

(Research note)

## Regional currencies and employment creation: The case of Argentina, 2001-2003

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### Abstract

Despite recent discussions on the possibility of re-issuing former European currencies, few studies have analyzed the impact that regional currencies had on economic activity. The case of Argentina from 2001 to 2003 presents a particular case study to analyze this. Fifteen out of the twenty three provinces issued their own currencies to deal with budget deficits and under the assumption that the increase supply of money would spur the demand of goods and services. At the same time, the country suffered its worst economic crisis, with a surge in unemployment, poverty, a major devaluation of the Peso and the drop of economic activity.

This paper first presents briefly the characteristics of Argentina in those years and introduces the list of provincial currencies that were issued. Then, it analyzes the effect that quasi-currencies had on several employment variables, by comparing the group of provinces that issued local monies with the group that did not. The employment level in the industrial and service sectors is analyzed and similar provinces are compared.

Provinces that issued currencies did not experience a surge neither in total employment nor in specific sectors. Moreover, similar provinces show similar performances or show that the provinces that issued their own currency have a higher rate of destruction of private jobs. Quasi-currencies failed to increase activity and the national government had to pay for their rescue.

**Key words:** Regional currency, employment, local money, Argentina, sub-national monetary policy.

### 1. Introduction

Bibliography on regional currencies (or quasi-currencies) is very limited, probably due to the restricted experience on this phenomenon. National governments issue and use their national legal tender in all their

territories, instead of letting each province or administrative jurisdiction issue its own. The case of Argentina from 2001 to 2003 presents a very interesting experience: fifteen out of the twenty three provinces of the country issued their own money. Therefore, it's a case study of sorts to analyze how these currencies impacted on regional economies. This analysis becomes relevant in the current context, when several European countries are facing severe

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economic conditions and, as they are not able to print their own money due to the existence of the Euro and its control by supranational organizations, buzz around the possibility of issuing once again nations' former currencies has raised in recent political discussions<sup>1)</sup>. Lietaer et al. (2009), for example, propose that local governments issue their own "complementary currency" in order to "link unused resources with unmet needs within a community, region or country" (p.1). The theoretical increase in economic activity due to the issuance of quasi monies should be analyzed in the context of factual cases and the results seen on the regional economies that followed this policy. This paper analyzes how employment behaved during that critical time of Argentina, comparing the performance of those provinces that issued quasi-currencies to those that did not. It is structured as follows: First, a brief introduction of the particular conditions of Argentina in the 2001-2003 period and the quasi-currencies that were issued are presented. Second, the evolution of employment variables is analyzed, comparing two big groups: provinces that issued quasi-currencies and those that did not. Third, the employment variables of provinces of similar characteristics (one that issued local money, the other that did not) are analyzed, and their performance in the industrial and service sector is presented. Last, the conclusions are presented.

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1) Since 2011, with the collapse of the Greek economy, the international media has paid a lot of attention to the possibility of troubled countries issuing once again their former currencies. The financial services company Nomura Holdings even calculated that their depreciation would range from 25 to 60 % (Fontevicchia 2011).

## 2. Background

Due to the currency board regime implemented in 1991, the Argentinean government had to have one United States Dollar (US\$) in its Central Bank for every Argentine Peso (ARS) that was circulating in the economy. This had a very positive effect in the short term, as it drove inflation to a halt and allowed for the stability of many macroeconomic indicators. Nevertheless, as the US\$ got revalued during the 1990s, the ARS also got revalued<sup>2)</sup>, therefore hindering the incipient economic growth seen in the first half of the decade. A declining industrial production, a negative trade balance due to the low prices of Argentine agricultural exports and an increasing foreign debt level attempted against the new government that took office at the end of 1999. Moreover, a rampant fiscal deficit due in part to the privatization of the pension system put a lot of pressure on the national and regional governments, who resorted to unpopular public expenditures cuts and new taxes on economic activity.

The cuts could not stop the shrinking of the economy and served as a base for pro monetary politicians to spread their words on regaining the ability to issue money. The inflexible monetary policy mixed with other rigidities (in the foreign trade, labor and public spending sectors) and made the situation unmanageable if no major change was to be made (Lopez Murphy et al. 2003). Nevertheless, the central government and the Central Bank -being the only entity who could legally print the official ARS- did not agree to lift the restrictions on printing money, maintaining the one ARS one US\$

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2) It has been estimated that over the whole decade the real effective exchange rate of Argentina appreciated by around 40 percent (O'Connell 2005).

parity. The government rejected the abandonment of the currency board for political issues, as at the time it was widely supported by the voters and even by the political opposition.

