# Programmatic Policy and Non-Written Eligibility Criteria: How Does Violence Affect the Allocation of Conditional Cash Transfers? (Draft)

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**Abstract**

Does an increase in violence affect the allocation of programmatic policy resources? In this paper, I plan to answer this question by focusing on the outburst of drug-related violence experienced in Mexico since 2008, and the allocations of *Prospera*, the Mexican Conditional Cash Transfer program. For this purpose, I present a nuanced definition of programmatic electoral strategies, recognizing the fact that even when a policy satisfies the formal requirements to be considered as programmatic, additional constraints may leave room for directionality in the allocations. The literature on redistributive policies tend to characterize a policy dichotomously as either programmatic or non-programmatic. However, more than a closed category, the programmatic character of an allocation can be considered as a matter of degree. How to choose among an eligible population, whose coverage exceeds the available funds for certain program? I argue that the geographically-concentrated increase in drug-related violence can be used as a non-written decision criteria to choose among localities for targeting new benefits. To test this empirically, I am exploring an original dataset that contains individual level data of all Mexican Federal Government Social Program's recipients for the state of Guerrero, one of the poorest and most violent states in Mexico.

# 1 Introduction

Does an increase in violence affect the allocation of programmatic policy benefits? This paper aims to address this question by offering a nuanced interpretation of how programmatic policies work, considering an often overlooked aspect on the definition of this type of allocations: their budget constraints. Even when a policy satisfy the conditions that define a policy as programmatic, there may still be room for directionality, derived from a mismatch between the size of the eligible population and the available funds of the program.

In this paper I address this question and focus on the role of violence as a potential additional criteria taken into account for choosing among eligible population. An outburst of violence represent a window of opportunity for selecting among eligible population in the need of additional criteria for allocating funds. This reasoning comes from the following potential mechanisms. First, an increase in violence may hinder living conditions of the affected population in a way that they require relatively more the support of such targeting. Second, in the specific case of drug-crime related violence, another outcomes may be affected by this phenomenon, such as a decreased presence of the state, a decrease in legitimacy of government institutions, and an increased control of drug-trafficking organizations. In this cases, it is reasonable to think that the state actors would seek for ways to regain its presence and legitimacy, and the allocation of social policy funds may help in for that purpose. Finally, an increase in violence in electoral competed places may pose an opportunity for state actors to tactically target funds and look for electoral advantage.

I plan to test this hypothesis in the Mexican case. Specifically, this research begins focusing on the allocation of funds in Guerrero, a state that has both been victim of an increase in drug-crime related violence, and that has one of the highest rates of poverty. Moreover, Guerrero is a highly contended state both in the state level elections as well as in the municipal level elections. For this purpose, I am analyzing an original dataset, a census of social program recipients that was until recently unavailable. This dataset contains more than a million observations of newly enrolled beneficiaries to any Federal-level Social

Program, and characterize them with a broad set of socio economic characteristics. The potential of this dataset is that, usually the studies on social programs allocations in the Mexican context rely on surveys that lack power to examine micro-level dynamics. With these, I will be able to link state level analysis on allocations of funds with micro level characteristics of the recipients.

This paper is structured as follow. In the next section I overview the theoretical motivation of this paper. Specifically, I revisit the conceptualization of programmatic and non-programmatic policies proposed by Stokes (2009), and use it as basis for presenting a slightly nuanced understanding of programmatic policies. Second, I present an hypothesis on how an increase in violence can be used as a non-written eligibility criteria for selecting places among already-eligible population. I offer three potential mechanisms that support this relationship, which still need to be proved empirically. Third, I mention the literatures to which my research is speaking to, identifying some broad theoretical debates where it can be embedded. Fourth, I briefly discuss the functioning of *Prospera*, Mexico's Conditional Cash Transfers Program. Fourth, I briefly present the empirical set up where I aim to test the proposed hypothesis. Finally, I discuss the next steps of this project

