[TARIFFS SEGMENTATION AND DISTRIBUTIONAL INCIDENCE IN ARGENTINA. ITS LINKAGES TO ENERGY POVERTY]

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# Overview

Deprivation in the access to energetic services is one of the main dimensions through which material poverty manifests itself. Due to this, there’s been a growing interest both in academia as in governmental agencies to conduct efforts to better understand, characterize and mitigate energy poverty. Argentina doesn’t have a coordinated strategy that aims specifically at reducing energetic deprivation, but has relied for many years in the establishment of widespread energy subsidies to both protect the purchasing power of its population and guarantee affordability in the access to services. This policy, however, has come at a very high cost. First of all, it’s contributed greatly to generating a pronounced public deficit, which is currently discussed as one of the main causes behind the spiking inflation experienced during the past decade. Secondly, it has created a wide gap between the generation cost of the service and the price paid by final consumers, inducing incentives to develop inefficient consumption habits. Finally, it has led to very large transfers to the richest sectors of the population, resulting to be regressive in terms of its distributional impact (Puig and Salinardi, 2015; Lakner et al., 2016; Báez, 2022). Because of this, a new tariff design was announced in 2022 in order to reformulate the way subsidies were assigned and target specifically lower income households.

The following paper presents an analysis of the tariff segmentation carried out during 2022. Its aim is to evaluate the effects of the policy change in the levels of energy poverty presented by the Argentinian population and determine the distributional incidence of the new subsidy scheme; namely, in which proportion each income group benefits from the public transfer. Additionally, some considerations are made regarding the legislation through which the segmentation was implemented from a political economy optic, in order to assess the transparency and coherence of the regulation.

The paper is structured as follows. First of all, the relevant theoretical aspects of both energy poverty studies and distributional incidence analysis are presented. Secondly, the legislation that dictates the segmentation characteristics is presented together with other norms that regulate the energetic market already active in the country to provide the complete framework in which the policy change is performed and to analyze the coherence of the legal guidelines. Thirdly, a description of the methodology employed and the information sources is made. Finally, the results are presented and discussed, a set of final conclusions is established and the limitations and possible follow-ups of the study are commented.

# Methods

Based on data from the National Household Expenditure Survey 2017-2018, a microsimulation exercise is implemented to determine i) to which income segment each of the households are assigned (and hence whether or not they will continue to perceive energetic subsidies or not), ii) how much would the cost of their tariffs be if they were to pay what corresponds to their income segment and iii) to how much the subsidy perceived by each household amounts. To evaluate the effects on energy poverty, estimations using both the 10% index (Boardman, 1991) and the double median one (2M) (EPOV, 2020)[[1]](#footnote-1) are conducted in the pre- and post-segmentation scenarios. On the other hand, the distributional incidence of the subsidies to electricity, natural piped gas and bottled gas is evaluated through the use of Lorenz curves, Gini coefficients and a simple Benefit-Incidence Analysis (BIA).

# Results

The implementation of the tariff segmentation would cause a substantial rise in energy poverty as measured by both indexes considered in the study. Practically the entirety of the effect is due to the rise in the cost of energy for those that are classified as “high income”, whereas households classified as “medium income” face almost no change whatsoever; although the subsidies should cover only a part of their energetic consumption, the thresholds are held too high and hence the are treated exactly the same as they were previous to the segmentation. The “low income” group, which is the only one that (accordingly to the legislation) should receive subsidies for the entirety of the quantities it consumes, is also the one that presents the highest incidence of energy poverty within the group. It’s hypothesized that this is due not only to the fact that it’s the segment with lowest income, but also because it consumes energy in a very inefficient way; hence, the lower prices of energy aren’t good enough to mitigate energy poverty within the segment. With regards to the distributional incidence, it’s found that all three subsidies (electricity, piped natural gas and bottled gas) are progressive, meaning they lead to a more egalitarian distribution, favoring most those that have lower income or lower consumption levels. In the case of piped natural gas, although progressive, there’s a higher concentration of the subsidies in the middle income deciles; one of the reasons could be the fact that the gas networks’ extension is limited and doesn’t reach users that are far away from the metropolitan areas (who, in many cases, turn out to be a part of the poorest segments of the population).

**Conclusions**

The tariff segmentation implemented from 2022 on in Argentina represents an improvement in terms of its distributional incidence compared to the previous scheme (which consisted of a universal subsidy received by anyone who had access to the service), given the fact that it is progressive in both absolute and relative terms. However, it still proves to be flawed in a series of aspects. The regulation that establishes the segmentation is unclear and incoherent with some other norms, which makes the whole implementation less transparent. At the same time, although it targets lower income households properly, it only alleviates their energetic deprivation without eliminating it. It would be useful to complement the policy (and, for appropriate cases, replace it) with aids to improve the energy efficiency conditions of households classified as energetically poor in the lower income group. Finally, it has a problem in the way it treats middle income users; although their consumption should be only partially subsidized, the threshold quantities determined by law are too high for regular residential consumers in the country, causing the amount of subsidies destined to this group to be actually substantially higher than intended. This implies a vertical equality problem: households that belong to the low income group receive the same treatment as those classified as middle income, even though their economic situation and purchasing power is considerably different.

# References

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1. Both indexes determine whether a household is classified as energetically poor based on which proportion of its income it has to spend to pay for energy. The 10% index classifies households that spend 10% or more of their income in energy as energetically poor, while the 2M one sets the cut-off at the level of twice the median proportion of expenditure of the sample. [↑](#footnote-ref-1)