

## Research Article

# The Argentinian Pension Moratorium. Stylized Facts in Poverty, Indigence, Income Distribution and Labor Participation of Older People

**Marcelo Alós\*** 

Institute for Socioeconomic Research, Faculty of Social Sciences, National University of San Juan, San Juan, Argentina

## Abstract

This paper highlights the dimensions of poverty, indigence, income distribution and labor participation in the situation of older people at the time of the implementation of the Pension Moratorium. This is a topic of relevance today in Argentina in some countries considering the debate on the reform of the pension system. It shows the context in which it was implemented and the scope of the Law, the growth of the beneficiaries due to the implementation of the moratorium and the evolution of the situation of poverty and indigence, as well as the labor participation of older people of retirement age. In all cases, vis-a-vis the older adult population accessing the benefits of the moratorium, the indicators of poverty, indigence, income distribution and participation in the labor market were modified. Although it cannot be concluded that the moratorium caused improvements in the welfare of older people, there would be evidence in that sense.

## Keywords

Older People, Poverty, Income Distribution, Pension System, Labor

## 1. Introduction

One of the objectives of this Chapter is to describe the public policy called moratorium at the end of 2006. This measure was designed and implemented within the framework of a process of counter reforms to the Argentine social security system in force since the year 1994 until the mid-2000s, which at that time did not achieve the expected results in fiscal terms. Furthermore, the number of benefits it provided was not enough to cover the needs of the elderly and pension coverage was the lowest, since Argentina had been a country with almost universal pension coverage. The People who met the age requirement to claim the benefit were not able to complete the other access conditions, such as the

amount of contributions necessary to the system. For those who received benefits, the amount was very low to satisfy even the minimum needs. The description to be made is important to understand the reasons why it was carried out and the effects of the design change and of requirements to access the benefits of the pension system.

As stated, the moratorium was part of the counter-reform process that begins with the reinstallation of a regime for teachers and researchers in Argentina that was valid until 1994. Teachers and researchers who met the requirements of access to retirement recovered the defined benefit as a percentage of the employee's salary assets. This was the first

---

\*Corresponding author: malos@unsj.edu.ar (Marcelo Alós)

**Received:** 19 December 2024; **Accepted:** 2 January 2025; **Published:** 24 February 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

measure of a series of other reforms to increase benefits received by older people. But the problem of limited reach remained of the pension system in granting cash benefits to older people. Herein direction, the most important instrument implemented was the moratorium that pursued clearly the result of increasing pension coverage and granting an income to the people of retirement age who were unable to receive a benefit from the system.

Another objective is to present indicators and stylized facts that describe the socioeconomic situation of older people at the time of implementation of the moratorium and see the evolution of the situation after a few years of validity of the measure. This description is intended to highlight the situation of older people and frame the political decision to modify the conditions of access to the benefits of retirement or old-age pension.

The description covers the situation of older people in relation to socioeconomic conditions, such as poverty, indigence and income distribution. In this sense, the situation of older people in the labor market is also described through the evolution of the labor participation rate. In all cases, the situation of older people discriminating by sex and by regions of Argentina the effects of verifying the existence of heterogeneities.

## 2. Reference Framework for the Moratorium

In 1904, the Argentine Congress passed Law 4,349, creating the National Fund of Civil Retirements and Pensions. This is the beginning of the pension regimes in Argentina. From this, new groups of workers were added to the national systems, own or isolated, all based on the contributory pay-as-you-go system [11]. The expansion and increase in worker coverage meant that at the end of the 1940s almost all salaried workers, as well as independent or self-employed workers, were reached by benefits of social protection systems, in particular, old-age retirement, reaching almost the universalization of coverage.

In the late 1960s, the existing regimes were unified into three large Social Security subsystems [13]. These were two systems of dependent workers: public employees and private workers in industry, commerce and civil activities; and a system of self-employed workers. The three were under the supervision of the national government. The parameters that governed the design of these retirement systems (salary replacement rates, age required to access benefits, contribution rates, required years of contributions to access the pension) set up beneficial schemes for workers. Furthermore, pension systems and policies, while they had formal workers as contributors; they were self-sufficient.

The passage of time meant greater proportions of workers meeting the requirements, access to the system and demanding benefits. The above, added to amounts growing number of

non-formal jobs in the labor market and high unemployment rates starting in the 1980s, they led to financing problems for contributory regimes. Until that date, the regimes contemplated that active workers financed their contributions the benefits claimed by the workers who were complying with the access requirements to them.

The proposed solution to the sustainability problem was to implement a structural reform of the retirement and pension system in 1994. This reform had as the main objective is to eradicate the growing pension deficits by replacing the distribution system through a system of capitalization in individual accounts of contributions administered by the Retirement and Pension Fund Administrators (AFJP) [13]. In this way, in the long term a scheme would be verified where the contributions of each worker during the active stage are deposited in an individual account that, capitalized during all the years of contribution as an active worker; would finance the benefit by meeting the system requirements. Thus, this reform sought that the system would be self-sustaining from the capitalization of contributions in individual accounts. On the other hand, the collection of contributions from employers financed the benefits of the remaining liabilities of the previous system (for more details see [2]).

After more than 10 years of operation, the new system showed in mid the 2000s a situation of strong deficits and imbalances. Employer contributions were not enough to finance the remaining beneficiaries of the previous regime, and it was necessary to resort to fiscal collection of general taxes since genuine collection of the regime was increasingly less. In this way, the system began to work as a non-contributory regime financed largely by Treasury resources National. Furthermore, the reform resulted in low percentages of coverage of the older adult population, increasing the vulnerability of older people. The Workers who reached retirement age did not meet the requirements to achieve the pension benefits and/or the amount capitalized in their accounts was not enough to finance a benefit to cover basic needs. Added to this situation was the precariousness of the labor market, informal jobs without contributions and high unemployment rates.

