The Effects of Conditional Cash Transfer Programs on Voting Behaviour in Mexico and Brazil.

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I hereby declare that this thesis has not been and will not be submitted in whole or in part to another University for the award of any other degree.

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UNIVERSITY OF SUSSEX
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PHD IN POLITICS

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SUMMARY

Since 1997, conditional cash transfer programmes (CCTs) have operated in several Latin American countries, highlighting the increased relevance of redistributive policies in the region's political arena. The development of such CCTs has a number of political implications. Recent electoral results seem to indicate that the economic effects of poverty and lack of opportunities have influenced political choices: electoral behaviour seems to be determined by personal current economic situation which could be affected by CCTs.

This study aims to contribute to these debates and particularly to the literature on the effects of CCTs on voting behaviour by comparing the effects of the two largest CCTs in operation. The objectives of this work were to analyse the extent to which CCTs could have been used to shape the electoral behaviour of its beneficiaries. This work relies on retrospective voting theories in order to study the effectiveness of such programmes on voting attitudes and political attainment.

In terms of data and methods, this study uses longitudinal socioeconomic and electoral secondary data from the Mexican Federal Electoral Institute (IFE), the National Institute of Statistics, Geography and Informatics (INEGI) as well as from the Ministry of Social Development and secondary data from the Brazilian Institute of Geography and Statistics (IBGE) and electoral data from the Brazilian Supreme Electoral Court (BSEC). It combines an

analysis of this data using econometric techniques with a more qualitative account of the political context in each country.

This work was able to associate the influence of the different types of implementation of the programmes with their effects on voting behaviour. Results suggest that the differences of the effects of CCTs on voting behaviour are linked to the diversity of implementation of the programmes. For example, it seems that while in Mexico the programme was implemented as means tested, with mandatory conditions and operated at state level, making it easier for local governments to establish a clientelistic-like usage of the programmes which shaped recipients' voting behaviour, in Brazil access to the programme follows a self-rated poverty index linked with the office of the *cadastro unico* (a Single Registry of Social Programmes of the Federal Government) highly associated with PT´s government.

Moreover, in countries such as Mexico and Brazil, the introduction of CCTs has come at a challenging time in their political development: democracy still needs to evolve towards a more predictable and conciliatory political model where the implementation of public policies has foreseeable effects in terms of their relative success and influence on the citizen's electoral behaviour. The research also considers the relationship between such programmes and the conduct of politics in these countries, particularly the nature of political and civic engagement and the role of clientelism.

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ABBREVIATIONS

Abbreviation	Meaning
AGEB	Basic geostatistical areas
ATE	Average Treatment Effect
BEPS	Brazilian Electoral Panel Study
BVCE	Caràcter Special Grant
BVJ	Variavel Jovem Grant
CCE	Business Coordinating Council
CCTs	Conditional Cash Transfer Programs
CEPAL	Economic Commission for Latin America and the Caribbean
CNC	National Peasant Confederation
CNOP	National Confederation of Popular Organizations
COFIPE	Federal Code of Electoral Institutions and procedures
CONASUPO	National Food Company
CONEVAL	National Council for the Evaluation of Social Development Policy
COPLAMAR	Coordination of the National Plan of Economically Depressed Regions and Marginalized Groups
CTM	Confederation of Mexican Workers
DICONSA	Rural Food Support Programme
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
ENIGH	Household Income and Expenditure Survey
FAO	Food and Agriculture Organization
FDN	National Democratic Front
FEPADE	Special Prosecutor's Office for Electoral Offenses
GDP	Gross domestic product
HACIENDA	Mexico´s Ministry of Finance
IBGE	Brazilian Institute of Geography and Statistics
IBOPE	Brazilian Institute of Public Opinion and Statistics
IFE	Federal Electoral Institute
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
IMSS	Mexican Institute of Social Security
INEGI	National Institute of Statistics and Geography
IPEADATA	Institute of Applied Economic Research

LAPOP	Latin America Public Opinion Project
LICONSA	Milk Supply Welfare Program
MDA	Ministry of Agrarian Development
MDS	Ministry of Social Development
MPS	Mexico Panel Study
NAFTA	North America Free Trade Agreement
NDF	National Democratic Front
OLS	Ordinary Least Squares
Oportunidades	Human Development Program
PAL	Food Support Program
PAN	National Action Party
PANES	Plan de Atención Nacional a la Emergencia Social
PFL	Party of the Liberal Front
PIDER	Public Investment Program for Rural Development
PMDB	Party of the Brazilian Democratic Movement
PNAD	National Household Survey
PNUD	The United Nations Development Programme
PRD	Party of the Democratic Revolution
PRI	Institutional Revolutionary Party
Procampo	Farmland Subsidy
Progresa	Programme for Education, Health and Food
PRONASOL	National Solidarity Program
PSDB	Brazilian Social Democratic Party
PT	Workers Party
PVEM	Mexico´s Ecologist Green Party
SAM	Mexican Food System
SEDESOL	Ministry of Social Development
SEDUE	Ministry of Urban Development and Ecology
SPP	Ministry of Programming and Budget
TRIFE	Federal Electoral Court
TSE	Electoral Supreme Court

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To Nacho, Mimo and Tere…
without your love and support
I could have not finished this work.
With love… Papá

1. INTRODUCTION

Since the late 1990s, Conditional Cash Transfer Programs (CCTs) have become a very popular policy in Latin America as an effective tool to reduce poverty. Such policies seek to fight poverty in two ways; first, following a short-term strategy through a conditional cash transfer to the female head of the household and in the long term, through the investment in human capital of the children living in the household with the intention of breaking the transgenerational cycle of poverty. Because of their success, CCTs nowadays are the most replicated and largest social assistance programme in the region.

For the purposes of this research, CCTs are defined as "programmes that transfer cash, generally to poor households, on the condition that those households make prespecified investments in the human capital of their children" (Fiszbein *et al*., 2009:1). Because of these characteristics, this new concept of social assistance policies was introduced across the globe and wherever they are deployed, CCTs share some common features. First, the target population are families (in opposition to individuals) selected by statistically based systems to ensure that the resources of the programme reach the most needed; second, there is a prohibition of any kind of intermediaries between the government and the beneficiaries with the purpose of reducing corruption and old clientelistic practices; and finally, and perhaps the most important concept of all, the fulfilment of a set of conditions required to receive income grants: a) members of the household have to attend a monthly healthcare workshop; b) to have at least one medical check per year, and; c) mandatory children's school attendance.

The introduction of CCTs in the Latin American context usually followed either an economic or a political crisis; scholars such as Fiszbein *et al* (2009) and Das *et al* (2005) suggest that those circumstances influenced the creation of these programmes as an innovative social programme to combat poverty. However, there were other factors that could have influenced the rationale behind the creation of these programmes. In terms of the political context, it is important to consider that, since CCTs were implemented in countries where

vote-buying and patronage are important, it is believed that such programmes were aimed at the poor population as a strategy to win votes and political sympathy rather than to alleviate the situation of poverty among its beneficiaries (De la O, 2013; Zucco, 2011). Nonetheless, in the last decades with a new wave of democratic actions (e.g. the creation of stronger democratic institutions, greater social participation and an intense and real electoral competition) mainly driven by citizens' pressure, there is evidence that actions such as the increased transparency in the operation and the continuous evaluation of social assistance policies by international organisations has reduced the manipulation of such policies as clientelistic weapons. Contrastingly, recent studies suggest that recipients of CCTs tend to reward the incumbent party after a short period of exposure to the programme, presumably to keep the benefits of the programme (Diaz-Cayeros, *et. al*, 2007; Bohn, 2011; De Janvry, Finan and Sadolulet, 2012; De la O, 2013).

To provide the reader with some context, it is important to mention that Mexico and Brazil share one same challenge: the fight against poverty. Despite being major economies, as both countries are considered in the group of the twenty most powerful economies in the world, it is well known that they both have large numbers of people living in poverty and that income inequality is widespread among their population. The latter has restricted both countries' economic growth potential as poverty has a negative direct effect on consumption, labour force and human capital. CCTs were introduced as a response to periods of economic crisis, hyperinflation rates, volatility in natural resource prices and devaluation of the currency. As with most antipoverty programmes, CCTs were designed to combat inequality but also to protect their population from economic fluctuations.

