

Widening social security coverage. Evaluating income distribution effects of Argentina's PROG.R.ES.AR

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Abstract

In the last decade, Latin American countries experienced a large increase in their social security coverage rates. Reinforcing this regional dynamics, Argentina introduced in 2014 a new set of social rights through the youth oriented program named PROG.R.ES.AR, aimed to: 1) reduce income inequality, by providing financial support to low-income young people; 2) complement and improve capacity-building strategies of human capital policies; and 3) stimulate aggregate demand, with the injection of up to AR\$ 10,600 million annually in terms of social investment. In order to make the first prospective evaluation of this program, the main contribution of this paper is to show their expected "first round" distributional impact, using data from the EPH-INDEC (Q2-2013) and applying the methodology popularized by Bourguignon and Spadaro (2006). Our simulations show that it could potentially reduce inequality in up to 14.3% and 32% for the whole population and the youth, respectively.

Resumen

En la última década, las economías latinoamericanas experimentaron un considerable aumento en la cobertura de sus sistemas de seguridad social. Reforzando tal dinámica regional, Argentina introduce en 2014 una nueva política creadora de derechos sociales orientada a los jóvenes, PROG.R.ES.AR, que tiene por objetivos: 1) reducir las inequidades distributivas, a partir del apoyo financiero a jóvenes de bajos ingresos; 2) promover la generación de nuevas capacidades en los jóvenes; e 3) impulsar la demanda agregada, inyectando hasta AR\$10,600 millones anuales en inversión social. A efectos de realizar una evaluación de impacto del programa, la principal contribución de este trabajo consiste en exponer sus efectos distributivos esperados de "primera vuelta" utilizando datos de la EPH de INDEC (2T-2013) y aplicando la metodología popularizada por Bourguignon y Spadaro (2006). Las simulaciones evidencian que PROG.R.ES.AR potencialmente reducirá la desigualdad hasta un 14.3% y un 32% para el total poblacional y los jóvenes, respectivamente.

Keywords: Argentina, Inequality, Youth, Micro-simulations, Cash transfer programs, PROGRESAR

Palabras clave: Argentina, Desigualdad, Jóvenes, Micro-simulaciones, Programas de transferencia condicionada, PROGRESAR

Clasificación JEL: D31, D63, I38, R19, Z18

Primera versión recibida el 29 de septiembre de 2014; versión final aceptada el 30 de noviembre de 2014

Coyuntura Económica. Vol. XLIV, No. 2, Diciembre de 2014, pp. 105-126. Fedesarrollo, Bogotá - Colombia

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I. Introduction

Despite significant improvements of Argentinean labor market figures in recent years, and in spite of having experienced a reduction of about 40% and 30%, respectively, both the unemployment rate and the unregistered employment rate among young people still present remarkable high values. As a consequence, the youth unemployment rate (18-24 years old) was, on average (between 2003 and 2013), 2.4 times the adult unemployment rate.

Moreover, the 2003-2009 auspicious initial evolution appears to be stagnated in the last four years (see Figures 1 and 2).

Absolute and relative vulnerability of young people -associated to lower employability and

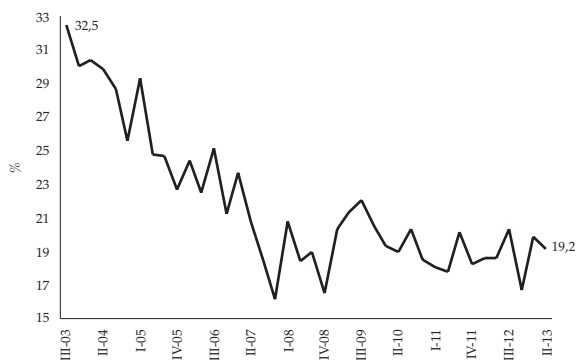
wage levels- and the above mentioned recently stagnated dynamics make young people a key population sub-group for targeted public policy in Argentina.

In this context, the government created in 2014 the *Programa de Respaldo a Estudiantes Argentinos* (PROG.R.ES.AR), aimed at widening the new mixed (and more Beveridgean) social security paradigm, extending coverage to young adults with the following objectives:

- To promote new social rights and reduce income inequality, by providing financial support to low-income young people;
- To complement and improve capacity-building strategies of human capital policies; and

Figure 1

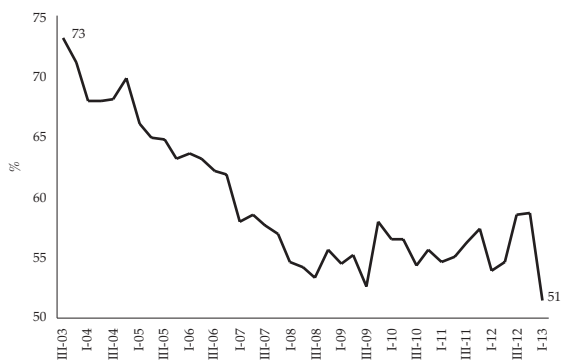
YOUTH UNEMPLOYMENT RATE (18-24 YEARS OLD), IN % OF THE ECONOMICALLY ACTIVE POPULATION AGED BETWEEN 18 AND 24 YEARS OLD



Source: Own estimations based on EPH-INDEC.

Figure 2

UNREGISTERED YOUTH EMPLOYMENT RATE (18 TO 24 YEARS OLD), IN% OF TOTAL WAGE EARNERS EMPLOYED IN THE SAME AGE GROUP



Source: Own estimations based on EPH-INDEC.

- To stimulate aggregate demand, with the injection of up to \$ 10,600 million annually in terms of social investment (targeted to people that generate the highest Keynesian multipliers).

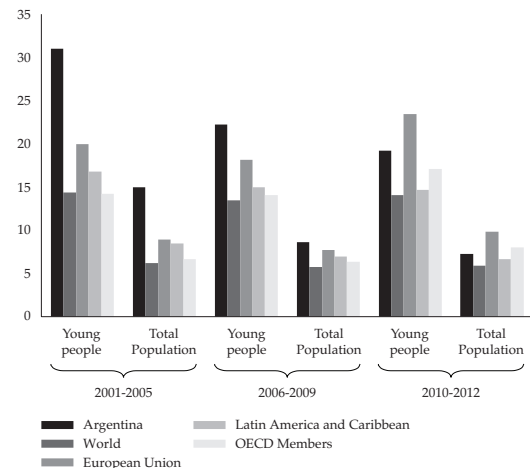
The main contribution of this paper is to generate the first prospective study of the PROG.R.ES.AR "first round" distributional impact (see section 3-*Methodology*), following a detailed process of micro simulation using public data from the National Permanent Household Survey (EPH-INDEC). For that purpose, the paper is structured as follows. After this introduction, section II presents an overview about the PROG.R.ES.AR genesis and its main characteristics. Subsequently, in section III, the methodology used in the micro simulation process is described. Finally, in sections IV and V, we examine empirical analysis results and discuss our last key remarks, concluding the article with bibliographical references.

