bread as a result of the shift to ounces to measure weight[13]. Conversely, meat tended to be cheaper as the surplus offer brought about by leather exports continued to grow. I have adopted the 1818 ratio as a benchmark, because the price of wheat increased much more significantly in the 1830s, and thus bread consumption may have dropped, being replaced by a greater intake of meat, due to the above-mentioned beef surplus brought about by increased leather exports (Gelman and Santilli 2014a, 2014b). Table 1 shows the item analysis for both 1796 and 1806.

As we can see, both meat and bread rank high in terms of calories, 71 per cent in 1796 and 78 per cent in 1806[14]. In addition, if bread's caloric share was half that of meat, the opposite was the case when it came to cost, since bread was twice as expensive as meat in 1796 and 50 per cent more expensive in 1806. As for the increased share of meat in the 1806 basket, this may be connected with the fall in its price in the first decade of the century; the price of a cow went from 11 *reales* in 1796 to 7 *reales* by 1806 (Garavaglia 1995, p. 102)[15].

[13] The price of bread did not change, but its weight decreased, so in fact the price increased because more money was required to buy the same amount of bread. For example, in 1785 a piece of bread weighed the equivalent of 17 ounces; in 1853 the bakers were forced by the authorities to restore the weight of 8 ounces per piece. Bakers fought against the increase in the price of wheat by decreasing the type and quality of flour used. See note 12 of Gelman and Santilli (2018, p. 99). See Gorostegui de Torres (1962); Schmit (2019) and Gelman and Santilli (2014b) on the price of wheat.

[14] In this regard, mention was made of the ration assigned to militiamen in La Matanza (outskirts of Buenos Aires) in 1753-1755 in a recent doctoral thesis. It consisted of 86 kg of meat and other goods per month for each soldier. It amounted to 7,000 calories per day—enough to supply a nuclear family (as we define it) with 2,300 calories (Alemano 2016, p. 151). Certainly, I share the author's reservations and pay heed to Juan Carlos Garavaglia's warnings about state budgets of a century later (Garavaglia and Caselli 2013). I am fully aware of how difficult it is to rebuild a basket relying on official information.

[15] Martin Cuesta (2009, p. 80) claims a *res* [dead cow in one piece] was worth 15 *reales* in 1796.

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TABLE 1
RBs FOR 1796 AND 1806

Goods	1796				1806			
	Daily calories	% cal.	Monthly cost	% $	Daily calories	% cal.	Monthly cost	% $
Oil and fat	253	13.0	0.0733	6.9	12	0.6	0.0239	1.3
Beverages	5	0.3	0.0247	2.3	1	0.1	0.0209	1.1
Vegetables	0.4	0.0	0.0145	1.4	14	0.7	0.0197	1.1
Fish	78	4.0	0.0708	6.7	188	9.7	0.4407	23.7
Rice and other cereals	29	1.5	0.0573	5.4	0	0.0	0.0000	0.0
Poultry	4	0.2	0.0033	0.3	29	1.5	0.0275	1.5
Spices and condiments	1	0.1	0.0108	1.0	2	0.1	0.0210	1.1
Sugar, honey and candy	7	0.4	0.0382	3.6	0	0.0	0.0006	0.0
Beef	937	48.3	0.2043	19.3	1,023	52.7	0.4739	25.5
Lamb and mutton				0.0	15	0.8	0.0035	0.2
Bacon and sausages	25	1.3	0.0662	6.3	132	6.8	0.0717	3.9
Pasta	10	0.5	0.0145	1.4	10	0.5	0.0186	1.0
Bread and biscuit	456	23.5	0.4083	38.6	490	25.3	0.6731	36.2
Legumes	88	4.5	0.0521	4.9	14	0.7	0.0131	0.7
Milk and eggs	48	2.4	0.0089	0.8	0	0.0	0.0026	0.1
Fresh fruit				0.0	0	0.0	0.0000	0.0
Raisins and dried fruits	1	0.1	0.0021	0.2	9	0.5	0.0312	1.7

TABLE 1
RBs FOR 1796 AND 1806
(Cont.)

	1796					1806				
Goods	**Daily calories**		**% cal.**	**Monthly cost**	**% $**	**Daily calories**		**% cal.**	**Monthly cost**	**% $**
Yerba	0.757			0.0080	0.8	1	0	0.0	0.0166	0.9
Total calories		**1,941**	**100**	**1.0575**	**100**		**1,941**	**100**	**1.8586**	**100**
	%					%				
Fuel and light	16.01			0.1694	16.0	16			0.3007	16.2
Soap	4.07			0.0430	4.1	3.7			0.0682	3.7
Clothes	5			0.1266	12.0	5			0.2907	15.6
Rent	5			0.0698	6.6	5			0.1259	6.8
Individual basket				1.4664					2.6440	
Family total	**3**			**4.3991**		**3**			**7.9320**	

Source: «Libros de procura»—accounting records—of the Convent of San Pedro Telmo, Order of Preachers, volume 5, 1791-1797 and volume 6, 1797-1807.

The value of oil and fat in the 1796 basket may well have been overestimated; less than 1 per cent share of calories would cost almost 7 per cent of the total basket[16]. More reasonable is that of 1806, whose incidence on the cost is 1.3 per cent.

Surprisingly, we have come across an item that was not present in previous studies: fish. With a 4 per cent share in 1796, it increased to almost 10 per cent in 1806, perhaps pointing to a change in diet as fish consumption eventually disappeared in the 1820s. In the late 18th century and early 19th century, a large quantity of fish was consumed in Buenos Aires, but it decreased sharply in the 1830s[17]. It is also worth noticing that fish cost as much as beef (Salas 1982). It is likely that the consumption of fish is related to the type of source; convents had religious restrictions on the consumption of meat on certain days of the week and at specific times of the year. An increased caloric share for bacon and sausages around 1806 can also be observed—a rise that nonetheless did not lead to higher prices.

Even more surprising is the increased cost of the total basket in *pesos*; food experienced a 75 per cent rise over 10 years, whereas total cost rose as much as 80 per cent. Considering that the benchmark wage used to calculate the WR—masons' wages—remained unchanged throughout this period (Johnson 1990, p. 155), I can conclude that there was a decline in real wages. Johnson also claims that there was a significant increase in the price index that he reconstructed for the years 1778-1810. However, it will be seen that this significant fall of the WR did not entail outright destitution for the local population.

If the benchmark figure for calories were to be increased to 2,100, as Robert Allen (2013) has recently argued, total basket cost for 1796 would be 6 per cent higher than if a 1,941-calorie benchmark was used, whereas the 1806 basket cost would be 7 per cent higher. Therefore, the increase is not so significant, as Allen himself shows.

5. THE 1818 AND 1819 BASKETS

In this case, I have resorted to the records of the *Hospital de la Residencia*, a different source from the one above, with patients and staff as the main consumers of goods. As will be seen, however, the differences do not go beyond the specific consumption patterns of a hospital. In addition, in this case I am using a source similar to the one we used for 1835

[16] If we change its unit of measurement from *arrobas* to pounds, the share of fat diminished 11 per cent.

[17] According to the 1815 census in Quilmes, a riverside village near Buenos Aires, fishing was a well-known activity in the *Río de La Plata* (Santilli 2008). I have already quoted the archaeological dig which demonstrates fish consumption at convents (Silveira 2005).

and 1849 (Gelman and Santilli 2018). Care was taken to separate the main expenditures of hospital activities, such as medication and special clothing, from those resulting from food consumption and other goods in the basket.

