The Impact of Devaluation on Argentine Households: Socioeconomic Changes Observed Between October 2001 and October 2002

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ABSTRACT

The crisis experienced by the Argentine economy at the end of 2001 produced a significant impact on poverty and indigence. Although this fact is well known, the contribution of its main determinants still has not been analyzed. The project proposed attempts to detect which was the weight of the different factors that impacted on the poverty situation of household between October 2001 and October 2002. The impact of the social policy is also analyzed in order to better understand the interaction between economic and social policies.

Starting from the fact that economic and social policy have played an important roll in explaining the behavior of poverty in year 2002, the general objective of this proposal is to measure the impact of the devaluation on poverty and indigence, as well as the mitigating effect of social policy, in order to answer questions like: Who are the “new” pours? What were the main determinants of the change in the income of households? What was the impact of the income transference policy in ameliorating the migration of households toward poverty? Could the social policy be considered as capable to face a crisis of the magnitude of the one experimented by Argentina in 2002? What are the households that are more vulnerable to a drastic change in relative prices?

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1. Motivation and Research Objectives

1.1) Motivation

At the end of 2001 the Argentine economy entered into a profound economic, political and institutional crisis. As a consequence of this crisis, the GDP fell in 2002 by 11% with respect to the average level for the previous year.

Dropping the convertibility regime and the abrupt depreciation of the peso that followed, produced a dramatic change in relative prices. One of the relative prices that suffered the highest impact was the real wage. That impact came together with a significant reduction in the level of employment, multiplying the impact of the change in relative prices on family income.

Beyond the reasons that may justify the need of such a large devaluation, the important fact is that it produced a very large impact on the levels of poverty and indigence. Known as this factor is, there has been not a study that has attempted to decompose the impact of the devaluation on the determinants of poverty, i.e. in terms of its underlying elements: the decrease in family income, the changes in governmental transfers, and the impact of the prices, particularly in a country that specializes its export production mostly in wage goods (such as beef, flour, edible oils, etc.) There has not been a study that analyzes the determinants of the new poverty configuration in Argentina.


The main idea driving this work is that devaluation caused a profound disruption in most economic relations. This outcome led to a state intervention mainly through the “Plan Jefas y Jefes de Hogar Desocupados”, as a way to ameliorate the impact of the crisis on households’ income.

At the present time, there are still many pieces of information lacking with respect to the empirical relationship between devaluation and poverty in Argentina. They raise
some of the following questions that this proposal will attempt to answer: Who are the “new” poor? What were the main determinants of the drop in household income? What was the impact of the income transference policy in mitigating or reducing the migration of households toward poverty? Could the social policy be considered as an adequate tool to face a crisis of the magnitude of the one experimented by Argentina in 2002? Could the households that are more vulnerable to large changes in relative prices be identified, so that social policy could target them more effectively?

The proposed methodology, for example, could also be used to explain the differences that price indexation makes on the impact of large shocks. For example, we could compare the experience of the impact of the hyperinflation of 1988-89 on poverty and indigence (during that period most prices and wages were indexed), with that of 2001-02 where a key feature of the convertibility regime remained in place: the prohibition to index contracts. A conclusion on the impact of indexation on large macroeconomic shocks could help to develop better social programs to deal with their impact.

1.2) Research Objectives

1.2.1) Main objective

Starting from the fact that economic and social policies have played an important role in year 2002, the general objective of this proposal is to show the impact of the economic crisis that followed the devaluation on the levels of poverty and indigence of households, and to analyze the impact of social policy in ameliorating that impact.

1.2.2) Specific objectives

For the period October 2001- October 2002:

1. To analyze the transition of households, i.e. among non-poor and different subcategories of poverty and indigence. The analysis will focus on the study of those households that remain poor, those that remain non-poor and those that move from one category to another, considering (and not considering) the government transfer in household income.

2. To decompose the poverty variation so as to be able to determine the contribution of two different effects: income growth and redistribution effects. The income effect will, in turn, be decomposed into the impact of the average nominal income, nominal prices variation and the ameliorating effect of the workfare program. This exercise will be made with the headcount poverty ratio and the headcount indigence ratio.

3. To estimate the determining socioeconomics factors that explains different forms of transition among the defined categories of poverty and indigence.

4. To analyze the interaction between the social and economic policies in the context of large devaluations.
2. Scientific contribution of the Research. Key references and knowledge gaps

Many researches have analyzed the relationship between the devaluation and poverty for the argentine crisis of 2001/02, utilizing different approaches. Four main references are related to our topic.

Kritz (2002) estimates that every point rise in the price index for the basic food basket produces 50,000 more extreme poor in the country. Furthermore, he estimates that from the decline in real income between May 2001 and May 2002, 30 percent can be explained by the fall in employment, 20 percent by the decline in nominal wages (including fewer hours worked), and 50 percent by the increase in prices.

In the devaluation context, social policy had focused on Programs of income transfers designed to ameliorate the impact of the crisis. The main one is the "Plan Jefas y Jefes de Hogar Desocupados", which provided income supplements of 150 Argentine pesos per month to about 2 million people. Fachelli, Ronconi and Sanguinetti (2005), using the "propensity score matching" methodology and the Encuesta Permanente de Hogares (EPH), found that this policy was pro-poor and increased beneficiaries income. However, the amount increased was smaller than the transfer amount: only $54.4. The poverty reduction made by this program was estimated at a mere 4.2%, while indigence fell by only 7.2%.