In this way, the social security system left a significant proportion of older people without coverage. Almost 70% of older people receiving some provision of the social security system in 1993 dropped to around 50% in 2006. The participation of older adults in the labor market, going from 20% in 1993 to just over 30% in 2006 [1, 12].

Given that situation the Argentine government made the decision to begin a counter-reform of the security system social system in force since 1994. The objective was to achieve a higher population rate of older people covered by some benefit. To achieve this, several measures were taken. The most important was the plan to increase coverage through Law 25,994 which was called the moratorium<sup>1</sup>.

<sup>1</sup> There were other very important measures such as the creation of a single public pension regime at the end of 2008, called SIPA, eliminating the individual capi-

This legislation allowed the population that reached the age requirement, but did not have enough years of contribution, request the benefit as if you had the density of required contributions. In these cases, a monthly amount would be deducted from the ordinary benefit (up to 60 installments and with a limit of 49% of the benefit) to face the debt pension that the worker had for not having made the contributions and contributions in its moment. The target population was self-employed workers (including housewives), but in practice, it meant a universal benefit only limited by date application limit.<sup>2</sup> Although Law 25,994 was enacted in 2004, the regulation took a while and benefits were requested starting in July 2006 [12].

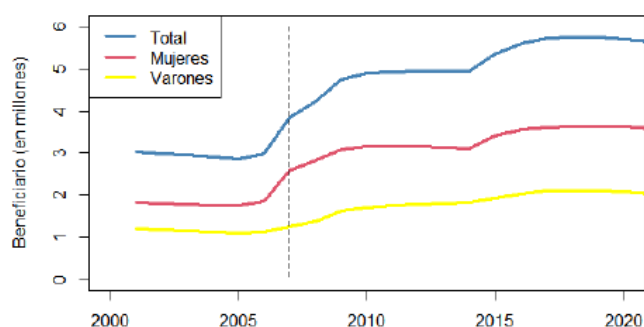


Figure 1. Annual SIPA beneficiaries 2001-2023.

In Figure 1 you can see the beneficiaries of the Argentine Pension System (SIPA) from 2001 to 2023 [4]. From the beginning of the series to 2006, there was a drop in the SIPA beneficiaries. With the validity of the moratorium, more than 800 thousand were incorporated (725,000 women) in 2007 and after 3 years - in 2009 - they had joined almost 1,750,000 (1,237,000 were women).

### 3. Stylized Facts Contemporary to the Moratorium

In this section, different social indicators are presented in a stylized way. They describe the situation of older people before and after the moratorium was implemented. As explained above, the moratorium came into effect after the regulations were issued. This happened in mid-2006, through which the population was able to use the benefits starting in the second half of 2006. In fact, starting in 2007, SIPA beneficiaries increased significantly, as seen in Figure 1.

Therefore, to have an empirical basis for comparison of the main socioeconomic indicators; the estimates are shown for three years before (2004, 2005 and 2006) and for three years

after (2007, 2008 and 2009) the entry into force.

To calculate the indicators, the information provided by the Permanent Household Survey (EPH) from 2004 to 2009 is used. The EPH is a household survey carried out by the National Institute of Statistics and Censuses (INDEC) and has with the objective of surveying socioeconomic and socio-demographic characteristics of the urban population of Argentina. The EPH has been carried out since 1973. Until 2003 it was carried out based on two specific surveys in the months of May and October of each year. Since 2003, the survey has been carried out by a panel with continuous monitoring on a rotating basis and on a quarterly basis.<sup>3</sup> The households that participate in the sample are surveyed for two consecutive quarters, withdraw in the two subsequent quarters and return to the sample. the sample to be surveyed again for two more quarters. It is a 2-2-2 scheme; therefore, a home can be followed for a year and a half. In each cluster, the selected areas are divided into 4 rotation groups, each of which is a sub-sample of equal size. Thus, the rotating panel is designed such that 25% of the households are replaced by those who are interviewed for the first time.

The EPH covers 32 urban agglomerations in Argentina since 2006. This work analyzes the information from the EPH since 2004. Therefore, the 3 agglomerations included as of 2006 (San Nicolas - Villa Constitución, Rawson-Trelew and Viedma-Carmen de Patagones), are not considered and, therefore, the analysis is limited to 29 urban areas of the country without considering the three mentioned agglomerates. The sample includes approximately 25,000 households each quarter with one questionnaire per household and individual questionnaires for each member. Data from individual interviews are used here, ranging between 45,000 and 65,000 individuals per quarter, representing between 23 and 24 million people based on the weighting used. The indicators in this work are computed annually. To avoid duplication, repeated individuals are eliminated in each quarterly survey that was followed by the continuity of the panel. The elimination of repeated individuals due to the continuity of the panel is based on avoiding duplication of the record of the same person. In addition, the individual records of those who appear with the interview not carried out are eliminated.

#### 3.1. Poverty and Indigence Rates

This section presents the evolution of the poverty and indigence rate of older people. In the case of men, the poverty rates are calculated for those who are 65 years of age or older in each of the years of the chosen period. In the case of women, the same calculation is made for those who are 60 years old or older. These ages are those required to be able to access the benefit of the old-age pension.

The poverty rate calculated in this work is the monetary

talization. More details in [3].

<sup>2</sup> Application deadlines were extended. Even on February 28, 2023, the Law 27,705 with similar benefits. Obviously the greatest impact is that corresponding to the 25,994 that was the first sanctioned norm.

<sup>3</sup> The information corresponding to the third quarter of 2007 is not available since the Mar del Plata-Batán agglomerates, Bahía Blanca-Cerri, Gran La Plata and GBA were not relieved for administrative reasons.

income poverty of the population [5, 6].

Following [14], measuring poverty requires solving two problems: that of identifying those who meet the condition among the target population and that of aggregating into an indicator using the information available on those who meet the condition. To solve the first problem, a threshold known as the poverty line is taken. By comparing the poverty line with the disposable income of each individual, those people who have a disposable income below the poverty line are identified as poor.

