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Concentration and inequalities in the financing of *obras sociales* after deregulation: a comparative analysis of the years 2004 and 2011

Concentración y desigualdades en el financiamiento de las obras sociales posdesregulación: un análisis comparativo de los años 2004 y 2011

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ABSTRACT In Argentina, during the decade of the 1990s major changes were introduced into the regulatory framework of the national *obras sociales*, or union-based health coverage plans. Using data from the Federal Administration of Public Income (AFIP) [*Administración Federal de Ingresos Públicos*], this study evaluates for the years 2004 and 2011: a) the importance of *obras sociales* within the healthcare system, b) the degree of concentration of this health social security subsystem, and c) the inequalities in the availability of funds among the *obras sociales* and their beneficiaries. The results show an increased importance of *obras sociales* within the Argentine health system. The concentration of funds distributed to the most important institutions within the subsystem showed no change, while the concentration of contributors to these institutions slightly increased and that of beneficiaries decreased. Finally, a reduction of the inequalities in funds per beneficiary received by different institutions was observed. This trend can be explained, among other factors, by the attenuation of wage differentials between branches of economic activity and the actions of the so-called Solidarity Redistribution Fund.
KEY WORDS Social Security Agencies; Health Care Rationing; Government Regulation; Argentina.

RESUMEN En Argentina, durante la década de 1990 se introdujeron grandes cambios en el marco regulatorio de las obras sociales nacionales. A partir de datos de la Administración Federal de Ingresos Públicos, el presente estudio compara para los años 2004 y 2011: a) el peso de las obras sociales dentro del sistema de salud argentino; b) el grado de concentración de este subsistema de la seguridad social en salud; y c) la desigualdad en la disponibilidad de fondos per cápita entre obras sociales y beneficiarios. Los resultados revelan un incremento de la importancia de las obras sociales dentro del sistema de salud; la cantidad de instituciones se mantuvo prácticamente invariante y la concentración de los fondos distribuidos en las entidades más importantes del subsistema no muestra cambios, mientras que la de cotizantes aumenta levemente y disminuye la de beneficiarios. Además, se registró una reducción en las desigualdades en los fondos por beneficiario, la cual podría estar asociada a la atenuación de las diferencias salariales entre los diferentes sectores de la economía y al accionar del Fondo Solidario de Redistribución.
PALABRAS CLAVES Instituciones de Seguridad Social; Asignación de Recursos para la Atención de Salud; Regulación Gubernamental; Argentina.

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INTRODUCTION

The Argentine health system is made up of three subsystems: the public system, aimed primarily at the population with the lowest income and without health coverage; the social security system, which offers coverage to wage earners incorporated into the formal economy and their family members; and the private system, which largely attracts a medium- to high-income population, offering insurance in exchange for payment of a premium[1],[2].

The social security subsystem came into being in 1970 with the sanction of Law 18610, establishing obligatory social insurance for all wage earners and their families financed through employee and employer contributions calculated as a fixed percentage of salaries[3].

This subsystem was organized through institutions called *obras sociales*, non-profit organizations offering health insurance. In the case of what are known as national *obras sociales*, management is in the hands of unions representing each productive sector of the economy. There are also provincial *obras sociales* which offer coverage to the public employees in each jurisdiction, *obras sociales* for management personnel, and the National Social Security Institute for Retirees and Pensioners (INSSJP) [*Instituto Nacional de Seguridad Social para Jubilados y Pensionados*], which offers health services coverage exclusively to retired persons and those receiving pensions.

Law 18610 also instituted a regulatory body, the National Institute of *Obras Sociales* [*Instituto Nacional de Obras Sociales*], in charge of controlling funding and services offered, as well as establishing solidarity mechanisms among the different insurers within the system. A key tool for achieving the latter objective was the creation of what is called the Solidarity Redistribution Fund [*Fondo Solidario de Redistribución*], to which all entities are required to contribute 10% of their total income. This fund is aimed at diminishing differences in resources existing among the *obras sociales*, a product of – among other factors – the different average salaries in each economic sector. To this end, the Fund supports financially the *obras sociales* with lower incomes, in order to guarantee affiliates access to health services and special plans[4].