Fizbein, Giovagnoli and Aduriz (2002), examine the impact of the economic crisis on households' welfare between 2001 and 2002 using a World Bank survey, which covers 2,800 households. The fieldwork was done during the months of June and July of 2002. The questionnaire asked for information at the moment of the survey on different variables and how they compare with the same variables in the previous year. They asked questions on demographic characteristics, employment, income, migration status, educational level, health coverage, changes in consumption patterns and participation in social programs and community activities. They found that families appear to cope with the deteriorating situation through a variety of strategies, including increased production of goods at home, the entry into the workforce of those not previously employed, and reduced consumption of food and other products.

Cruces and Wodon (2003) decompose poverty into transient and chronic components for Argentina in the period 1995-2002 using a panel data based on the EPH. They estimate a censored quintile regression model and find, controlling for a wide range of household characteristics, that there has been an increase in chronic poverty throughout most of the period, but the increase in transient poverty occurred only towards the later part of the period.

Our research proposal has some advantages relative to previous works. First, our analysis will be based on the EPH. The data is collected and processed by the Argentine National Statistical and Census Institute (Instituto Nacional de Estadísticas y Censos, INDEC).

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1 The Plan Jefas y Jefes de Hogar Desocupados is an emergency workfare program. The beneficiaries are Male/female heads of households with children who are either 18 years of age, younger or disabled. Likewise, households in which the female head, spouse, concubine, or cohabitant partner of the male household head suffers from serious health conditions are also eligible. It provides a payment of $150 (around U$S 50) per month. During 2002 this program had about 2 million beneficiaries, and it may be the explanation of why unemployment –defined to include people in the program as employed- declined between May and October 2002.
Second, we will use a panel methodology, where we study the same group of households at two different times: October 2001 (before the crisis) and October 2002 (after the crisis). The number of households in both samples is 7,438 and represents 2,246,737 households and 37% in the sample of 2001.

Third, the crisis impact is analyzed in terms of the concept of “households transition” which looks whether a given household remain in the non poor category or in the poor and indigence one, or whether they migrate from one category to another. Furthermore, we will use a decomposition analysis in order to identify the determinants of poverty and indigence changes: redistribution and growth effects. The growth effect will, in turn, be analyzed in terms of changes in nominal income, price index and workfare program. Then, we will examine the determinants explaining each of these three households’ status (remain poor, remain non-poor, and move from one to another situation).

Finally, our analysis takes into account Fachelli, et. al.’s (2005) findings. We will start from the pre-devaluation situation, in which there was a limited transfer policy, in order to analyze the impact of the significant increase in the social program (“Plan Jefes”) introduced in 2002 to ameliorate the impact of devaluation on poverty.

The main advantage of this methodology is to be able to identify the contribution that different factors have had on households, leading to their transition from one to another category of poverty.

3. Policy relevance

The literature mentioned above provides evidence that contribute to partially answer some of the question formulated, in particular with respect to the impact of the crisis in the level of economic activity and on its impact on social behavior.

The expected results from this work is relevant to determine if the social policy implemented was an effective tool to maintain households over the poverty line, given the abrupt changes in the income levels produced by the economic policy.

In this sense, the contribution of this work is improve our understanding of the impact generated by devaluation on the income of economic agents, considering the existing feedback between the economic and social processes. The underlying question is: to what extent the social policy has the capacity to offset the effects of a large devaluation?

It will also allow for better understandings of which are the households that are more vulnerable – i.e. those that have the higher probability of seeing their income situation deteriorated the most due to a sharp devaluation. This result could make a contribution to the design of the social policy, since it could help it to be targeted more effectively to the households that would face the largest impact from devaluation.

4. Methodology

4.1) According with the specific objective N°1:

To better understanding the transition dynamic of households between October 2001 and October 2002, each poverty category reported by the INDEC (No poor, Poor, and
Indigent) also is divided into two subcategories\(^2\). The reason for this decision is the need to obtain reduced groups of households, so as to be able to analyze in a more detailed way the dynamic of its behavior, i.e. whether they change between subcategories between the two dates and what are the reasons behind the categories changes.

The way in which this division was made consisted in dividing by two the value of the goods basket that define each category, and find an interval between the lower and upper limit. The criteria used to divide the "No Poor category" (those persons that are above the poverty line) was to multiply by two the value of the basket that defines poverty, and utilize that threshold to divide the No Poor in two subcategories\(^3\). Another criteria would be to divide the categories using the median income level as a threshold.

Once the new subcategories are obtained, the work consists in observing how households 'move' between the two periods. That is, do they improve their situation, do they remain in the same poverty subcategory or do they worsen?

The methodology that we will use is one of panel sample. It must be pointed out that the households that participate in both EPH are 7,438, which expanded to the total of the population account for 2,246,737 households and represent around 37% of the sample of 2001\(^4\),\(^5\).

### Table 1. Households divided in poverty subcategories.

<table>
<thead>
<tr>
<th>Changes between October 2001 and 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household</td>
</tr>
<tr>
<td>Extreme Indigence</td>
</tr>
<tr>
<td>No Extreme Indigence</td>
</tr>
<tr>
<td>Indigence</td>
</tr>
<tr>
<td>Extreme Poor</td>
</tr>
<tr>
<td>No Extreme Poor</td>
</tr>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Moderate No Poor</td>
</tr>
<tr>
<td>Rest No Poor</td>
</tr>
<tr>
<td>No Poor</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: our own elaboration based on EPH

Table 1 illustrates the significant impact of devaluation on poverty. However, it does not take into consideration the impact of the social policy implemented during 2002 since the income compensation provided by the "Plan Jefes y Jefas" has been subtracted from family income.