In Argentina, the poverty line is built from a Basic Food Basket (CBA). This basket is calculated by INDEC at the level of each region<sup>4</sup> of the country and monthly [7]. The CBA indicates the threshold to be considered indigent. The CBA indicates the minimum cost of acquiring the necessary food according to the consumption habits of the population detected in the National Household Expenditure Survey (ENGHO)<sup>5</sup>. The CBA meets the nutritional needs - according to the nutritional/caloric requirements defined by professionals - of a male person between 30 and 60 years old. Nutritional requirements are different depending on the age, sex and activity of the person, which is why an equivalence is established for the rest of the ages and by sex in relation to the adult male from 30 to 60 years old. The CBA value corrected by the equivalent adult ratio (CBA\*) is compared with the income that corresponds to the family per capita income (IPCF). Thus, the person whose IPCF is below the CBA\* is considered indigent since he or she does not have sufficient income to satisfy basic food needs.

Poor status is calculated from the threshold called Total Basic Basket (CBT). CBT is calculated as follows:

$$CBT = CBA * icE \quad (1)$$

where  $icE$  is the inverse of the Engel Coefficient, with the Engel Coefficient ( $CdE$ , with  $CdE \geq 1$ ) being the following ratio:

$$CdE = \frac{Food}{Total} \quad (2)$$

CBT is a higher comparison threshold that includes CBA. By incorporating the inverse of the Engel coefficient, CBT considers other non-food expenses essential for daily life such as health, clothing, transportation, education, etc. The Engel coefficient, unlike the CBA, is empirical rather than normative. It does not exhaustively include non-food components of a defined basket. Based on the National Household Expenditure Survey [8], a comparison is made between total expenses and food expenses to give rise to the  $CdE$  value.

In this way, the poor condition is determined for each of the EPH interviewees by comparing the IPCF with the CBT corrected by the equivalent adult ratio (CBT\*). If the IPCF is lower than the CBT\* the individual is considered poor; otherwise, it is considered not poor.

The poverty rate is calculated from the count of poor people (according to the methodology explained) in relation to the total population in question. It is noteworthy that the Poverty Rate calculated in this way includes the Indigence Rate, since indigent individuals are part of the poor individuals as they have an IPCF lower than the CBT.<sup>6</sup>

Table 1 shows the poverty and indigence rates calculated for older people and the breakdown into men over 65 years of age and women over 60 years of age. The poverty rate shown corresponds to the years 2004 to 2009. Table 1 also indicates the three-year average rates before the moratorium (2004 to 2006) and after the moratorium (2007 to 2009).

**Table 1.** Poverty and Indigence (In %). 2004-2009.

	Year	Poverty	Aver	Indigence	Average
Older People	2004	10.30		5.57	
	2005	7.06	7.60	2.80	3.56
	2006	5.73		2.38	
	2007	2.45		1.01	
	2008	1.29	1.74	0.64	0.65
	2009	0.49		0.33	
	2004	9.96		4.93	
	2005	8.49	8.15	3.30	3.62
	2006	6.01		2.63	
Males 65+	2007	2.90		2.15	
	2008	1.69	1.72	1.33	1.63
	2009	0.58		0.42	
	2004	10.53		6.00	
	2005	6.12	7.40	2.48	3.57
	2006	5.55		2.23	
	2007	2.17		0.30	
	2008	1.05	1.22	0.20	0.26
	2009	0.43		0.27	

\*Source: Own elaboration based on EPH 2004-2009 (INDEC).

The drop in poverty and indigence rates between 2007 and 2009 is significant compared to the three years prior to that

<sup>4</sup> The regions into which the country is divided are AMBA: Greater Buenos Aires Metropolitan Area. Pampeana: includes the rest of the province of Buenos Aires, La Pampa, Cordoba, Santa Fe and Entre Rios. Whose: San Juan, San Luis and Mendoza. Northwest: Jujuy, Salta, Tucuman, La Rioja, Catamarca and Santiago del Estero. Northeast: Misiones, Corrientes, Chaco and Formosa. Patagonia: Neuquen, Rio Negro, Chubut, Santa Cruz and Tierra del Fuego.

<sup>5</sup> See [8].

<sup>6</sup> By equation (1),  $CBA \leq CBT$

(2004 and 2006). Poverty among older people fell by almost 6 percentage points (pp) comparing the average from 2004 to 2006 with the average poverty rate from 2007 to 2009. The drop in men (6.43 pp) is greater than in the case of women (6.18). The average indigence rate also drops considerably among older people (2.91 pp). It falls 5.5 times from a value of 3.56% to just 0.65%. In this case, unlike what happened

with the poverty rate; The decrease in the proportion of indigent women (3.31 pp) is greater than the decrease in men of retirement age (1.99 pp), leaving almost no indigent women over 60 years of age. In all cases we compare the average indigence rate from 2004 to 2006 with the same rate from 2007 to 2009.