# 2 Motivation

I follow the definition of programmatic strategies offered by Stokes (2009). Programmatic and non-programmatic strategies entail material inducements, where parties try to get voters to support them by offering to improve or protect their material well-being. However, for a policy to be programmatic, three steps need to be satisfied. First, the objectives of the program need to be a matter of public debate. Second, these objectives shape the official and institutionalized criteria for the distribution of the program. Finally, the enacted criteria shape the actual distribution of the benefits. The fulfilment of these conditions apparently discards the opportunity for directionality considerations in the allocation of benefits. How-

ever, I argue that even when these conditions are met, there can still be a room for tactical behavior in the distribution of material benefits. These three steps may be exhaustive in cases where the official criteria for the distribution of resources allow for a perfect match between the funds allocated to the program , and the amount of resources needed for a complete coverage of the targeted population. In other words, the funds of the program are enough to attend the population defined by the program's eligibility criteria. However, it is reasonable to consider scenarios where these criteria define a subset of the population that, in order to be completely covered, the required funds exceeds the budget restrictions of the program. In these cases, even when the program satisfies the conditions for being a programmatic strategy, additional criteria is needed for choosing among the eligible population. [1]

Eligibility conditions are related to the goals of the program, and go in line with what Wantchekon (2003) defines as a broad set of objectives of a programmatic platform, such as developmental goals, poverty alleviation, economic growth, redistribution. However, even when these conditions may be met, there is room for a mismatch between the available funds and the targeted population. In this mismatch raises the opportunity for directionality within a programmatic framework. In this scenario, does the program becomes a tactical form of redistribution and loses its programmatic character? What I argue is that the programmatic character of a redistributive policy may be met even when it leaves room for directionality. So more than exhaustive categories, programmatic and tactical characters of a policy are a matter of degree.

# 3 Hypothesis and Potential Mechanisms

My hypothesis is that, in a context where the criteria that determine the form of the allocations of programmatic policies are not sufficient to narrow enough the eligible population, the increase in violence represent an additional dimension for making this decision.

*Hypothesis: An increase in drug-crime related violence leads to an increase in allocation*

[1] See Figure 1 in Appendix

*of social policy benefits.*

The relationship between violence and the delivery of social programs is implicitly causal. There are reasons to think that the causal relationship can work on either way. In one sense, my proposed hypothesis implies that an "exogenous" shock in violence causes an increase in the enrolment to the social program. I present three potential mechanisms through which this relationship can take place. First, an increase in violence may impoverish the affected population, due to the costs associated with violence. This may cause an urge to attend change the priorities, in order to attend this places. The mentioned mechanism relies still within the programmatic framework. The second set of mechanisms consider the outburst of violence as a *window of opportunity.* Progresa is a poverty alleviation program, that does not only imply a cash transfer but that aims to improve other developmental outcomes such as access to health services and education. However, there is no goal to prioritize the allocation to places that are hindered by increases in violence from drug-related crimes.

Third, the increase in violence may put an additional interest to the policy makers different from exclusively alleviating poverty. By focusing efforts to reach eligible population in more violent areas, the state may pursue a double goal: poverty alleviation, as stated by the rules of operation of the program, and regaining state presence in places where drug-trafficking organizations are gaining power.

This mechanisms make sense because of a series of reasons. First, the decisions to allocate funds are made at the federal level. Prospera is an institution that depends on the Ministry of Social Development, which is a federal agency. There is intrastate coordination for the delivery of the funds, but is is mostly carried out by federal level bureaucrats. In this sense, the potential room for directionality takes place in a politicized context. The political logic here would be to use violence as an opportunity for targeting funds to places where not only violence has increased, but also considering the electoral context in the local level. Moreover, security concerns are mostly coordinated at the federal level. It is important to note that the security policy carried out since 2008, known as the "war against narco", has been object of

multiple criticism because of unclear effectiveness and an sharp increase in violence.

# 4 Theoretical Accounts

There are two broad bodies of literature to which my paper will be speaking. On the one hand, the redistributive policy literature has conceptualized in different ways the allocation of goods in terms of the motivations of the actors, the institutionalization of this procedures. On general terms, following Dixit and Londregan (1998), redistribution can be understood as either tactical or programmatic. However, as Stokes (2009) point out, there has been a constant confusion in the use of these terms to describe the way in which allocations take place. For that reason, I plan to overview the theoretical accounts that define in different ways what a programmatic policy is.

On the other hand, since my treatment is the outburst of violence and how government actors are responding to it, I need to look to the body of literature which addresses this relationship.[2]

## 4.1 Politics of Redistribution

### 4.1.1 Definitions

Formal models that conceptualize how politicians, understood as strategic actors, chose to transfer funds. Their preferences can go from the minimal assumption of office-motivated agents to more complex scenarios in which they can be following an ideology, or are responding to the needs of their constituents. ((Persson and Tabellini, 2002); (Cox and McCubbins, 1986); (Meltzer and Richard, 1981))

[2]Still working on identifying the relevant papers for this section.