Two separate yearly baskets have been reconstructed because the price of cattle rose steadily in the second decade of the 19th century in Buenos Aires, and we should bear in mind that beef was a food staple at this time. According to Garavaglia, the price of a cow increased from 11 *reales* in 1810 to 27.25 *reales* in 1818, reaching as much as 34.65 *reales* in 1819 (1995, p. 102)[18]. This price hike was fuelled by the opening of the *saladeros*, which began to contend for urban consumers (Garavaglia 1994)[19]. In this case, it should be borne in mind that these baskets survey a hospital's consumption, that is that of sick people and staff, and this might introduce some discrepancies with the convent's consumption indicators, such as an increase in the consumption of poultry and a decrease in the purchase of fish (see Table 2).

Some continuities and differences can be observed at first glance. Firstly, beef remains at the top of the ranking despite its price hike, and while 1819 shows reduced intake, spending on beef rose noticeably. Secondly, bread consumption increased slightly, but there are no major differences in costs than was estimated years before. Thirdly, fish consumption has almost disappeared. This sharp decline might be seen as a bias resulting from the source consulted in 1796 and 1806; due to religious regulations, convent staff and priests refrain from eating meat more often during the year—a possibility we cannot rule out completely. Finally, there is a rise in the consumption of poultry, which ranked third after beef and bread, perhaps replacing fish as an item of daily consumption[20]. In any case, whether it was poultry or fish, these new indicators do not alter basket structure significantly, and the same goes for legumes, rice, milk and eggs.

There was also a significant increase in spending on lighting and fuel, which rose from 16 to 25 per cent of the cost of food. This could also be another bias caused by the source itself. Perhaps the seminarians in the convent were made to endure cold winters, or just needed less light. A more likely explanation is that the sick needed more heating. This percentage is at odds with Allen's estimations, 12.8 per cent (2001), or those

[18] Fernando Barba also noted this rise. He argues that meat rose from 1 *peso* per *arroba* in 1814 to 1.62 *pesos* in 1818 and 1.75 *pesos* the following year, eventually stabilising at 2 *pesos* in 1823 (Barba 1999).

[19] On the dispute with the *saladeros*, see Halperin Donghi (1963), Montoya (1970), Saldías (1968 [1881]) and others.

[20] Consumption of poultry broth in hospitals was common since it was recommended for numerous diseases in the 18th century. The expression «caldo de enfermo» [broth for the sick] was widely used (Alzate Echeverry 2012; Reynoso Bazúa 2016). Poultry, however, was also consumed by the general population as has been proven in archaeological excavations (Silveira 2005).

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TABLE 2
RBs FOR 1818 AND 1819

Goods	1818 Daily calories		% cal.	Monthly cost	% $	1819 Daily calories		% cal.	Monthly cost	% $
Oil and fat		15	0.8	0.0524	1.5		24	1.3	0.0517	1.4
Beverages				0.3070	8.5		54	2.8	0.6946	18.8
Vegetables										
Fish				0.0053	0.1		1	0.1	0.0201	0.5
Rice and other cereals		33	1.7	0.0788	2.2		87	4.5	0.1734	4.7
Poultry		180	9.3	0.5302	14.7		143	7.4	0.0053	0.1
Spices and condiments				0.0132	0.4		1		0.0106	0.3
Sugar, honey and candy		41	2.1	0.1815	5.0		35	1.8	0.1516	4.1
Beef		1,071	55.2	0.8272	23.0		891	45.9	0.9091	24.6
Lamb and mutton				0.0594	1.7					
Bacon and sausages										
Pasta		13	0.7	0.0265	0.7		25	1.3	0.0429	1.2
Bread and biscuit		521	26.9	1.3147	36.5		611	31.5	1.4247	38.6
Legumes		24	1.2	0.0379	1.1		17	0.9	0.0473	1.3
Milk and eggs		5	0.2	0.0558	1.6				0.0707	1.9
Fresh fruit		12	0.6	0.0230	0.6		5	0.2	0.0133	0.4
Raisins and dried fruits		25	1.3	0.0511	1.4		47	2.4	0.0780	2.1
Yerba	0.948			0.0332	0.9	0.07			0.0001	
Total calories		**1,941**	**100**	**3.5972**	**100**		**1,941**	**100**	**3.6933**	**100**
	%					%				
Fuel and light	25.75			0.9263	25.8	24			0.9044	24.5
Soap	3.32			0.1196	3.3	3.2			0.1186	3.2
Clothes	5			0.1504	4.2	5			0.1248	3.4
Rent	5			0.2397	6.7	5			0.2421	6.6
Individual basket				5.0331					5.0831	
Family total	**3**			**15.0994**		**3**			**15.2493**	

Source: Archivo General de la Nación (AGN), Room III 35-5-10.

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made by Arroyo Abad *et al*. (2011) for Argentina, 13.2 per cent. Still, it is a high share, since it stood at 16 per cent in 1796 and 17 per cent in 1806. A new calculation based on these figures will be made when the total basket has been studied. The rest of the items appear to be within reasonable benchmarks.

Regarding total basket cost, there is almost no difference between 1818 and 1819 (15.10 and 15.25, respectively). However, these amounts were 90 per cent higher than those of the 1806 basket, which in turn was 80 per cent higher than the 1796 basket. We have pointed to a steady increase in prices in the first decade following the May 1810 Revolution (Gelman and Santilli 2014b), a tendency that simply worsened with the enforcement of *peso* non-convertibility in 1825[21]. All things considered, the price hike of basic food staples is a well-established fact. Furthermore, we must bear in mind that the prices surveyed are from the same source of 1818 and 1819, that is those actually paid by the institutions themselves, and therefore should be considered valid and reliable indicators.

When reexamining the 1796 and 1806 baskets with the upgraded 2,100-calorie benchmark for both 1818 and 1819, I observed a similar difference; basket costs only experienced an 8 per cent rise. The impact this has on the WR will be seen later.

6. THE 1835 AND 1849 BASKET

Firstly, it should be clarified that the 1849 basket is a repetition of the quantities consumed in 1835, but valued with the prices of 1849 obtained from the same hospital source, as explained in our previous work (Gelman and Santilli 2018).

In order to compare with the figures of 1796, 1806, 1818 and 1819, some modifications were required; the first and most important was to convert the prices expressed in devalued *pesos papel* to *pesos fuertes*. In 1835 the *peso fuerte* was equivalent to 6.98 *pesos papel*; in 1849 it reached 17.50 for each *peso fuerte* (see Table 3).

The effect of currency devaluation is highly representative; the cost of the basket rose from $15 in 1819 to $43 in 1835 and to $78 in 1849, multiplied by more than 5 in 30 years. Its real value, however, fell to $6.16 and $4.45 for both years respectively. In short, it should be highlighted that the low cost of the basket brings it closer to 18th-century standards and away from those of the 19th century. We will now see how wages fit into this picture.

[21] Due to the blockade imposed by Brazil on the port of Buenos Aires and the consequent decline in the collection of customs duties, the *peso papel*, backed by such income, lost its value. It was the first inflationary process seen in Buenos Aires. See Amaral (1988, 1989) on this issue and its consequences.