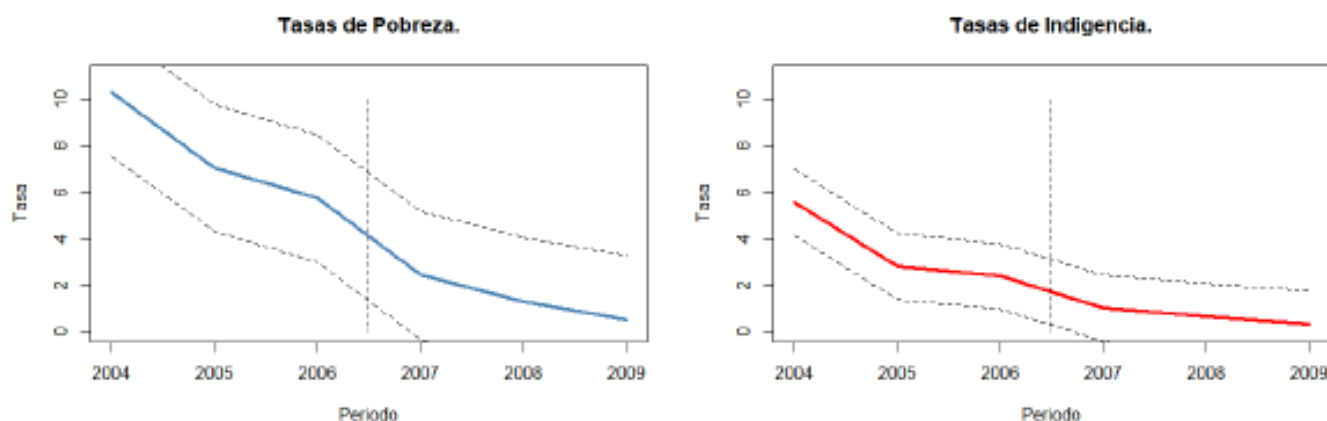


Figure 2. Poverty and Indigence Rates. Older People.

Figure 2 shows the values from Table 1. There you can see the fall in poverty and indigence rates. Using the bootstrap [15] technique, 1000 repetitions of the calculation of the values were simulated and the 95% confidence intervals were constructed. In this way, it is verified that the differences between the values of poverty and indigence before and after the reform are statistically significant.

The same conclusions can be drawn by observing the calculations for women aged 60 years or older and men aged 65 years or older in Figures 3 and 4 respectively. The differences between the values of the poverty and indigence rates before and after the moratorium are statistically significant.

Furthermore, structural changes are verified in both series, poverty and indigence, based on the Chow test. That is, it is analyzed whether there are differences before and after the moratorium comes into effect. Table 2 presents the F statistic values of the test for each of the series of the total population and by sex. In all cases, the impossibility of rejecting the null hypothesis of equality of parameters at 95% confidence is verified. With which it is concluded that although the differences are statistically significant; There would be no structural change in the poverty and indigence series between the subsequent three-year period and the three-year period prior to the moratorium coming into effect.

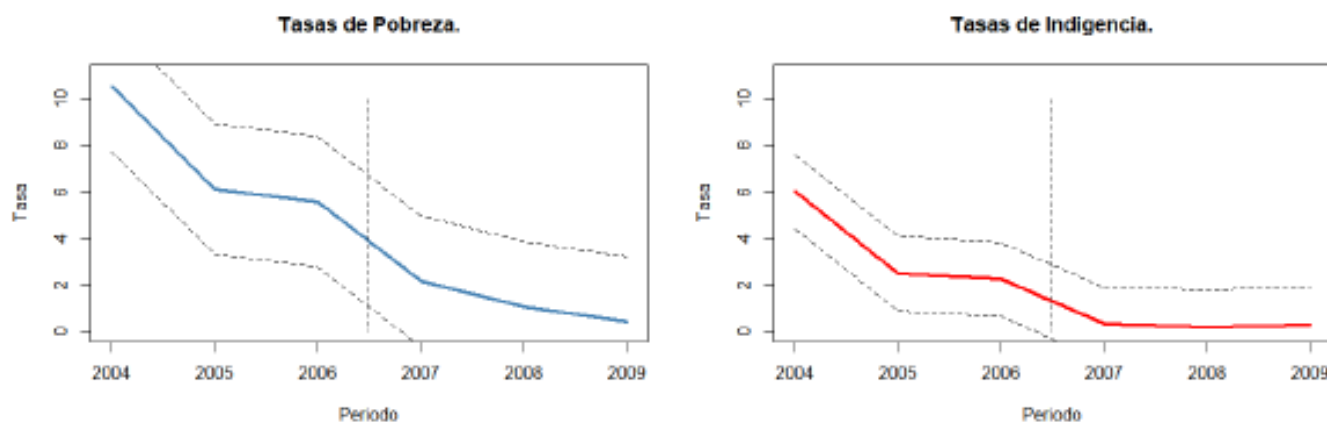


Figure 3. Poverty and Indigence Rates. Female +60.



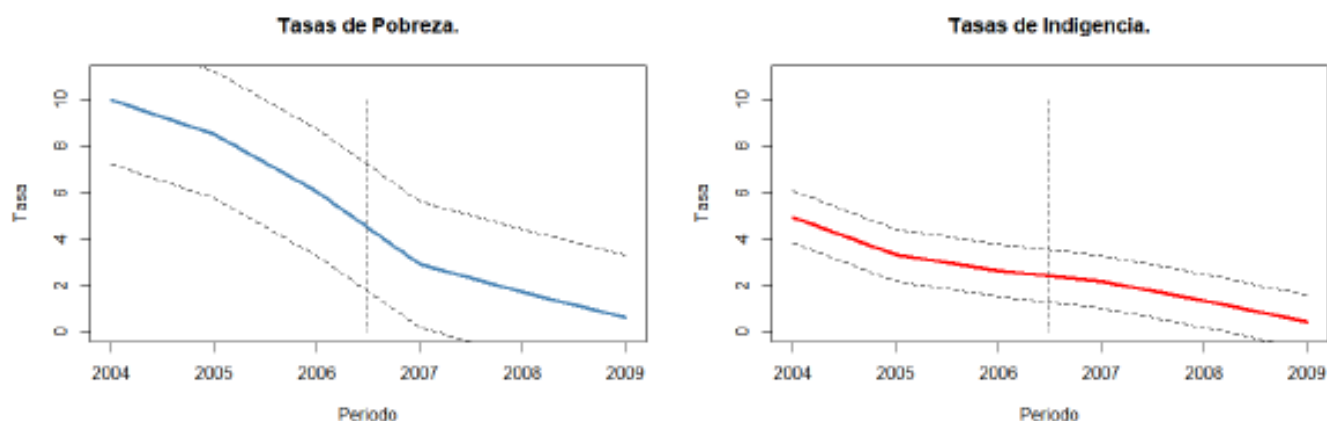


Figure 4. Poverty and Indigence Rates. Male +65.