Fifteen provinces (out of 23) decided to print their own currency between 2001 and 2002. Poor and highly indebted provinces as Chaco and Formosa (who owed 61 and 105% of their GDP) issued their own monies, but rich and with low debt-level provinces as Buenos Aires and Córdoba (21 and 16%) did that as well. Even the national government issued its own quasi-currency (the *Lecop*<sup>3)</sup>) to deal with short term liabilities with provinces. Provinces issued currencies for an astonishing 5.34 billion ARS, which together with the *Lecop* bills (3.2 billion ARS) counted for almost the 50% of the total money supply<sup>4)</sup> (Licari et al. 2003). The coexistence of the Central Bank with other “central banks” of provinces certainly hindered the capacity of the national government to implement a coherent monetary policy and by the end of 2001 it was common for workers to receive their salaries in two or three different currencies.

Every bill of a provincial currency was in fact a bearer bond, as it established that on a certain date the holder of that bill would be paid a certain amount of ARS. Except for the case of the *Lecop*, all the others offered an interest to the holder of the bill, so it could be used as an investment alternative as well.

3) *Lecop*: Letras de cancelación de obligaciones provinciales (Letter of cancellation of provincial obligations).

4) Money supply here is considered as the monetary base (or M0, as defined by the Central Bank of Argentina) plus the quasi-currencies. M0 is the sum of all monies issued by the Central Bank plus current account deposits in ARS in this institution (BCRA 2012).

Nevertheless, the reminiscence of some bills to the official ARS bills and the fact that they were commonly accepted in the jurisdiction that they were issued helped to their acceptance as current money. Moreover, it is commonly accepted among economists that the transactional capacity of these quasi-currencies has been more important than its investment potential (Argañaraz et al. 2003). Considering the inflation in 2002 was over 40%, the incentives to keep the bonds as an investment were low, and the incentives to use them quickly were high.

Table 1 shows the detail of the currencies issued by provinces. The provinces did not follow clear patterns for the issuance of their monies. Buenos Aires province, the most populated and economically important of the country, issued a 3.41% of its Gross Provincial Product (GPP) in Patacón, representing therefore a significant part of the money circulating within the jurisdiction. The 3.3 billion Patacón issued meant that over 240 of that currency (nominally, they accounted for the same amount of ARS) were printed per every citizen of the province. To reflect on the importance of this number, we should consider that the minimum wage in 2001 was 275 ARS. On the other hand, Patagonian, oil-producing provinces as Chubut and Río Negro issued just a 0.52 and 0.59% of their GPP in bonds and therefore the impact that these currencies had on the economy was very limited: Just 49 and 36 ARS were issued per capita.

The economic decline of 2001 hit particularly provinces and municipalities, as their revenue depends heavily on transfers from the national government. A study by Tomassi (2002) shows that in the year 2000, 83% of all tax revenue was collected by the

**Table 1 Issuance of quasi-currencies by province**

Province	Currency	Quasi-Currencies (Million ARS)	Quasi-Curr. / GPP (%)	Bonds per inhabitant (ARS)
Buenos Aires	Patacón	3, 306. 4	3. 41	240. 36
Córdoba	Lecor	700	2. 90	229. 3
Entre Ríos	Federal	348	5. 04	301. 82
Corrientes	Cecacor	200	4. 88	215. 75
Tucumán	Bocade	168	2. 54	126. 13
Mendoza	Petrom	138	0. 97	74. 98
Misiones	Cemis	130	3. 09	133. 84
San Juan	Huarpes	100	2. 92	161. 95
Chaco	Quebracho	50	1. 25	51. 07
Formosa	Bocanfor	50	2. 75	102. 19
Catamarca	Bono Ley 4748	45	2. 69	135. 95
Tierra del Fuego	Letras	30	1. 63	299. 06
Chubut	Petrobono	20	0. 52	49
Río Negro	Petrobono	20	0. 59	36. 42
La Rioja	Bocade (Serie A)	5	0. 29	17. 37
<b>Total</b>		<b>5, 310. 4</b>	<b>2. 36</b>	<b>145</b>