\(^2\) See Annex No. 1

\(^3\) An alternative method that could be used to subdivide each category of poverty in October 2001 is to look at the income per person that divide each category in two subcategories with the same number of people Then to analyze the migration of those households between the two periods. It turns out that the results are very similar for these two methodologies.

\(^4\) This percentage is the consequence on the one hand of the way in which the sample is constructed -since it is renewed by quarters in every sample-, and also on the decision of INDEC of reducing in 50% the size of the sample for the GBA in October 2002. See: EPH-INDEC "Novedades de la Onda". Dirección de Encuestas a Hogares. Octubre 2002.

\(^5\) For characteristics of sampling weight see Data Requirements and Source.
It is clear that the impact of the crisis has been very significant, especially in the subcategories of higher poverty (Extreme Indigence and Indigence) where the changes are larger than 100%, i.e., there is more than a doubling of the number of households in these subcategories.

To analyze in more detail this situation, we constructed a table of “households’ transition”. It allows observing, in a very simple way, the movements of households that are in the sample between different subcategories of poverty, before the impact of the workfare programs. These numbers are presented in Tables 2 and 3.

Table 2. Transition Matrix
Categories of poverty

<table>
<thead>
<tr>
<th>Households</th>
<th>Indigence</th>
<th>Poor</th>
<th>No Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigence</td>
<td>0.09492</td>
<td>0.11616</td>
<td>0.05687</td>
<td>0.26795</td>
</tr>
<tr>
<td>Poor</td>
<td>0.01761</td>
<td>0.07596</td>
<td>0.16254</td>
<td>0.25612</td>
</tr>
<tr>
<td>No Poor</td>
<td>0.00834</td>
<td>0.01923</td>
<td>0.44837</td>
<td>0.47593</td>
</tr>
<tr>
<td>Total</td>
<td>0.12087</td>
<td>0.21135</td>
<td>0.66779</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Source: our own elaboration based on EPH

The matrix shows the probability of some household being in a given cell, i.e. of being in one category of poverty in one year and in another in the next year. It is clear from this table that around 22% of households entered in poverty in 2002, where almost 6% became indigent. Only 2.8% of households moved out of poverty.

Table 3. Transition Matrix
Subcategories of poverty

<table>
<thead>
<tr>
<th>Households</th>
<th>Extreme Indigence</th>
<th>No Extreme Indigence</th>
<th>Extreme Poor</th>
<th>No Extreme Poor</th>
<th>Moderate No Poor</th>
<th>Rest No Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme Indigence</td>
<td>0.0375</td>
<td>0.0307</td>
<td>0.0317</td>
<td>0.0176</td>
<td>0.0197</td>
<td>0.0051</td>
<td>0.1418</td>
</tr>
<tr>
<td>No Extreme Indigence</td>
<td>0.0094</td>
<td>0.0173</td>
<td>0.0395</td>
<td>0.0273</td>
<td>0.0255</td>
<td>0.0070</td>
<td>0.1261</td>
</tr>
<tr>
<td>Extreme Poor</td>
<td>0.0061</td>
<td>0.0070</td>
<td>0.0212</td>
<td>0.0356</td>
<td>0.0554</td>
<td>0.0138</td>
<td>0.1392</td>
</tr>
<tr>
<td>No Extreme Poor</td>
<td>0.0026</td>
<td>0.0020</td>
<td>0.0062</td>
<td>0.0129</td>
<td>0.0695</td>
<td>0.0238</td>
<td>0.1170</td>
</tr>
<tr>
<td>Moderate No Poor</td>
<td>0.0044</td>
<td>0.0025</td>
<td>0.0062</td>
<td>0.0101</td>
<td>0.0913</td>
<td>0.1502</td>
<td>0.2647</td>
</tr>
<tr>
<td>Rest No Poor</td>
<td>0.0011</td>
<td>0.0003</td>
<td>0.0005</td>
<td>0.0024</td>
<td>0.0134</td>
<td>0.1939</td>
<td>0.2112</td>
</tr>
<tr>
<td>Total</td>
<td>0.0610</td>
<td>0.0599</td>
<td>0.1054</td>
<td>0.1059</td>
<td>0.2740</td>
<td>0.3938</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: our own elaboration based on EPH

Considering the subcategories defined, we observe that 37% of households preserved their status after the crisis and 10% of households move to the extreme indigence subcategory. This fact suggests the relevance of studying the dynamics of poverty in the period covered.
4.2) According to specific objective N° 2:

As it was stated, households’ income and therefore poverty levels have been affected by the devaluation and social policy. To decompose the poverty variation so as to be able to determine the income growth effects, and specially the impact of the average nominal income, nominal prices variation and workfare program, we will follow the Datt and Ravallion (1992) and Shorrocks (1999) decomposition approach. We are interested in quantifying the relative degree of importance of these factors.

In the methodology proposed by Datt and Ravallion (1992) intertemporal movements in poverty is assumed to be explained by three primary factors, income growth (G), distribution shifts (D) and a residual (R). The growth component gives the change in the mean income while holding the Lorenz Curve constant at the reference level. The redistribution component gives the change in poverty due to a change in the Lorenz Curve while keeping the mean income at the reference level. The residual measures the interaction between growth and redistribution. Using the Shapley decomposition proposed by Shorrocks (1999) we will avoid the need to introduce a residual component into the decomposition equation.