Table 2. Chow test. Poverty and indigence series.

	F	p-value
Poverty	3,7557	0,2103
Poverty Fem	1,2294	0.4486
Poverty Males	9.8286	0.0923
Indigence	1,7103	0.0923
Indigence Fem	1,9981	0.3335

	F	p-value
Indigence Males	1,6162	0.3822

\*Source: Own elaboration based on EPH 2004-2009 (INDEC).

To verify if there are heterogeneous behaviors between regions; calculations of poverty rates were made for each region according to the INDEC classification (see foot note 3). Figure 5 shows the values of the poverty and indigence rates for older people in each of the regions from 2004 to 2006 and from 2007 to 2009.

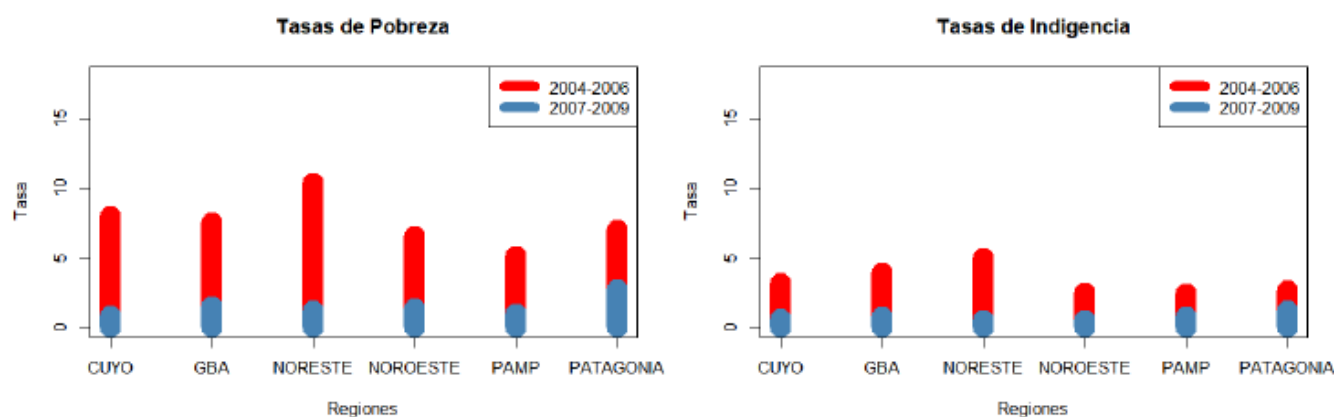


Figure 5. Poverty and Indigence Rates. Older people. By Regions.

In all regions the poverty and indigence of older people falls considerably, but they were not in a homogeneous manner. Thus, in the Noreste region the drop in the average rate after the moratorium is almost 9 pp. It is followed by the Cuyo region with a drop of 7.2 pp. The region where there is the smallest drop in poverty is the Pampeana region, where a drop of 4.1 pp is recorded. Regarding indigence, he repeats that in the Northeast region the drop is the most pronounced: 5.09 pp. GBA follows with a drop in poverty of 2.84 pp.

Where the decrease is least perceived is in Patagonia with a drop of 1.46 pp. Similar behaviors occur in females and males.

### 3.2. Income Distribution

Another characteristic to be highlighted as a stylized fact before and after the moratorium is the distribution of income among older people. For this, the Lorenz curves are shown.

Figure 6 shows the Lorenz curve of the distribution of per capita family income (IPCF) for the years 2004-2006 and 2007-2009 and the 45° line of equal distribution.

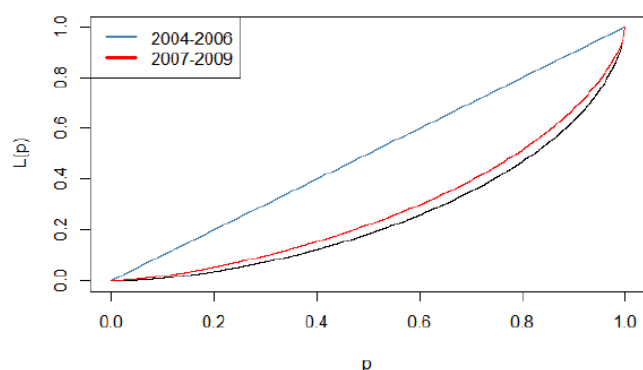


Figure 6. Lorenz Curve. Older people.

The income distribution of 2007-2009 is more equal than that of 2004-2006 due to the fact that it is closer to the 45° line. As an example, in 2004-2006, the poorest 40% of the elderly population accumulated approximately 10% of the income; and in 2007-2009 it accumulated just over 11%. In this way, together with the moratorium that allows more older people to access old-age pensions, there is an improvement in income distribution.

To complement the Lorenz curve, Table 3 shows the calculations of the Gini coefficient for women aged 60 or older, men aged 65 or older, and older people, which is the sum of the above. The Gini coefficient is calculated considering the IPCF of the home where the elderly person lives. The three-year average values of each pre- and post-moratorium period are also presented. Both for all older people; as for men aged 65 or over and women aged 60 or over, distribution improves. From values close to 0.48 in 2004, these dropped to values around 0.41 in 2009.

Table 3. Gini. 2004-2009.

Years	Older People	Aver	Female	Aver	Male	Aver
2004	0.480		0.483		0.476	
2005	0.453	0.465	0.460	0.470	0.443	0.469
2006	0.462		0.466		0.457	
2007	0.418		0.417		0.419	
2008	0.412	0.413	0.408	0.411	0.418	0.416
2009	0.409		0.408		0.410	

\*Source: Own elaboration based on EPH 2004-2009 (INDEC).

In this sense, the distribution of income among older people shows an improvement after the moratorium was implemented through more people who were able to access the old-age pension benefit. Among women, it is verified that the relationship between the average Gini coefficients before and after the moratorium (0.470/0.411) is greater than the relationship verified in the case of men (0.469/0.416). Which would indicate that the distribution improved relatively more in the case of women compared to men. See Figures 7 and 8.