Until the mid-1980s the trend in the social security subsystem was towards a constant expansion of coverage, favored by an economic context in which the majority of the labor force was included in the formal labor market. While in 1967 only 35% of the Argentine population had an *obra social*, coverage reached 75% in 1984[5]. Nevertheless, at the end of this same decade the efficiency of these entities and the presence of inequalities in funding and coverage of health services among beneficiaries of the different *obras sociales* was being strongly questioned[6].

The problems of efficiency were attributed to different causes. The absence of competition among entities impeded beneficiaries of the system from choosing the *obra social* of their preference, given that they were obligatorily affiliated to a single entity according to their labor activity. Added to this was the regulatory frailty of the National Institute of *Obras Sociales*, which proved incapable of limiting coverage for unnecessary services offered by wealthier entities, and of guaranteeing a minimum coverage to the beneficiaries of the poorer entities[5]. It was argued that these reasons generated a low level of efficiency, responsible for the debts accrued with service providers[7] and the continual increase in the number of staff, which was considered excessive in relation to the number of affiliates[5],[8].

Inequalities in funding were also attributed to the obligatory affiliation by labor activity, which segmented the wage-earning population according to contribution capacity, with stark contrasts among the different *obras sociales* in terms of coverage offered[6]. At the same time, discretional mechanisms in the allocations of the Solidarity Redistribution Fund limited its redistributive effectiveness.

In this context, between the years 1993 and 1999, a series of reforms of the social

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security sector were implemented, affecting the great majority of national *obras sociales* – only the *obras sociales* of the security forces and the universities were exempt from the national deregulation process. The provincial *obras sociales* were less clearly affected, as they were subject to the norms of the sub-national government under whose jurisdiction they fell. The stated objectives of the deregulation and the specific measures undertaken to achieve those objectives can be summarized as follows:

1. *Increase the efficiency of the subsystem through the introduction of competitive mechanisms among* obras sociales[2]. The system of national *obras sociales* was deregulated and freedom of choice was conferred to affiliates, who could change insurance providers once a year. Nevertheless, and after a number of modifications, it was finally established that the choice was limited to *obras sociales* of the same type; it was not possible to move from a national union-run *obra social* to one for management personnel or vice versa, nor from an *obra social* to a prepaid medical insurance company.
2. *Foster more equal levels of coverage by defining a minimum package of services, known as the Obligatory Medical Program.* This had to be guaranteed by all insurance providers and any provider unable to comply would have to be merged with another entity or entities.
3. *Attenuate inequalities in income per affiliate among* obras sociales*, guaranteeing a minimum base in the contributions of primary affiliates.* In this way, all entities could cover the cost of the basic package of services included in the Obligatory Medical Program. To this end, Decree 292/95 redefines the distribution mechanisms of the Solidarity Redistribution Fund, assuring every primary beneficiary of the system a minimum contribution. Were the worker contribution according to his/her salary to be lower than the established minimum value, the Solidarity Redistribution Fund would automatically make up the difference. Additionally, a part of this fund would finance costly but uncommon treatments incorporated in the Administration of Special Programs[3].

It is important to mention that, although there was no explicit incorporation of private insurance in the deregulation, the agreements by which some national *obras sociales* transferred their affiliates' contributions to a prepaid medical insurance company (which would then take responsibility for the provision of health services and/or the management of the list of beneficiaries) allowed these companies to enter the social security system, competing with the rest of the entities to attract affiliates[9]. The possibility of establishing differential health plans among beneficiaries and *obras sociales* became a means for the companies to enter competitively into the system[10]. Nevertheless, these types of affiliates (called "*indirect members*" by the companies of prepaid medical plans) retain their status of social security contributors.

It was hoped that the introduction of competition would promote the efficiency of the system. With the new regimen, affiliates that were not satisfied with the quality and coverage of the services offered by their entity could exercise the right to change providers. If an *obra social* lost a significant number of affiliates, eventually it would have to cease to operate. In this way, by incentivizing the concentration of users into a smaller number of entities, an economy of scale was expected to be achieved, reducing administrative costs and diversifying risk within each institution.