Let P represent an aggregate statistical indicator such as the overall level of poverty, μ the average real incomes, L the Lorenz curve and t the period reference.

\[ P(\mu_t, L_t), \quad t = 1, 2 \quad (1) \]

The growth factor is \( G = \mu_2/\mu_1 - 1 \), and the redistribution factor \( D = L_2 - L_1 \). The decomposition issue here consists of identifying the contribution of these two primary factors to the variation in poverty, \( \Delta P \). So,

\[ \Delta P = P(\mu_2, L_2) - P(\mu_1, L_1) = P[\mu_1(1 + G), L_1 + D] - P(\mu_1, L_1) = F(G, D) \quad (2) \]

where F is an appropriate aggregate function. The goal of decomposition is to attribute contributions, \( C_G \) and \( C_D \), to growth and redistribution primary factors to yield the poverty change.

\[ \Delta P = C_G + C_D \quad (3) \]

The Shapley decomposition procedure consists of estimating the marginal effect on poverty of removing each contribution factor in a given elimination sequence. Repeating the operation for all possible elimination sequences we compute the mean of the marginal effects for each factor. Since there are two factors we have two possible elimination sequences \( \{G, D\} \) and \( \{D, G\} \). This mean measures the contribution of the chosen factor, yielding an exact, additive decomposition of poverty in two contributions, G and D. From the equation of variation in poverty we can obtain a final expression for the contribution of growth and redistribution (see Kabore (2003) for a detailed presentation of Shapley procedure):

\[ C_G = \frac{1}{2} \left[ P(\mu_2, L_2) - P(\mu_1, L_2) + [P(\mu_2, L_1) - P(\mu_1, L_1)] \right] \quad (4) \]

\[ C_R = \frac{1}{2} \left[ P(\mu_2, L_2) - P(\mu_1, L_2) + [P(\mu_1, L_2) - P(\mu_1, L_1)] \right] \quad (5) \]
We consider growth component as a “primary factor” which is composed of a number of secondary factors: nominal income, price index and governmental transfer (“Plan Jefas y Jefes de Hogar Desocupados”).

Thus, we have a hierarchical decomposition model: redistribution and growth effects as primary factors and for the latter, nominal income, price index and governmental transfer as secondary factors. We have a two stage decomposition where factors are grouped into two hierarchical levels (primary and secondary factors) and we will apply the Shapley-Owen-Shorrocks procedure (SOS) in order to ensure consistency of the decomposition.

The first step detailed above (equations 3, 4 and 5) determines the contributions of the primary factors using the Shapley procedure. In the second step, the contribution of growth primary factor is allocated to its constituents called “secondary factors” (nominal income, \(ni\), price index, \(pi\), and transfer program, \(tp\)) by applying the Shapley decomposition to the model again. The aggregation is consistent due to the fact that the contribution of primary factor to growth is the sum of the contributions of its constituents:

\[
C^G = C^G_{ni} + C^G_{pi} + C^G_{tp} \quad (6)
\]

**4.3) According to specific objective N° 3**

We will particularly focus on understanding the poverty transition profile between 2001 and 2002. Therefore we will model and estimate the determining factors of the transition from different forms of poverty, using a multinomial logit model since our dependent variable is a categorical variable with values corresponding to each of the poverty transitions in our matrix. For methodological reasons, we need to define different categories. Those are: households that remain poor, households that move, households that remain non-poor.

This model is designed to estimate the impact of the different explicative variables on each of the forms of poverty transition. The model will predict the probability that a household, with given socioeconomic characteristics, will experience any of the three poverty states. We will show the impact of discrete changes in explanatory variables over the probability of being in each poverty state and we will attempt to answer several questions: Are the factors explaining “households that move” and “households that remain non poor” the same? Do the factors explaining “households that remain poor” equally important in explaining “households that move”? What are the main factors explaining a move to a lower poverty category?

The explanatory variables will be considered at two different levels: household and individual level. These variables will be measured as given initial characteristics and as changes from one period to another. At the household level, we consider household socioeconomics characteristics (gender of the head of the household, household size, income earners/household size, children under 12 years old, age structure, years of education, etc). At the individual level, we considered labour status, institutional sector at which he works (private or public sector), formal or informal work, type of work, labour hours, duration of unemployment, willingness to change employment and/or increase hours of work, etc.

The multinomial logit model assumes that the probability that a household \(i\) will be in poverty state \(j\), \(p_{ij}\) is,
\[ p_{ij}(y_i = 1 | x_i) = \frac{1}{\sum_{j=2}^{J} e^{\beta(j)x_i}} \quad (7) \]

and

\[ p_{ij}(y_i = J | x_i) = \frac{e^{\beta(j)x_i}}{1 + \sum_{j=2}^{J} e^{\beta(j)x_i}} \quad \text{if } J > 1 \quad (8) \]

where \( x_i \) is a vector of individual and household characteristics, \( \beta \) is a vector of unknown parameters. There are 3 states of poverty in this model.

We will show the impact of discrete changes in explanatory variables over the probability of being in each poverty status and their impact in terms of relative risk ratios (e.g. relative probability of poverty moves relative to never poor).

From the point of view of estimation, an assumption of multinomial logit model is that the odds ratio, \( p_{ij}/p_{ik} \) does no depend on the other economic state, which is known as the Independence of Irrelevant Alternatives (IIA). We will use the test developed by Hausman and McFadden to determine if IIA assumption is valid to justify the use of multinomial logit model. If the IIA assumption fails, then the nested model will be a more accurate method of estimation due to its ability to accommodate correlation between subsets of alternatives in a choice set. And we plan to use it in that case.

### 4.4) According to specific objective N° 4:

The development of this methodology could contribute to provide the answer to the question that we have formulated with respect to the interaction between the economic policy and the social policy. In particular, we could measure whether the policy implemented was effective in ameliorating the impact of the devaluation, or phrased different, what was it contribution to that objective?