II. PROG.R.ES.AR in Argentina: motivation and main features

Young people's difficulties to gain (good quality) access to the labor market constitute a structural and global phenomenon. In quantitative terms, worldwide statistics suggest that youth unemployment is much higher than that of adults. Indeed, the youth¹ unemployment rate is nearly three times

as high as adult rate (Figure 3), and young people also face much lower chances of getting a formal employment (OIT, 2013).

Figure 3
UNEMPLOYMENT RATE FOR YOUNG PEOPLE (AMONG 15 TO 24 YEARS OLD, IN % OF THE ECONOMICALLY ACTIVE POPULATION AMONG 15 TO 24) AND TOTAL POPULATION (IN % OF THE WHOLE ECONOMICALLY ACTIVE POPULATION). INTERNATIONAL COMPARISON (2001-2005, 2006-2009, 2010-2012 AVERAGES)



Source: World Development Indicators - World Bank.

In the mid 90s, and because of the high relative vulnerability of young people, many Latin American countries implemented different measures to improve their social, educational and employment status (Bourguignon *et al.*, 2003; Villatoro, 2005; Rawlings, 2005; Valencia Lomelí, 2008). They built-

¹ The definition of youth as the population group ranges from 18 to 24 years old corresponds to the category established by the World Bank.

up a new generation of "conditional cash transfer programs", aimed to produce synergies between different individual capabilities (e.g. education, training and professional experience). This set of experiences includes representative programs such as: *Programa Jóvenes con Oportunidades*, Mexico; *Programa Nacional de Inclusión de Jóvenes PRO JOVEN*, Brazil; *Programa Avancemos*, Costa Rica; among many others.

In Argentina, youth-oriented capability-building and redistributive measures revived after the 2001-2002 crisis. The national government implemented several youth programs aimed at promoting school retention (e.g. *Jóvenes con Más y Mejor Trabajo*, *Programa Nacional de Becas del Bicentenario*, *Programa Nacional de Becas Universitarias*, *Plan de Finalización de estudios primarios y secundarios*), as well as massive direct employment programs such as *Plan Jefes y Jefas de Hogar Desocupados* (PJyJHD) or *Argentina Trabaja*, where young people had a major participation rate (Neffa and Brown, 2011).

In this context, PROG.R.ES.AR was created by the Decree 84/2014. It is a direct cash transfer program with educational and health responsibility, in line with the design of income policies in Latin America (Skoufias *et al.*, 2001; Soares *et al.*, 2006). It was designed to ensure the recognition and estab-

lishment of a new social right for young people: to receive state support in order to achieve reintegration and/or continuity in the educational system, and conducting training experiences and/or qualifying practices at work. In this regard, PROG.R.ES.AR improves and refines the Argentinean new social security (increasingly Beveridgean) paradigm, by extending vulnerable population coverage and complementing other social rights creating policies such as: *Plan Nacional de Inclusión Previsional* (Decree 1454/2005), *Asignación Universal por Hijo para Protección Social* (AUH)² (Decree 1602/2009), *Asignación Universal por Embarazo para Protección Social* (AUE) (Decree 446/2011), and *Programa Conectar Igualdad* (Decree 459/2010), among others.

Its main and clearest antecedent is the *Programa Jóvenes con Más y Mejor Trabajo* (JMMT) (Resolution 497/2008) which operates under the aegis of the Ministry of Labor, Employment and Social Security of the Nation. However, PROG.R.ES.AR overcomes JMMT limitations, as its integral design eliminates previous programs hard access restrictions (e.g. occupational status) and addresses youth issues from the joint action of various state agencies, which integrate two inter-ministerial committees, the *Executive Committee and Advisory Committee*. The generation of new capabilities in young people (school retention and/or professional formal system) is encouraged

² For a comprehensive analysis of the impact of the Universal Child Allowance for Social Protection, see Agis, E., Cañete, C. & Panigo, D. (2013). "El impacto de la asignación universal por hijo en la Argentina", *Serie Empleo, desempleo y políticas de empleo*, 15, 1-75.

in conjunction with: a) the promotion of vocational training, counseling and job placement; b) support on child care services -if needed-; and c) the creation of a network of tutors to increase adherence.

Right holders must comply with the following requirements: a) aged between 18 and 24 years old; b) with own monthly income below the minimum wage (SMVM) -regardless of occupational category-; c) belonging to family groups with monthly incomes below SMVM (excluding the rights holder own income); d) being Argentine native, naturalized, or being resident in the country for 5 years at least; and e) not being beneficiary of any social contribution.

With regard to responsibilities, youth must submit: a) the national identity card; b) a certificate of ongoing education, accredited four times (every year) by public educational institution or training centers: at the enrollment date, and later at March, July and November; c) an annual certificate of health controls; and d) an affidavit, which certifies compliance with the requirements laid down. Additionally, rights holder must: e) fulfill specific (depending on the education level) academic performance requirements; and f) accomplish with an annual evaluation instance to be held in December by the National Social Security Administration (ANSES).

The monetary component of the program is a monthly cash benefit of AR\$600 (USD84.55 at January 2014). However, replicating the design of the Asignación Universal por Hijo para Protección Social (AUH), the effective monthly stipend to receive corresponds to 80% of the prescribed amount (*i.e.* AR\$480, equivalent to USD67.64) which will be paid through the ANSES standard payment system, while the remaining 20% is subject to the above mentioned annual evaluation. Since the payment is made through debit cards, the program also involves the incorporation of young people into the banking system -mechanism which (in conjunction with a clear defined set of requirements) strongly improves transparency and reduces political clientelism-. Funding will come from funds from the National Treasury annually allocated through the Budget Act.

In the following section, we show how to incorporate these main PROG.R.ES.AR features into consideration for micro simulation purposes about distributional issues.

III. Methodological issues and sources of information

In order to simulate the distributional impact of PROG.R.ES.AR in Argentina, we used INDEC-EPH (Permanent Household Survey) microdata from the last available database (Q2-2013)³.

³ Given that the first benefit payment was made in March 2014, the study aims to measure the impact on income distribution that the program would have had if it had been implemented during the second quarter of 2013.

Microsimulation techniques implemented, following the methodology proposed by Bourguignon and Spadaro (2006), have enabled a static evaluation of income distribution effects of the program. Consequently, obtained results should be interpreted as "first round" impacts that, a posteriori, will be influenced by: a) macroeconomic dynamics that determine the distributional "second and further rounds" effects (*e.g.* how young people spend additional income and how it influences the functional income distribution); and b) concomitant economic policies and macroeconomic shocks from different sources.