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TABLE 3
RBs FOR 1835 AND 1849

	1835					1849				
			Monthly cost					Monthly cost		
Goods	**Daily calories**	**% cal.**	**$ currency**	**$ *fuerte***	**% $**	**Daily calories**	**% cal.**	**$ currency**	**$ *fuerte***	**% $**
Oil and fat	38	2.0	0.1698	0.0243	1.8	38	2.0	0.34	0.0194	2.1
Beverages	17	0.9	0.4761	0.0682	5.1	17	0.9	0.91	0.0520	5.7
Some vegetables										
Fish										
Rice and other cereals	32	1.7	0.2147	0.0308	2.3	32	1.7	1.06	0.0606	6.6
Poultry	27	1.4	0.2155	0.0309	2.3	27	1.4	0.41	0.0234	2.5
Spices and condiments								0.47	0.0269	2.9
Sugar, honey and candy	55	2.8	0.5607	0.0803	6.0	55	2.8	0.83	0.0474	5.2
Beef	1,241	63.9	2.9300	0.4198	31.2	1,241	63.9	4.75	0.2714	29.5
Lamb and mutton										
Bacon and sausages										
Pasta	25	1.3	0.1704	0.0244	1.8	25	1.3	0.53	0.0303	3.3
Bread and biscuit	443	22.8	3.5433	0.5076	37.7	443	22.8	4.54	0.2594	28.2
Legumes	16	0.8	0.0295	0.0042	0.3	16	0.8	0.06	0.0034	0.4
Milk and eggs	47	2.4	0.6337	0.0908	6.7	47	2.4	1.33	0.0760	8.3
Fresh Fruit										
Raisins and dried fruits										
Yerba			0.4500	0.0645	4.8			0.86	0.0491	5.3

TABLE 3
RBs FOR 1835 AND 1849
(Cont.)

	1835						1849					
				Monthly cost						Monthly cost		
Goods	**Daily calories**		**% cal.**	**$ currency**	**$ *fuerte***	**% $**	**Daily calories**		**% cal.**	**$ currency**	**$ *fuerte***	**% $**
Total calories		**1,941**	**100**	**9.3939**	**1.3458**	**100**		**1,941**	**100**	**16.0900**	**0.9194**	**100**
Fuel and light	17			1.6103	0.2307	17	0.2			2.76	0.1577	17
Soap	3.9			0.3644	0.0522	3.9				0.62	0.0354	3.9
Clothes	5			2.2756	0.3260	5	5			5.71	0.3263	5
Rent	5			0.6822	0.0977	5	2.1			0.80	0.0457	5
Individual basket				14.3263	2.0525					25.9800	1.4846	
Family total	**3**			**42.9790**	**6.1574**	**3**	**134**			**77.9300**	**4.4531**	**3**

Source: Gelman and Santilli (2018).

Firstly, however, we will check for significant changes in the composition of the baskets.

As already noted, the sources are diverse with the first two from a convent and the others from two hospitals. Care should, of course, be taken with the comparison, but it can be estimated, since the last four points of evaluation of the 19th century, 1818, 1819, 1835 and 1849 were built with the same type of sources, that the reserves decrease. Also there is no reason to assume that the food consumed in the boarding schools of the convent was different from that given to hospital patients, beyond certain specificities. It has also been shown that popular consumption did not differ essentially from that of the mentioned institutions. In addition, the objective of this work is to find trends in the evolution of the basket of the first half of the long 19th century.

Figure 1 shows the proportion of calories of the basket for the whole period under study.

At first glance and as already noted, we see the high proportion of beef consumption in Buenos Aires, which remained unchanged throughout this period. It fluctuates around 1,000 calories per day, that is 50 per cent of the total RB. A drop in consumption can be noticed; this was brought about by the 1818-1819 price hikes, due to the above-mentioned increases in cattle prices, which was especially sharp in 1819, with consumers shifting to bread and poultry in response. It is worth noting the sustained upward trend in beef consumption, except for 1819. At the same time, 1835—and 1849—saw a greater increase in meat consumption, with a corresponding fall in bread, itself the result of the dramatic fluctuations in wheat prices, which began in the 1830s and continued into the next decade (Gorostegui de Torres 1962; Gelman and Santilli 2014b). This picture of the consumption basket in the first half of the 19th century confirms several claims about how basic food staples such as meat or bread are replaced by cheaper food whenever their price increased dramatically. Further research is required to confirm whether this trend continued during the second half of the century. Therefore, in my opinion, the average column in Figure 1 can be taken as an RB valid for the entire period 1796-1849. Therefore, we have a fairly eloquent and complete picture of consumer habits in Buenos Aires in those 50 years[22].

Finally, before moving on to the WR, let us take a comprehensive look at the total basket including food and other items (Figure 2).

As we see, food accounts for more than two-thirds of basket cost, whereas lighting and fuel accounts for a significant 16 per cent. When it becomes possible to construct a real basket, we will be able to explore

[22] The superiority of bovine meat consumption over other types of meats has also been demonstrated in archaeological excavations (Silveira 2005).