### 4.1.2 Clientelism and Programmatic Politics

The clientelism literature has been the common denominator on the explanations of social policy in Latin America. Overall, this literature relies on the assumptions that allocations following an electoral logic, and represent an advantage for incumbents which have the capacity to allocate these benefits for pursuing electoral benefits. ((Diaz-Cayeros et al., 2016); citepde2013conditional; (Fox, 1994);(Imai et al., 2016); (Weitz-Shapiro, 2012); (Zucco, 2013))

# 5 Poverty Alleviation in Mexico. The case of Prospera

Conditional Cash Transfers (CCTs) have been a common policy tool for poverty alleviation in the last decades. CCTs deliver an amount of cash benefits to households living with an income below the poverty line, conditioned on the observance of certain behavior. This induced behavior usually attempt to ameliorate other conditions associated with poverty such as low education levels, high education drop-out for children living in poor households and poor health outcomes. For instance, Prospera (Mexico's CCT) conditions the delivery of the cash benefits to two types of behavior. First, children in participating families need to attend to school. Second, they attend regularly to medical appointments.

Mexico redistributive policy has evolved from what was considered as a clientelistic transaction to a programmatic setting(Fox, 1994) Mexico's main redistributive policy for poverty alleviation is its conditional cash transfers program, Prospera (originally named Progresa). This program emerged in the context of neoliberal reforms and targeted poverty alleviation programs. The program has proven to be an effective tool for poverty reduction, while improving other indicators thanks to its conditional component, such as health, education and gender parity among the most in need. The form of the allocations derives from institutionalized rules of operation, and has survived the change in party in government, a fact that was previously unobserved in earlier programs. However, poverty measures have increased in recent years.

The effectiveness of programs such as Prospera has been proved vastly in the development economics literature Specifically, these programs tend to be praised because of their effectiveness not only in reducing poverty, but also because the positive effects on outcomes such as increased educational levels and better health outcomes for targeted populations (Fernald et al. (2008); de la Rocha and Latapí (2012); Levy (2007); Molyneux (2006)). However, in recent years poverty rates in Mexico has started to increase. Some authors claim that the effectiveness of Prospera has been exhausted, as well as a suspicion that political motivations have influenced the targeting of the program and decreased its effectiveness (Esquivel, 2015).

## 5.1 Eligibility Criteria

In order to be eligible for Prospera's benefits, no electoral considerations are taken into account, at least in theory. Two set of conditions need to be met in order to receive the benefits. First, the program operates in localities with access to education and health services, which are necessary conditions to comply with the conditional factor of the program. Second, the actual coverage is determined considering the budget allocated to the program, the current amount of households enrolled to the program, and adjusted by family casualties, reactivations and incorporation of new households [3]

Notwithstanding, the eligibility criteria do not completely discriminate in a way that the allocated budget is sufficient to serve the entire population living in poverty.[4] To attend this fact, some additional criteria are considered. For instance, this additional criteria indicate a prioritized support for families with members that are younger than 22 years old, as well as households with women of reproductive age. However, it remains obscure the exact process of decision making made to select the targeted localities.

[3]Rules of Operation of PROSPERA. Diario Oficial de la Federacion, DOF: 30/12/2014

[4]This statement is made in the previously cited rules of operation of the program, where it is said that since the total of people living in poverty exceeds the capacity of the allocations, so that additional criteria needs to be taken into account.

# 6 Empirics

## 6.1 Data

At this stage, I want to assess if there is any relationship in the allocation of new program beneficiaries and the outburst of violence. I got two datasets that can help me for this purpose, a census of enrolled beneficiaries to Social Programs, and crime statistics.

### 6.1.1 Census of Federal Social Program Beneficiaries

When any person applies for any of the 27 federal social programs in Mexico, they need to fill up a questionnaire. This questionnaire collects information of a series of socio economic variables of the household, such as age, sex, educational level and working status, of each member of the family, as well as household income, and access to basic services such as access to clean water and drainage. This information was scattered across the different programs bureaucracies and were neither systematically ordered for any statistical purpose, nor it was available for readily public access. In the last year, the Ministry of Social Development concentrated these datasets in an unique Social Programs Census (Padrón Unico de Beneficiarios de Programas Sociales). This census is in the process of becoming public, but I got access to the data from one of the poorest states in Mexico, Guerrero. This database contains information for more than a million enrolled individuals in the years 2011-2015.[5]

### 6.1.2 Crime and Electoral Variables

In terms of crime statistics, I have information at the municipal level of homicides. The reason to focus on crime is that, since 2008, drug-related violence increased drastically in Mexico as a result of a state led war against drug trafficking organizations (DTOs). This dataset contains information on monthly crimes at the municipal level for a series of different

[5]This dataset can be required through a information request, that is guaranteed by the Mexican Law of Transparency and Access to Public Information. So even when it is not public in the sense that it is not accessible through a web page, it can be obtained using the mentioned mechanism

crimes, including homicides by type.