Finally, and before proceeding with the description of the micro simulation process, it appears necessary to explain some caveats that may influence the accuracy of the estimates:

- The register design and microdata structure of the EPH⁴ does not allow to obtain information regarding potential right holders living in separate homes to their parents/guardians. Therefore, compliance with household income requirements cannot be determined in cases in which potential right holders are not living with their parents/guardians.
- The micro simulation operations have been made assuming that there exist some income sources that cannot be officially verified -primar-

ily those associated with unregistered activities-. Nevertheless, in practice, the utilization of income administrative records by the ANSES -that differ from those provided by the survey- would allow the agency to find incomes that we have considered as not verifiable for the present work.

- The EPH would present income under-reporting. Therefore, a proportion of subjects identified as right holders, actually may not be in compliance with both own and family income requirements -as their actual incomes are indeed higher than those reported to the survey-.

Having made the foregoing clarifications, methodology steps used to determine the universe of potential right holders are described below. Subsequently, that universe will allow to assess the expected impact of PROG.R.ES.AR on income distribution through micro simulations.

The initial step was to process the EPH individual database, in order to:

- Create a household identifier to allow the matching with the household database.
- Define non-monetary variables that permit the identification of those people who preliminarily qualify to PROG.R.ES.AR. To do this,

⁴ See http://www.indec.mecon.ar/nuevaweb/cuadros/4/EPH_disenoreg_09.pdf.

- ❑ A dummy variable for young people between 18 and 24 years old was created; and
 - ❑ According to normative requirements, restrictions on nationality and residence of young people were imposed.
- Create a verifiable income variable (EPH variable), built from the "amount of total individual income earned in the month of reference", from which the following concepts were deducted:
 - ❑ General not verifiable income⁵; and
 - ❑ Individual not verifiable income for: i) unregistered employees; and ii) patron or self-employed (*cuentapropistas*)⁶.
- Generate the adult equivalent variable, that will allow to build an additional variable of interest to be used in the calculations of the distributive analysis: *family income per adult equivalent*.
- Create additional dummies in order to identify sub-universes of: a) employees, b) women, and c) people under the age of 18 years old.
- Complete the initial phase by generating the *qualifies individually* variable. The dummy has value 1 if the young has met the individual requirements for being a right holder and zero otherwise (see Figure 4).

Then, considering previous changes made over the individual database:

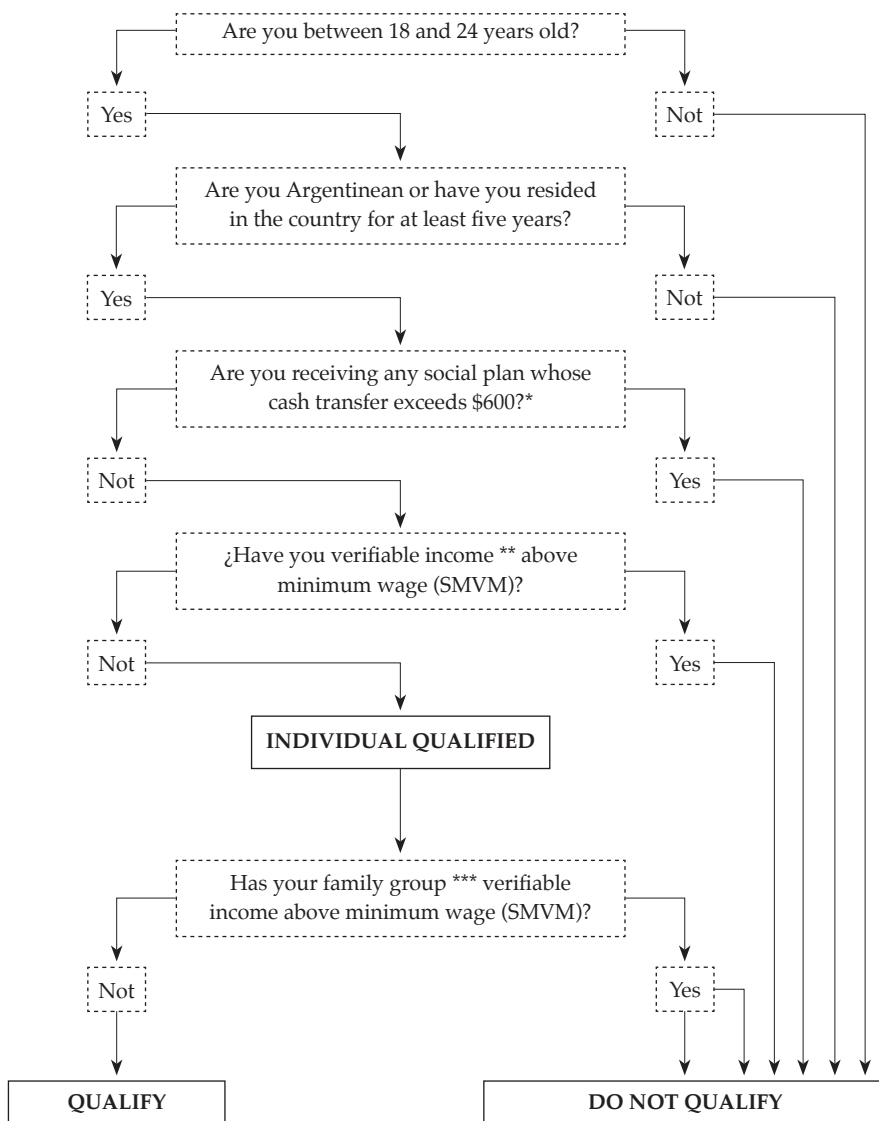
 - A new aggregate database was created, with the per household sum or average of the following variables: a) adult equivalent; b) less than 18 years old; and c) employed household members.
 - Also, seven per household aggregate databases were constructed. They provide information about: household head, spouses, child/step-child, daughters/sons in law, mothers/fathers, other relatives and non-relatives, respectively.

The following stage involved processing the complementary household database corresponding to the same wave of the individual database previously used:

⁵ In this classification it is assumed that, with the exception of registered worker's wages, retirement pensions and social plans, benefits of legally constituted societies and interests from financial investments, the remaining income sources are not liable to be effectively controlled by the public sector. In addition, in the absence of EPH information in this regard, it is also assumed that the secondary occupation income is not verifiable (*e.g.* hypothesis of an unregistered secondary employment). Finally, although they are verifiable in nature, the following items were not included in this category: a) extraordinary incomes as unemployment insurance compensation (even though this component is not specifically excluded from the calculation in the current legislation); and b) periodic income in concept of complementary annual salary (formally excluded in the Res. 51/2014, Art. 1 - ANSES).