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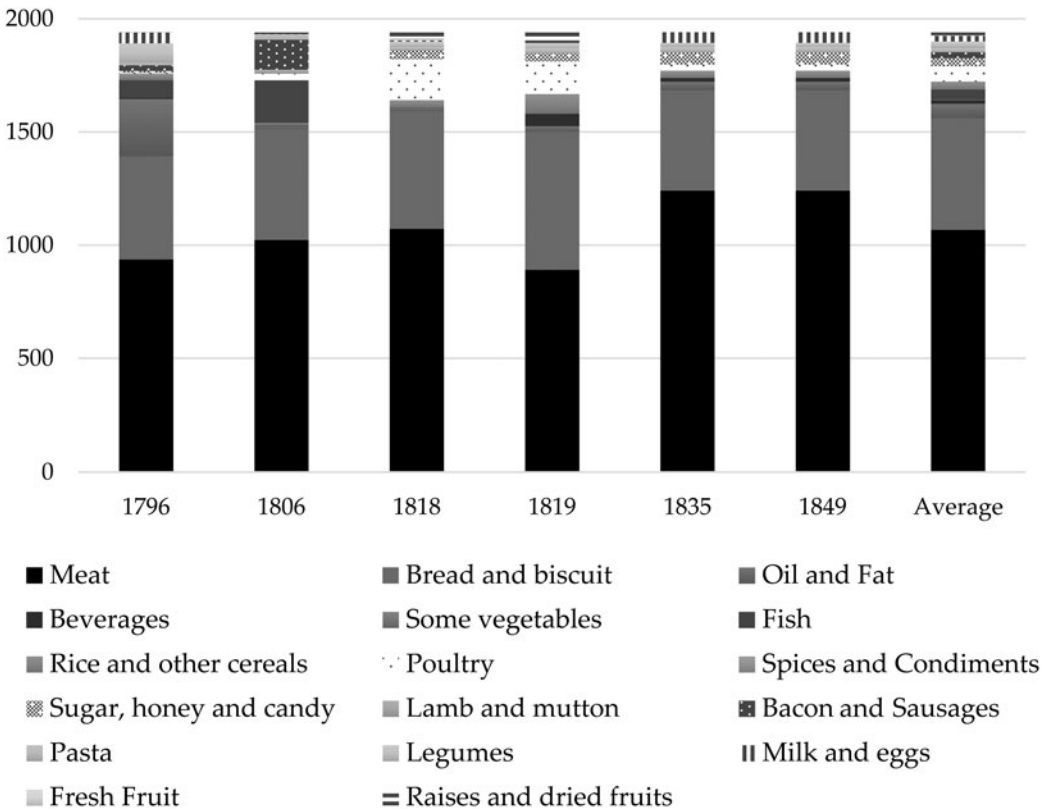
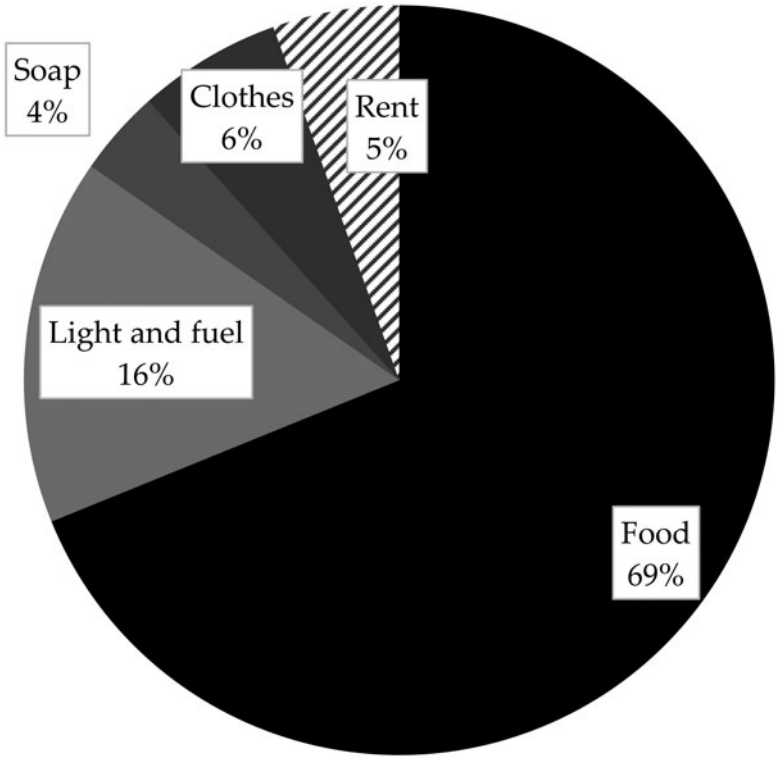
FIGURE 1
BASKET COMPOSITION IN CALORIES.



Source: See Tables 1, 2 and 3.

FIGURE 2
FAMILY BASKET COMPOSITION 1796-1835.



Source: As in Figure 1.

how the people of Buenos Aires spent their income and, therefore, to see whether Engel's law is confirmed in Buenos Aires.

We have seen in Tables 1, 2 and 3 that basket costs were quite different, with an upward trend until 1819. Let us now look at how these costs impinged on workers' income, considering that there were significant variations in wages in the mentioned period.

7. REAL WAGES BETWEEN 1796 AND 1849

A mason's wage is the standard benchmark used worldwide. If this standard allows international comparisons, it is also true that its validity could be affected as a result of overgeneralisation. Factors such as the weight of construction, the main activity in the area being studied, and

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TABLE 4
BUENOS AIRES' WR 1796-1849 (WITH REFERENCE TO A MASON'S DAILY WAGE)

	1796	1806	1818	1819	1835[1]	1849[1]
Annual basket cost	52.79	95.18	181.19	182.99	73.89	53.44
Mason's daily wage	0.50	0.50	1.00	1.00	0.36	0.69
Yearly working days	250.00	250.00	250.00	250.00	250.00	250.00
Total wage	125.00	125.00	250.00	250.00	89.54	171.43
WR	**2.37**	**1.31**	**1.38**	**1.37**	**1.21**	**3.21**

[1]The values are expressed in constant currency. However, the WR should remain nearly unchanged if the calculations were made using the *peso papel*.

Source: See Tables 1, 2 and 3.

how representative these workers are regarding the population as a whole are all relevant. With all these reservations in mind, I will now examine the table corresponding to the WR built with these data (Table 4)[23].

In spite of the increased price of basic staples, the evidence seems to prove that inflation did not seriously cut into real wages, beyond the drop they experienced between 1796 and 1806 and confirmed by Lyman Johnson (1990) and other researchers. This means that masons' wages rose in line with prices between 1806 and 1835, no matter how dramatic price increases may have been. Thus, it seems that, when measured against theoretical consumption, living standards in Buenos Aires were between 20 and 40 per cent above a minimum basket (BBB) and included several items consistent with a respectable level. The fall which can be observed in 1835 does not entail a reduction to subsistence levels, since this basket not only stands 20 per cent above such a level but, as previously mentioned, it is a *respectable* basket.

There is a surprising surge in 1849, an increase I have corroborated simply by repeating the amounts of the 1835 basket with the prices and wages of 1849. This should be checked when reliable sources for the reconstruction of the 1849 basket with consumption indicators for that year, or nearby years are available. For now, I will repeat a basket composition that we have considered valid for all the reasons previously stated in this article and other works published (Gelman and Santilli 2018). I will look now at the differences with the 1835 basket[24].

[23] As previously mentioned, the figures for salaries are from our study (Gelman and Santilli 2014a).

[24] A study presented at the CLADHE 6 (*Sexto Congreso Latinoamericano de Historia Económica*) [6th Latin American Economic History Congress] in Santiago (Chile) in 2019 shows a similar trend in wages and prices, estimating a WR between 3.59 and 4.43 in the 1840s for the same category of workers (Guzmán and Schmit 2019).

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The evolution of prices between 1835 and 1849 indicates that, while the nominal prices of many products increased, there was in fact a decrease in constant values, with some prices falling below 1835 levels. The only exceptions were sugar, which rose 12 per cent in constant currency, and noodles, which increased 25 per cent. Sugar was imported, so its price varied in line with the value of the *peso papel* against the pound. The increase in the price of noodles is without a doubt a reflection of the volatility of the price of wheat, which is not reflected in the price of bread, due to the well-known changes in the system of weights used in Buenos Aires.

Masons' wages increased steadily throughout the 1840s, going from 3.75 *pesos* in 1840 to 5 *pesos* in 1841, reaching 15 *pesos* in 1843 and eventually stabilising at 10 *pesos* in 1847 (all values in currency), according to our sources.

As stated in previous works (Santilli and Gelman 2016; Gelman and Santilli 2018), the indicators from 1849 are—at least in part—the reason behind the inflow of immigrants coming from Europe, which began in the mid-19th century, as well as the constant inflow of migrants from other provinces. It should be noted, in passing, that the scale and scope of immigration demands further and more in-depth research. Let us now look at other non-rural wages. Only a few examples are available, but they will allow a comparison with masons' income. When calculating daily wages, I estimate that there were 250 working days in a year (Table 5).