An aspect to highlight in these regulatory changes was the potential conflict between introducing competition among entities (by allowing the option to change providers) and the objectives of increasing coverage and attenuating financial inequalities.

Findling *et al.*[6] analyzed the early effects of deregulation. Using data from 1999, the authors found that although the number of users that exercised their ability to switch providers was small in relation to the total, the proportion of workers that changed

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providers increased with salary level. Similarly, Fidalgo[9] provides data that indicate that in the period from 1999 to 2005, eight of the ten national *obras sociales* that received the largest number of transfers had agreements with prepaid medical insurance companies. Lastly, Cetrángolo y Devoto[10] affirm that the elimination in 1997 of *obras sociales* for management personnel from the regulation was due to the fact that these entities were receiving the largest number of transfers. As a whole, these results suggest that in the first years of deregulation there was a shifting in the market to the benefit of entities "richer" in relative terms, or to the benefit of those that possessed agreements with prepaid medical insurance companies. If this tendency were to persist, it could be assumed that there would be a progressive defunding of the poorer *obras sociales* through the loss of the highest-paid affiliates[6].

In the decade after the sanction of the reforms, the combination of a number of factors could have limited the pro-inequality tendencies in funding resulting from the freedom of choice among *obras sociales*.

Firstly, the dynamics of the labor market in that period were characterized by a notable reduction in salary inequality, owing mostly to the more intense reconstitution of income for those in the lowest part of the income distribution[11]. This dynamic was marked by a highly favorable economic context with strong growth and declining levels of unemployment, as well as by the regulatory changes in the labor market introduced through the sanction of Law 25877, which tangibly modified the framework of collective labor agreements and strengthened the bargaining power of unions.

Secondly, the distribution criteria of the Solidarity Redistribution Fund and its funding structure were progressively transformed: in 2002, contribution percentages were increased and differentiated according to contributor salary; later, through Decree 741/2003, the minimum contribution went from being assured only for the primary beneficiary to being assured for all beneficiaries (including the worker and his/her dependents). In this way, larger family groups were assured a greater contribution base. Later, in 2006, Decree 1901 created the Automatic Nominative Subsidy that introduced an adjustment for risk in the minimum contribution assured to every family member (including the primary beneficiary) according to sex and age, with the objective of avoiding risk-based selection on the part of insurance providers. The minimum contributions fixed in the original decree were later updated in 2010 and 2011[3],[10] (Table 1).

The objective of the present study is to compare for the years 2004 and 2011: a) the weight of *obras sociales* within the Argentine healthcare system; b) the degree of concentration of this health social security subsystem, in relation to the funds received and the number of institutions, beneficiaries, and contributors; and c) the inequalities in the availability of funds per capita among the national *obras sociales* and their beneficiaries.

METHODOLOGY

A descriptive, observational and retrospective study was carried out based in analysis of quantitative data related to the national *obras sociales*, corresponding to the years 2004 and 2011. The selection of this time period is due to the fact that although effective implementation of the option to change providers was carried out through decree 504 in 1998, the period from 1999-2002 was marked by the most profound economic crisis in Argentine history, which limited the functioning of social security to a bare minimum. Only after 2003 is it possible to consider that the implemented reforms had an impact on the mobility of beneficiaries and contributions among *obras sociales*.

Throughout this work, the affiliates or *beneficiaries* of the national *obras sociales* are understood to be the sum total of contributors and their dependents. *Contributors* are the workers employed in the formal sector (from whose salary the contribution to the *obra social* is deducted). *Dependents* are those

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Table 1. Minimum contributions (in Argentine pesos) of the Solidarity Redistribution Fund. Argentina, 2006, 2010 and 2011.