Source: Author, based on Tomassi (2002), Licari et al. (2002) and INDEC.

national government. Taxes which are more inflexible to local economic downturns, as VAT on basic goods or export taxes, go mainly to the national jurisdiction, and later they are distributed to the provinces. Moreover, provinces had a very restricted access to international capital; therefore they couldn't borrow as much money as the national government did to deal with their current account deficits. Provinces needed the money, as their capital expenditures had to be collected—in their majority—from local sources. Just 15% of total investment in provinces was financed by national funds in 2001. By 2004, that number had crossed the 50% mark and in 2007 it reached 67% (Bernal 2011). The crisis came chiefly from the macroeconomic policy implemented by the national government, and local administrations had little space to maneuver their economic and financial policies.

At the end of December, 2001, the president resigned due to his inability to manage the

social and economic situation after the IMF decided to stop lending money to Argentina. Having an important part of the economy in informality—over 40% of the workers in 2001 were not legally hired (MECON 2001)—, the decline of ARS circulating in the economy increased the acceptance of quasi-currencies. Moreover, the government had promoted the bankarisation of commercial transactions, making mandatory for deposits or transfers of big amounts of money to be done via commercial banks. This reduced even further the physical money in circulation.

The following default and asymmetric pesification of deposits<sup>5)</sup> added to the highly unstable economic environment, and it was not until 2003 that the national government started studying how to homogenize the monetary front and take quasi-currencies away from circulation. They were discharged

5) Deposits in US\$ were automatically converted to ARS.

and exchanged into BOGAR, a bond that the central government issued to rescue quasi-currencies and restructure provinces' debt. By the beginning of 2004, the quasi-currencies were not circulating anymore, and just a few bills were kept by investors or collectors.

The difference in the market price of these currencies was remarkable. The Cecacor, from Corrientes province, had a market value of 52% over its nominal price in May 2003 (Argañaraz 2003). The Patacón had a market value of 99%. When they were rescued by the central government, their prices increased and the price difference between them was therefore reduced. When they were exchanged into BOGAR, the Cecacor and the Federales (from Entre Ríos province) suffered a 25% discount over their nominal prices, followed by the Bocanfor from Formosa (15%) and the Quebracho from Chaco (13%). Others, as Patacón and the bonds from Catamarca did not experience any discount and were accepted at their nominal value (AGN 2007). Comparing the rescuing discounts to the numbers depicted in Table 1, we see no relation between the rescuing price of currencies and their amount per inhabitant or per unit of GPP. Moreover, there is no relation either with the level of debt of each province, which is an indicator of the capacity of a province to pay for its debts. Just as an example, Buenos Aires and Entre Ríos had a similar level of public debt to GPP, but they are the ones that suffered the largest and smallest discounts. The rescuing value of the quasi-currencies, therefore, was not influenced by provinces' ability to pay, but by other factors.

Very few previous studies have tried to assess the impact of quasi-currencies in

economic variables. They have mostly suffered the limitations of the difficulties to measure quasi-currencies' impact on regional economies in Argentina, as the monetary base of the country increased exponentially in 2002 due to the exit from the currency board system (Frenkel and Rapetti 2007). Therefore, its original purpose (to increase the monetary base to pay public salaries and increase activity) got diluted due to the oversupply of *official* money. Nevertheless, a study by Argañaraz et al. (2003) has to be highlighted, as it measured the impact that the quasi-currencies had by analyzing and comparing two neighboring provinces with similar characteristics, one of which printed its own currency, while the other did not do it. They compared Santa Fe and Córdoba provinces, and found that “no positive effects can be inferred on the activity level as a consequence of the emission of quasi-currencies” (Argañaraz et al 2003, p.22).

Despite the importance of this study, no further studies have measured the impact of local monies in productive activity, employment, consumption or tax revenue. The originality of this study lays in the research of the effects of quasi-currencies in the employment performance of the main urban conglomerate of each province. By comparing their results to the ones of the provinces who did not issue quasi-currencies we will see if they had an effect on employment; by comparing two similar provinces (one that issued a quasi-currency, the other not), we will be able to comprehend the particularities of those effects.

### **3. Comparing the employment evolution in provinces**

In the 2001-2003 period, Argentina saw its

biggest decline in production and employment in its history. Peaking at 21.5% in May 2002, the unemployment rate had been increasing since the beginning of the century and has declined ever since, reaching 7.4% in October 2012. With the surge in unemployment came the increase of the poverty rate, which reached 50% in 2002, an unprecedented figure for a country that up to the 1980s had less than 5% of its population living in poverty.