In order to reduce these negative effects of poverty in economic growth these new policies were implemented. The allocation criteria of CCTs were focused in order to prioritize the most vulnerable. As those vulnerable economically speaking are also the most vulnerable in terms of vote buying or clientelistic practices, a set of measures such as rules of operation, targeting criteria and, impact evaluations were established in order to reduce their potential missuses.

1.1. Social Policy in Mexico and Brazil

The aim of this research was to understand and to identify the linkages between CCTs and voting behaviour through an empirical study of the Mexican and Brazilian conditional cash programmes over the past 3 and 4 presidential elections, respectively. Because of this, this section provides an overview of how social policy has evolved in both countries.

The introduction of CCTs in Latin America can be traced back to the late 1990s, with the leading countries being Mexico and Brazil. The replication and implementation of such programmes in other countries of the region has gradually expanded reaching almost the entire continent. This study, however, focuses on the pioneer countries (Mexico and Brazil). In this section a brief summary of social policies in Mexico and Brazil is presented, aiming to provide a contextual framework that will serve to explain how these policies have evolved, highlighting the similarities and differences between the two countries.

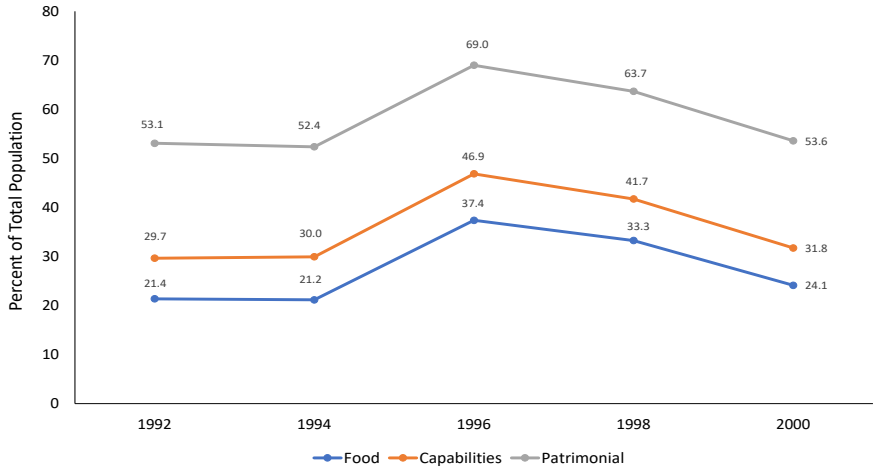
We cannot talk about CCTs in Mexico without mentioning the National Solidarity Program (*Pronasol*). This programme, implemented from 1988-1994, was directed to indigenous, rural and marginalised areas and aimed to encourage community participation through a discretionary selection of both projects and beneficiaries (Kaufman and Trejo, 1997; Diaz-Cayeros, et. al, 2016). The rationale behind the focusing on community participation policy making was mainly rooted in the following understanding: lifestyle and political behaviour are all affected by society and the natural environment (Hanson, 1988; Davis, 2011). As from a social perspective, a community can be defined by describing the social and political networks that connect individuals, community organizations, and its leaders (*Minkler* et al., 1997). By understanding these essential social structures, *Pronasol* was able to identify leaderships, understand the community behaviour patterns and to strengthen their political and social networks. This could have been the real intention of the programme instead of community participation.

The National Council for the Evaluation of Social Development Policy (CONEVAL) characterised the programme as being politically manipulated by the governing Institutional

Revolutionary Party (PRI) and ineffective in combating poverty. Statistics show that while in 1988, at the beginning of the programme there were 46.1 million of people living in poverty, in 1994 after 6 years of Pronasol the number of people living in poverty had increased to 47 million (CONEVAL, 2017). As stated by Diaz-Cayeros, et. al (2016: 90; 112) even though *Pronasol*´s resources were directed towards the less well-off, the programme failed to alleviate poverty because it was administered with the main goal of strengthening PRI´s electoral hegemony which had been challenged at the 1988 elections. This was done by targeting its resources to places where party loyalties were eroding and by locking in voters through political clientelism rather than reducing poverty.

Pronasol´s failure to reduce poverty along with the political and economic problems faced by Mexico intensified in 1994. Despite the introduction of the North American Free Trade Agreement (NAFTA) in 1994 mainly promoted by President Salinas under the logic that the agreement will promote the growth and development of Mexico (Stanford, 2013; Weisbrot, et. al., 2018), at the dawn of the year, Mexico suffered a major macro-economic crisis with a devaluation of its currency. This led to a fall of 6% of the GDP in 1995 that, in addition to the increasing rates of poverty among the country led to terrible consequences for the health, nutrition and education of Mexicans (Levy, 2006). Poverty rates increased from 52.4% in 1994 to 69% in 1996 (See figure 1.1) (Cordera and Durazo, 2016).

Figure 1.1. Mexico: Poverty Levels Based on Consumption Baskets



Source: Own elaboration based on CONEVAL (2017) estimates.

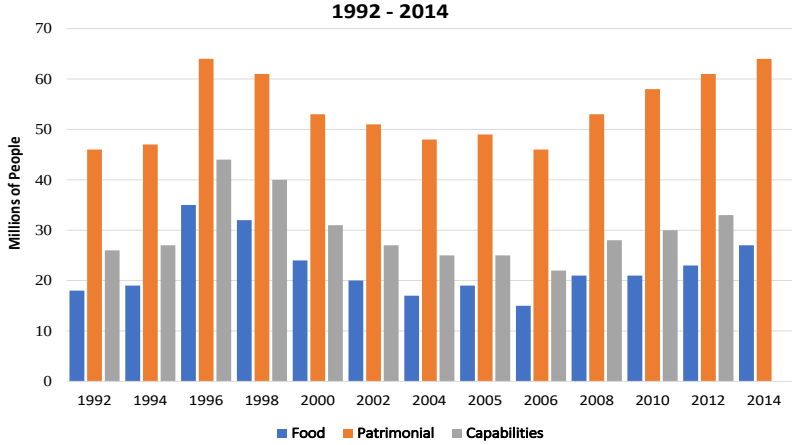
As a result of this crisis and the increasing poverty rates, under the administration of President Zedillo the *Programme for Education, Health and Food (Progresa)* was implemented in 1997 in order to counteract poverty. The newly introduced programme aimed to replace all other social programmes in operation and gather them into one single poverty relief programme and can arguably be the start of CCTs in Mexico. *Progresa* was launched initially as a pilot serving up to 300,000 families in 6,344 localities in 12 states with a total budget of US$5.8 million[1] (Levy, 2006). *Progresa* was designed to make cash transfers to the female heads of households in order to break the intergenerational cycle of poverty in exchange of certain conditions, including regular medical checks and school attendance that should be fulfilled by the beneficiaries (Levy, 2006). According to Rubalcaba and Teruel (2006) the programme targeting was made by identifying geographically the areas with high levels of poverty and once such regions were identified a second selection was made based on socio-economic characteristics. Such localities must have had access to communications (local roads), health and educational services. Once the localities were selected, a socio-economic census was conducted in order to discriminate between potential beneficiary and non-beneficiary households (Levy, 2006).

Progresa was designed to achieve its goals by having three main components. First, a nutrition component was directed to pregnant or breastfeeding women, children between four months and two years old, and undernourished children between three and five years old. Second, the health component required regular attendances to health clinics for monthly check-ups. Finally, the educational component was designed to increase the school enrolment of children, aiming to achieve an attendance rate of at least 85 per cent (Levy, 2006). Over the following years the programme was gradually introduced in other states, targeting the poorest people in the most marginalized areas first (Levy, 2006; Gantner, 2007). By year 2000, three years after its implementation *Progresa* was extended to over 2.6 million families in the country and reduced poverty from 60% to 53.6% (Zedillo, 2000). Under the

[1] The cash transfer reached approximately $20 per family.

tenure of President Fox *Progresa* changed its name to *Oportunidades* (*Human Development Program*) and was extended to semi-urban and urban areas, increasing its budget by 70% per year. By the end of Fox's administration, poverty rates dropped to 42.9% (Fox, 2012).