⁶ According to INDEC, *cuentapropistas* can be defined as people who work for its own business or activity and do not employ workers or only employ them seasonally.

Figure 4
FLOWCHART, NORMATIVE PROCESS FOR DETERMINING RIGHT HOLDERS
OF PROG.R.ES.AR



* If it is lower than \$600 (monthly cash transfer per right holder of PROG.R.ES.AR), the individual will choose to stop receiving the alternative plan, otherwise he/she will not apply for the program.

** Verifiable income will vary depending on the individual's occupational category.

*** Analysis of family income excludes the right holder, according to Disc. 84/14, Art 8.

- A household identifier was created for matching purposes.
- Then, aggregate databases created in points 7. and 8. were incorporated into the household database.

Once the changes to the household database were made and saved, the process required a return to the modified individual database (saved after item 6). Later, subsequent changes were implemented:

- Matching the modified individual and household databases (saved at point 10.). Implying that for each household member the same aggregate household information is replicated.
- Generation of the verifiable income of the family group⁷ (IVGF) variable, and a dummy that evaluates compliance with the family group income restriction, taking value 1 if it complies with (*i.e.* is lower than a SMVM) and zero otherwise. Then, a new dummy was created in order to identify young people who fulfill individual and family requirements, and therefore qualify to the PROG.R.ES.AR.
- Subsequently, the variable that assigns the monetary component of the program to those who

qualify was generated. Two different scenarios were distinguished in an attempt to assign: (a) zero if the young was receiving an alternative allowance greater than \$600; and (b) the difference between \$600 and the amount perceived, if the alternative program benefit was lower than \$600.

- Thereafter, the matched/enlarged individual database was saved and an additional aggregate database per household was created, containing the amounts per household of the variables of points 12. and 13.
- This aggregate database was then incorporated into the modified individual database saved in the previous point.
- Next, *income per adult equivalent* (IAD_EQ) variable was created. Defined as the ratio between the total family income and the number of equivalent adult per household.
- *Total family income 2* (ITF2) variable was built. Created as the sum of total family income (ITF) and the amount of program benefits per household.
- A posteriori, *per capita family income 2* (IPCF2) variable was constructed from the ratio between ITF2 and the number of household members.

⁷ It must be remembered that the verifiable income of the family group will vary depending on the family relationship and the characteristics of coexistence of the potential right holder (considering in all cases only the income of individuals older than 17 years old).

- Income *per adult equivalent* 2 (IAD_EQ2) variable was also created, specified as the ratio between ITF2 and the number of household equivalent adults.
- Then, outliers were discarded by deleting the 5% extreme values of the *per capita family income*.
- An identification of household income quintiles and deciles was performed, using (IAD_EQ), both at national and regional level.
- Finally, all changes made to the individual database were saved.

Using this matched/enlarged individual database, the expected impact of PROG.R.ES.AR on inequality can be performed by means of different indicators depending on:

- the observed income measure (Feres and Mancero, 2001), taking in all cases ex-ante and ex-post values of:
 - total household income (ITF);
 - per capita family income (IPCF);
 - income per adult equivalent (IAD_EQ); and
- selected inequality measures (Sen and Foster, 1997; and Haughton and Khandker, 2009), whose sensitivity to income transfers varies according to the particular part of the distribution to be considered:
 - Atkinson Index;
 - Entropy measures;

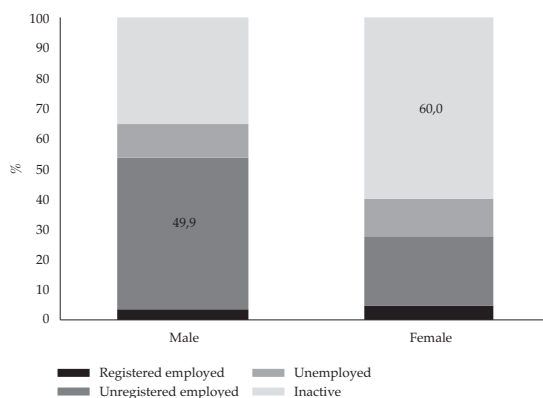
- Gini Coefficient;
- Decile (D10/D1, D6/D1) and quintile (Q5/Q1) ratios.

IV. Empirical Results

As a result of the micro simulation process, the universe of potential right holders was determined. It covers 1.55 million of young people that fulfill all program requirements. On this particular universe, 47% are women.

Firstly, we examine potential right holder performance in the labor market. For male potential right holders the predominant occupational category is unregistered employed (49.9%) whereas most women who qualify do not belong to the economically active population (60%).

Figure 5
DISTRIBUTION OF POTENTIAL RIGHT HOLDERS
PROG.R.ES.AR ACCORDING TO OCCUPATIONAL
CATEGORY, BY SEX. TOTAL COUNTRY



Source: Own estimates based on EPH-INDEC (Q2-2013).

In second instance, we intended to examine the distribution of potential right holders educational condition: a) a 42.9% was attending an educational institution; and b) - from a gender comparison- our universe of women showed a slightly higher educational attendance rate (45.5% female and 40.6% male).

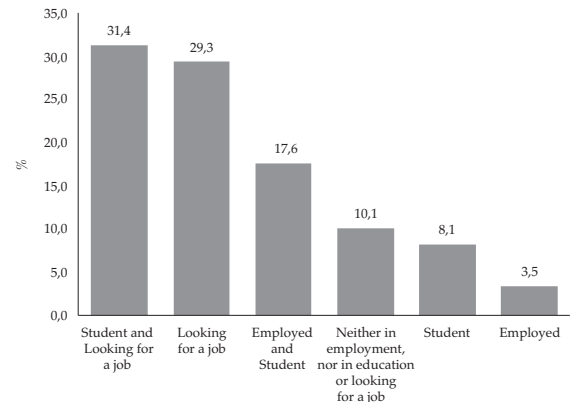
Afterwards, the joint analysis of youth occupational status and educational condition was performed (see Figure 6). Obtained results indicate that a 61% of potential right holders was in fact studying, working or performing both activities synchronously.

Indeed, of all individuals aged between 18 and 24 years old that were identified as potential right holders, the major sub-group was involved in the formal education system and looking for a job (31.4%), a 29.3% was exclusively looking for a job, and 17.6% were studying and working at the same time. This situation tends to refute, somehow, the extended argument that associates youth with lack of commitment to labor and/or educational activities, through the stigmatizing category of NEET⁸ (neither in employment, nor in education or training).