This study divides the 23 provinces of Argentina between those that printed quasi-currencies and those that did not<sup>6)</sup>. Table 2 shows the figures for employment in provinces. Five indicators were chosen to analyze the employment conditions of provinces:

- Activity rate: The total percentage of the population between 14 and 65 years who have a job or are looking for one;
- Employment: Percentage of population that has a full time job;
- Unemployment: Percentage of the labor force that does not have a job and is actively looking for one;
- Demanding unemployment: When a person works part time and is looking for a job, or when the worker is over skilled for the job;
- Undemanding unemployment: The same conditions, but not looking for a job.

In May 2001, figures for the five variables measured show a difference of less than one

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6) Buenos Aires province is excluded, as its economy is by far the largest of the country and it is much influenced by the performance of Buenos Aires City, a federal district that has no “province” status. Río Negro is also excluded as it only had one “urban-rural” conglomerate and its statistics were not fully gathered by the INDEC.

point between those provinces that issued quasi-currencies and those that did not. By May 2003, when quasi-currencies were already rescued and the economy was starting to grow once again, every indicator differs by more than one point. By analyzing the chosen variables we see that:

- The activity rate decreased for the first group (quasi-currencies issuing provinces) and increased slightly for the second one. No general conclusion can be derived from the analysis of this indicator.
- Regarding employment rate, both increased a little bit. When the actual number of jobs in those economies is analyzed, we can conclude that the provinces that printed quasi-currencies in fact created jobs at a similar pace than their counterparts.
- The decrease of the activity rate in the first group (-0.5 points) led to a decrease of the unemployment rate (-1.8), while in the other group it increased (+0.4 and +0.3).
- The most important changes can be appreciated in the underemployment rates, as in the first group both indicators increased around 20% from 2001 to 2003, while in the other group they remained stable.

The increase in the supply of money in provinces did not lead to the creation of more jobs, as the provinces that used only the official currency show similar changes in the number of jobs. This result contrasts with the results of many studies (Davidson 1998, Atesoglu 1999, among others) which—based on Keynes (1936) theory—found that there is a positive relation between money supply, income and employment. They propose that an increase in the amount of money will spur the demand of goods and services<sup>7)</sup>. These studies were designed for

**Table 2 Change in selected employment indicators in provinces, 2001-2003**

(in %)

	Province	May 2001					May 2003				
		Activity	Employment	Unemployment	Demanding underemployment	Nondemanding underemployment	Activity	Employment	Unemployment	Demanding underemployment	Nondemanding underemployment
Provinces that issued quasi-currencies	Catamarca	39.8	30.9	22.3	12.5	3	40.2	34.4	14.6	8.7	4
	Córdoba	40.5	35.4	12.7	9	6.3	42.9	37.4	12.9	9.9	7.1
	Corrientes	35.9	30	16.6	8.5	4.2	41.6	34.9	16.2	20.2	7.5
	Chaco	33.5	29.2	13	8.4	7.1	40.8	34.1	16.5	10.2	5.6
	Chubut	40.7	35.1	14	7.2	2.8	37.2	32.1	13.7	14.5	3.1
	Entre Ríos	37.8	32.5	14.1	8.8	5.4	34	31	8.6	10.9	9.5
	Formosa	32	28	12.6	9	2.7	41.2	36.6	11.2	7.6	2.5
	La Rioja	38.1	32.8	13.9	10.3	7.9	40.2	34.6	13.9	11	8.1
	Mendoza	40.7	36.4	10.7	10.2	5.1	38.1	34.5	9.3	12.3	7.1
	Misiones	35	33.6	4.1	14.5	4.6	33.4	30.9	7.6	17.7	5.3
	San Juan	40.1	34.2	14.8	13.1	5.3	39.1	33.8	13.6	18.3	3.9
	Tierra d Fuego	42.3	37.8	10.6	7.6	3.5	40.8	35.5	13.1	12.4	6.3
	Tucumán	40.2	32.8	18.4	13.1	5.7	35	30.8	12.1	16.1	4.9
	<b>Average</b>	<b>38.9</b>	<b>33.4</b>	<b>14.1</b>	<b>10.1</b>	<b>5</b>	<b>38.4</b>	<b>33.6</b>	<b>12.3</b>	<b>12.2</b>	<b>6.1</b>
Other provinces	Jujuy	35	28.5	18.6	11.4	4	40.6	32.3	20.5	16.5	4.1
	La Pampa	42.8	37.1	13.3	9.4	2.4	43.9	38.4	12.7	7.9	2.7
	Neuquén	43	36.5	15.2	11	3.2	42.4	36.9	13.1	9.8	3.3
	Salta	38.5	31.9	17.1	12.7	6.3	38.6	32.4	16.1	12.7	9.3
	San Luis	40.6	36.5	10.1	14.2	6.4	38.4	32.4	15.6	12.7	6
	Santa Cruz	39.9	39	2.1	4.1	3.1	38.5	37.5	2.7	3	1
	Santa Fe	42.8	34.2	20.2	9.2	5.3	43.3	35.6	17.9	9.1	6.5
	Santiago del E.	35	30.7	12.2	7	4.1	36.7	32	12.9	7	2.9
	<b>Average</b>	<b>39.7</b>	<b>34.3</b>	<b>13.6</b>	<b>9.9</b>	<b>4.3</b>	<b>40.3</b>	<b>34.7</b>	<b>13.9</b>	<b>9.8</b>	<b>4.5</b>