If we look at carpenters' wages, we can see that real wages fell between 1796 and 1806. However, other wages do not seem to have suffered the same fate. It may seem obvious that gunsmiths' pay should rise during the 1806-1807 English invasions of Buenos Aires, along with urban labourers forced to join the militia—heralding future growth, as Lyman Johnson has shown (1990, p. 155). On the other hand, we observe a decline in sailors' wages. Common soldiers earned less than the minimum subsistence level, but we must consider the rations assigned to them, which included meat, some *vicios* [tobacco and yerba] and possibly some extra money (although it is not possible to measure such items at the moment). Other public workers may have enjoyed similar treatment although teachers did not receive any rations and had to manage with low wages. Captains also experienced a reduction in their salaries between 1819 and 1849—a tendency already noted (Gelman and Santilli 2014b). However, when it comes to the WR of carpenters—an activity linked to construction—such as masons, we observe a significant improvement in their real wages, which leads us to the question: does this confirm the previously observed trend? Again, we must examine the 1849 basket thoroughly in order to confirm this. The fact remains that masons and carpenters were the only urban workers whose wages increased.

Finally, I consider rural wages. Unlike their urban counterparts, rural workers enjoyed some benefits such as partly free food; this would

TABLE 5
URBAN WAGES (IN *PESOS FUERTES*)

	1796	1806	1818	1819	1835	1849
Annual basket cost	52.79	95.18	181.19	182.99	73.89	53.44
Soldiers' monthly wage				132.00	31.72	29.26
Welfare ratio				**0.72**	**0.43**	**0.55**
Captains' monthly wage				600.00	268.81	87.62
Welfare ratio				**3.28**	**3.64**	**1.64**
Teachers				302.04	85.96	
Welfare ratio				**1.65**	**1.16**	
Public workers				172.00		
Welfare ratio				**0.94**		
Carpenters'(daily) wage[1]	250	312.5			180.87	285.71
Welfare ratio	**4.74**	**3.28**			**2.45**	**5.35**
Gunsmiths	125.00	250.00				
Welfare ratio	**2.37**	**2.63**				
Sailors	132.00	156.00				
Welfare ratio	**2.50**	**1.64**				
Urban labourers	62.50	125.00			44.53	
Welfare ratio	**1.18**	**1.31**			**0.60**	
Physicians (in a hospital)					285.39	137.14
Welfare ratio					**3.86**	**2.57**
Ordinance (central administration)			192		142.69	45.67
Welfare ratio			**1.06**		**1.93**	**0.85**
Painters (daily)					167.26	
Welfare ratio					**2.26**	
Ranch managers (2)						685.71
Welfare ratio						**12.83**

[1]The wages of carpenters and ranch managers for 1849 are in 1850s values.

Sources: 1796-1806 (Johnson 1990); 1819-1835-1849 (Gelman and Santilli 2014a); 1850 physicians and clerical workers (central administration), all years (Barba 1999).

certainly include meat, and a piece of land where they could build their own *ranchos* [humble cottages] and also grow some vegetables[25]. Besides, this includes both monthly labourers who, no matter how

[25] It well known that some of these workers owned animals which were the source of some extra income (Gelman 1998).

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TABLE 6
BUENOS AIRES RURAL WR 1796-1849

	1796	1806	1818	1819	1835	1849
Annual basket cost	52.79	95.18	181.19	182.99	73.89	53.44
Beef and housing discount	3.29	7.24	38.41	13.81	6.21	11.42
Labourers' monthly wage	72.00	84.00	96.00	108.00	65.24	82.29
Welfare ratio	**1.45**	**0.96**	**0.67**	**0.64**	**0.96**	**1.96**
Labourers' daily wage			1.60	1.60	3.50	23.13
Yearly working days	250.00	250.00	250.00	250.00	250.00	250.00
Annual wage	0.00	0.00	400.00	400.00	125.36	330.36
Welfare ratio			**2.80**	**2.36**	**1.85**	**7.86**
WR with beef and housing			**2.21**	**2.19**	**1.70**	**6.18**

Source: Basket, Tables 1, 2 and 3; wages (Gelman and Santilli 2014a).

unstable their jobs were, also received meat and other goods, and day labourers, who were hired for specific tasks on a temporary basis (skilled workers such as tamers, shearers, harvesters, who also did specific jobs such as *yerra* [cattle branding], etc.). As a result, payment in kind was made only on working days. For this reason two separate calculations were made: with and without meat and housing (Table 6).

As can be seen, those labourers receiving a monthly payment, despite free access to beef and housing, were below the subsistence level; their WR fell steadily between 1796 and 1819. By 1835 there are signs of recovery, perhaps fuelled by an economic activity which was now predominantly geared to rural production. In 1849, their purchasing power had doubled.

It should be taken into consideration that workers began their working life when they were single, generally migrants from other regions of the future Argentina, and, therefore, the resulting proportion might not have been as low as it seems, since they only had to support themselves. According to contemporary censuses, most rural workers had not yet formed a family (Contente 1999; Canedo 2000; Mateo 2001; GIHRR, 2004; Santilli 2008; Salvatore 2018).

By contrast, the picture changes when daily paid labourers are included. Unfortunately, there are no data available for the first 2 years, but it is clear that from 1818 onwards their purchasing power practically doubled, reaching a peak in 1849 when it was almost eight times higher

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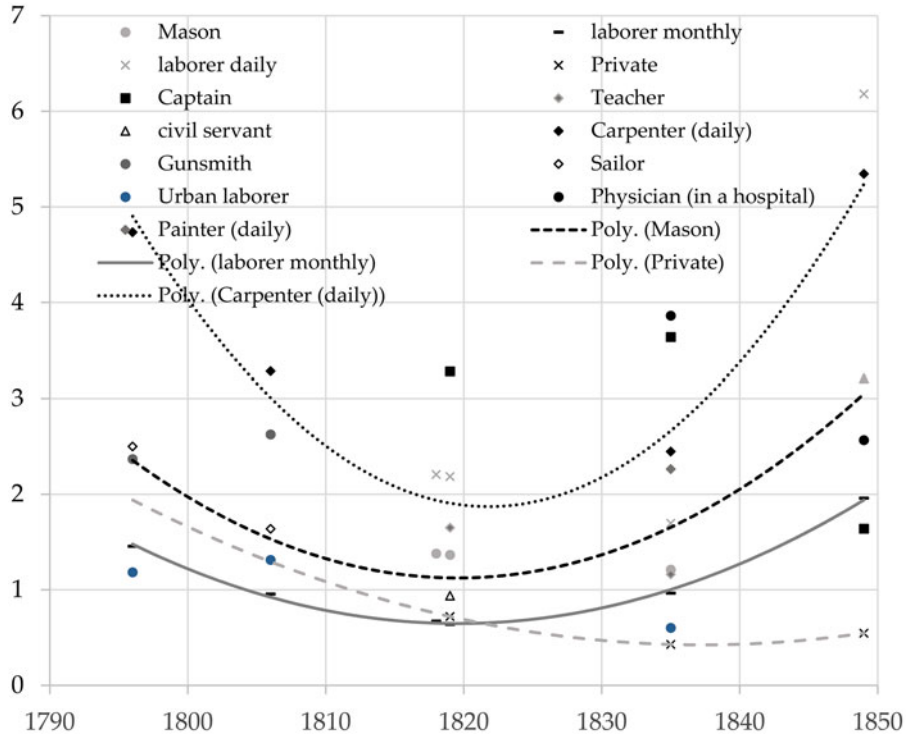
FIGURE 3
WR TENDENCIES.