Figure 1.2. Mexico: Evolution of Poverty 1992 - 2014



Source: Own elaboration based on CONEVAL (2017) estimates.

As we can observe in the figure (1.2.) above, according to the evolution of poverty in Mexico poverty decreased constantly since the implementation of *Progresa* in 1997 until 2006. However, in 2008 after an economic crisis, poverty has increased in terms of all of its three dimensions.

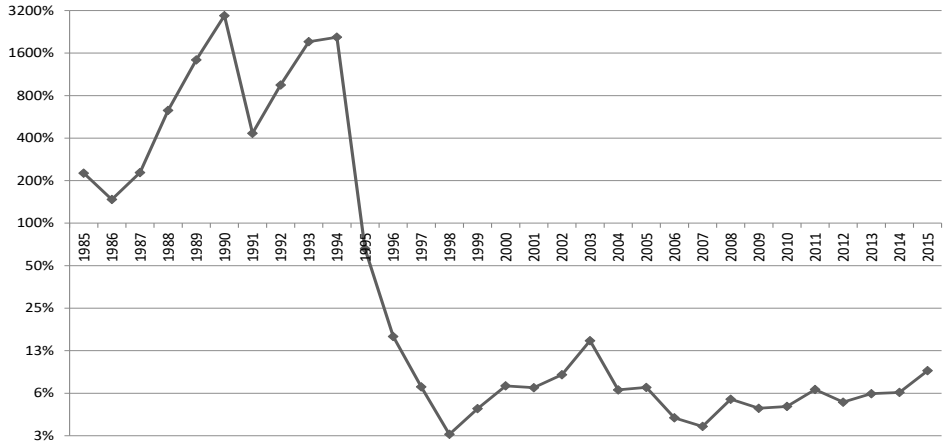
For this study's purposes it is necessary to define what those dimensions are. According to CONEVAL, there are three types of poverty: a) **patrimonial poverty** which is defined as not having sufficient household income to acquire a certain basket of food products and to cover the necessary expenses in health, clothing, housing, transportation and education; b) **capabilities poverty** is defined as not having sufficient household income to acquire a certain basket of food products and to cover the necessary expenses in health and education and; c) **food poverty** is not having the necessary income to buy a basic food basket (this type of poverty is related to extreme poverty).

Oportunidades was created to fight those three components of poverty but with the main goal to break the intergenerational cycle of poverty. Since its creation *Oportunidades* has

evolved into a more sophisticated and larger programme. Some of the main changes from its initial settings are the inclusion of poor people living in urban areas; economic incentives to students that finish high school before 22 years old; the inclusion of the Food Support Program (PAL) for *Oportunidades´* non-beneficiary families; and the creation of the "Solid Floor" programme, which aims to replace dirt household flooring with cement flooring diminishing the prevalence of infectious diseases such as diarrhoea and respiratory conditions (INEGI, 2015). Finally, in 2013 another component was added to *Oportunidades* with the incorporation of the National Crusade Against Hunger. Incidentally, this component was inspired by the *Fome Zero* strategy from Brazil (see below).

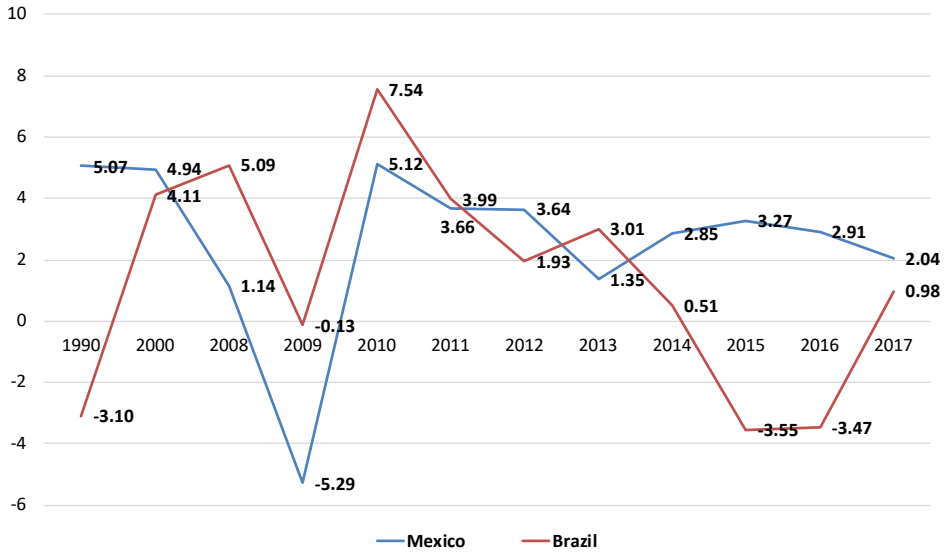
As for the Brazilian case, CCT´s were introduced after the economic crisis and the hyperinflation rates of the 1990s. Before the introduction of CCTs, Brazil's social policy was not universal, with benefts provided clientelistically and always linked to the labour market (Draibe and Arretche, 1995). At the end of the '90s under Cardoso's administration there was a change in the economic and political paradigm of Brazil. As a well-known scholar, Fernando Henrique Cardoso was the mastermind who controlled hyperinflation by implementing the *Plano Real* (real plan) and a several neoliberal policies that included "high interest rates, pegged exchange rates and intermittent pressure on congress to reduce the federal deficit" (Kingstone and Power, 2000, p.8). He managed to reduce inflation rates from 2948% in 1990 to 3.2% in 1997. At the end of his second term in office he left a healthier economy. Inflation was under control (See Figure 1.3.) and GDP growth reached 5% (See Figure 1.4).

Figure 1.3. Brazil Annual Inflation Rates, 1985 – 2015.



Source: Own elaboration based on data from the World Development Indicators Database. World Bank (2018).

Figure 1.4. GDP Growth (annual %)



Source: Own elaboration based on data from the World Development Indicators Database. World Bank (2018).

The rationale for the creation of a strategy to eradicate poverty in Brazil was grounded in the fact that, according to the Brazilian Institute of Geography and Statistics (IBGE), in 1999 there were more than 44 million people living with less than 1 dollar per day. Building on Cardoso's policies, the Zero Hunger (*Fome Zero*) strategy was launched by the government of leftist

Inacio Lula da Silva with the goal of eradicating hunger, poverty and social inequality and the inclusion of the less well off in the Brazilian society under a safety net. Similar to Mexico, the Brazilian programmes followed a targeting strategy in addition to a profound change in the bureaucratic system by the unification of a diversity of social programmes into one single office (Betto, 2004).

Parallel to *Oportunidades*, *Fome Zero* focused on rural and urban households living in poverty. This programme was effectively a cluster of social programmes comprising six subcomponents. It included "*Carta Alimentaçao*", "food supply and distribution programme", "food and nutrition education programme", "health and nutrition programme", "*Bolsa Escola*" and "*Bolsa Família*" (FAO, 2009).