Source: Author, based on INDEC (2001 and 2003).

countries, but a same logic could be applied to provinces: if the supply of money increases in a context of excess capacity, consumers will use the money, stimulating the demand of goods and services, positively influencing the output and employment of local companies.

In the case of Argentina, the provinces that

7) See Hemming et al. (2002) for a detailed explanation on the economic theories relating monetary expansion and output.

printed their own currency-therefore increasing the supply of money-, did not see a surge in the amount of jobs created. Reasons for this may vary from jurisdiction to jurisdiction, but the issuance of quasi-currencies contributed to the uncertainty about the economic and financial conditions of the provinces, reducing the level of confidence in the recovery, hindering investments and therefore reducing the hiring plans of the businesses of those provinces.

The increase in demanding underemployment is interesting, as it increased in 11 out of the 13 provinces that issued quasi-currencies, while just one out of the other group of 8 increased. For non-demanding underemployment, the first group had 9 provinces in which it increased and 4 where it did not. For the other group, in 5 provinces it increased, while 3 did not. Reasons for the different evolution of the underemployment indicators may be found in the economic conditions of that era: not being able to secure the ARS needed to pay salaries, employers decided to hire people on a part-time basis as the amount of people accepting those working conditions increased. Many of the workers under the underemployed category are not legally hired (INDEC), and are more vulnerable to being paid in quasi-currencies. It can be argued that quasi-currencies contributed to the enlargement of the part-time working force and the illegal job market.

### **3.1 Comparing employment evolution in similar provinces**

In order to understand more deeply the changes in employment conditions in the context of the issuance of quasi-currencies, comparisons should be made between a specific province that issued them and one that did not. We should be careful when picking provinces to compare, as their conditions may vary greatly, therefore making it impossible to compare. For example, those oil producing provinces suffered the 2001-2003 crisis in a very different way than those which produced crops, those that are industrial centers or those that have an economy too much dependent on transfers from the national government. We choose “similar” provinces

based on these conditions: industrial production, agricultural output, oil production, population, geographical location, dependence on transfers from national government, public employment, and national tax system<sup>8</sup>). We identified three pairs of “similar” provinces: Córdoba-Santa Fe, Chaco-Santiago del Estero, San Juan-San Luis. The first of each set printed its own currency, the other did not.