Finally, in terms of political outcomes, the state of Guerrero and its municipalities have been disputed between two parties: the PRI and the PRD. I have information on municipal level elections that allow me to determine how competed was each municipality in the past elections, as well as how much switch in the ruling parties have taken place.

## 6.2 Empirical Strategy

[6] The allocation decisions take place at different levels. The first level for determining whether someone receives a benefit or not is related with context conditions. After choosing if a locality will be part of the pool of targeted localities, households are selected within the set of selected localities. Moreover, I am also interested in considering political variables that may influence the allocation decision (political competition and electoral outcomes at the municipal level). So, there are three levels of variation that may affect the allocation decision

1. Municipal level ($Z_m|\alpha$): Political covariates such as electoral outcomes in previous elections, and party in power. Also, violence outcomes are measured at this level

2. Locality level characteristics ($\theta_l|Z_m, \gamma$): size of the locality and existence of education and healthcare infrastructure (conditions for being a targeted locality)

3. Household level ($X_i|\theta_l, Z_m, \beta$) : household income, household composition

Thus I have a Bayesian Hierarchical Latent Model

$$Z_m \sim f(\alpha)$$

$$Y_{l,m}|Z_m \sim g(\gamma)$$

$$X_{l,m,i}|Z_m, Y_{l,m} \sim h(\beta)$$

[6] still underdeveloped

in which a $Z_m$ is a variable indicating the enrolment decision for municipality $m$ with characteristics $\alpha$, $Y_{l,m}$ is the allocation decision for locality $l$ in municipality $m$, which depends on being part of the allocation decision $Z_m$, and is function of locality specific characteristics $\gamma$. Finally, $X_{i,m,l}$ represents if a household $i$ receives or not a benefit, and is conditioned on both municipal and locality level decisions, and is modelled according to a set $\beta$ household level characteristics. One potential path to take is to model it as a Hierarchical Bayes model, as the example in Murphy (2012, p.171) on how to predict cancer rates in various cities from Johnson and Albert (1999, p.24) In this example, the authors measure the number of people in various cities and the number of people who died of cancer in these cities in order to estimate the cancer rates, allowing rates to differ due to city-specific variations. For my example, I would be interested firstly in determining the rates of enrolment to the program by locality, considering municipality and locality level characteristics.

# 7 Next Steps

At this point, I have identified the potential path to test my hypothesis. However, I still need to correctly assess my identification strategy to deal with the endogeneity between violence and poverty. While the shock in drug-crime violence can be assessed as an exogenous shock, this need a correctly assessment that allow to find a causal relationship in the allocation decisions. One potential way to disentangle the relationship is through a matching procedure, but still need to work on this

Moreover, I am still analyzing electoral competition data. The political context is a clear cofounder for both the decisions to allocate funds (since some parties ideologies are more prone to support redistribution) and for the increase in violence (since municipal leaders often hold ties with drug trafficking organizations)

In terms of the model of choice, I am working for defining the specification of the a Bayesian hierarchical model, which would allow me to test if crime rates are actually affecting

increases (or decreases) in enrolment rates.

Finally, after assessing the relationship found in Guerrero, I wold consider extending the study to all of the Mexican case. The challenges for this is that the data collection is costly in terms of time, so testing my hypothesis in a place like Guerrero seem as a reasonable start. However, increasing the scope of the analysis would allow to found places that have been less exposed to violence, and see how my hypothesis hold.