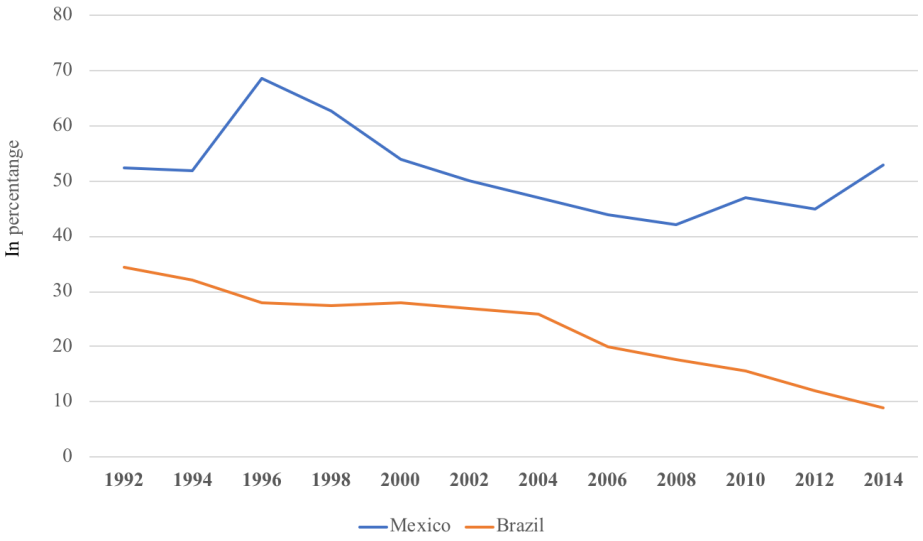
Nowadays, *Bolsa Família* is the most important programme since it covers most of the Brazilian population living in poverty. In terms of budget, it increased from US$ 1.1 billion in 2003 to US$ 6.5 billion in 2009. Some scholars have argued that the success of this programme is due to the continuation of its predecessor *Bolsa Escola* (conditional only on school attendance) from the Cardoso to the Lula da Silva administration as the expanded *Bolsa Família* (Neri et al 2012).

Even though CCTs account for a small proportion of social spending, such programmes have had a significant success in reducing poverty. Nevertheless, scholars suggest that this success has a strong relation to the amount of public expenditure on this matter. To provide some perspective, the amount of social expenditure in Latin America has increased since 1997, going from 14.7% up to 18% in terms of the GDP in the ten-year period from 1997 to 2007 (CEPAL, 2014). However, the situations differ widely when talking about Mexico and Brazil. While in Mexico the expenditure has been calculated to be between 10% to 11% which is lower than the average in the region in Brazil only in 2012, circa 26.8% of its GDP was devoted to social programmes´ expenditure (CEPAL, 2014).

As mentioned before, *Oportunidades* seemed very successful from 1997 to 2006; however, in the last decades poverty rates started growing after 10 years of success. Differently, the Brazilian CCT *Bolsa Família* has contributed 21% of the reduction in inequality and in terms

of extreme poverty it explains 8% in reduction of poverty which continues to decrease (See Figure 1.5) (Soares et Alii, 2006; Soares and Satyro, 2009).

Figure 1.5. Poverty Percentage in Mexico and Brazil 1992 – 2014



Source: Own elaboration based on CONEVAL (2017) and IBGE (2014) estimates.

As seen in Figure 1.5, the evolution of poverty shows that Mexico has a larger percent of people living in poverty than Brazil. By comparing the data provided by CONEVAL from Mexico and IBGE from Brazil, it seems that Brazil has been more successful in reducing the share of people living in poverty. It could be that the reduction of poverty in Brazil has been a result of *Bolsa Família* as from its 13 million beneficiary families, around 4.3 million have crossed the line of extreme poverty. However, this has not happened in Mexico despite the increasing coverage of *Oportunidades* in terms of the number of beneficiaries (See Table 1.1) went from 300,000 beneficiary families in 1997 to more than 6 million in 2015.

Table 1.1 *Oportunidades* Coverage 1997 – 2014			
Year	Municipalities	Localities	Beneficiary Families
1997	456	10,789	300,705
1998	1,485	34,414	1,595,606
1999	1,986	48,719	2,306,325
2000	2,166	53,232	2,476,430
2001	2,310	67,539	3,116,042
2002	2,354	70,520	4,240,000
2003	2,360	70,436	4,240,000
2004	2,429	82,973	5,000,000
2005	2,435	86,091	5,000,000
2006	2,441	92,672	5,000,000
2007	2,444	92,961	5,000,000
2008	2,445	95,819	5,049,206
2009	2,445	97,922	5,209,359
2010	2,445	97,053	5,818,954
2011	2,448	97,437	5,827,318
2012	2,449	105,588	5,845,056
2013	2,451	109,852	5,922,246
2014	2,456	116,025	6,129,125
2015	2,456	115,561	6,168,900

Source: Own elaboration using data from Sedesol (2015)

Differences in the evolution of poverty between Mexico and Brazil could be related to the higher percent of GDP destined to *Bolsa Família* when compared to *Oportunidades*. According to the OECD (2007), social spending in Brazil is the highest among the Latin American countries, amounting to 31.3% of general government expenditures in 2014. The social expenditure as percentage of GDP in Brazil for the period from 1997 to 2007 increased from 12.2% to 23.7%, 5% higher than Latin America's average. As it regards to Mexico, social expenditure as percentage of the GDP went from 8.8% of GDP in 1997 to 12.4% in 2006 (Sedesol, 2015). Perhaps the higher expenditure has made the Brazilian programme more successful at fighting poverty when compared to the Mexican programme. As Cecchini (2017) and Soares (2012) posit in the case of Brazil, the *Bolsa Família* programme contributed to an 8% reduction in the poverty headcount index, an 18% reduction in the poverty gap and

a 22% reduction in the severity of poverty. However, according to the ECLAC (2015) there are other key factors significant for reducing poverty in Brazil such as; the decrease in unemployment rates from 11.5% in 2002 to 7.4% in 2012; a political context that could prioritise public policies aimed to eradicate poverty and reduce inequality; economic growth; non-contributory social protection; the implementation of labour market policies and better taxation policies. The latter takes relevance as a reduction of poverty in real terms took place between 2002 and 2012, as the incidence of poverty declined from 44% to 28% of the population, and extreme poverty from 19% to 11% of the population (ECLAC, 2015).

Having explained the relative success of the programmes in reducing poverty in both countries, the next section focuses on explaining the effects of CCTs on elections.

1.2. The Effects of CCTs on Elections

Despite the efforts to bring more democratic regimes to the zone, democracy in Latin America still needs to evolve towards a more predictable and conciliatory political model where the implementation of public policies has foreseeable effects in terms of their relative success and influence on the citizens' electoral behaviour. Some of the most recent electoral results in Mexico and Brazil seem to mainly reflect the economic conjunctural effects of socioeconomic conditions on political choices. Taking this into account, it seems logical that policy makers need to consider the impact of CCTs on voting behaviour, such as a shift in voting preferences towards a certain political party. In this context, the observed electoral behaviour seems to be determined more by the current economic situation of the households than by the classical driving forces that explain electoral and political choices, which can be party identification or ideological orientation. Consequently, key macroeconomic variables and social indicators have left behind forces that usually have shaped voting behaviour. Drawing from Fiorina (1981) we can say that voters are purely results-oriented in assessing the incumbent party's performance. Along with the Downsian tradition we can observe that voters look for convenient and reliable information about the

likely effects of either the incumbent or opposition party policies proposed for the future (Downs, 1957; Campbell et al., 2010; Diermeier, D., & Li, C, 2018).

Given this context it is worth noting that CCT programmes in both countries have been maintained have been maintained through three different administrations and through different political parties. The Mexican CCT was initiated by the PRI under the name of *Progresa* and was continued by the PAN under the name of *Oportunidades*. Likewise, in Brazil *Bolsa Família* was introduced under the Brazilian Social Democratic Party (PSDB) and continued throughout the Workers Party (PT) administration. The electoral consequences of CCTs cannot be explained without considering their success in the fight against poverty as discussed in the previous section.

There is a significant literature demonstrating the relationship between CCTs and the voting behaviour of beneficiaries. A number of studies argue that CCTs are very popular in electoral terms. This dissertation builds on this literature and examines if the electoral effects of CCTs, defined as the vote for the party that introduced the programme, are different in the short and long run. While beneficiaries may reward the party that introduced the programme in the short run, their voting behaviour may change in the long run and they may then vote for a different party. The rationale for this is that the longer a CCT programme is in existence, the less likely it is to be abolished regardless of the party in power, since abolishing successful programmes has a large political cost. In other words, political parties and their candidates are guided to continue or even to expand those social policies as a response to the increasing popularity of the programme. Scholars such as Diaz-Cayeros, Estéves and Magaloni (2008) argue that parties tend to target social benefits towards their most loyal voters (core voters). In that sense, the core voting base of the party is more responsive to any transfer given by the party who holds the office (Diaz-Cayeros, et. al, 2008). In terms of Diermeier and Li (2018: 2) voters need not to necessarily be aware of their ideological position; as they only care about policies (such as CCTs) that may influence their experience.