Age group	2006		2010		2011	
	Males ($ pesos)	Females ($ pesos)	Males ($ pesos)	Females ($ pesos)	Males ($ pesos)	Females ($ pesos)
0-14	22.00	22.00	36.00	36.00	47.00	47.00
15-49	35.00	41.00	57.00	67.00	74.00	87.00
50-64	41.00	41.00	67.00	67.00	87.00	87.00
Over 65	99.50	99.50	148.00	148.00	192.00	192.00

Source: United Nations Development Programme[3].
Note: Values expressed in Argentine national currency.

who receive coverage as a direct family member (child, spouse, dependent parent or grandchild) of the contributor, but who do not contribute from their own salary to the *obra social* of the contributor.

Although it may have been desirable in this study to determine the percentage of contributors to national *obras sociales* who transfer their contributions to a prepaid medical insurance company, doing so was not possible. The 2010 census specifies the population that accesses a prepaid medical plan through a national *obra social*, however the same data is not available through the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*], which was the primary information source utilized.

Regarding the first objective of this study, in order to understand the magnitude of the participation of national *obras sociales*, we analyzed the relative weight (in terms of percentage of total health spending represented and population covered) of a) the social security subsystem in relation to the health system as a whole, and b) the deregulated national *obras sociales* in relation to the social security subsystem as a whole.

The information on total health expenditure by subsystem was taken from the Global Health Observatory Data Repository of the World Health Organization (WHO)[12]. The data on the number of inhabitants was obtained from the National Population and Housing Censuses of 2001 and 2010[13],[14] and data on population covered by subsystem and type of *obra social* were obtained, for 2010, from the report of the United Nations Development Programme[3] and, for 2005, from Cavagnero *et al.*[15]. Given the impossibility of obtaining coverage information for 2004, data from 2005 were utilized.

The second objective seeks to study the evolution of the level of concentration of the subsystem of national *obras sociales*, given that this was the mechanism by which it was expected to increase the average efficiency of the entities. With this objective, in both years analyzed the following was measured: i) the quantity of national *obras sociales* subject to deregulation, along with the number of beneficiaries and contributors, and ii) the percentage of beneficiaries, contributors and funds distributed accumulated by the five, ten and twenty most important deregulated entities, by number of contributors. This data was extracted from the AFIP document *Informe de seguridad social: subsistemas de la seguridad social* [Report on social security: subsystems of social security][16].

Given that the information is provided by month, in order to produce annual data the funds distributed to the national *obras sociales* over the 12 months of the year were totaled. To calculate the number of contributors and beneficiaries of each national *obra social* the

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simple yearly average of the data declared for each month was considered. In both years analyzed, entities that did not show continuous activity over all 12 months were excluded from the study[a].

Regarding the third objective, inequalities in the funding in the national *obras sociales* were studied using the following data: a) funds distributed annually, by entity, including net transfers with the Solidarity Redistribution Fund (funds received minus funds contributed); b) average annual number of contributors and beneficiaries by national *obra social*; c) average annual salary per contributor by entity (estimated using the simple average of monthly data for the years analyzed).

The data obtained were analyzed using descriptive techniques for concentration and distribution. To analyze inequalities in the availability of funds, the national *obras sociales* were grouped into quintiles according to average contributor salary. For each quintile of entities, the following was determined: a) the percentage represented by the number of beneficiaries of the *obras sociales* in each quintile in relation to the entire system; b) the average funds distributed per contributor and per beneficiary; c) the average number of beneficiaries per contributor; and d) the simple average contributor salary for each group of entities.

A weakness of the previous analysis is that it puts all the *obras sociales* on equal footing, regardless of the number of affiliates. In this way, in the calculation of averages an entity with 300,000 affiliates has the same weight as one with 5,000. In order to overcome this fault, inequalities in the availability of funds among all the affiliates of the system were analyzed, grouping them into quintiles according to average salary per beneficiary, determined by the *obra social* to which they belong. For each quintile of beneficiaries, the percentage of corresponding funds distributed was calculated. Additionally, the Gini coefficient was calculated as a synthesized measure of the degree of inequality in the distribution of funds.