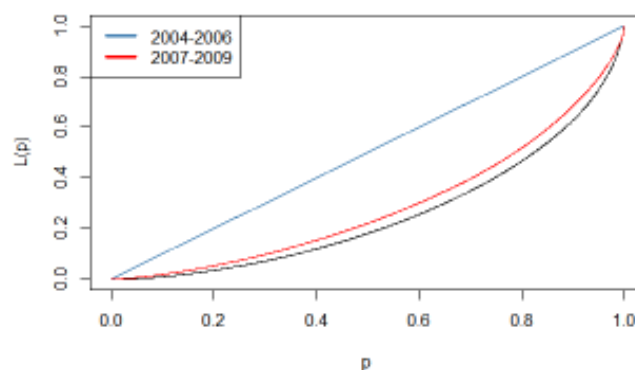


Figure 7. Lorenz Curve. Female 60+.

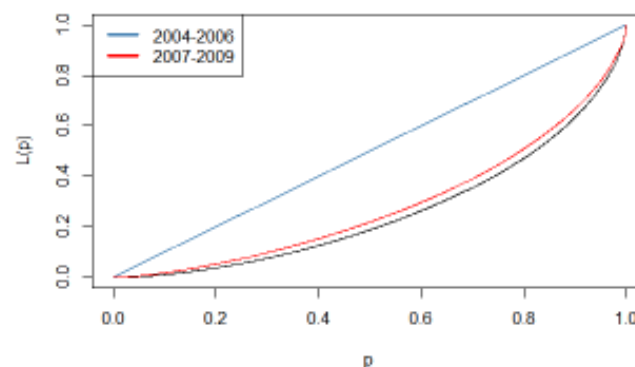


Figure 8. Lorenz Curve. Males 65+.

### 3.2. Labor Participation Rate

This section presents the labor participation rates of older people in the pre- and post-moratorium periods. The activity or labor participation rate of older adults is defined by the people who are employed or actively looking for work as a percentage of the population of that age. The choice of the activity rate is because it better represents the true conditions of the labor market. "The activity rate is important to evaluate the degree of slack in the labor market. The employment or unemployment rate alone, without understanding the behavior of the activity rate, is a not so reliable indicator of market conditions" [9]. Another argument in favor of using the activity rate can be found in [10]. There it is stated that the behavior of the employment (or unemployment) rate is usu-

ally reflected in the participation of the labor force in relation to the population.

This section shows the values of the labor activity rates of older people for the years 2004 to 2009, subdividing into the three years before and after the entry into force of the moratorium. Table 4 shows the labor participation rates of older people from 2004 to 2009. The same information is shown for women over 60 and men over 65. It can be seen how the percentages of older people who work or are looking for work fall. Of 40% of older people who actively participated in the labor market in 2004; They fell to only 19% - less than half - in 2009. The drop for men is greater than in the case of women. Men fall from 45% of them actively participating to only 21%, that is, they fall 24 pp. Women also have a significant drop from 36% to 18%, but relatively less than that of men.

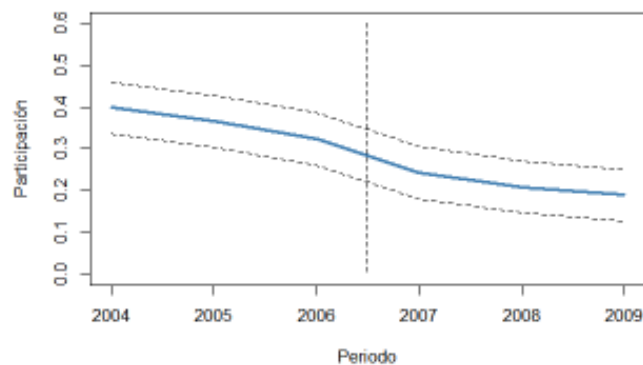
**Table 4.** Labor participation rate (In %). 2004-2009.

	Year	Participation	Average
Older People	2004	40	36
	2005	37	
	2006	32	
	2007	24	21
	2008	21	
	2009	19	
Males 65+	2004	36	33
	2005	34	
	2006	30	
	2007	22	20
	2008	19	
	2009	18	
Females 60+	2004	45	40
	2005	40	
	2006	35	
	2007	28	24
	2008	24	
	2009	21	

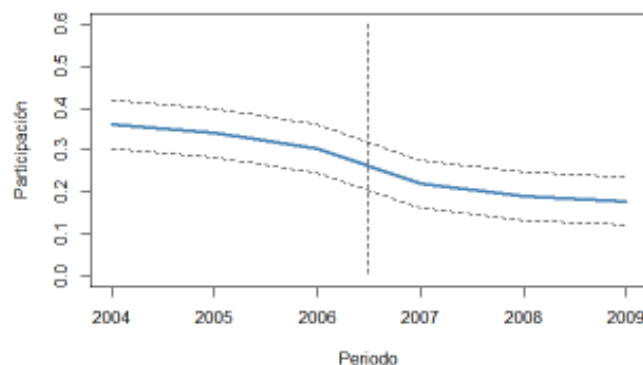
\*Source: Own elaboration based on EPH 2004-2009 (INDEC).

To corroborate the statistical significance of these differences, the bootstrap technique was applied, and 95% confidence intervals were constructed. These results are shown in Figures 9, 10 and 11. Thus, the values of the rates from 2004 to 2006; They are higher than the values shown by the rates

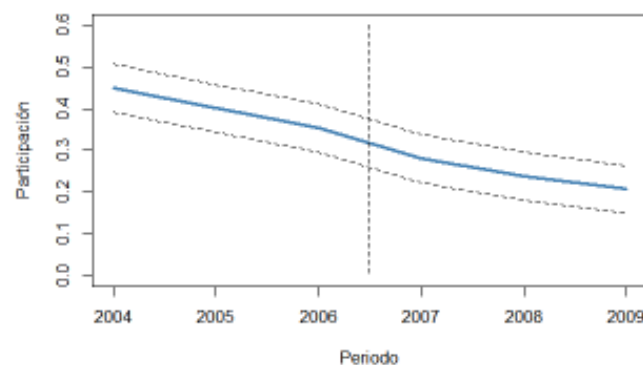
from 2007 to 2009. And these differences are statistically significant.