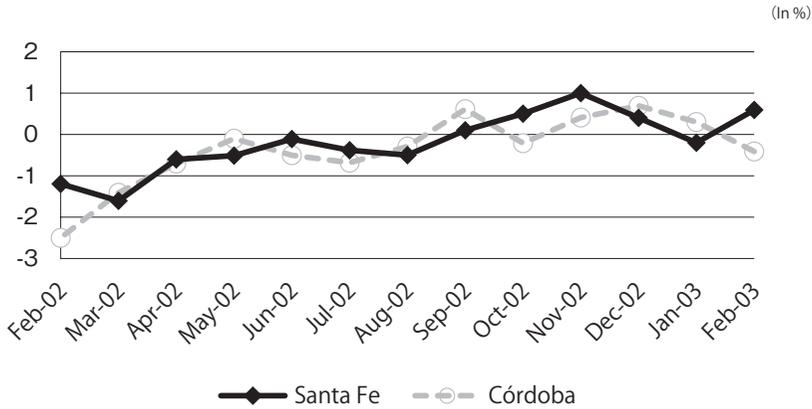
The performance of provinces like Córdoba and Santa Fe has already been compared in Argañaraz et al. (2003) study. Both, being the second and third most populated provinces in the country, have similar economies, with a very important primary sector and an industrial base that supplies both the country and the Mercosur with their products. Córdoba issued its own currency (the Lecor), while Santa Fe did not. We concentrate in the period starting after the devaluation (the beginning of 2002) and March 2003, when quasi-currencies were fully in circulation and used in everyday life.

Córdoba had been more heavily hit by the economic conditions that affected the country since 1999. Having an important automobile industry, it suffered heavily due to the appreciation of the ARS, the depreciation of Brazil’s Real (its main competitor) and the dwindling internal market. Soon after the collapse of the currency board, both provinces show a similar performances regarding employment creation. Santa Fe could manage to create 2000 jobs between the first quarters of 2002 and 2003, while Córdoba created 3000. Figure 1 shows that their paths to job creation are similar and that there is no clear

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8) Some provinces have the “industrial promotion area” status and enjoy reduced national taxes, as VAT or import tax.

**Figure 1 Employment rate change in Santa Fe and Córdoba, February 2002 - February 2003**



Source: Author, based on Ministry of Labor

difference between them.

Comparing other similar provinces, we obtain analogous performances in job creation. Chaco and Santiago del Estero, two landlocked provinces with little industrial tradition and high dependence on transfers from the central government, were compared. The first issued a currency (*Quebracho*), while the second did not. Both have very low figures for their activity rate, and saw an increase in this indicator between May 2001 and 2003: Chaco saw a 21% increase, while in Santiago it was of 5%. Increases in the activity rate can be seen in this period in the poorer provinces (Formosa, Jujuy, La Rioja), as people who depended on national pensions or other subsidies were forced to enter the job market in order to get more income, as those subsidies dwindled due to the crisis and the devaluation. From the beginning of 2001 to the beginning of 2003, Chaco lost over 10,000 jobs, or 22% of its total private sector jobs. In the same period, Santiago del Estero lost almost 4,000, or 13% of total private jobs.

Other comparable provinces are San Juan

(which issued the *Huarpes*) and San Luis (did not issue a currency). These provinces have the “industrial promotion area” status and they enjoy several discounts on national taxes. Although numbers show a decline of the unemployment rate in San Juan (-1.2 points) and an increase in San Luis (+5.5), attention should be paid to the demanding underemployment. Here, the numbers increased more than 5 points in San Juan and declined slightly in San Luis. San Juan destroyed more full time jobs between 2001 and 2003 (3,500 versus 2,600, or 18% and 6.5% of all private sector jobs), replacing them for part-time jobs.

The impact of quasi-currencies cannot be seen when analyzing the employment data of provinces. Similar provinces show similar performances (in the case of Santa Fe and Córdoba) or show that the provinces that issued their own currency have a higher rate of destruction of private jobs (in the case of Chaco and San Juan). But some may argue that the issuance of quasi-currencies may impact specific sectors, as the service and industrial sectors would supposedly benefit from more people buying goods due to the

oversupply of money.

### 3.2 Sector analysis

Two sectors were selected to see if the quasi-currencies had any effect on specific segments of the regional economies: the service and industrial sectors. The first one was chosen as quasi-currencies would allegedly boost consumption, therefore increasing the sales of the retail sector, leading to the creation of new jobs. The second one, as the increased demand would positively affect the output of industrial products, and some of them are produced locally—especially those produced by local small and medium companies<sup>9)</sup>.

Analyzing the figures for the manufacturing and service sectors for “similar” provinces, we see a similar performance, albeit small

9) The devaluation of the ARS made imports plunge over 40% in 2002. The participation of products made in Argentina increased drastically.

variations. In the manufacturing sector, Santa Fe increased its workforce in 2,500 people; while Córdoba just added 100 manufacturing jobs (the country saw an increase of 12,000 manufacturing workers in the same period). In services, Santa Fe lost 800 jobs, while Córdoba added 1,000 (the country lost 16,000 service sector jobs in the period); most of them were in the retail sector. Interestingly, both provinces added over one thousand jobs in the primary sector, pointing at the importance that the development of agriculture—with the impulse of higher commodity prices (especially soybeans)—played in the recovery (Richardson 2009).