RESULTS

Importance of the national *obras sociales* within the Argentine health system

Taking into account that the public financing of total health expenditure includes both the social security and public subsystems, in Table 2 a 16% increase from 2004 to 2011 can be observed. This increase occurs at the expense of a reduction of equal magnitude in the percentage of private expenditure (including out-of-pocket spending and private insurance) in total health spending. The dynamics of public financing are in large part explained by increased funding of the social security subsystem (including national *obras sociales*, the INSSJP and provincial *obras sociales*) which increased by 14%.

Other aspects explaining of the financing of public health spending can be found in the evolution of certain variables in the labor market: the relative weight of the economically active population within the total population, which increased from 42.8% in 2004 to 64.3% in 2010[14]; the reduction in the unemployment rate that, according to World Bank estimates, went from 12.6% in 2004 to 7.2% in 2011; and the tendency toward formalization in the labor market, such that the percentage of registered salaried work[b] (considering both public and private employment) increased by 60% in May 2002 and by 64% in the second trimester of 2012[17].

Table 2. Percentage distribution of total health expenditure by subsystem. Argentina, 2004 and 2011.

Subsystem	2004 (%)	2011 (%)
Social security	29.0	43.0
Public	22.0	24.0
Private	49.0	33.0

Source: Own elaboration using data from the Global Health Observatory Data Repository[12].

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Table 3. Percentage distribution of the population according to type of health coverage. Argentina, 2005 and 2010.

Type of coverage	2005 n=38,592,150 (%)	2010 n=40,117,096 (%)
Social security		
National *obra social*	32.0	39.0
INSSJP	8.0	8.0
Provincial *obra social*	14.0	14.0
Public sector	39.0	30.0
Voluntary insurance	7.0	9.0

Source: Own elaboration based on total populations from the National Institute of Statistics and Censuses [*Instituto Nacional de Estadísitca y Censos*[13],[14], data from the United Nations Development Programme[3] for 2005 and from Cavagnero *et al.*[15] for 2010.
INSSJP = *Instituto Nacional de Seguridad Social para Jubilados y Pensionados* [National Social Security Institute for Retirees and Pensioners].

In order to determine the importance of national *obras sociales* subject to deregulation within the social security subsystem, the percentage of their beneficiaries with respect to the total Argentine population was calculated (Table 3).

An increase in the importance of this subset of institutions in terms of the percentage of the covered population is observed, with a corresponding reduction in the population without explicit coverage and therefore covered by the network of public health centers. Similarly, the proportion of the population with voluntary insurance from the private sector also showed an increase of nearly 2%.

Deregulation and concentration

Table 4 shows the quantity of national *obras sociales* and the average annual number of contributors and beneficiaries during both of the analyzed years, as well as the percent variation of each variable in the period under analysis.

Contrary to expectation, the number of national *obras sociales* (with continual contributions over the course of each year) increased slightly. Similarly, the number of contributors to the system shows a 64.3% increase, accompanied by an increase (albeit of a smaller magnitude) in the quantity of beneficiaries.

The larger quantity of contributors is consistent with the dynamics of the labor market in the analyzed period, with an important drop in unemployment levels and an increase in the economically active population and the population with formal employment[18]. The smaller increase in the number of beneficiaries as compared to

Table 4. Number of *obras sociales*, average annual number of contributors and beneficiaries, and percent variation of each between 2004 and 2011. Argentina.

	2004	2011	Variation (%)
National *obras sociales*	288	293	1.7
Contributors	3,974,593	6,530,894	64.3
Beneficiaries	7,331,138	9,666,417	31.8

Source: Own elaboration using data from the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*][16].

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Table 5. Percentage of contributors, beneficiaries, and funds distributed in national obras sociales with the greatest number of beneficiaries. Argentina, 2004 and 2011.

NOS ordered according to number of beneficiaries	Contributors (%)		Beneficiaries (%)		Funds distributed (%)	
	2004	2011	2004	2011	2004	2011
5 largest	29.0	35.0	35.0	33.0	29.0	30.0
10 largest	44.0	47.0	47.0	45.0	44.0	45.0
20 largest	59.0	62.0	62.0	59.0	62.0	60.0

Source: Own elaboration using data from the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*][16].
NOS = National obras sociales.

contributors can be explained by the existence of more than one contributor per family group (making it unnecessary to include the entire family group in a single *obra social*) and/or the incorporation into the labor market of young people without children.