Following a Downsian (1959) model, the hypothesis of this study is that after a longer exposure to the programme beneficiaries as voters tend to focus on their future economic

expectations. In that sense, it is argued that the political cost of eliminating such programmes is higher than the cost of continuing them. It is to be noted that a diversity of political parties and actors (not only the incumbent) will promise to perform, continue, and even expand such programs once in office. In such situations, beneficiaries have no fear of losing their social assistance programmes and may switch their political preferences if a contesting party's programme is more in line with their interests and economic expectations. According to the economic voting theory, economics always plays an important role when electoral decisions are made. Following this logic, beneficiaries as instrumental rational actors will vote in a rational way based on their own individually determined interests (Key, 1966; Downs, 1957; Fiorina, 1981).

The literature on the long-term effects of CCTs on voting behaviour is scarce with most of the studies focusing mainly on; a) the short-term performance of the programme, b) the increase of turnout rates following the implementation of the programmes, and c) how beneficiaries are responding to both national and personal economic conditions. It is important to mention that studies focusing on the socioeconomic effects on CCTs are more extensive and examine the effects in both the short and long run. The present study focuses not only on the short-term effects of the programme, but also explores the effects in the electoral behaviour of CCTs' beneficiaries in the long-term.

This study attempts to contribute in three different aspects to the existing literature. First, it compares two large scale CCTs in operation (*Progresa-Oportunidades* and *Bolsa Família*) with enormous similarities in the targeted population in order to observe how recipients respond to the implementation of the programme in both the short and long term, with the intention of testing two different theories of political economy (prospective and retrospective). Second, this study seeks to disentangle the effects of CCTs on voting behaviour and to identify which variables (i.e. years of education, region, gender or income) are strong enough to change voters' preferences and ensure their loyalty to the incumbent in both the short and long term. Finally, this study contributes to the existing literature by combining both individual and aggregate level data from both countries in order to measure the effects of CCTs on voting behaviour of beneficiaries more accurately. While some other studies have

relied only on either individual or aggregate data, by combining both levels this study identifies which conditions shape beneficiaries' decisions when casting a ballot.

The key assumption of this research, following Cox and McCubbins´ core voter model (1986), is that beneficiaries may see the implementation of CCTs as an indication that the incumbent's policies are not only acting in their favour but also in favour of those who are less well off. In that sense, building upon Diermeier and Li (2018), incumbent policy makers may introduce office-motivated policies towards their electoral base so that they can, on the one hand, consolidate their constituency by providing them better benefits, and on the other, expand their electoral base by amplifying these policies. As a result, supporters of non-incumbent parties could be willing to change their political preferences to support the incumbent party or candidate in the following election in order to maximize the future expected utility; this support may also continue through following elections.

This research aims to demonstrate that beneficiaries of CCTs act rationally when casting a ballot in favour of the party in power or against it. This can be explained through various theories based on economic voting theory, retrospective and prospective voting theory. This study seeks to contribute to the research on the effects of CCTs on voting behaviour not only in the short term but also the longer term. It does so by assuming that recipients will vote for the party in power in the short term, seeking to maximize their utility based on economic voting theory (Downs, 1957), but that in the longer-term beneficiaries may or may not vote for the incumbent party, as there is no risk of losing the benefits. In addition, better educated beneficiaries or those with a relatively higher income tend to be more critical when casting their vote.

Accordingly, beneficiaries tend to vote both retrospectively and prospectively. In order to clarify the latter, the retrospective voting theory maintains that voters consider past performances of the incumbent to evaluate future welfare. In addition, retrospective voting also presumes voters are more concerned about policy outcomes. The prospective voting theory presupposes that voters only look to the future and take electoral choices according to economic expectations (Fiorina, 1981; Lewis-Beck and Stegmaier, 2007). When

beneficiaries vote for the incumbent to maintain their economic benefits, they are casting a ballot retrospectively; in other words, they choose to vote for a specific party based on an extrapolation of their current situation. This voting behaviour strategy is rational if voters are actually seeking the maximization of their utilities (Duch and Stevenson, 2008; Fiorina, 1981). In other words, for the purpose of this research, recipients would vote retrospectively in the short run when they reward the party that introduced the CCTs, but in the long run they would vote prospectively as they consider CCTs to be secure. This explains how CCTs could be a key determinant of voting behaviour in the short-run this topic will be discussed in more depth in the following chapters.

1.3. Research Questions

The objective of this dissertation is to determine the effects CCTs on voting preferences in a time frame of 18 years. Both Mexico and Brazil share similar economic characteristics and a similar antipoverty strategy. By comparing these two countries, it was possible to analyse qualitatively the conditions, context and objectives of the two different CCTs in operation and to investigate to what extent such differences and similarities shape voting patterns of its beneficiaries.

In order to analyse the possible effects of CCTs on voting behaviour, using the retrospective - prospective theory I draw upon three research questions:

1. Are CCT beneficiaries voting following their self-interest rather than political ideology?
2. Does time influence their voting behaviour? (short v. long term)
3. Do CCTs increase incumbent support amongst both beneficiaries and non-beneficiaries?

In order to address these questions, statistics and econometric techniques have been used to analyse the effects of CCTs on voting behaviour, while qualitative comparisons between the Mexican and Brazilian cases bring to the table the importance of the type of implementation of the programme when analysing the findings.

Considering the above, the following hypothesis was evaluated:

H1. The more recent a CCT programme is, the more positive its impact on support for the party that governs at national level.

The hypothesis assumes that beneficiaries are more rational and income-oriented rather than ideological; meaning that they will look more into their pocket (immediate benefit) and not into their political affiliation.

1.4. DATA

In order to test the hypothesis regarding the effects of CCTs on voting behaviour, this study used data from different sources, given the aim of this work to test the effects of CCTs at two different levels of observation and two periods of time. A dataset for the Mexican case was created by using three different datasets. First, data from the Household Income and Expenditure Survey (ENIGH) was used in order to reflect the effects of the programme on the likelihood of beneficiaries to vote for the incumbent party at the municipal level. The ENIGH dataset includes household socioeconomic information from a representative sample of all the municipalities in Mexico. It was therefore used to determine which household characteristics were associated with a higher likelihood for voting for a certain party and to reflect the likelihood for a change in voting behaviour. However, with this data geographical voting patterns could not be obtained. A second source of data from the Federal Electoral Institute[2] (IFE) was therefore used to demonstrate the effect of CCTs on voting behaviour at a municipal level. Given the main aims of this study, a dataset reflecting the evolution of the socioeconomic characteristics and the voting decisions of the beneficiaries was necessary. Therefore, both ENIGH and IFE datasets were merged into a new dataset at a municipal level that could allow an analysis of these characteristics. Finally, in order to observe individually the voting attitudes of the Mexican electorate a third dataset was required. For this the

[2] Now National Electoral Institute (INE).

Mexico Panel Study, a large longitudinal dataset on voting preferences, was also analysed. This made it possible to assess the political attitudes of the Mexican electorate individually.

Similarly, for the Brazilian case, two different types of data were used at municipal level. Data from Ministry of Social Development (MDS) and the National Household Survey were analysed. By using these surveys, it was possible to include the number of households receiving the programme on the basis of individual characteristics such as income, age, gender and years of schooling. In addition, data from the Electoral Supreme Court (TSE) was used to identify results regarding vote share per candidate, party and demographic group. At the individual level, the Brazilian Electoral Panel Study (BEPS) was used to measure self-reported vote and compare it with certain demographic and income characteristics as well as partisanship, government performance, political ideology, CCT coverage and political participation.

Multivariate analyses were performed to examine the impact of CCT coverage as well as the impact of municipal and individual characteristics on voting behaviour in Mexico and Brazil. By aggregating households' characteristics at the municipal level and then comparing them across time periods, changes on voting behaviour of the beneficiaries were analysed.