**Figure 9.** Labor participation rate. Older people.



**Figure 10.** Labor participation rate. Female 60+.



**Figure 11.** Labor participation rate. Male 65+.

In the same way as with the poverty and indigence series; the hypothesis of the absence of a structural change in the series of the labor participation rate is tested. Table 5 presents the F statistic values of the Test for the total population and by sex. In this case, a structural change would be verified in men at 95% confidence. For women at 80% and in the total population at 90% confidence.

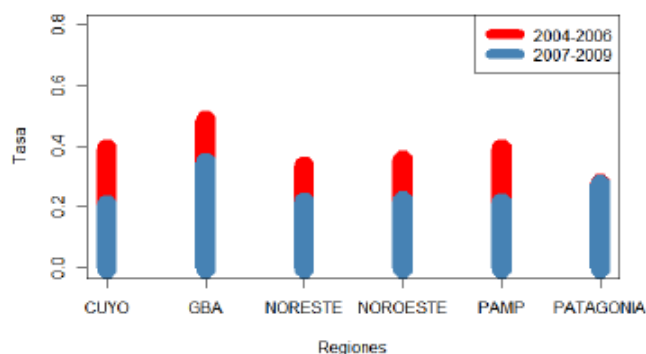
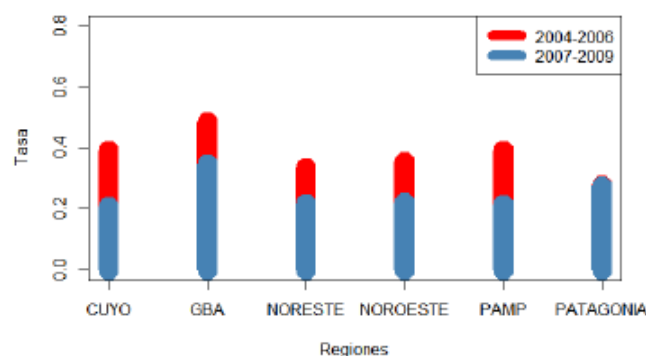


**Table 5.** Chow test. Labor participation series.

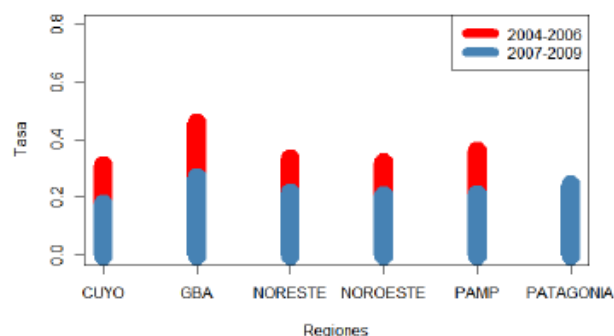
	F	p-value
Poverty	14.0400	0.06649
Poverty Fem	10,5290	0.08674
Poverty Males	31.0000	0.02125

\*Source: Own elaboration based on EPH 2004-2009 (INDEC).

Labor participation rates by region are also shown to detect possible heterogeneous behavior. Figure 12 shows that labor participation rates for older people fall in all regions. Now, this fall is not homogeneous and there are regions with large drops such as in Cuyo (26 pp) and others with more moderate decreases of only 2 pp such as the Patagonian region.

**Figure 12.** Labor participation rate. Older people. By Regions.**Figure 13.** Labor participation rate. Female 60+. By Regions.

The activity rates of men and women are shown in Figures 13 and 14. Heterogeneous behaviors are confirmed. In the case of women, in Cuyo there is the greatest decrease in activity rates (17 pp) and in the Patagonian region there is an increase of 1 pp. In the case of men, the Pampas region shows a very significant decrease (19 pp) along with Cuyo and GBA. On the other hand, men in the northern regions show drops of 13 and 14 pp, while in Patagonia only 3 pp.

**Figure 14.** Labor participation rate. Males 65+. By Regions.

## 4. Conclusions

This paper describes the frame of reference in which the moratorium was designed and implemented. In the mid-2000s, fewer and fewer elderly people were able to access a cash benefit from the social security system. To reverse the low coverage rates of the pension system, a public policy was launched in the second half of 2006 that pursued the objective of increasing the elderly population receiving cash benefits from the moratorium system through Law 25,994. The moratorium achieved the objective of increasing the population to be covered and concomitantly verifying improvements in indicators such as poverty, income distribution and in the labor markets of older people.

In the case of poverty and indigence, there were significant decreases in the proportion of elderly people between the three years before and the three years after the moratorium, without verifying a structural change in the series. These decreases were not homogeneous between men and women. Women had larger decreases in both rates than men. On the other hand, at the regional level, non-homogeneous behaviors were also found. The northern regions, especially the northeast, verified the most important improvements in poverty and indigence rates, followed by the Cuyo region. While in the Pampas regions and especially in Patagonia, the improvement in poverty and indigence rates was verified to a lesser extent.

The income distribution of the elderly population also improved after the moratorium. This is verified through the calculated Gini coefficients and the representations of the Lorenz curves. The analysis carried out verifies that in relative terms the improvement was greater in the case of women of retirement age than in the case of men over 65 years of age.

Finally, the behavior and evolution of labor market participation rates was analyzed. It was confirmed that older people have changed their behavior in relation to the labor market. In fact, activity rates fell by half in the period analyzed, resulting in statistically significant differences and a structural change in the series, especially in the case of men. In the three years following the moratorium compared to the three previous years, broken down by sex, men had a greater fall in participation in the labor market in relation to women.