In Table 5, the trends in the concentration of the primary entities of the system (according to number of beneficiaries) with respect to contributors, beneficiaries and funds distributed are analyzed.

There is no clearly defined trend regarding the level of concentration of the system. While the concentration of contributors increased in all the categories considered, that of beneficiaries fell slightly (between 2% and 3%). Similarly, the percentage of funds received by the most important entities according to their number of beneficiaries showed practically no change.

Distribution of the funds of national *obras sociales*

Table 6 groups the *obras sociales* in quintiles according to average salary of the contributors of each entity for the years 2004 and 2011. The percentage of affiliates belonging to *obras sociales* of the first and second quintile (the poorest in relative terms) reduced by 9% and 7% respectively. At the same time the top three quintiles increased coverage by 2%, 8% and 4%, respectively.

The ratio between funds per beneficiary of the *obras sociales* from the first and fifth quintiles reduced to 2.94 in 2004 and 2.44 in 2011 (17%). Inequalities in funds per contributor between these quintiles behaved similarly, reducing 9.5%.

A reduction in the differences in average contributor salary between the highest and lowest quintiles was also observed (28%), which can be explained (at least partially) by the evolution of inequalities in funds per beneficiary and per contributor. Nevertheless, to the extent that for both years analyzed the difference in salaries is greater than the differences in funds per contributor, the role played by the Solidarity Redistribution Fund in attenuating funding inequalities is clear.

A reduction in additional dependents per contributor is seen in all quintiles in the analyzed period. This may be a consequence of the demographic changes between censuses (2001-2010), in which the population under 14 years of age dropped from 28.3% to 25.5% of the total population, while the population between 15 to 64

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Table 6. Percentage distribution of total beneficiaries in the subsystem, funds per beneficiary, and dependents per contributor, according to quintiles of *obras sociales* ordered by average contributor salary. Argentina, 2004 and 2011.

Year	Quintile of obras sociales	Total beneficiaries (%)	Funds per beneficiary[1] ($ pesos)	Funds per contributor[2] ($ pesos)	Dependents per contributor ($ pesos)	Average contributor salary[3] ($ pesos)
2004	1	43.3	395.68	672.11	0.70	552.56
	2	17.6	442.79	851.22	0.92	870.65
	3	13.0	540.56	1,091.60	1.02	1,127.94
	4	16.6	804.42	1,582.51	0.97	1,620.57
	5	9.5	1,162.67	2,354.75	1.03	3,482.68
2011	1	34.5	2,080.05	2,744.83	0.32	2,273.38
	2	11.3	2,448.59	3,578.02	0.46	3,474.02
	3	15.3	2,716.38	4,214.65	0.55	4,213.37
	4	25.0	3,425.68	5,454.26	0.59	5,779.96
	5	13.9	5,085.34	8,696.65	0.71	10,299.61

Source: Own elaboration using data from the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*][(16)].
[1]Coefficient of quintiles 5 and 1= 2.94 in 2004 and 2.44 in 2011.
[2]Coefficient of quintiles 5 and 1= 3.50 in 2004 and 3.17 in 2011.
[3]Coefficient of quintiles 5 and 1= 6.30 in 2004 and 4.53 in 2011.
Note: Values expressed in Argentine national currency.

years increased from 61.8% to 64.3%. This demographic shift has its correlation in the mean number of children born per woman[c], which for the country as a whole has dropped from 3.1 children per woman in 2001 to 2.9 in 2010, evidencing a reduction in fertility rates in the last decade.

Table 7 compares the evolution of funds distributed among beneficiaries of the system. The beneficiaries of national *obras sociales* are grouped into quintiles according to the average amount of funds per beneficiary, determined by the *obra social* to which they belong. In this way, the first quintile is made up of the 20% of beneficiaries that receive the least amount of funds per capita, while the fifth quintile is made up of the 20% with the greatest amount of funds per capita.