It could also allow a better understanding of what are the socioeconomic variables that make a household more vulnerable so as to be able to make some policy recommendation in relation to social policies designed to ameliorate the impact on poverty of devaluation.

5. Data requirements and sources

The methodology that we propose to use requires the use of micro data on the same households in two different moments of time (before and after devaluation). The data needs to allow us to describe the main socioeconomic characteristics of each household as well as of its members.

Our analysis will be based on the Permanent Household Survey (EPH), INDEC. The survey has been conducted bi-annually in May and October since 1974 to May 2003, and covers 28 urban centers, which represents 70% of the urban population of the country and 98% of the population living in urban centers with more than 100,000 inhabitants.

The EPH has a rolling panel’s structure: each household is surveyed for four successive periods and new ones replace each period 25% of the surveyed households. It means each individual could be followed – at the most – during four waves. This characteristic of the survey is quite useful for this study, since by providing information before and after the devaluation, it allows us to apply our methodology keeping 37% of the surveyed households in October 2001. The households that participate in the panel (Oct. 2001 and Oct. 2002) are 7438, which expanded to the total of the population account for 2.246.737 households. Table 5 shows the sampling and the sampling weight.

<table>
<thead>
<tr>
<th>Table 5. EPH Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
|*Includes the category that does not report income or does so only partially

6. Dissemination Strategy

We consider that our approach and results will be relevant for several research and policy making groups: students and teachers engaged in the study of public policies, public officials in international organisations concerned with public policy in development countries (e.g. Economic Commission for Latin America and the Caribbean, International Labour Organization, Inter-American Development Bank, World Bank), as well as policymakers in Argentina.

In this sense, we plan to adopt a broad dissemination strategy. We plan to present and discuss our findings at local academic institutions, such as Economic Seminars at the Universidad Nacional de La Plata (UNLP), Universidad de Buenos Aires and Facultad Latinoamericana de Ciencias Sociales (FLACSO), as well as in internal seminars in the Ministry of Economy and Production as well as in the Ministry of Labour and Social Welfare.

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6 The sample between October 2001 and 2002 should contain 50% of the households surveyed in October 2001. However, this lower percentage is the consequence of the decision of INDEC of reducing in 50% the size of the sample for the GBA in October 2002. See: EPH-INDEC "Novedades de la Onda". Dirección de Encuestas a Hogares. Octubre 2002.
We will submit the paper for publication in UNLP web page (www.depeco.econo.unlp.edu.ar/semi.htm), FLACSO web page (areas y proyectos www.flacso.org.ar), and the Revista Argentina de Sociología (www.cps.org.ar).

We also plan to send a summary of our findings to the major argentie daily newspapers, as well as to the economic teams of the main political parties. In addition, we will schedule as large as possible number of one-on-one meetings with major political and social actors involved in poverty policies.

7. Team members’ experience and expected capacity building

a. Member’s experience

Ariela Goldschmit is an economist specialised on expenditure and social policies. She is currently working as a consultant at the Division of Social Expenditure and Social Programs (Ministry of Economy and Production) where coordinates the quantification and analysis of Children Public Expenditure and conducts the quantification and analysis of Public Expenditure of federal and local governments with emphasis on social programmes. She is co-authored of a report of local workfare programmes. In addition, she teaches Economics at the University of Buenos Aires.

Evelyn Vezza is an economist specialised on micro econometrics with special focus on labor economics and income distribution. She has served as consultant in the Ministry of Economics and is currently working at the Division of Social Expenditure and Social Programs. Also, she is a researcher at the Centro de Estudios Distributivos, Laborales y Sociales (Universidad Nacional de La Plata).

b. External Adviser’s experience

Sandra Fachelli is a sociologist specialized on social programs. She worked at the Instituto Nacional de Estadísticas y Censos (INDEC), and she is currently working as a researcher at the Division of Social Expenditure and Social Programs (Ministry of Economy and Production). She is a member of the Consulting Council on Studies on Poverty and Social Programs of Argentina, and has collaborated on several documents published by the government. It is closely related to FLACSO (Facultad Latinoamericana de Ciencias Sociales) where she is finishing its Master Degree on Social Policies.

c. Research capacities build by this project

We expect that this project will contribute to a better understanding by the research team of the issues of poverty dynamic, according to the recent literature that was review in the text. In particular, a better understanding of the transition matrix, the decomposition of the impact of a crisis on growth and redistribution effects, the use of multinominal Logit models to define vulnerable groups, and the relevance of nested Logit model for this kind of analysis. Also, we expect to have a better knowledge of tools that allow analyzing poverty dynamic, like the capacities of the DAD 4.4 program.

d. Contribution of this project to research capacities in Argentina

The authors and the external adviser have worked at the Division of Social Expenditure and Social Programs of the Ministry of Economy and Production of Argentina. This
Division is responsible for evaluating social projects and submitting proposals as to the changes that are required to improve their efficiency. Therefore, one of the main impacts of this project is to improve the capacity of that Division about the dynamic of poverty.

On the other hand, the team is involved in teaching at a different Argentine university: Universidad de Buenos Aires, Universidad Nacional de La Plata, and FLACSO. Therefore, another important impact of this project to the research capacities on poverty dynamic in Argentina will come from its impact on the participants as teachers at different Argentine universities.

e. Contribution of each of the members to the project

Specific Objective No. 1 will be developed by both researchers. Ariela Goldschmit will be responsible for Specific Objective No. 2 and Evelyn Vezza will be in charge of Specific Objective No. 3. Finally, Specific Objective No. 4 will be a joint effort of the team. Sandra Fachelli will advise the work in progress.
References


World Bank (200b), “Gestion del riesgo social en Argentina”, World Bank Office for Argentina, Chile, Paraguay and Uruguay.
Annex No. 1.- Indigence and Poverty line methodology

The method currently in use by the INDEC to measure poverty is presented below.