As for labor market participation rates calculated at a regional level, falls are observed in all cases, but differently depending on the region in question. Thus, older people showed strong falls in participation in the labor markets of the Cuyo region and smaller falls in the Patagonian region. Broken down by sex, women show significant falls in the Cuyo region, and an increase in labor market participation in Patagonia. Men show lower labor market participation in all regions, the most pronounced being in Cuyo and Pampeana.

In all cases, it has been shown that, vis-a-vis the elderly population, the benefits of the moratorium have changed, the indicators of poverty, indigence, income distribution and participation in the labor market have changed. However, based on this evidence, it cannot be concluded that moratorium is the cause of the changes in the situation of the elderly. Further research in causal inference is necessary.

## Abbreviations

AFJP	Retirement and Pension Fund Administrators
SIPA	Argentine Pension System
EPH	Permanent Household Survey
CBA	Basic Food Basket
CBT	Basic Total Basket
(ENGHo)	National Household Expenditure Survey
icE	Inverse of the Engel Coefficient
CdE	Engel Coefficient
IPCF	Family per Capita Income
INDEC	National Institute of Statistics and Census
pp	Percentual Points

## Author Contributions

Marcelo Alós is the sole author. The author read and approved the final manuscript.

## Conflicts of Interest

The author declares no conflicts of interest.

## References

- [1] Alós, M., Apella, I., Grushka, C., and Muiños, M. (2008). Participation of seniors in the Argentinian labour market: An option value model. *International Social Security Review*, 61(4): 25-49. <https://doi.org/10.1111/j.1752-1734.2008.00322.x>
- [2] Bertranou, F., Cetrángolo, O., Grushka, C., and Casanova, L. (2012). Más allá de la privatización y la reestatización del sistema previsional de argentina: cobertura, fragmentación y sostenibilidad. *Desarrollo Económico*, 52(205): 3-30. <https://www.jstor.org/stable/23612371>
- [3] Bertranou, F., Cetrángolo, O., Grushka, C., and Casanova, L. (2016). Encrucijadas en la seguridad social argentina. *Revista de Cepal*. <https://repositorio.21.edu.ar/bitstream/handle/ues21/12818/Encrucijadas%20en%20la%20seguridad%20social%20Argentina.pdf?sequence=1>
- [4] Ministerio de Trabajo Empleo y Seguridad Social (2023). Boletín estadístico de la seguridad social. Secretaría de Seguridad Social. Dirección de Programación Económica. Diciembre.
- [5] Gasparini, L., Cicowiez, M., and Sosa Escudero, W. (2013). Pobreza y desigualdad en América Latina: conceptos, herramientas y aplicaciones. Temas Grupo Editorial. <https://www.econstor.eu/bitstream/10419/127692/1/cedlas-wp-171.pdf>
- [6] Gasparini, L., Tornarolli, L., and Gluzmann, P. (2019). El desafío de la pobreza en argentina. Diagnóstico y perspectivas. Nota Técnica. CIPECC. PNUD. CEDLAS, 1.
- [7] INDEC (2016). La medición de la pobreza y la indigencia en la Argentina. 1era Ed., volume 22. Instituto Nacional de Estadística y Censos - INDEC, metodología INDEC edition. [https://www.indec.gob.ar/ftp/cuadros/sociedad/EPH\\_metodologia\\_22\\_pobreza.pdf](https://www.indec.gob.ar/ftp/cuadros/sociedad/EPH_metodologia_22_pobreza.pdf)
- [8] INDEC (2020). Encuesta Nacional de Gastos de los Hogares-ENGHo: Informe de Ingresos 1era Ed. INDEC Libro digital, PDF Archivo Digital: descarga y online. [https://www.indec.gob.ar/ftp/cuadros/sociedad/engho\\_2017\\_2018\\_informe\\_ingresos.pdf](https://www.indec.gob.ar/ftp/cuadros/sociedad/engho_2017_2018_informe_ingresos.pdf)
- [9] Juhn, C. and Potter, S. (2006). Changes in labor force participation in the united states. *Journal of Economic Perspectives*, 20(3): 27-46. <https://doi.org/10.1257/jep.20.3.27>
- [10] Lindbeck, A. (1996). The west european employment problem. *Weltwirtschaftliches Archiv*, 132(4): 609-637. <https://doi.org/10.1007/BF02707585>
- [11] Mesa-Lago, C. (1986). Social security and development in latin america. *Cepal Review*. [https://repositorio.cepal.org/bitstream/handle/11362/12443/28135150I\\_en.pdf](https://repositorio.cepal.org/bitstream/handle/11362/12443/28135150I_en.pdf)
- [12] Rofman, Rafael and Fajnzylber, Eduardo and Herrera, German Dario, Reforming the Pension Reforms: The Recent Initiatives and Actions on Pensions in Argentina and Chile (March 26, 2009). <http://dx.doi.org/10.2139/ssrn.1992438>
- [13] Schulthess, W. E. and Demarco, G. C. (1993). Sistema de pensiones en américa latina: Argentina: evolución del sistema nacional de previsión social y propuesta de reforma. SRV Impresos. Proyecto Regional Políticas Financieras para el Desarrollo. CEPAL / PNUD. [https://repositorio.cepal.org/bitstream/handle/11362/30134/S331252S386AR\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/30134/S331252S386AR_es.pdf)
- [14] Sen, A. (1976). Poverty: an ordinal approach to measurement. *Econometrica: Journal of the Econometric Society*, pages 219-231. <https://doi.org/10.2307/1912718>
- [15] Singh, K., & Xie, M. (2008). Bootstrap: a statistical method. Unpublished manuscript, Rutgers University, USA. Retrieved from <http://www.stat.rutgers.edu/home/mxie/RCpapers/bootstrap.pdf> 1-14.