Based on the analyzed data, it is possible to affirm that between 2004 and 2011 the differences in funds received per beneficiary

Table 7. Percentages of total funds distributed according to quintile of beneficiaries. Argentina, 2004 and 2011.

Quintiles of beneficiaries	Total funds distributed[1]	
	2004 (%)	2011 (%)
1	11.0	13.0
2	14.0	15.0
3	15.0	18.0
4	22.0	22.0
5	38.0	32.0

Source: Own elaboration using data from the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*][(16)].
[1]Coefficiente of quintiles 5 and 1= 3.48 in 2004 and 2.54 in 2011.

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in the first and fifth quintiles tended to reduce. This reduction is explained in large part by the 6% drop in funds received by affiliates of the fifth quintile. However, although the percentage of funds received by beneficiaries of the first quintile increased, this increase was only 2%.

A better measure of the evolution of inequalities in the distribution of funds among beneficiaries of the national *obras sociales* can be obtained by creating Lorenz curves for the analyzed years and calculating the corresponding Gini coefficients, allowing for an overall view that considers all the quintiles of beneficiaries and not just the first and last. The Gini coefficient of funds distributed among beneficiaries of the national *obras sociales* for the year 2004 was 0.246 and was 0.185 for the year 2011. These values, along with the Lorenz curves (Figure 1), confirm the positive trend in relation to the attenuation of inequalities.

CONCLUSIONS AND DISCUSSION

The analysis carried out in this study reveals an increase in the relative importance of the social security subsystem within the Argentine health system in the analyzed period. This conclusion is based on the increase in the percentage of total health expenditure financing this subsystem, as well as in the growth of the population covered. In particular, while the percentage of the population included in the National Social Security Institute for Retirees and Pensioners increased marginally, and the population insured through provincial *obras sociales* as well as the population receiving care exclusively in the public subsystem decreased in relative terms, the proportion of the population covered by national *obras sociales* (subject to deregulation) increased by 7% between the years of 2005 and 2010. Nevertheless, a weakness of this analysis is the omission (due to lack of information) of the population of beneficiaries of *obras sociales* who transferred their contributions to a prepaid medical insurance company.

Contrary to expected, between 2004 and 2011 the number of entities in the subsystem of national *obras sociales* did not shrink. The favorable economic conditions (with their positive impact on the funding of all entities), as well as the reluctance of the government to shut down *obras sociales* with

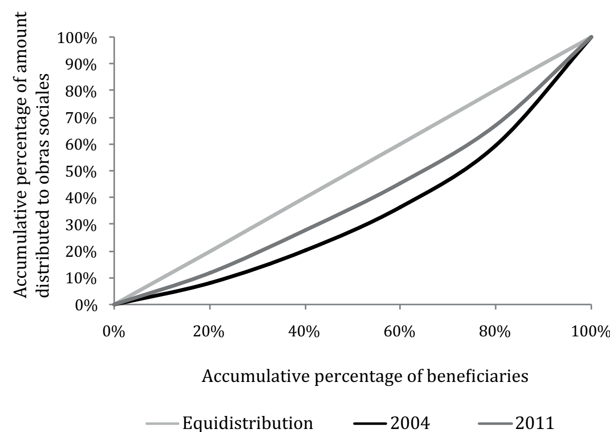

Figure 1. Lorenz curves of fund distribution among beneficiaries of national *obras sociales*. Argentina, 2004-2011.

Source: Own elaboration based on data from the Federal Administration of Public Income [*Administración Federal de Ingresos Públicos*][16].

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small numbers of affiliates and with possibly greater financial difficulties, are some of the factors that explain this result.

The large number of entities contrasts with the highly concentrated nature of the system: 20 entities (out of approximately 290) have close to 60% of all contributors, beneficiaries and funds in the two years analyzed. That said, a moderate rise in the concentration of contributors among the most important entities (according to number of contributors), a fall in the concentration of beneficiaries and a lack of change in the concentration of funds distributed was observed.

The increase in the concentration of contributors (and not of beneficiaries) can be attributed to the dynamics of affiliate transfers and the new incorporation of workers into the formal labor market.