1.5. STRUCTURE

This dissertation is divided into seven chapters. The next chapter (second) presents the historical and political background of both countries, focusing on the evolution of the democratic and political processes in Mexico and Brazil. The third chapter presents the literature review, which focuses on CCTs and their effects on political behaviour and socioeconomic outcomes. While this study will not focus on the socioeconomic effects of CCTs we cannot deny that some their results may have an influence on beneficiaries' electoral decisions. The fourth chapter explains the methodological approach, the data used for the analysis as well as the difficulties encountered and how those difficulties were solved. Chapters five and six presents the results of the statistical analysis in both Mexico and Brazil.

Chapter seven presents the main conclusions, presenting the limitations of the study, ideas for new research and suggestions of influence of CCTs on voting behaviour.

2. HISTORICAL AND POLITICAL BACKGROUND

2.1. INTRODUCTION

This chapter describes both the historical and political context of the previous and current poverty relief policies that have been introduced in Mexico and Brazil. As briefly mentioned in the introductory chapter, *Oportunidades* and *Bolsa Família* are the oldest and largest Conditional Cash Transfer programmes in operation based on the number of benefited families and on the amount of their annual budget. The aim of this chapter is to discuss the historic reasons that led to the introduction of CCT´s in the region as well as the different stages in the design, implementation, and expansion of such policies. In this chapter similarities between Mexico and Brazil in terms of the general political and historical background and in their attempts to combat poverty and to provide public welfare to their citizens are presented. However, this chapter, also highlights important differences in the design and creation of the CCTs in each of the countries of focus.

Conditional Cash Transfer programmes emerged in Mexico and Brazil during a time where democracy was more or less established. For much of the last century almost all Latin-American countries were governed by authoritarian regimes with different degrees of intensity. Argentina, Brazil and Chile suffered the most with authoritarian military regimes. Relatively speaking the authoritarian regime in Brazil was less brutal than in Argentina and Chile but the military regime from Brazil was in power for longer when compared to the other countries in the region. By contrast, in the case of Mexico there was no such military regime. However, the country's political system was dominated by a single ruling party created after the Mexican revolution which ruled the country for over 70 years.

After the collapse of Latin America's economy and increasing poverty and inequality rates during the 1980s Mexico and Brazil embraced new poverty relief programmes. The emergence of CCTs in Latin America was a response to the adverse consequences of stabilisation policies. The main idea of the designers (mainly former academics such as

Santiago Levy, who went into politics) of CCTs was to achieve sustained economic growth, but in order to reach that goal it was essential to increase the state intervention, making it clear that any linkage to political parties was prohibited, in social matters through a broader strategy that would allow significant and permanent progress in improving social conditions (Levy, 2004). In that sense CCTs, in contrast to previous poverty relief programmes, were born with the intention of eroding clientelism, promoting social participation and limiting any chances to politicize such policies (De La O, 2015).

Despite the ambitions of the new democratic era and the introduction of CCTs such programmes coexisted with past clientelist policies. The previous poverty relief policies that remained in operation were considered as *clientelistic* as these programmes were delivered by the government in exchange for political support. (Stokes, 2005; De la O, 2007; Weiss-Shapiro, 2008; Zucco, 2011). *Clientelism* as defined by scholars, is the relationship established between a patron who offers goods in exchange for the concession of political favours or rights from the client (Fox, 1994; Sobrado Chavez and Stoller 2002). As Fox posits, it is when "a wide range of political systems, including many that hold regular elections, oblige the poor to sacrifice their political rights if they want access to distributive programmes. Such conditionality interferes with the exercise of citizenship rights and therefore undermines the consolidation of democratic regimes" (Fox, 1994: 152). And while the previous social programmes were established on clientelistic bases, the new CCTs aimed to break the clientelistic cycle. This is discussed further in Chapter 3.

In order to present the historical and contemporary circumstances, this chapter presents a summary of the political context of Mexico and Brazil before and at the time in which CCTs were introduced as a new poverty relief policy, followed by a brief description on how the programmes were created. While in both countries CCTs developed from existing social programmes, in Mexico CCTs started with *Progresa*, then renamed *Oportunidades* and in Brazil it started as *Bolsa Escola* becoming later *Bolsa de Familia*. The final section of this chapter focuses on the very important differences between the Brazilian and Mexican CCTs. Even if both are CCTs with compulsory conditions for their recipients, both were implemented differently, and their outcomes have been measured in different manners as

well. These differences are crucial for understanding possible differences when it comes to their effect on voting behaviour.

2.2. Political Context

2.2.1. Mexico

After the Mexican revolution, political power was held by several revolutionary leaders or "caudillos" across the country. Caudillos played a significant role in politics, mostly at state and municipal level making the country's governance and succession of power difficult to manage. Therefore in 1929 Plutarco Elías Calles[3] in an attempt to integrate all local leaderships into one single political force, created the National Revolutionary Party (PNR), later to become the Institutional Revolutionary Party (PRI)[4].

Like its predecessors, the PRI operated on the basis of the principles of loyalty and reciprocity with the party creating adequate incentives to guarantee the support of its members in return for the opportunity to access political power. The hegemony of the party and its capacity to hold the presidency and almost every single political position remained untouched until 1997 when it lost the Chamber of Deputies majority and in 2000 when they lost the presidency (Weldon, 2002). Among other factors, an important explanation for the PRI's hegemony was the use of clientelistic practices as well as the influence of the outgoing President in the appointment of his successor (Fox, 1994; Rubio, 1998; De la O, 2007).

From its origin, PRI's political power was concentrated within the incumbent President's circle. It is worth mentioning that under Lazaro Cardenas' tenure (1934-40) the first and perhaps the most significant transformation of the party took place. Renamed as the Party of the Mexican Revolution (PMR), the ruling party adopted a corporatist structure, gathering peasants, mass organizations, workers' unions, and the military. In this regard, four sectors were created to concentre the electoral core of the party, later becoming the clientelist

[3] Was a general of the Mexican army and President of Mexico from 1924 to 1928.
[4] The PNR became the Party of the Mexican Revolution (PMR) and later acquires his final name Institutional Revolutionary Party (PRI).

network machinery of the successful PRI. Cardenas's political orientation was rather socialist in the sense that he believed that the keystone to foster Mexico's development was the creation of industrial communities through the distribution of land, the nationalization of the oil industry and through the expenditure on health and education (Aspe and Sigmund, 1984; De la O, 2007).

It was under the presidency of Manuel Avila Camacho (1940-1946) that the PRI obtained its current name. It was not only a change of name, but it also implied a change in ideology under the slogan "Democracy and Social Justice". During this period, Avila Camacho created the Mexican Institute of Social Security (IMSS) in 1943 in order to provide health insurance to workers and their families, thereby establishing the country's first welfare programme. A golden economic period reigned in Mexico from 1958 to 1970 because of the so-called stabilizing development created by Economy Minister Antonio Ortiz Mena, bringing annual rates of growth of up to 8% for the hitherto weak Mexican economy (Buffie, 1989). However, despite the strengthening of the economy at the macroeconomic level, income distribution did not increase amongst the poorest. The stabilizing development ended under the administration of Luis Echeverria (1970 – 1976). While he presided over increased expenditure on social services and made access to health in rural areas one of the main goals of his administration, following the abandonment of Ortiz Mena's economic model, economic crisis and high inflation rates prevailed until 1994.

At the end of Luis Echeverría's (PRI) tenure, Mexico was under great pressure regarding the balance of payments, its currency had devalued by nearly 50% and the once strong economy under the "stabilizing development" fell into a recession (Pastor, 1989). The new President, José Lopez Portillo (1976 – 1982) took office during a financial turmoil. One of his first actions as president was to install a stabilization programme in order to address Mexico´s foreign debt account deficit with the International Monetary Fund (Pastor, 1989). At the end of the 1970s, Mexico´s national income improved as a result of changes in the oil market; in 1979, the country´s oil reserves were at their best as the newly discovered Cantarell oil field boosted Mexico's GDP by 9%, leading to a more expansionary fiscal policy (Buffie, 1989). During the second oil shock in 1979, Mexico's economy benefited from the increasing oil

prices, enabling Lopez Portillo to expand even more the governmental expenditure regardless of the worldwide recession and the diminishing oil exports; this resulted in large fiscal deficits leading the country to a debt crisis at the end of his administration (Buffie, 1989).