These results may raise the discussion on whether the existence of an increased supply of currency may have helped Córdoba’s small businesses or if this increase may have been the result of other factors. Out of the other 12 provinces that issued quasi-currencies and are analyzed in Table 1, just

**Table 3 Variation of employment in the industrial and service sectors, 1<sup>ST</sup> quarter, 2002 to 2003.**

Province	Variation of industrial jobs	Variation of service sector jobs	Province	Variation of industrial jobs	Variation of service sector jobs
(Provinces with quasi-currencies)			(Other provinces)		
Catamarca	1.3	-15.8	Jujuy	15.2	-6.3
Córdoba	0.1	1.8	La Pampa	10.4	-5.2
Corrientes	9.5	-5.4	Neuquén	10.5	3.8
Chaco	1.2	0	Salta	0.8	-6.5
Chubut	11.6	-2	San Luis	2.4	-4.1
Entre Ríos	1.2	-3.8	Santa Cruz	3.5	0
Formosa	-9	-3.3	Santa Fe	3.1	-1.5
La Rioja	5.7	-16.9	Santiago del E.	-4.3	-1.5
Mendoza	5.4	-0.5			
Misiones	6.8	3.3			
San Juan	-0.4	-5.2			
Tierra d Fuego	-15.2	-4.5			
Tucumán	6.6	-4.1			
<b>Average</b>	<b>1.91</b>	<b>-4.34</b>	<b>Average</b>	<b>5.20</b>	<b>-2.66</b>

Source: Author, based on Ministry of Labor.

one saw an increase in the amount of jobs in the service sector (Misiones). One posted no changes and the other 10 posted a decline. The provinces that did not issue quasi-currencies show a similar sign (positive for industrial jobs, negative for the service sector), but in average the increase in the amount of industrial jobs is 170% higher and the decline in services' sector jobs is 40% smaller (Table 3).

Therefore, it can be concluded that the circulation of quasi-currencies did not affect the employment situation neither of the industrial sector nor of the service sector.

#### 4. Conclusions

Recent buzz on the possibility of allowing European countries to reissue their former currencies in order to have more independence in deciding their monetary policy raised the discussion on whether this would have a positive effect on economic activity. There are very limited cases of jurisdictions with more than one legal tender, and the case of Argentina in 2001-2003 is interesting, for regional governments decided to issue their own currency while still using the national one.

Previous studies have shown that quasi-currencies did not have an effect on the

economic activity of provinces. This study has shown that they did not affect job creation as well. What is more, we see that when two similar provinces are compared, issuing provinces destroyed more jobs than their non-issuing counterparts.

In the case of Argentina, this lack of growth in economic activity of provinces forced the national government to rescue quasi-currencies, issuing a bond at a low interest rate. This benefitted provinces that issued quasi-currencies, as they did not fully pay for the monies that they had autonomously printed. The apparently successful exit from a monetary system with many currencies into one with just one legal tender brings perverse arguments for those who support the issuance of regional currencies: In the case of Argentina it was the national government the one who at last had to pay the burden of provinces' decisions.

Of course, the logic would be different if national governments (instead of provinces) are the ones that issue their own monies in a monetary union. Nevertheless, the case of Argentina presents a negative experience and raises the question on—in the case that quasi-currencies are issued and fail once again to increase activity and create jobs—who is going to pay for their rescue.

#### Bibliography

- AGN - Auditoría General de la Nación (2007), Informe de Auditoría, Canje de la deuda Nación - Provincias. [http://www.agn.gov.ar/informes/informesPDF2007/2007\\_110.pdf](http://www.agn.gov.ar/informes/informesPDF2007/2007_110.pdf) (Last access 11/2012).
- Argañaraz, N., Capello, M., Garzón, J.M. (2003), “*Cuasi-monedas provinciales: Un análisis de su existencia y actual rescate*” (Provincial quasi-currencies: an analysis of their rescue), IERAL. <http://cdi.mecon.gov.ar/biblio/docelec/ieral/dt/pf4.pdf> (Last Access: 11/2012).
- Atesoglu, H.S. (1999), “A post Keynesian explanation of employment in the United States”, *Journal of post Keynesian Economics*, Vol. 21, No. 4, pp. 603-610.
- BCRA - Banco Central de la República Argentina (2012), “Boletín estadístico”, November 2012. <http://www.bcra.gov>.