Then, in order to analyze the universe composition according to socioeconomic variables, it was

Figure 6

DISTRIBUTION OF POTENTIAL RIGHT HOLDERS OF PROG.R.ES.AR ACCORDING TO OCCUPATIONAL STATUS AND EDUCATIONAL CONDITION (AS % OF TOTAL UNIVERSE OF POTENTIAL RIGHT HOLDERS). TOTAL COUNTRY



Source: Own estimates based on EPH-INDEC (Q2-2013).

considered a percentage distribution of income by deciles (using household income per adult equivalent as income measure instead of individual income, so that all deciles have the same amount of people but not necessarily the same amount of young people).

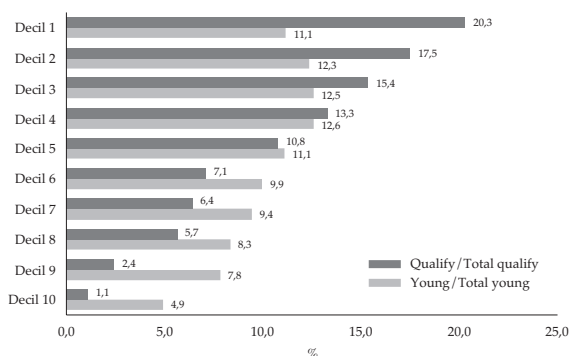
Figure 7 exhibits a high absolute and relative concentration of potential right holders in the lower income tail, while the distribution of the total population between 18 and 24 years old revealed a greater proportion of individuals belonging to some

⁸ The English acronym 'NEET', from which the Spanish term "Ni-Ni" derives, emerged in the UK in the late eighties to reflect a new way of categorizing young people as a result of certain changes in policy benefits unemployment (Eurofound, 2011). For further analysis, see Saravi (2001).

middle deciles (deciles 3 and 4). In fact, the group of the poorest 40% -at total country level- concentrated near the 70% of those who qualify for the program.

Figure 7

DISTRIBUTION OF YOUNG PEOPLE (RIGHT HOLDERS OF PROG.R.ES.AR AND TOTAL), BY INCOME DECILE -CONSTRUCTED FROM INCOME PER ADULT EQUIVALENT. TOTAL COUNTRY



Source: Own estimates based on EPH-INDEC (Q2-2013).

Finally, from a geographical perspective, it was found that regions with the lowest average income per capita of the country present the highest over-representation ratios (defining over-representation as potential right holders in proportion of total young people between 18 and 24 years old living in each region): Northeast (62.3%) and Northwest (60.2%).

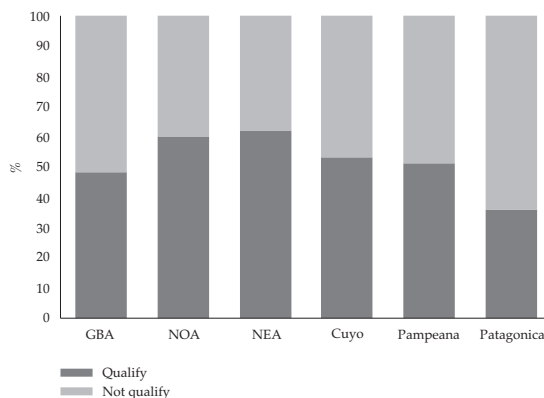
With regard to "first round"⁹ impacts of PROG.R.ES.AR on income distribution, it is noted

that -according to our estimates- the implementation of this conditional cash transfer program in Argentina should involve considerable positive effects.

In fact, we found that inequality would significantly fall among both total population and, primarily, the youth, regardless of the used indicator and the selected income variable (see Figure 9). In quantitative terms, considering the results for the country as a whole and for each of the geographic regions concomitantly, it could be expected a "first round" reduction of inequality that could reach up to 23.5% for total population and 37.7% for the sub-universe of young people.

Figure 8

POTENTIAL RIGHT HOLDERS OF PROG.R.ES.AR AS A PROPORTION OF TOTAL YOUNG PEOPLE, BY REGION

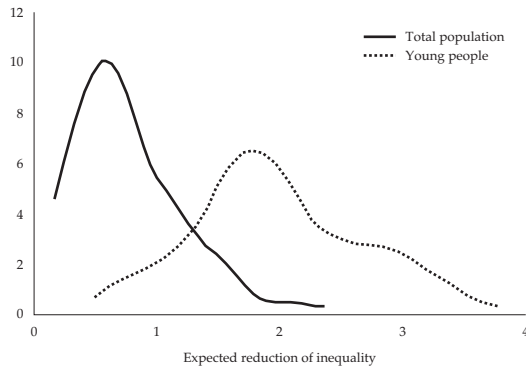


Source: Own estimates based on EPH-INDEC (Q2-2013).

⁹ Refer to section III. *Methodological issues and sources of information.*

Figure 9

PROG.R.ES.AR AGGREGATED RESULTS (TOTAL COUNTRY AND REGIONS). EPANECHNIKOV KERNEL DENSITIES FOR EXPECTED REDUCTION OF INEQUALITY, (BWIDTH= 0.02)



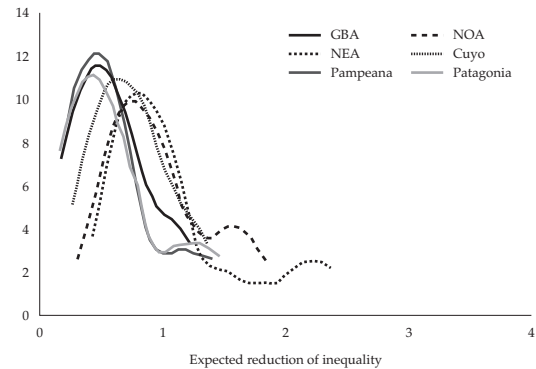
Source: Own estimates based on EPH-INDEC (Q2-2013).

Thus, the distribution of results by geographic region is presented for both population universes considered. In particular, for total population, Figure 10 exposes that a considerable proportion of results -regardless the region deemed- concentrates around -5% and -10%. However, while Patagonia, Pampeana and GBA regions appear to be associated to moderate potential falls in inequities as a response of the implementation of PROG.R.ES.AR, the distribution of results for NEA, NOA and Cuyo reveals prospective impact on income distribution notable deeper, with maximum expected decreases of 23.55%, 18.53% and 13.57% in turn.

In the case of estimates for young people, firstly it can be seen that the range of expected decline in inequality vary around 20%. Given that this special

Figure 10

PROG.R.ES.AR AGGREGATED RESULTS. EPANECHNIKOV KERNEL DENSITIES FOR EXPECTED REDUCTION OF INEQUALITY, BY REGION (BWIDTH= 0.02). TOTAL POPULATION



Source: Own estimates based on EPH-INDEC (Q2-2013).