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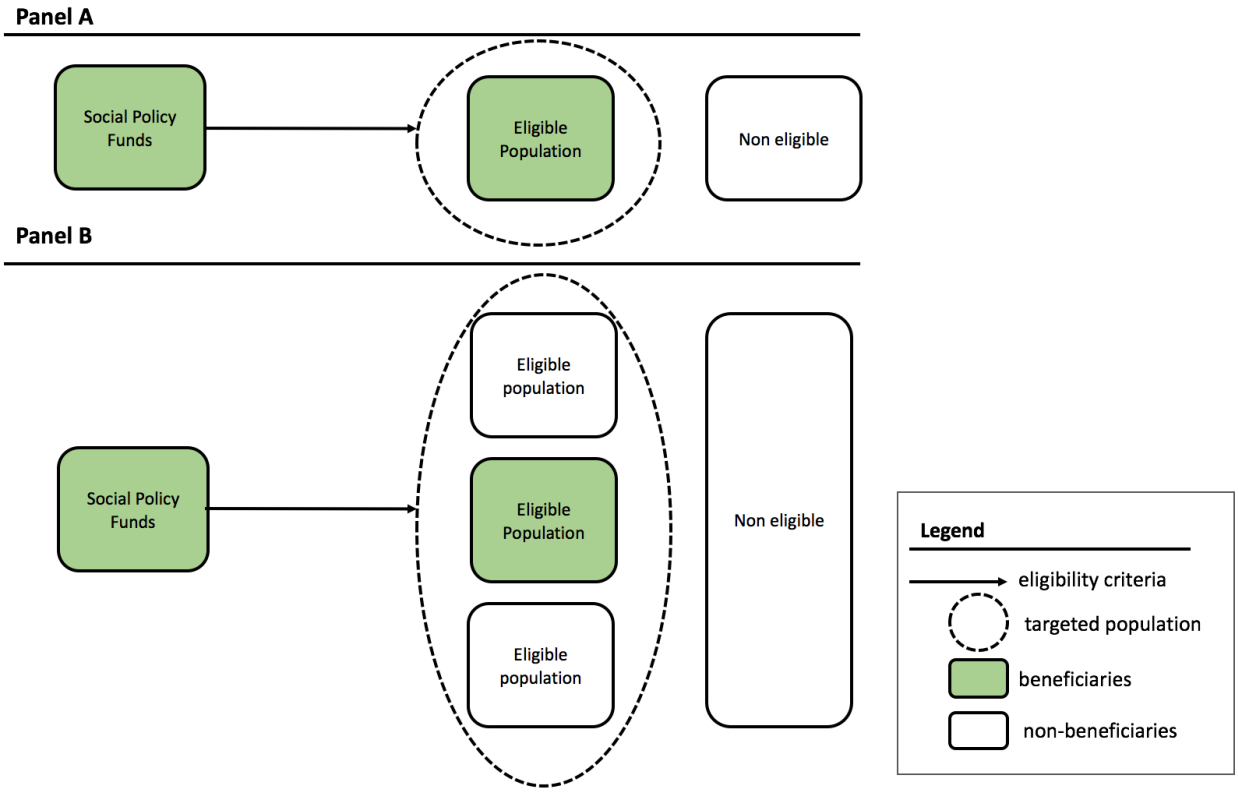
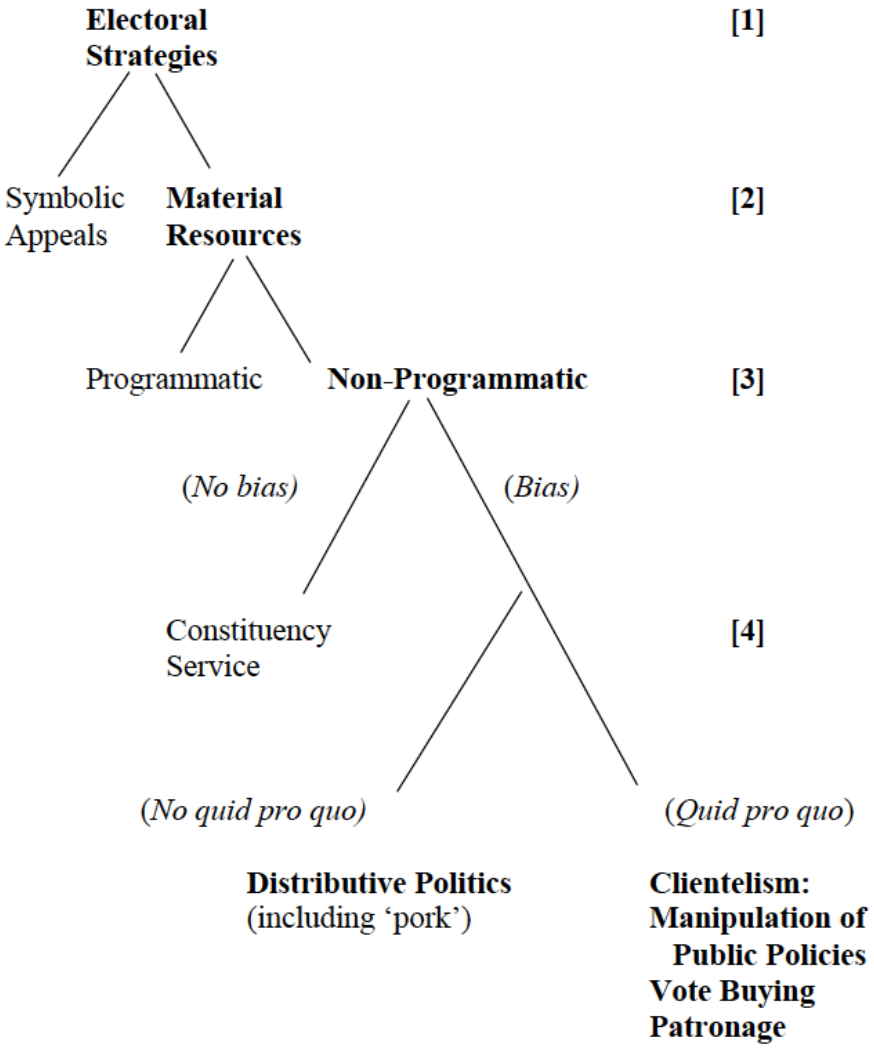
# Appendix