Because of the generalised discontent about PRI's economic performance in 1982, the opposition party PAN started to win political positions mainly in the north of the country. In that same year, in the northern state of Chihuahua 11 municipalities were won by the PAN, marking the beginning of the democratization on the country and the erosion of the hegemony of the PRI. In 1986, Cuauhtémoc Cardenas, a member of the PRI and President Lazaro Cardenas' son, created the "democratic current" inside the PRI, a movement which sought to democratize the selection process of candidates within the party. Two years after, following the PRI's nomination of the candidate for the presidency (Carlos de Salinas de Gortari), the "democratic current" movement left the PRI causing a huge internal crisis within the party.

Cuauhtémoc Cardenas ran for the presidency as candidate of the National Democratic Front (NDF), a left-wing coalition, which in 1989 became the Party of the Democratic Revolution (PRD). In the 1988 election Cuauhtémoc Cardenas took almost a quarter of PRI's loyal supporters. However, he lost in a very close contest against the PRI´s candidate Carlos Salinas. The election was followed by a post-electoral dispute where the NDF denounced fraud and-vote buying practices. As a result, Carlos Salinas' tenure suffered from a lack of legitimacy upon taking power. After the presidential election, a democratic spirit remained in the country. Consequently, in the following year of 1989 Ernesto Ruffo, PAN´s candidate for governor of Baja California was elected; for the first time a non-PRI candidate became a state governor.

As a candidate, Carlos Salinas promised severe changes in Mexican social policy to reduce poverty and after the post-electoral dispute, these changes sought to address and mitigate the general discontent among the population. Part of these changes included the creation of the National Solidarity Program (*Pronasol*) in order to respond directly to the electoral

challenges experienced after his appointment. Unlike other social policy predecessors, *Pronasol* was focused on the municipal level and targeted the urban poor, peasants and indigenous people.

In the aftermath of the 1988 election, President Salinas had not only to govern with an increased proportion of opposition members in the Congress (though not enough to control Congress) and with a governor from the PAN, but he also had to deal with opposition within the traditional political class. To deal with the internal opposition once in office, President Salinas decided to integrate his cabinet with old guard politicians as well as with young technocrats; those young politicians were his inner circle. Carlos Salinas was a pragmatic politician, he wanted to maintain and boost not only his political support among rural areas but PRI's; as pointed out by De la O, Carlos Salinas "argued that political support in the rural areas collapsed because time after time the government had promised much and done little" (De la O, 2007: 47). With that objective in mind Salinas' administration created *Pronasol*.

It was designed as a means-tested programme aiming to reduce poverty by providing food support aid, credits to farmers, grants, and scholarships for children, building and refurbishing public schools, communal electrification, and other similar measures creating social funds (Székely & Fuentes, 2002: 131; Becerril-Velasco, 2015). The programme sought to encourage community participation by conditioning the allocation of resources to certain communal activities (Piester, 1997: 469). As stated before, however, the programme was highly criticized as being corrupt and clientelist, as it was used more as a political tool for electoral purposes than as an effective poverty-reduction programme (Molinar and Weldon, 1994: 136; Diaz-Cayeros, et. al, 2016: 90; 112).

During his period in the presidency, Carlos Salinas launched several liberal and pro-market reforms. As a strategy, he decided to provide absolute economic power to the Ministry of Finance. As part of that strategy, President Salinas created, along with the Ministry of Finance and the Ministry of Urban Development and Ecology (SEDUE), *Pronasol* as a powerful mechanism for the coordination of social development concentrating all the political power to the presidency.

Historically, Mexico's social policy focused on giving affordable food to the urban and rural Mexican population; in Mexico food was always seen as the principal clientelistic resource to link strong social organizations with the government (Ansell and Mitchel, 2008). For example, the National Food Company (Conasupo), a powerful institution created by the hegemonic PRI during the '60s overseeing food prices control, was used as a clientelistic tool to obtain benefits among the electorate in three different ways. First as an important boost to party loyalty among food consumers; according to Cornelius (1975) almost 70% of Mexican households used to receive Conasupo handouts. Second it was used to facilitate relations between PRI and its corporatist sectors, as all of their associates were ellegible to receive Conasupo´s handouts and products. These sectors include the Confederation of Mexican Workers (CTM), the National Peasant Confederation (CNC) and the National Confederation of Popular Organizations (CNOP).

Carlos Salinas merged *Conasupo* with *Pronasol* in order to reorganize and expand the PRI´s presence across the country. This increased the targeted population and delivered food to more than half of the inhabitants of the country. Besides *Conasupo*, the Salinas government created two parallel infrastructures to decrease malnutrition among the less well off in the most impoverished areas. *Diconsa* was a rural food support programme seeking to abate poverty by providing basic and supplementary food supply to rural communities and to encourage community participation, and *Liconsa,* the milk supply welfare programme, which was created to ensure effective milk supply among the population.

In 1992, the Ministry of Social Development (Sedesol) was created through a massive reform of the Federal Public Administration. The newly created ministry combined the powers of the formers Ministry of Urban Development and Ecology (SEDUE) and the Ministry of Programming and Budget (SPP). The latter was the entity responsible for the operation *Pronasol*. Sedesol inherited the control of *Pronasol* but also the faculties of SEDUE, which were urban and land planning, human settlements, regional development, housing and ecology. Sedesol also retained the power to formulate, conduct and evaluate the country´s general policy of social development of the SPP making this ministry one of the most powerful of the country in terms of expenses. To this day, it is directly from *Pronasol*, the

flagship programme of Carlos Salinas´ government, that Sedesol takes up its social vocation and founding objective: the alleviation of poverty. (Meza, 2019).

Due to *Sedesol´s* massive concentration of political power, Carlos Salinas decided to appoint Luis Donaldo Colosio as its first minister. Later on, Luis Donaldo Colosio was appointed as PRI's presidential candidate. However, tragically in March of 1994, in Lomas Taurinas, an impoverished neighbourhood in Tijuana, Luis Donaldo Colosio was shot dead during a campaign rally, forcing President Salinas to reorganise his and PRI´s succession. Carlos Salinas appointed Ernesto Zedillo, Luis Donaldo Colosio´s campaign manager as the new candidate. The appointment of Ernesto Zedillo, who served under Salinas administration as Minister of Programming and Budget (the ministry in charge of *Pronasol* before *Sedesol*) and as Minister of Education, surprised Carlos Salina´s inner circle and the party members. Ernesto Zedillo, who had never been elected for a political position before, became President in December 1994.

In contrast to the 1988 contested and disputed electoral results, in 1994 Ernesto Zedillo won with 50% of the vote, on the basis of the largest turnout rate recorded. However, during his administration, Mexico's economy suffered one of its most serious financial crises. After just 20 days of Ernesto Zedillo's commencement, the Mexican stock market's value collapsed. As a result, more than half of the population fell into poverty and the country's GDP shrank by 7 % (Gil Diaz & Carstens, 1996; De la O, 2007). As part of the government's attempts to address this economic crisis, in 1997, the flagship of Carlos Salinas' administration *Pronasol* was replaced by the Program of Education, Health and Nutrition (*Progresa)*. The new programme was designed to gather all the existent poverty relief programmes in operation (15 subsidised food programmes) into a centralised public spending programme for social development (Levy, 2006). *Progresa* aimed to solve the increasing poverty problem by initially providing social security to the poor through cash transfers to the households. The benefits of the programme were structured in a novel way, so that income transfers not only increased the family's financial resources, but also provided incentives to participate in other programme activities. The scale of the cash transfer was large, equivalent to an average

increase of 25% in the total income of families living in extreme poverty (Gertler and Boyce, 2001).