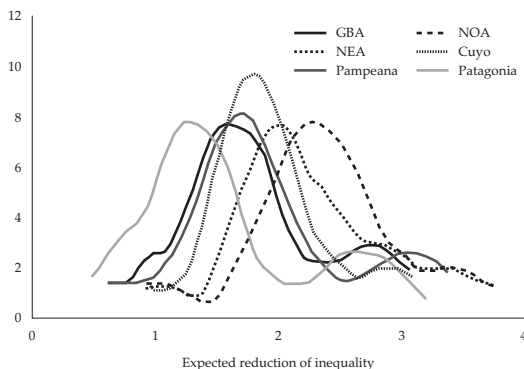
sub-universe is the one the program is oriented to, it is reasonable that the impact of PROG.R.ES.AR shows a higher result.

In terms of geographic analysis, as in the case of adults, NEA, NOA and Cuyo emerge as the areas that could be most affected by the program. In fact, its implementation could potentially reduce inequality in up to 37.7%, 37% and 31%, respectively. Furthermore, the corresponding distribution to Northwest appears to reflect the most notable impacts, as it is located on the right side of the distributions of outcomes linked to the remaining regions of the country.

Additionally, and consistent with existing literature on distributional issues, we corroborated that

Figure 11

PROG.R.ES.AR AGGREGATED RESULTS. EPA-NECHNIKOV KERNEL DENSITIES FOR EXPECTED REDUCTION OF INEQUALITY, BY REGION (BWIDTH= 0.02). YOUNG PEOPLE (18 TO 24 YEARS OLD)



Source: Own estimates based on EPH-INDEC (Q2-2013).

the expected decrease in income inequality turned to be more significant for indicators that most heavily weight -in relative terms- income changes at the bottom of the distribution (e.g. D10/D1; Atkinson with $\epsilon = 2$; Entropy Indicators with $\theta = -1$).

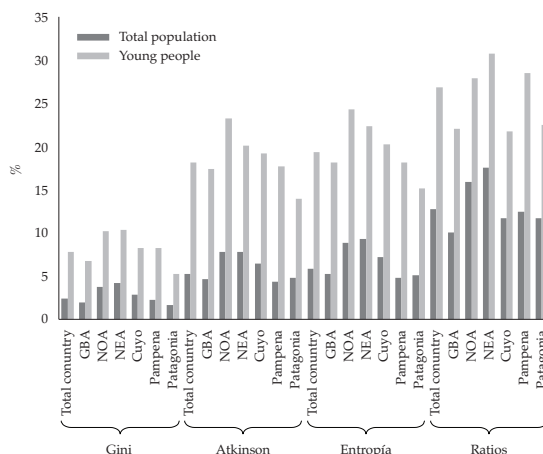
The smaller expected falls in inequalities were associated with the utilization of the Gini Coefficient, while the most significant one was linked to the ratio between the average incomes of the richest 10% and the poorest 10% of the population (Figure 12 and Table 1). This arising heterogeneity generated a greater outcome dispersion for young people, sub-universe for which the range of results exceeds the 24 p.p. (against the range of 12 p.p. obtained for total population).

From a geographical approach, as expected from the overrepresentation ratios (see Figure 8) and kernel analysis (Figures 9, 10 and 11), we inferred that although the implementation of PROG.R.ES.AR could significantly reduce income inequality in all regions, the program most substantial effects will be associated to the poorest regions of the country: the Northeast (NEA) and the Northwest (NOA) (see Tables 2 and 3 below).

Taking into account the total population, in regard to the Gini Coefficient, it is observed that while

Figure 12

EXPECTED REDUCTION OF INEQUALITY AS A RESULT OF PROG.R.ES.AR, BY INEQUALITY INDICATOR. TOTAL POPULATION AND YOUNG PEOPLE (18 TO 24 YEARS OLD). TOTAL COUNTRY (Q2-2013)



Note: For Atkinson Index and Entropy Indicators, we considered total average of results obtained from the multiple values assigned to the inequality aversion parameters, -Atkinson Index with ($\epsilon = 0,5; 1; 1,5; 2$) and Entropy Indicators with ($\theta = -1; 0; 1; 2$)-. Source: Own estimates based on EPH-INDEC (Q2-2013).

the expected reduction of inequality in NOA and NEA reaches 4.0% (IAD_EQ) and 4.4% (IAD_EQ) respectively, in the remaining geographic regions, the prospective falls in inequalities range from a minimum of 1.7% (IAD_EQ, in Patagonia) to 2.9% (IAD_EQ, in Cuyo), denoting a lower remarkable impact of the program.

Nevertheless, the asymmetrical effects on income distribution between less and more developed regions are most noteworthy if the analysis is made through indicators that assign a heavy weight to income changes at the bottom of the distribution, such as D10/D1; Atkinson with $\epsilon = 2$ and Entropy Indicators with $\theta = -1$. So, in terms

Table 1
PROG.R.ES.AR. EXPECTED REDUCTION OF INEQUALITY, BY INEQUALITY INDICATOR.
TOTAL POPULATION AND YOUNG PEOPLE. TOTAL COUNTRY (Q2-2013)

INDICATOR	Variation					
	Total Population			Young People		
	ITF (%)	IPCF (%)	IAD_EQ (%)	ITF (%)	IPCF (%)	IAD_EQ (%)
Gini	-2.18	-2.42	-2.48	-7.60	-7.68	-8.10
Atkinson eps = 0.5	-4.98	-5.40	-5.57	-17.84	-17.34	-18.31
Atkinson eps = 1	-4.53	-5.28	-5.53	-16.92	-16.16	-17.17
Atkinson eps = 1.5	-4.67	-5.48	-5.81	-18.85	-17.53	-18.73
Atkinson eps = 2	-4.47	-5.13	-5.53	-20.85	-19.00	-20.42
Entropy theta = -1	-7.40	-9.31	-9.91	-31.45	-28.90	-30.16
Entropy theta = 0	-5.04	-6.04	-6.32	-18.64	-17.95	-18.94
Entropy theta = 1	-4.11	-4.50	-4.60	-13.92	-13.96	-14.71
Entropy theta = 2	-4.39	-4.38	-4.40	-14.04	-14.35	-15.00
Ratio D10/D1	-13.69	-14.30	-13.81	-27.96	-32.08	-31.59
Ratio D6/D1	-12.60	-13.29	-12.82	-25.55	-29.54	-29.00
Ratio Q5/Q1	-9.40	-9.46	-9.19	-18.50	-21.25	-20.98

Note 1: ITF is the total household income, IPCF is the per capita family income and IAD_EQ is the income per adult equivalent. Values represent the percentage rate of change of the indicators with respect to the values of the original base.