Source: Table 5.

than the cost of the basket. It can, however, be reasoned with a certain amount of arbitrariness, that they did not always receive meat and housing, so I also considered the WR if meat and housing had to be purchased. In both cases, the ratio remains very positive for rural workers. It is also likely that my estimation of a total 250 yearly working days is slightly exaggerated. However, if a 125-day benchmark was used, the resulting ratios would still be higher: 1.10 in 1818, 0.85 in 1835 and 3.09 in 1849.

Let us now look at Figure 3 showing long-term trends in the WR.

The trend is clearly the same for the wages of rural workers, masons and carpenters. In contrast, the worsening of soldiers' payment is also evident. This graph shows that rural production, with its constant demand for labour, became the powerhouse of the economy, with surplus income, in turn, being channelled into construction in the city of Buenos Aires—a well-established fact for this historical period.

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TABLE 7
RANKING OF CITIES' WR (RB)

Buenos Aires	**1849**	**3.21**
Lima	1850	2.40
Buenos Aires	**1796**	**2.37**
London	1850	1.64
Buenos Aires	**1818**	**1.38**
Buenos Aires	**1819**	**1.37**
Buenos Aires	**1806**	**1.31**
Buenos Aires	**1835**	**1.21**
Warsaw	1825	1.19
Amsterdam	1825	1.08
Mexico	1825	1.05
Madrid	1825	1.03
Paris	1825	1.03
Caracas	1851-55	0.90
Leipzig	1825	0.76
Kyoto/Tokyo	1825	0.60
Vienna	1825	0.59
Milan	1825	0.42
Beijing	1825	0.31

Source: Buenos Aires, Table 4. For other cities (Challú and Gómez-Galvarriato 2015, p. 102), except for Caracas (Arroyo Abad 2013a, p. 129) and Lima (Arroyo Abad 2014, p. 63).

8. BUENOS AIRES COMPARED WITH OTHER CITIES

When compared with its European and American counterparts, Buenos Aires ranks well in terms of living standards (Table 7).

Masons' wages have been used as a benchmark for comparison. From this point of view, Buenos Aires is placed at the top of the ranking, surpassing even London in 1850. These ratios clearly indicate why, beginning in the 1840s, Buenos Aires was being chosen by immigrants worldwide as their destination (Masse 2006).

9. CONCLUSIONS

I have reached preliminary conclusions; further research is required on the years following 1835 in order to be able to offer more solid insights for

the first half of the 19th century, and thus cross the Rubicon of the 1850s, a milestone in Argentina's historiographic research[26].

However, I have been able to establish some basic issues. Firstly, it was possible to design a theoretical minimum basket for 6 different years between the late colonial period and the first decades after independence, benchmarks constructed from reliable data and using the same methodology, although from different kinds of sources. This basket is seen as a minimum basket when considering the number of calories it contains; it represents, however, an RB according to current standards given the quantity and quality of its components. Quite unexpectedly, a high consumption of fish was observed towards the end of the colonial period; this faded dramatically in the 1810s. The fact that the source was a religious institution might be relevant here. Another finding—already suggested in our previous work (Gelman and Santilli 2018)—is the increased share of meat in the diet of *porteños* (inhabitants of Buenos Aires). This increase was fuelled, it might be guessed, by the rise in the production of leather, which resulted in an excessive supply of meat which kept its price low in the long term, following the 1818/1819 incident with the *saladeros* (explained in footnote 19). It seems that the stability in meat prices balanced the volatility in wheat prices, which was reflected in the weight variation of bread per unit. As bread—a basic food staple—became more expensive, *porteños* tended to increase their consumption of meat because of its more stable price.

Another finding is the steady increase in the cost of the basket; it tripled in little more than 20 years, until 1819. This price hike has been observed in our previous study (Gelman and Santilli 2014b) and by other researchers (Schmit 2018). However, it did not condemn the poor to live below their subsistence level. From 1806 onwards, I observed the stabilisation of real wages, not only masons' wages. I also noticed that the WR deteriorated slightly around 1835, falling 11 per cent throughout the period—a decline in real wages already charted in our work, which also hit the wages of the upper echelons in the military and the state hard (Gelman and Santilli 2014b).

Finally, there are some pending issues that require further clarification. If—as we argue—the 1849 WR ranked so high, then real wages rose well

[26] I refer to the Rubicón of Caesar because Argentine economic historiography is treated in watertight compartments. Those of us who work on the first half of the 19th century do not go into the second half and those who study the second half do not look at the first half, to the point of considering the 1850s as the moment of take-off of the agro-export economy (Fradkin *et al*. 2010). This conception is an influence of political history, which rightly considers the battle of Caseros and the fall of Governor Rosas in 1852 as a watershed in institutional politics. However, the traits of continuity in the economy are notorious, since the export of leather began towards the end of the colony, in continuous growth, and that of wool in the 1840s (Hora 2010; Míguez 2008).

beyond the expectations of historians. It is necessary to build baskets around 1849 and previous years to be able to chart their evolution and confirm this trend.

Virtually all wages, both in the city and the hinterland linked to rural production, the most dynamic economic sector, experienced significant growth. Only the wages of the military and public workers lagged behind. This tendency was reverted in 1852 and subsequent years, when the wages of the upper ranks in the army increased substantially (Gelman and Santilli 2014a). Also, according to Fernando Barba (1999), public workers' wages doubled and even tripled nominally from 1852 onwards, a rise that mostly benefitted the upper ranks of public administration[27].

To sum up, there are two pending issues regarding the standard of living in Buenos Aires in the 1800s-1850s: to reconstruct theoretical baskets for the 1835/1849 period and search for reliable data to build real baskets as described in Section 3. The task, then, is to deal with the second half of the 19th century with the same methodology—a challenge we have just begun to tackle in our field of research.

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REFERENCES

Alemano, M. E. (2016): «*El imperio desde los márgenes: la frontera del Buenos Aires borbónico (1752-1806)*». Buenos Aires: UDESA, Tesis de doctorado. Accessed 12 June 2018. Available at http://repositorio.udesa.edu.ar/jspui/handle/10908/11778.

Allen, R. C. (2001): «The Great Divergence in European Wages and Prices from the Middle Ages to the First World War». *Explorations in Economic History* 38 (4), pp. 411–447.

[27] As the value of the paper currency remained unchanged between 1849 and 1852, the rise was also in constant currency. Senior positions in the bureaucracy were given a higher pay rise than lower positions; for example, assistants' wages tripled whereas 1st officers' wages increased five times.

ALLEN, R. C. (2013): *Poverty Lines in History, Theory, and Current International Practice*. Oxford: University of Oxford.

ALLEN, R. C., BASSINO, J.-P., MA, D., MOLL-MURATA, C., and VAN ZANDEN, J. L. (2011): «Wages, Prices, and Living Standards in China, 1738-1925: In Comparison with Europe, Japan, and India». *The Economic History Review* 64 (S1), pp. 8–38.

ALLEN, R. C., MURPHY, T. E., and SCHNEIDER, E. B. (2015): «Una de cal y otra de arena: Building Comparable Real Wages in a Global Perspectiva». *Revista de Historia Económica/Journal of Iberian and Latin American Economic History* 33 (1), pp. 61–76.

ALZATE ECHEVERRY, A. M. (2012): «Comer en el hospital colonial: Apuntes sobre la alimentación en tres hospitales neogranadinos a finales del siglo XVIII». *Historia Crítica* (46), pp. 18–42.