Figure 1: Programmatic policy allocations




This figure shows two possibilities in which funds of social policy are allocated within a programmatic logic. Panel A show how resources, that are limited because of budget constraints, are assigned to certain population following the eligibility criteria determined by the rules of operation of a program. In this scenario, the funds are sufficient to cover completely the targeted population. Panel B offers a more general set up. In this scenario, the designated funds for social policy are not enough to cover all the population that meets the eligibility criteria. Even when the eligibility criteria allows to differentiate between targeted and non-targeted population (e.g. people living in below and above the poverty line), the funds are not sufficient to cover them. In this scenario, it appears room for discretion in the allocations, even when the program rules are met.

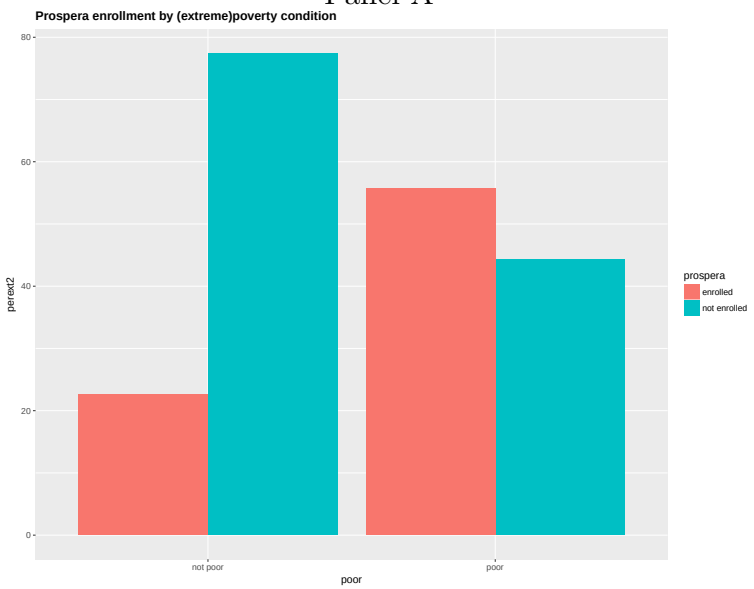
Figure 2: Programmatic and non-programmatic strategies. Stokes 2009