Note 2: For the total population, the largest expected declines in inequality when evaluating through Atkinson eps=0.5 responds to the fact that given that the program is targeted to low income individuals between 18 and 24 years old, when is considered the population as a whole and the indicator heavily weighted the bottom of the distribution, there is still a significant amount of people that is intensely weighted by the indicator but is not experimenting any change in their income levels, implying that the reduction of inequalities for the aggregate is dimmed.

Source: Own estimates based on EPH-INDEC (Q2-2013).

of the D10/D1 ratio –for the total population universe–, the income gap between the richest and poorest 10% of the population in Northeast and Northwest regions would, in average¹⁰, potentially decrease a 23.3% and a 18.3%, respectively; while in the case of Cuyo –the third region in terms of over-representation ratios analysis–, the expected fall in inequality as a consequence of the implementation of PROG.R.ES.AR would be 10 percentage points (p.p) lower (see Table 2).

On the other hand, if the analysis focuses on the population sub-universe of young people (see Table 3), the results follow the same pattern: when taking into account the outcomes related to the Gini Coefficient, we find that the program would involve a decrease in inequalities of 10.8% in NOA (IAD_EQ) and 9.7% in NEA (IAD_EQ). In addition, this potential reduction of inequalities accounts for a 8.3% in Cuyo and a lower 5.7% in Patagonia.

However, if we analyze the eventual impact of PROG.R.ES.AR on inequality through the indicator that gives a strong weight to income transfers at the bottom of the distribution, D10/D1, it can be seen that –considering the average of expected falls linked to the three measured income variables– in NOA the expected reduction of inequality reaches an average of 37%, and an average of 31.7% in NEA. But the

effects of the program in Cuyo are almost as significant as those associated to the two most backward regions, showing a similarity to the magnitude of potential impact in the remaining regions (see Table 3). This phenomenon could answer to the fact that youth represent the target population group.

V. Final Considerations

It has been well and broadly documented that young people are one of the most vulnerable population sub-groups worldwide. Trying to break the intergenerational cycle of poverty related to youth social exclusion, many Latin-American countries have implemented different sets of public policies aimed to widen social rights (Cecchini y Martínez, 2011; Rofman y Oliveri, 2011).

Argentina has not been an exception, especially from 2005 onwards, with a number of measures that partially shifted the social security paradigm from Bismarckian to Beveridgean principles (Panigo, Médici and Dvoskin, 2011).

Within this general framework, the creation of PROG.R.ES.AR promotes the strengthening of this new paradigm through the following objectives:

- To obtain a more equitable income distribution by means of new social rights;

¹⁰ Considering the three income measures evaluated: the total household income, the per capita family income and the income per adult equivalent.

Table 2
PROG.R.ES.AR. EXPECTED REDUCTION OF INEQUALITY, BY INEQUALITY INDICATOR.
TOTAL POPULATION AND YOUNG PEOPLE. TOTAL COUNTRY (Q2-2013)

Indicator	Total population - variation, %								
	GBA			NOA			NEA		
	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ
Gini	-1.7	-2.1	-2.1	-3.1	-4.0	-4.0	-4.2	-4.2	-4.4
Atkinson eps = 0.5	-4.0	-4.7	-4.8	-6.5	-7.8	-8.0	-8.4	-8.7	-9.1
Atkinson eps = 1	-3.8	-4.8	-5.0	-6.7	-8.3	-8.6	-7.4	-8.1	-8.6
Atkinson eps = 1.5	-4.0	-5.1	-5.4	-6.9	-8.5	-8.9	-6.8	-7.9	-8.4
Atkinson eps = 2	-4.1	-5.1	-5.5	-6.8	-8.6	-9.2	-5.8	-7.1	-7.8
Entropy theta = -1	-6.6	-9.1	-9.6	-10.3	-13.7	-14.5	-9.7	-12.4	-13.2
Entropy theta = 0	-4.2	-5.5	-5.7	-7.4	-9.3	-9.6	-8.3	-9.3	-9.8
Entropy theta = 1	-3.4	-4.0	-4.0	-6.2	-7.4	-7.5	-7.7	-7.8	-8.2
Entropy theta = 2	-3.6	-3.8	-3.8	-6.3	-7.1	-7.2	-8.5	-8.2	-8.4
Ratio D10/D1	-11.5	-12.2	-11.7	-18.3	-18.5	-18.2	-23.5	-23.5	-22.9
Ratio D6/D1	-10.5	-11.4	-10.9	-16.0	-16.3	-16.0	-21.1	-20.9	-20.4
Ratio Q5/Q1	-8.1	-7.9	-7.7	-14.0	-13.5	-13.1	-14.7	-15.3	-14.9

Indicator	Cuyo			Pampeana			Patagonia		
	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ
	Gini	-2.6	-2.8	-2.9	-2.1	-2.3	-2.4	-1.7	-1.6
Atkinson eps = 0.5	-5.3	-6.0	-6.2	-5.2	-5.3	-5.6	-4.9	-4.7	-4.9
Atkinson eps = 1	-5.3	-6.3	-6.6	-4.0	-4.3	-4.7	-4.0	-3.9	-4.2
Atkinson eps = 1.5	-5.6	-6.9	-7.2	-4.0	-4.2	-4.6	-4.8	-4.6	-5.0
Atkinson eps = 2	-6.3	-7.7	-8.0	-3.3	-3.1	-3.5	-5.3	-5.0	-5.7
Entropy theta = -1	-9.3	-12.0	-12.4	-5.9	-5.9	-6.6	-9.8	-9.5	-10.7
Entropy theta = 0	-5.8	-7.1	-7.3	-4.4	-4.9	-5.3	-4.5	-4.5	-4.8
Entropy theta = 1	-5.1	-5.4	-5.5	-3.6	-3.9	-4.1	-2.8	-2.8	-2.9
Entropy theta = 2	-5.4	-5.2	-5.2	-4.0	-4.2	-4.3	-3.0	-2.9	-2.9
Ratio D10/D1	-13.6	-13.3	-13.0	-12.9	-14.1	-13.6	-13.1	-14.7	-14.5
Ratio D6/D1	-11.6	-11.0	-10.9	-12.3	-13.4	-12.9	-12.5	-14.3	-14.1
Ratio Q5/Q1	-9.5	-9.3	-9.1	-8.1	-8.8	-8.5	-6.7	-7.4	-7.3

Note 1: ITF is the total household income, IPCF is the per capita family income and IAD_EQ is the income per adult equivalent. Values represent the percentage rate of change of the indicators with respect to the values of the original base.