What is meant by indigence level?

The concept of «indigence level» (or line of indigence), IL, aims to ascertain whether the households earns enough income to purchase a food basket that will satisfy a minimum threshold of energetic and protein needs. Thus, the households that do not meet that threshold or line are considered indigent. The procedure is based on the use of a “Canasta básica de alimentos” -basic food basket- (CBA) of minimum cost, determined as a function of the consumption patterns of a reference population defined according to the results of the 1985-86 Household Expenditure and Income Survey. The procedure also takes into account the prescribed kilocalories and protein requirements for that population (as specified in the «Basic Food Basket for the Equivalent Adult», included below). Once the CBA components have been established, their prices are assigned according to the Consumer Price Index (IPC) for each measurement period.

Since human nutritional requirements vary according to age, sex and person’s activity, it is necessary to adjust for each person’s characteristics, taking as reference the requirements of a male adult aged between 30 and 59 and exerting moderate activity. This reference unit is called the «equivalent adult» and is assigned the value 1.00. The table of equivalences of energetic requirements for each consumer unit in terms of equivalent adult is the following.

---

8 See Annex N°2
Each household’s composition in equivalent adults determines a specific CBA value for that household. In September, 2000, the CBA value for an equivalent adult was 62,44 pesos. As a final step, the specific value of each household’s CBA is compared to the household’s total income. If the total income is less than the household’s CBA, the household and its members are considered to be under the indigence level.

**What is meant by poverty line?**

The measurement of poverty by the poverty level or «poverty line» (PL) method is based on determining, from the household income reported, whether the households in question are able to satisfy --through the purchase of goods and services-- a set of nutritional and non-nutritional needs considered essential. In order to calculate the poverty level it is necessary to determine the CBA value and compound it with the inclusion of non-nutritional goods and services (clothing, transportation, education, health care, etc.) so as to obtain the value of the Total Basic Basket (CBT).

For the purpose of compounding the CBA value, the so-called Engel coefficient (EC) is used. It is defined as the ratio of food expenditures to total expenditure observed in the reference population (in this case, the reference population in the base year for this calculations, 1985-86), thus:

\[
\text{Engel coefficient} = \frac{\text{Food expenditures}}{\text{Total expenditure}}.
\]

---

### Table of equivalences

**Energetic needs and consumer units by age and sex**

<table>
<thead>
<tr>
<th>Sex and age</th>
<th>Energetic needs (Kcal)</th>
<th>Consumer unit / Equivalent adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys and girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 1 year old</td>
<td>880</td>
<td>0.33</td>
</tr>
<tr>
<td>1 year old</td>
<td>1170</td>
<td>0.43</td>
</tr>
<tr>
<td>2 yrs. Old</td>
<td>1360</td>
<td>0.50</td>
</tr>
<tr>
<td>3 yrs. Old</td>
<td>1500</td>
<td>0.56</td>
</tr>
<tr>
<td>4 to 6 yrs. Old</td>
<td>1710</td>
<td>0.63</td>
</tr>
<tr>
<td>7 to 9 yrs. Old</td>
<td>1950</td>
<td>0.72</td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 12 yrs. Old</td>
<td>2230</td>
<td>0.83</td>
</tr>
<tr>
<td>13 to 15 yrs. Old</td>
<td>2580</td>
<td>0.96</td>
</tr>
<tr>
<td>16 to 17 yrs. Old</td>
<td>2840</td>
<td>1.05</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 12 yrs. Old</td>
<td>1980</td>
<td>0.73</td>
</tr>
<tr>
<td>13 to 15 yrs. Old</td>
<td>2140</td>
<td>0.79</td>
</tr>
<tr>
<td>16 to 17 yrs. Old</td>
<td>2140</td>
<td>0.79</td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 29 yrs. Old</td>
<td>2860</td>
<td>1.06</td>
</tr>
<tr>
<td>30 to 59 yrs. Old</td>
<td>2700</td>
<td>1.00</td>
</tr>
<tr>
<td>60 yrs. old and over</td>
<td>2840</td>
<td>1.05</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 29 yrs. Old</td>
<td>2000</td>
<td>0.74</td>
</tr>
<tr>
<td>30 to 59 yrs. Old</td>
<td>2000</td>
<td>0.74</td>
</tr>
<tr>
<td>60 yrs. old and over</td>
<td>1730</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Note: Extracted from the table by MORALES, Elena, Canasta básica de alimentos, Gran Buenos Aires, Documento de trabajo n°3, INDEC/IPA, 1988.
In each period, both the numerator and the denominator of the Engel coefficient are updated with the price variations obtained from the CPI. According to the relative price variation, the EC is determined each month for the purpose of measuring poverty. In order to compound the CBA value, in practice its value is multiplied by the reciprocal of the Engel coefficient:

\[ \text{CBT} = \text{CBA} \times \frac{1}{\text{Engel coefficient}}. \]

In September 2000, the reciprocal of the Engel coefficient was 2.42 and the CBA was 62.44 pesos. Thus we have $62.44 \times 2.42 = $151.10 (CBT) for an equivalent adult. As the last step, each household’s CBT value is compared to the household’s total income. If the household’s income is less than the CBT value, the household and its members are considered under the poverty line; otherwise, they will be counted among the non-poor population and households.
## Annex No. 2.- Basic Food Basket (CBA)