AMARAL, S. (1988): «El descubrimiento de la financiación inflacionaria. Buenos Aires, 1790-1830». *Investigaciones y Ensayos* (37), pp. 379–429.

AMARAL, S. (1989): «Alta inflación y precios relativos. El pago de las obligaciones en Buenos Aires (1826-1834)». *El Trimestre Económico* 56 (221), pp. 163–191.

ARCONDO, A. (2002): Historia de la alimentación en Argentina. Desde los orígenes hasta 1920. Córdoba: Ferreyra Editor.

ARROYO ABAD, L. (2013a). «Inestabilidad, costo de vida y salarios reales en Venezuela en el siglo XIX». *América Latina en la Historia Económica* 20 (3), pp. 114–137.

ARROYO ABAD, L. (2013b). «Persistent Inequality? Trade, Factor Endowments, and Inequality in Republican Latin America». *Journal of Economic History* 73 (1), pp. 38–78.

ARROYO ABAD, L. (2014): «Failure to Launch: Cost of Living and Living Standards in Peru During the 19th Century». *Revista de Historia Económica/Journal of Iberian and Latin American Economic History*, 32 (1), pp. 47–76.

ARROYO ABAD, L., and VAN ZANDEN, L. (2015): «Optimistic but Flawed? A Reply». *Revista de Historia Económica/Journal of Iberian and Latin American Economic History* 33 (1), pp. 77–82.

ARROYO ABAD, L., DAVIES, E., and VAN ZANDEN, J. L. (2011): «Between Conquest and Independence: Real Wages and Demographic Change in Spanish America, 1530-1820». *CGEH Working Papers* (20), pp. 1–49. doi: 10.1016/j.eeh.2011.12.001.

BARBA, F. (1999): *Aproximación al estudio de los precios y salarios en Buenos Aires desde fines del siglo XVIII hasta 1860*. La Plata: Ediciones UNLP.

CANEDO, M. (2000): *Propietarios, ocupantes y pobladores*. San Nicolás de los Arroyos 1600-1860. Mar del Plata: UNMP-GIHRR.

CHALLÚ, A. E., 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* 33 (1), pp. 83–122.

CONTENTE, C. (1999): «Actividades agrícolas y el ciclo de vida: el caso de La Matanza a principios del siglo XIX», in R. FRADKIN, M. CANEDO, and J. MATEO (eds), *Tierra, población y relaciones sociales en la campaña bonaerense (siglos XVIII y XIX)*. Mar del Plata: Universidad Nacional de Mar del Plata, pp. 77–102.

CUESTA, M. (2009): *Precios, población, impuestos y producción. La economía de Buenos Aires en el siglo XVIII*. Buenos Aires: Temas Grupo Editorial.

DI MEGLIO, G. (2006): *¡Viva el bajo pueblo! La plebe urbana de Buenos Aires y la política entre la Revolución de Mayo y el rosismo (1810-1829)*. Buenos Aires: Prometeo Libros.

DMITRUK, L. P. (2011): «Porteños, migrantes, estructuras socio-ocupacional y ciclo de vida en la ciudad de la Santísima Trinidad y puerto de Santa María del Buen

Ayre, 1810-1827». Buenos Aires: Facultad de Filosofía y Letras, Bachelor Thesis at Universidad de Buenos Aires.
Dmitruk, L. P. (2014): «Estructura socio-ocupacional de la ciudad de Buenos airtes post-colonial (1810-1827)». *Coordenadas* (2), pp. 1–30.
Dobado-Gonzalez, R. (2015): «Pre-Independence Spanish Americans: Poor, Short and Unequal…Or the Opposite?» *Revista de Historia Económica/Journal of Iberian and Latin American Economy History* 33 (1), pp. 15–60.
Fradkin, R., Gelman, J., Barriera, D. G., Míguez, E. J., Hora, R., Palacio, J. M., and Garavaglia, J. C. (2010): «Rupturas y continuidades en el agro bonaerense: debates en torno a ‹San Antonio de Areco, 1660-1180. Un pueblo de campaña, del Antiguo Régimen a la modernidad argentina›» *Anuario IEHS* (25), pp. 13–41.
Garavaglia, J. C. (1987): *Economía, sociedad y regiones*. Buenos Aires: De la flor.
Garavaglia, J. C. (1994): «De la carne al cuero. Los mercados para los productos pecuarios (Buenos Aires y su campaña, 1700-1825)». *Anuario IEHS* (9), pp. 61–96.
Garavaglia, J. C. (1995): «Precios de los productos rurales y precios de la tierra en la campaña de Buenos Aires: 1750-1826». *Boletín del Ravignani* (11), pp. 65–112.
Garavaglia, J. C., and Caselli, E. (2013): «Guerra, política y negocios en Buenos Aires. Las oficinas de Hacienda y los proveedores del Estado (1858-1860)». *Boletín del Instituto de Historia Argentina y Americana «Dr Emilio Ravignani»* (39), pp. 39–72.
Gelman, J. (1998): «Un gigante con pies de barro. Rosas y los pobladores de la campaña» en N. Goldman, y R. Salvatore (comps), *Caudillismo rioplatenses. Nuevas miradas a un viejo problema*. Buenos Aires: Eudeba, pp. 223–240.
Gelman, J., and Moraes, M. I. (2015): «Las reformas borbónicas y las economías ripoplatenses: cambio y continuidad», en J. Gelman, E. Llopis, and C. Marichal (coords), *Iberoamérica y España antes de las independencias, 1700-1820. Crecimiento, reformas y crisis*. México: Instituto Mora, El Colegio de México, pp. 31–74.
Gelman, J., and Santilli, D. (2014a): «Los salarios y la desigualdad en Buenos Aires, 1810-1870». *América Latina en la Historia Económica* 21 (3), pp. 83–115.
Gelman, J., and Santilli, D. (2014b): «Mar de fondo. Salarios, precios y los cambios en las condiciones de vida de los pobladores de Buenos Aires en una época convulsa, 1810-1870», In D. Santilli, R. Fradkin, and J. Gelman (comps), *Rebeldes con causa. Conflicto y movilización popular en la Argentina del siglo XIX*. Buenos Aires: Prometeo, pp. 121–148.
Gelman, J., and Santilli, D. (2016): «El nivel de vida en Buenos Aires, siglo XIX. Canasta de consumo ‹de supervivencia› y canasta de consumo ‹respetable›: un aporte metodológico». *Paper presented in XXV Jornadas de Historia Económica de la AAHE*, Salta.
Gelman, J., and Santilli, D. (2018): «Wages and Standards of Living in the 19th Century from a Comparative Perspective. Consumption Basket, Bare Bone Basket and Welfare Ratio in Buenos Aires, 1825-1849». *Investigaciones en Historia Económica* 14 (2), pp. 94–106.
Gihrr, G. D. (2004): «La sociedad rural bonaerense a principios del siglo XIX. Un análisis a partir de las categorías ocupacionales», In R. Fradkin, y J. C. Garavaglia (comps), *En busca de un tiempo perdido. La economía de Buenos Aires en el país de la abundancia 1750-1865*. Buenos Aires: Prometeo Libros, pp. 21–64.
Gorostegui De Torres, H. (1962): «Los precios del trigo en Buenos Aires durante el gobierno de Rosas» *Anuario del Instituto de Investigaciones Históricas* (6), pp. 142–165.
Guzmán, T. (2018): «Economía urbana y nivel de vida de los trabajadores: los salarios de los peones albañiles». *Paper presented in XXVI Jornadas de Historia Económica*. Santa Rosa: AAHE.