Note 2: For the total population, the largest expected declines in inequality when evaluating through Atkinson eps=0.5 responds to the fact that given that the program is targeted to low income individuals between 18 and 24 years old, when is considered the population as a whole and the indicator heavily weighted the bottom of the distribution, there is still a significant amount of people that is intensely weighted by the indicator but is not experimenting any change in their income levels, implying that the reduction of inequalities for the aggregate is dimmed.

Source: Own estimates based on EPH-INDEC (Q2-2013).

Table 3
PROG.R.ES.AR EXPECTED REDUCTION OF INEQUALITY, BY INDICATOR AND GEOGRAPHIC REGION. YOUNG PEOPLE (18 TO 24 YEARS OLD; Q2-2013)

Indicator	Total population - variation, %								
	GBA			NOA			NEA		
	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ
Gini	-6.2	-6.8	-7.0	-9.5	-10.5	-10.8	-12.2	-9.3	-9.7
Atkinson eps = 0.5	-15.4	-15.7	-16.3	-20.4	-20.7	-21.5	-24.7	-20.1	-20.6
Atkinson eps = 1	-15.4	-15.6	-16.3	-22.1	-22.0	-22.8	-22.6	-17.7	-18.2
Atkinson eps = 1.5	-17.7	-17.5	-18.4	-24.1	-23.7	-24.6	-22.6	-18.1	-18.5
Atkinson eps = 2	-20.1	-19.5	-20.7	-26.3	-25.9	-27.0	-22.2	-18.2	-18.7
Entropy theta = -1	-30.0	-29.8	-30.9	-37.0	-35.4	-36.3	-32.7	-26.9	-27.1
Entropy theta = 0	-16.8	-17.3	-18.0	-24.0	-23.9	-24.6	-24.7	-19.6	-20.1
Entropy theta = 1	-12.0	-12.7	-13.1	-18.6	-19.3	-20.1	-21.3	-17.1	-17.6
Entropy theta = 2	-11.9	-12.4	-12.7	-17.5	-18.8	-19.7	-22.3	-19.6	-20.1
Ratio D10/D1	-25.5	-28.4	-27.7	-30.3	-32.4	-32.5	-35.4	-37.7	-37.2
Ratio D6/D1	-22.8	-25.8	-25.0	-26.4	-28.3	-28.5	-30.3	-31.6	-31.1
Ratio Q5/Q1	-16.2	-18.0	-17.8	-22.9	-24.6	-24.6	-23.5	-27.1	-26.7

Indicator	Cuyo			Pampeana			Patagonia		
	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ	ITF	IPCF	IAD_EQ
Gini	-8.6	-7.7	-8.3	-8.2	-7.9	-8.8	-4.9	-5.2	-5.7
Atkinson eps = 0.5	-17.4	-17.3	-18.5	-20.0	-19.3	-21.3	-13.6	-13.5	-14.5
Atkinson eps = 1	-16.6	-16.8	-17.9	-16.5	-14.6	-16.6	-12.4	-11.5	-12.4
Atkinson eps = 1.5	-18.5	-19.0	-20.0	-18.3	-15.3	-17.5	-15.3	-12.9	-13.9
Atkinson eps = 2	-21.9	-22.3	-23.0	-20.3	-16.0	-18.5	-18.2	-14.1	-15.6
Entropy theta = -1	-30.8	-30.9	-31.0	-30.9	-23.5	-26.3	-32.1	-24.7	-26.3
Entropy theta = 0	-18.2	-18.3	-19.3	-18.2	-16.0	-18.0	-14.1	-13.2	-14.0
Entropy theta = 1	-14.9	-14.7	-15.6	-13.7	-13.2	-14.7	-8.6	-9.1	-9.8
Entropy theta = 2	-15.6	-15.5	-16.3	-14.6	-14.9	-16.2	-9.0	-9.7	-10.3
Ratio D10/D1	-24.5	-27.1	-27.1	-29.0	-33.9	-33.3	-22.6	-28.3	-28.3
Ratio D6/D1	-19.7	-20.5	-20.7	-27.4	-31.6	-31.2	-21.5	-27.1	-27.1
Ratio Q5/Q1	-17.3	-18.6	-18.4	-17.6	-21.1	-20.7	-12.9	-16.5	-16.5

Note 1: ITF is the total household income, IPCF is the per capita family income and IAD_EQ is the income per adult equivalent.

Source: Own estimates based on EPH-INDEC (Q2-2013).

- To generate new capabilities among vulnerable individuals; and
- To expand aggregate demand through greater progressivity of social investment.

The main contribution of this paper has been to provide, to our knowledge, the first prospective evaluation of the PROG.R.ES.AR potential impact on income distribution.

Using INDEC-EPH data for the second quarter of 2013 and applying a micro-simulation methodology (inspired by Bourguignon and Spadaro, 2006), the expected "first round"¹¹ effects indicate that the PROG.R.ES.AR could:

- Have more than one and a half million of potential right holders, universe that represents a 51.1% of all individuals in the age range of 18 to 24 years old.
- Be characterized by an adequate level of targeting on the most vulnerable sectors, because: a) the group of the poorest 40% -total country- concentrated near the 70% of those who qualify for the program; and b) regions with the greatest relative representation (youth who qualify as a proportion of total young people in each region)

are also the most backward in terms of average per capita income.

- Inject up to \$10,600 million annually to boost aggregate demand, conditional on the final degree of youth program adherence.
- Generate, in static terms, a reduction of income inequality of up to 14.3% for the whole population (total country), depending on the indicator and the inequality aversion parameter considered.
- Decrease young people inequities up to a 32.1% (again, for total country figures and depending on the indicator examined).
- Affect much more intensively income distribution in the poorest regions of the country, with youth inequality reductions higher than 37% in both, the Northeast (NEA) and the Northwest (NOA) regions of the country.

Notwithstanding, there is still a caveat to emphasize. The final impact of the program in terms of scope and progressiveness will crucially depend on auxiliary search mechanisms that the Argentine government should promote. Such mechanisms play a central role in ensuring that young people

¹¹ The overall distributive impact will also depend on: 1) the final level of youth adherence to the program; 2) macroeconomic dynamics that determine the distributive effects of "second and further rounds"; and 3) concomitant macroeconomic shocks.

who meet all program requirements and have not been registered yet (to May 2014), were able to do so in the short term. Efforts in this sense would strongly contribute to the consolidation of an increasingly Beveridgean Social Security System,

as PROG.R.ES.AR extends previous social rights created by the *Asignación Universal por Hijo para Protección Social* (Decree 1602/09) and the *Asignación Universal por Embarazo para Protección Social* (Decree 446/11) to young-adults aged 18 and 24 years old.

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