Basic food basket for the equivalent adult (monthly)

<table>
<thead>
<tr>
<th>Component</th>
<th>Grams</th>
<th>Specifications</th>
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</thead>
<tbody>
<tr>
<td>Bread</td>
<td>6060</td>
<td></td>
</tr>
<tr>
<td>Salt crackers</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Sweet biscuits</td>
<td>720</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>630</td>
<td></td>
</tr>
<tr>
<td>Wheat flour</td>
<td>1020</td>
<td></td>
</tr>
<tr>
<td>Other flours (corn)</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Noodles</td>
<td>1290</td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td>7050</td>
<td></td>
</tr>
<tr>
<td>Sweet potatoes</td>
<td>690</td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>1440</td>
<td></td>
</tr>
<tr>
<td>Sweets and jams</td>
<td>240</td>
<td>made with milk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>made with sweet marmalades</td>
</tr>
<tr>
<td>Dry legumes</td>
<td>240</td>
<td>Lentils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Green peas</td>
</tr>
<tr>
<td>Vegetables</td>
<td>3930</td>
<td>Chard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Onions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lettuce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tomatoes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carrots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pumpkins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canned tomatoes</td>
</tr>
<tr>
<td>Fruits</td>
<td>4020</td>
<td>Bananas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tangerines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oranges</td>
</tr>
<tr>
<td>Meats</td>
<td>6270</td>
<td>Short ribs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chuck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minced meat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rump beef</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Navel and foreshank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom round beef</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shoulder clod</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chicken</td>
</tr>
<tr>
<td>Eggs</td>
<td>630</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>7950</td>
<td></td>
</tr>
<tr>
<td>Cheese</td>
<td>270</td>
<td>fresh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>spread</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quartirolo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grated</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>1200</td>
<td>blended</td>
</tr>
<tr>
<td>Sweet/sweetened</td>
<td>4050</td>
<td>Concentrated (fruit) juices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>drinks</td>
</tr>
<tr>
<td>Unsweetened carbonated beverages</td>
<td>3450</td>
<td>Soda water</td>
</tr>
<tr>
<td>Table salt</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Kitchen salt</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Vinegar</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Tea</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Mate</td>
<td>600</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Documento de trabajo n° 3, Idem n° 8, INDEC
CURRICULUM VITAE – Researcher

Name: Evelyn Vezza
Country of citizenship: Argentina
Birth date: July 7th, 1978
Address: Guido 1927, 1 D
(1119) Buenos Aires, Argentina
Phone Number: (5411) 4801-9418
e-mail: evezza@mecon.gov.ar

Education

Universidad Nacional de La Plata, Argentina
Antorchas scholarship

Universidad Nacional de Rosario, Argentina
Honors: merit-based awards as a graduate in 2002 and as a student in 2001

Experience


Present  Teaching assistant, Universidad Nacional de La Plata. Course: "Economía de Empresa y de la Organización Industrial" (since November 2004).

Present  Junior researcher, Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), Universidad Nacional de La Plata (since August 2003). Main projects: "Socioeconomic Database for Latin American countries" (for the World Bank); "Ethnicity and the Millennium Development Goals in Latin America and the Caribbean" (for the United Nations); Desarrollo Rural en América Latina y el Caribe (for the World Bank); y "Protección Social y Empleo en América Latina: Estudio sobre la Base de Encuestas de Hogares" (for the International Labor Organisation).

August 2005 - June 2004  Consultant, Comisión Nacional de Defensa de la Competencia (competition agency), Ministerio de Economía y Producción, Argentina.

2001 Junior researcher, Instituto de Investigación en Economía y Dirección para el Desarrollo, Universidad Austral, Argentina. Areas of concentration: regulated utilities, financial system.


**Published and Unpublished Research**


"Asignación del factor trabajo y dispersión en los ingresos laborales horarios"; Universidad Nacional de La Plata, August 2003, mimeo.

"Persistencia y cambios de régimen en la tasa de desempleo argentina", Universidad Nacional de La Plata, March 2003, mimeo

**Other Activities**


CURRICULUM VITAE – Researcher

Name: Ariela Goldschmit
Gender: Female
Age: 26
Nationality: Argentine
Status: Single
Address: 287 Serrano Street (1414) Buenos Aires City
Telephone Number: (054-11) 4854-3803
Mobile Number: (054-11) 155-017-6730
E-mail: arielagold@hotmail.com/ agolds@mecon.gov.ar

Education

2005-Present
Master in Economics Candidate
University of Buenos Aires (UBA)

1998-2003
Licentiate in Economics
University of Buenos Aires (UBA)
Average qualification: 8.4 (eight with 40/100) - Magna cum laude Diploma

Professional Experience

June 2001 to Present
Analyst
Division of Public Expenditure and Social Programs Analysis
Ministry of Economy and Production

Activities: Analyzed financial consistency between federal and local governments, analyzed evolution of Nutrition Expenditure, coordinated quantification and analysis of Children Public Expenditure, conducted and coordinated quantification and analysis of Public Expenditure of federal and local governments with emphasis on social programmes, co-authored a report of local workfare programmes, provided technical support to the Director for policy discussions; wrote several analytical and policy reports.