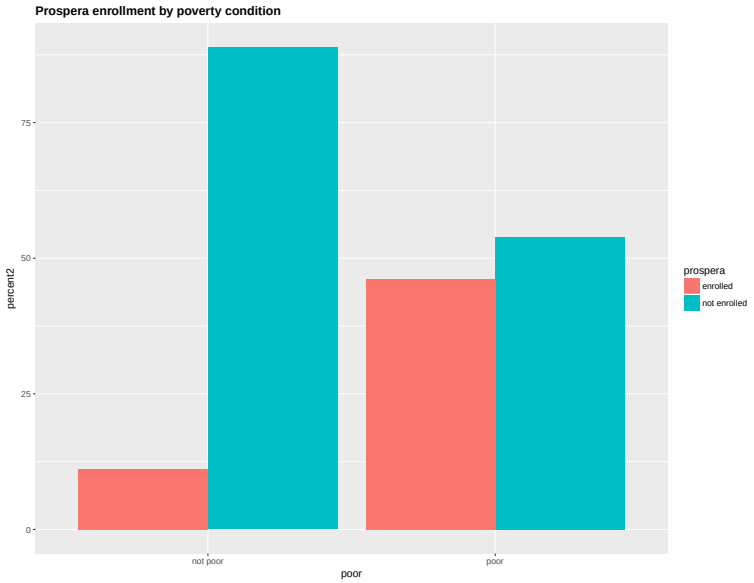

This diagram show how programmatic and non programmatic electoral strategies are differentiated in terms of the three steps defined in the text. When a program does not fulfil these requirements it automatically is understood as non programmatic, where depending or the existence of a bias, or a quid pro quo relationship, the policy of interest can take the form of pork, vote buying, or patronage. Nevertheless, it is worth mentioning that this imply that a strategy that satisfy these criteria automatically is considered as programmatic, regardless of any other consideration such as any room for directionality in the final allocation of the funds -even when the publicly debated criteria is met-. (Stokes, 2009)

Figure 3: Enrollment to Prospera, by Poverty Condition

Panel A

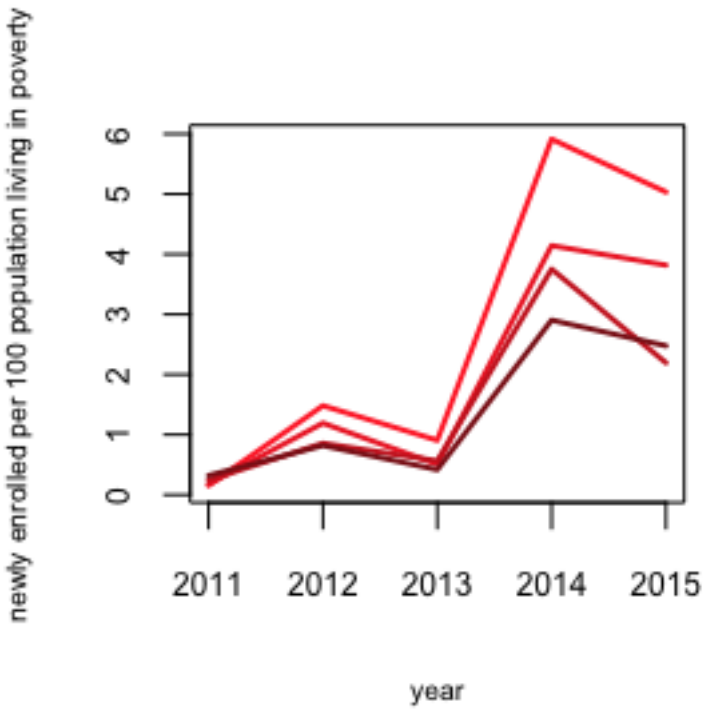



Panel B




These charts show the enrolment to Prospera condition in the Census of Federal Social Programs, by poverty and extreme poverty condition. In each plot, the two bars in the left represent the proportion of not-poor population enrolled and not enrolled to Prospera, while the right bars represent the same but for poor population. Panel A divide the census by extreme poverty condition, while Panel B does it by poverty condition. The key take away from this chart is that, even whit defined rules of operation and eligibility criteria, there are newly enrolled beneficiaries that does not satisfy the primary requirement of the program: living with an income below the poverty line. For instance, nearly 20 percent of the individuals in the census that does not qualify as poor are Prospera recipients

Figure 4: Enrollment to Prospera, by municipalities violence levels Guerrero




This figure shows the number of enrolled individuals to Prospera by year. Each line correspond to the total enrolled individuals sub setting by degree of violence exhibited in each municipality at the beginning of the Peña Nieto's administration, that is, the homicide rate rates per 1000 population. The municipalities were divided in 4 categories following the distribution of homicides across the municipalities, where the lighter red line correspond to the top violent municipalities and the darker red line correspond to the least violent municipalities. What we can see in this plot is that the magnitude of enrolment varies with the degree of violence in the municipalities, where the most violent places targeted a higher amount of beneficiaries.