Guzmán, T., and Schmit, R. (2019): «Precios, salarios y nivel de vida en la ciudad de Buenos Aires, 1824-1850». *Paper presented in Sexto Congreso Latinoamericano de Historia Económica*. Santiago de Chile.

Halperin Donghi, T. (1963): «La expansión ganadera en la campaña de Buenos Aires (1810-1852)». *Desarrollo Económico* III (1-2), pp. 1-58.

Halperin Donghi, T. (1972): *Revolución y Guerra. Formación de una élite dirigente en la Argentina criolla*. Buenos Aires: Siglo XXI.

Hora, R. (2010) *Historia económica de la Argentina en el siglo XIX*. Buenos Aires: Siglo XXI.

Humphries, J. (2011): «The Lure of Aggregates and the Pitfalls of the Patriarchal Perspective: A Critique of the High Wage Economy Interpretation of the British Industrial Revolution». *Discussion Papers in Economic and Social History*, Oxford: University of Oxford.

Humphries, J., and Weisdorf, J. (2016): *Unreal Wages? A New Empirical Foundation for the Study of Living Standards and Economic Growth in England, 1260-1860*. Oxford: University of Oxford.

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* (2), pp. 133–157.

Larrain Melo, J. M. (1980): «Movimiento de precios en Santiago de Chile 1749-1808. Una interpretación metodológica». *Jahrbuch für Geschichte Lateinamerikas—Anuario de Historia de America Latina*, 17 (1), pp. 199–259.

López Losa, E., and Piquero Zarauz, S. (2016): Spanish Real Wages in the North-Western European Mirror, 1500-1800. On the Timings and Magnitude of the Little Divergence in Europe. Documento de trabajo, DT-AEHE No. 1607, AEHE. https://www.researchgate.net/publication/301296372.

Mansilla, L. V. (1966): *Mis memorias*. Buenos Aires: Eudeba.

Marschoff, M. (2013): «Los objetos de la alimentación en el Buenos Aires virreinal: Entre el mercado mundial y las prácticas cotidicanas». *Revista de Arqueología Histórica Argentina y Latinoamericana* (7), pp. 11–40.

Masse, G. (2006): «Inmigrantes y nativos en la Ciudad de Buenos Aires al promediar el siglo XIX» *Población de Buenos Aires* (4), pp. 9–25.

Masse, G. (2008): «*Convivir bajo el mismo techo. Hogar-familia y migración en la ciudad de Buenos Aires al promediar el siglo XIX*». Cordoba: Universidad Nacional de Córdoba, Tesis de doctorado.

Mateo, J. (2001): *Poblacion, parentesco y red social en la frontera. Lobos (provincia de Buenos Aires) en el siglo XIX*. Mar del Plata: GIHHRR, UNMdP.

Míguez, E. (2008): *Historia Económica de la Argentina. De la Conquista A la Crisis de 1930*. Buenos Aires: Sudamericana.

Montoya, A. (1970): *Historia de los Saladeros Argentinos*. Buenos Aires: El Coloquio.

Moraes, M. I., and Thul, F. (2015): «Precios, salarios y costo de vida en el Río de la Plata: Montevideo, 1760-1810» Kyoto, Japón, 3-7 de agosto de 2015: Ponencia presentada en el XVII Congreso Mundial de Historia Económica (WEHC).

Moutoukias, Z. (1995): «El crecimiento en una economía colonial de antiguo régimen. reformismo y sector externo en el Río de la Plata (1760-1796)». *Arquivos do Centro Cultural Calouste Gulbenkian*, 34, pp. 771–813.

Newland, C., and Ortiz, J. (2001): «The Economic Consequences of Argentine Independence». *Cuadernos de Economía* 38 (115), pp. 275–290.

Newland, C., and Poulson, B. (1998): «Purely Animal: Pastoral Production and Early Argentine Economic Growth 1825-1865». *Explorations in Economic History* 35 (3), pp. 325–345.

Reynoso Bazúa, A. (2016): «Comer para sanar: alimentación y medicina en Nueva Galicia, siglo XVIII». *Relaciones. Estudios de historia y sociedad* (146), pp. 47–81.
Rosal, M. A., and Schmit, R. (1999): «Del reformismo colonial borbónico al librecomercio: las exportaciones pecuarias del Río de la Plata (1768-1854)». *Boletín del Instituto Ravignani* (20), pp. 69–110.
Salas, A. M. (1982): «Los alimentos del Real Convictorio Carolino de Buenos Aires (1798-1806)». *Sur* (350/351), pp. 211–229.
Saldías, A. (1968): *Historia de la Confederación Argentina*. Buenos Aires: Eudeba.
Salvatore, R. (2018): *Paisanos itinerantes. Orden estatal y experiencia subalterna en Buenos Aires durante la era de Rosas*. Buenos Aires: Prometeo.
Santilli, D. (2008): «*Desde abajo y desde arriba. La construcción de un nuevo ordenamiento social entre la colonia y el rosismo. Quilmes 1780-1840*». Buenos Aires: Universidad de Buenos Aires, Tesis de Doctorado.
Santilli, D. (2013): «¿Perjudiciales o beneficiosas? La discusión sobre el impacto económico de las reformas borbónicas en Buenos Aires y su entorno». *Fronteras de la Historia* 18 (2), pp. 247–283.
Santilli, D., and Gelman, J. (2014): «La canasta de precios de Buenos Aires en la primera mitad del siglo XIX y el nivel salarial. Una primera aproximación y varias dudas» Rosario: Ponencia presentada en las XXIV Jornadas de historia economica argentina.
Santilli, D., and Gelman, J. (2016): «Los estudios sobre el nivel de vida. La metodología de la canasta aplicada a la primera mitad del siglo XIX». *Folia Histórica* (26), pp. 126–138.
Schmit, R. (2019): «Prices and Early Inflation in Buenos Aires During the First Half of the 19th Centurya (1824–1850)». *Revista de Historia Económica/Journal of Iberian and Latin American Economic History*. DOI: https://doi.org/10.1017/S0212610919000351
Silveira, M. J. (2005): *Cocina y comidas en el Río de la Plata*. Neuquén: Universidad del Comahue.
Stephenson, J. (2016): *Real Contracts and Mistaken Wages: The Organisation of Work and Pay in London Building Trades, 1650-1800*. London: London School of Economics and Political Science—Department of Economic History.
Szuchman, M. D. (1988): *Order, Family and Community in Buenos Aires 1810-1860*. Stanford: Stanford University Press.
Wibaux, M. I. (2004): «Una mirada desde el mostrador. Dieta, hábitos alimenticios y comercio minorista en la campaña bonaerense, 1760-1870». *Anuario del CEH* (4), pp. 125–142.
Wibaux, M. I. (2008): «¿Un placer para pocos? Los hábitos de consumo de los pobladores rurales y los precios corrientes de los productos alimenticios cotidianos. Buenos Aires, 1830-1870». In S. C. Mallo, and B. I. Moreyra (coords), *Miradas sobre la historia social en la Argentina en los comienzos del siglo XXI*. Córdoba—La Plata: CEH Segretti—CEHAC, pp. 323–340.