- ar/pdfs/estadistica/bolmetes.pdf (Last Access: 1/2013).
- Bernal, F. (2011), "El sector público nacional en la inversión total de la República Argentina". In J.M. Vázquez Blanco and S. Frascina (eds.), *Aportes de la Economía Política del Bicentenario*. Buenos Aires, Prometeo, pp. 109-123.
- Davidson, P. (1998), "Post Keynesian employment analysis and the macroeconomics of OECD unemployment", *The Economic Journal*, Vol. 108, pp. 817-831.
- Fontevicchia, A. (2011), "Euro Break-Up: Greek Drachma Would Depreciate 60%, PIIGS Down 25% To 35%", *Forbes*. <http://www.forbes.com/sites/afontevicchia/2011/12/05/sp-confirms-germany-and-frances-aaa-rating-is-under-creditwatch-negative/> (Last Access: 12/2012).
- Frenkel, R. and Rapetti, M. (2007), "*Política cambiaria y monetaria en Argentina después del colapso de la convertibilidad*" (Monetary policy in Argentina after the collapse of convertibility), *Centro de Investigación Económica y de Políticas*, April, pp.1-24.
- Hemming, R., Kell, M. and Mahfouz, S. (2002), "The effectiveness of fiscal policy in stimulating economic activity - A review of the literature", IMF Working Paper WP/02/208. <http://rbidocs.rbi.org.in/rdocs/content/pdfs/L-6a.pdf> (Last Access: 01/2013)
- INDEC - Instituto Nacional de Estadísticas y Censos (2001 and 2003), "*Encuesta Permanente de Hogares*" (Permanent Survey of Households), May 2001 and May 2003.
- Keynes, J.M. (1936) [2007], *The General Theory of Employment, Interest and Money*. London, Mc Millan
- Licari, J.M., Calcagno, J.C., Oviedo, J.M. and Pellegrini, S. (2002), "*Cuasimonedas Provinciales. Medición absoluta y comparada*" (Provincial quasi-currencies: Absolute and relative measurement). Instituto de Economía y Finanzas, Facultad de Ciencias Económicas, Univ. Nacional de Córdoba, pp. 1-6. <http://ief.eco.unc.edu.ar/files/publicaciones/observatorio/nov02-licari-calcagno-oviedo.pdf> (Last access 11/2012).
- Lietaer, B., Ulanowicz, R. and Goerner, S. (2009), "Options for managing a systemic bank crisis", *S.A.P.I.E.N.S* [Online], Vol. 2, No.1, <http://sapiens.revues.org/747> (Last access, 12/2012).
- Lopez Murphy, R., Artana, D. and Navajas, F. (2003), "The Argentine economic crisis", *Cato Journal*, Vol. 23, No. 1, pp. 23-28.
- MECON - Ministry of Economy (2002), *La economía argentina durante 2001 y evolución reciente* (The Argentine economy in 2001 and its recent evolution), <http://www.mecon.gov.ar/informe/informe40/introduccion.pdf> (Last access 11/2012).
- Ministry of Labor, *Encuesta de Indicadores Laborales* (Survey of Employment Indicators). [http://www.trabajo.gov.ar/left/estadisticas/oede/estadisticas\\_nacionales.asp](http://www.trabajo.gov.ar/left/estadisticas/oede/estadisticas_nacionales.asp) (Last access: 11/2012).
- O'Connell, A. (2005) "The recent crisis and recovery of the Argentine Economy: some elements and background", in Epstein, G. (ed.) *Financialization and the World Economy*, Political Economy Research Institute.
- Richardson, N. P. (2009), "Export-oriented populism: commodities and coalitions in Argentina", *Studies in Comparative International Development*, Vol.44, No. 3, pp. 228-55.
- Tomassi, M. (2002), "Federalism in Argentina and the reforms of the 1990s", Paper prepared for the Center for Research on Economic Development and Policy Reform project on Federalism in a Global Environment. <http://faculty.udes.edu.ar/tommasi/cedi/dts/dt69.pdf> (Last Access: 12/2012).