Publications and colaborations


**Additional skills**

**Spanish:** Native  
**English:** Good manage spoken and written.  

**Microsoft Office:** Word, Excel, Powerpoint, Acces.  
**Others:** E-views, Matlab, Stata

**Teaching experience**

2003-Present  
Teaching assistant of International Economy – University of Buenos Aires (UBA)

1999-2003  
Teaching assistant of Economics – University of Buenos Aires (UBA)

**Courses**

2004  
Ist Course about National Public Sector Financial Administration - Ministry of Economics and Production
CURRICULUM VITAE – External Adviser

Name: Sandra Isabel Fachelli Oliva
Country of citizenship: Argentina
Birth date: December 13th, 1967
Address: Ramón Falcón 1365, PB “A”, (1406) Buenos Aires, Argentina
Phone Number: (5411) 4431-2419
e-mail: sandrafachelli@hotmail.com

Academic Studies

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>LatinAmerican University on Social Sciences</td>
<td>Master on Design and Implementation 2001-2003</td>
<td></td>
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<tr>
<td>Facultad Latinoamericana de Ciencias Sociales</td>
<td>of Social Policies and Programs</td>
<td></td>
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<tr>
<td>John F. Kennedy University</td>
<td>Graduate Degree on Sociology</td>
<td>1990/1995</td>
</tr>
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<table>
<thead>
<tr>
<th>Language</th>
<th>Speak</th>
<th>Read</th>
<th>Write</th>
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<tbody>
<tr>
<td>English</td>
<td>Good</td>
<td>Good</td>
<td>Regular</td>
</tr>
<tr>
<td>French</td>
<td>Regular</td>
<td>Regular</td>
<td>Regular</td>
</tr>
</tbody>
</table>

Teaching Experience


Key Professional experience

1994

“The Health of School Teachers”. Analysis of the problem, with special emphasis on diseases related to their profession, work schedule. Data from National and Provincials Census of schools.

1995


1996/97
Supervising of the information gathering and the consistency of the national survey on expenditure and family income of households ("Encuesta Nacional de Gastos e Ingresos de los Hogares") INDEC

1997

Supervising of the information gathering and the consistency of the survey on social development for the metropolitan area. Living conditions and access to social programs and services. ("Encuesta de Desarrollo Social"). SIEMPRO/INDEC.

1998

Field Coordinator of the new index of consumer prices. INDEC

1999 a 2001

Member of the team of advisers to the Secretary of Economic and Regional Programming. Member of the Consulting Council on "Studies on Poverty and social programs". Ministry of Economy

April 2001- December 2005

Researcher on "Promotion and Social Assistance" on the Division of Social Expenditure and Social Programs of the Ministry of Economy and Production.

Additional education: seminars and workshops

- Seminar on ‘Prevention and Research on Drug Abuse and Dependency’
  Date: June 3rd and 4th, 1994.
  Institution: Department of Anthropology, University John F. Kennedy, and IPID (Institute for the prevention and Research on Drug Abuse)


- Methodology and Philosophical problems in the Social Sciences.
  Date: August 14th –18th, 1995. Institution: University of Buenos Aires, Philosophy Department. Professor Mario Bunge

  Date: September 21th and 22th, 1995.
  Institution: University of Buenos Aires, Department of Philosophy. Center for Ethical Research "Dr. Risieri Frondizi” and Instituto Italoargentino de Investigación "Antonio Gramsci” – Centro de Estudios Políticos "Sandro Pertini"

- VI Seminar on Epistemology and History of the Sciences.
  Date: October 6th and 7th, 1995.
  Institución: Universidad Nacional de Córdoba, Facultad de Filosofía y Humanidades
• Seminar on "Economic and Political Liberalization in Eastern Europe and Latin America"
  Date: August 12th – 17th, 1996
  Institution: Universidad de Buenos Aires. Ciclo Básico Común.
  Teacher: Carlos Waisman (Universidad de California, USA)

• VII Seminar on Epistemology and History of the Sciences
  Date: December 5th-7th, 1996
  Institution: Universidad Nacional de Córdoba, Facultad de Filosofía y Humanidades

• Seminar "Privatization of Public Utilities and its Impact on the Popular Classes in Argentina'
  Date: May 12th and 13th, 1999
  Institution : World Bank and Universidad de Belgrano.

• Regional Workshop "The measures of Expenditure in the Household Surveys"
  Date: May 24th – 28th, 1999
  Institution: Banco Mundial, BID y CEPAL
  Place : INEGI Instituto Nacional de Estadística, Geografía e Informática de México; Aguascalientes, México.

• 9th International Workshop on Poverty: Definitions, Concepts and Methodologies for its measurement.
  Date: July 16th-31st, 1999
  Institute: CEPAL e INEGI
  Place : INEGI Instituto Nacional de Estadística, Geografía e Informática de México; Aguascalientes; México.

• 4th Regional Workshop of MECOVI. The mesurement of Poverty: The meted of lines of Poverty.
  Date: November 16th – 19th, 1999
  Institution: INDEC, CEPAL, BIRD y BID
  Place: Buenos Aires, Argentina.

• First National Workshop of Theory and Practice of Sampling
  Date: November 15th-22nd, 1999.
  Institution: MECOVI – INDEC
  Place: Buenos Aires, Argentina.

• The Demography of Poverty
  Date: November 9th-11th, 2000
  Institution: CROP-CLACSO
  Place: Buenos Aires, Argentina.

• Sixth Regional Workshop of 6to. Taller Regional de Indicadores sobre el Desarrollo Social.
  Date: November 15th –17th, 2000
  Institution: BID, BIRF, CEPAL e INDEC
  Place: Buenos Aires, Argentina.

• Workshop on the methodology of measurement of family income and expenditure in a system of Household Surveys.
**Research work**