Transfers among *obras sociales* are especially common in young people, single and without children, who receive the best offers for differential coverage plans. Given that in these transfers the ratio between beneficiaries and contributors is lower than the average for the whole system, the *obras sociales* that receive these transfers might show a reduction in their overall beneficiary/contributor ratio. Assuming that the principal *obras sociales* receiving these transfers are among the most important of the system, these transfers could accentuate the concentration of contributors and diminish that of beneficiaries.

On the other hand, if in the new incorporations to the *obras sociales* system there is also an important representation of young people without children or in two-income homes, and these new incorporations tend to be within the most important entities, the result would also be an increase in the concentration of affiliates and a drop in that of beneficiaries.

Lastly, the lack of changes in the concentration of funds in the most important entities (according to number of contributors) is consistent with the distributive function of the Solidarity Redistribution Fund.

By taking as the unit of analysis national *obras sociales* and grouping them into quintiles according to mean salary per contributor in each entity, a reduction of the differences between the average salaries of the first and last quintiles can be seen in the period studied. The dynamics of the formal labor market, with a reduction in the differences among salaries from different productive sectors (and therefore different unions) is the primary factor explaining this trend. Nevertheless, it could also be explained by the transfer of high-salary contributors to entities with less average income. Although the available data and the methodology of analysis utilized does not make it possible to categorically dismiss this last option, it appears rather implausible in terms of the incentives proposed by the deregulation: for the transfers among entities to be a factor for reducing salary inequalities, these would have to have benefitted the "poorest" *obras sociales* in relative terms, which although technically possible, would be counterintuitive.

Although different studies suggest that in the first years it came into effect the freedom of choice of *obras sociales* promoted a shifting process that could have accentuated inequalities in the funding of national *obras sociales*, the results expressed here suggest that in the analyzed period the tendency was just the opposite: the differences in funds received in per capita terms (considering both contributors and beneficiaries) by the different entities in the system were reduced. At least two complementary factors can explain this result.

First, the role played by the Solidarity Redistribution Fund, and in particular the incorporation of automatic transfers of funds to entities considering adjustments for risk due to age and sex of the beneficiaries, could have reduced incentives for changing providers. Similarly, the comparison in both years studied of salary differences versus differences in funds per contributor or beneficiary put into evidence its effectiveness as a redistribution tool.

Second, the tendency towards the reduction of inequality in relative salaries within the formal labor market, as a result of new regulatory frameworks (collective labor agreements) and an economic context

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characterized by high growth rates and low unemployment, were decisive in the shaping and dynamics of the national *obras sociales* during the period studied. Lastly, a weakness of the study carried out (and that should be taken into account when evaluating its results) is that the analysis of inequalities among *obras sociales* in the funds available per beneficiary and contributor do not take into account the additional payments that the users make for differential plans with greater coverage. This information is not provided by the collection agency, and could be hiding inequalities within the system.

ENDNOTES

a. The entities excluded for not showing continuity throughout the study years were, for the year 2004: Personal de Maestranza; Personal de Azúcar Ingenio Las Toscas; Viajantes de Comercio; Árbitros del Fútbol Argentino; Asociación de Obras Sociales de Rosario; Empleados y Obreros Gastronómicos de Tucumán; Personal Jerárquico Industria Gráfica Argentina; Personal Artes Gráficas Chaco; Personal Artes Gráficas Santa Fe; Portuarios de Bahía Blanca; Portuarios Puerto San Nicolás. For the year 2011: Personal Azúcar Ingenio Río Grande and Personal Auxiliar Casas Particulares.

b. For this purposes of this study, a person is considered to be salaried if he or she receives a salary for work carried out under an employer. Similarly, a person is considered to have a registered or formal work relationship if his or her salaried work includes retirement deductions.

c. The mean number of children born per woman is a measurement that expresses fertility rates. It is defined as the number of children born to women of 45-49 years over the course of their reproductive history (retrospective fertility) in relation to the total number of women of those ages included in the census. It is a measurement of longitudinal fertility analysis.

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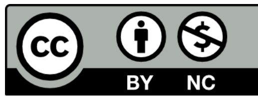

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