The programme was also designed to include a set of restrictions[5] to break patronage practices and thereby make the programme unusable as a clientelistic tool. The restrictions also meant that the programme would not be identified too closely with the administration thereby preventing it from being exploited for partisan purposes. *Progresa* was introduced as new decentralized agency, in coordination with the ministries of Social Development, Health and Education. In contrast to *Pronasol* the Congress was in charge of establishing its budget, and its operating rules were published annually, including the number of families that could be enrolled, along with the amounts of aid offered and the requirements for beneficiaries. Enrolment had to cease several months before elections, and no payments would be made in the weeks before voting days. Payments were made through specific bank accounts appointed to each family or by the telegraph company if banks were unavailable. This strategy decreased the number of intermediaries or agents thus decreasing the probability of clientelistic misuse (Bate, 2004).

This change in approach was in part due to the vision of its creators (Cristovam Buarque a politician from Brazil and Santiago Levy and José Gómez de León both academics and politicians from Mexico) regarding the importance of evaluation for fine-tuning the programme's operations, to generate credible information and empirical proof of its achievements (Bate, 2004) but also as a result of the international pressure by organizations such as the World Bank (an external investor in the programme) to democratize the country and put aside clientelistic uses of social programmes.

Ernesto Zedillo's decision to curtail *Pronasol* was a risky political move: as Fox (1994) highlights, less than 40% of *Pronasol´s* budget was really committed to antipoverty spending.

[5] Constraints were made at beneficiary level, creating a direct relationship between the government and the beneficiary household by excluding any kind of intermediaries as middlemen. In order to strengthen ties between beneficiaries and government the basic aim behind it was to prevent abuses of policy such as corruption or the clientelism as had been the case with the previous programme PRONASOL.

Zedillo was determined to tackle the increasing poverty rates in the country. However, as stated in the previous paragraph, *Progresa´*s budget was now determined by the congress. The programme faced political adversaries among the opposition parties at the congress, members of the cabinet and PRI's congressmen. Within the congress, the programme was perceived as a new and sophisticated political mechanism created by the new technocracy. Antagonism to the programme did not only came from the opposition parties but from the PRI itself as *Progresa* was designed to eliminate both *Conasupo* and *Diconsa*, strongly hurting PRI's clientelistic muscle. Internally, the main problems were with the Minister of Social Development and the other 2 Ministries (Health and Education) that as these ministries were forced to fund *Progresa*. Scholars such as Rubio (1988) and De la O (2007) have tried to understand Ernesto Zedillo's motivations for promoting *Progresa*, positing that he was a sui generis president of Mexico, emanating from the PRI but not a proper man of party or "PRIista". He despised being not only the leader of the party but the non-democratic ways of the presidential candidacy process. That is why once he took office; he established a formal distance between the presidential figure and the activities of the party.

Progresa's launch took place in August 1997, one month after the mid-term election. During those elections, the PRI lost for the first time in its existence its majority in the lower chamber. Three years later in the 2000 presidential election the hegemonic PRI was defeated by the National Action Party (PAN). Despite what opposition parties believed in 1997, *Progresa* was resistant to any political manipulation by local and federal authorities; it is worth saying that also changes in the electoral procedures, the autonomy of the electoral authorities and increased transparency of elections facilitated Vicente Fox's election as the first non-PRI candidate to win the presidency in 2000. Vicente Fox's administration not only continued *Progresa* but extended the programme to urban areas, changing its name to *Oportunidades* in 2003 (discussed later in Chapter 5).

2.2.2. BRAZIL

While Brazil´s regimes changed from populism (1930 – 1945) to a dictatorship (1964 – 1985) the underlying pattern was one of conservative regimes relying on patronage to retain

power. The north of Brazil was, among other regions, the most affected by poverty and hence, more prone to succumb to clientelistic practices run by either local or federal governments. In Brazil, weak party identification and strong clientelistic networks have always helped the incumbent to build a long-term relationship with its constituents. Following the latter, scholars such as Stokes (2007), Montero (2011) and Zucco (2011), have said that given the country´s large territorial extension it has been easier to conduct clientelistic practices in the less populated territories and rural areas.

The first period of Brazilian Democracy (1946 – 1964), was surrounded by political instability: over the first 15 years period nine different presidents took office. As a result, in 1961 the political system changed from presidentialism to parliamentarism in an attempt to bring about political stability. However, this political system lasted only 3 years (Power, 2010). In 1964 a military coup established an authoritarian dictatorship which lasted until 1985. The coup against the left-wing President Goulart was supported by the Governors of Minas Gerais, Sao Paulo and Rio de Janeiro. The military dictatorship lasted twenty-one years repressing civil liberties, censoring media, limiting suffrage (by setting literacy rules) and hounding political opposition. Despite the civil and political repression, the regime enjoyed substantial support in the 1970s because of the "Brazilian Miracle", an exceptional economic growth period (Montero, 2014).

Despite the previous success of the Brazilian Miracle, at the end of the decade a second oil shock hit Brazil's economy leading to a trade deficit that impoverished the country, the north of Brazil being the most affected region. During the 1980s that region suffered the most and was more prone to succumb to clientelistic practices helping local incumbent authorities to maintained long term patron-client relationship (Stokes, 2007; Power, 2010; Montero, 2011, Zucco, 2011).

In response to the democratic wave in the Latin American region during the 1980s, the military regime relaxed civil restrictions and held Presidential elections in 1984. In January 1985, during the first elections held after the military dictatorship, the winning candidate Tancredo Neves died before taking office and his political partner and elected vice-president

Jose Sarney became the first civilian president in 21 years. During his presidency a new constitution was promulgated in 1988 which laid out the procedures for direct elections, reducing the voting age to sixteen and granting suffrage to individuals unable to read or write. Under this new framework, in 1989 Fernando Collor de Mello became the first democratically elected president since 1961.

Fernando Collor de Mello promised during his campaign improvements in economic and social conditions. Since the beginning of his tenure his administration launched radical economic reforms to control inflation (which was up to 84% per month) and to stimulate Brazil's economic growth. The "Collor Plan" was introduced to battle Brazil´s worst economic crisis (1987 – 1992): a -0.14 percent of GDP growth rate and hyperinflation of 1300 percent annually (Power, 2010). However, in 1992, the president was involved in a corruption scandal leading to an impeachment trial against him. In December of the same year Fernando Collor de Melo was deposed as president and was replaced by the vice-president Itamar Franco. The country continued to endure a severe economic crisis as hyperinflation persisted; along with the impoverishment of more than half of the population, such crisis led later to the introduction to the Plano Real designed by Fernando Henrique Cardoso.

As candidate of the Brazilian Social Democracy Party (PSDB) Fernando Henrique Cardoso, a former ministry of economy of the interim President Itamar Franco, was elected as President over the Workers Party (PT) candidate Luiz Inacio Lula da Silva. President Cardoso was recognized as the key driver of the economic reform (Plano Real) during Franco's tenure. The plan was successful and stopped inflation after almost fifty years and instituted a fiscal adjustment and for the first time in eight years. During his administration, Brazil grew constantly at 3.2 percent between 1994 – 2008, while inflation for the same period averaged 8 percent annually (Codato, 2006).

Aside from having to overcome the country's economic problems as a Minister, as President, Fernando Henrique Cardoso had to face another of Brazil's biggest problems: poverty. Under the dictatorship poverty had dramatically increased across the country, with the countryside the most affected as agricultural subsidies and large development programmes were

suppressed (Ansell and Mitchell, 2008). The growing urban concentration led to the creation of poor neighbourhoods within the cities (*favelas*) where crime and poverty became a huge challenge for the young Brazilian democracy. During the decade of the '80s the government's efforts focused on increasing food distribution campaigns across the country. Unlike in Mexico, in Brazil large food distribution programmes like *Conasupo* did not exist; instead food distribution was managed through community kitchens and school meals. As in Mexico, food prices were controlled by the government, and rural credits and subsidies were given to producers across the rural areas. However, due to the high inflation rates and financial crisis those subsidies were cancelled (Ansell and Mitchell, 2008).

These problems along with the financial crisis led President Cardoso to implement a CCT along the lines of the Mexican *Progresa*, as an attempt to minimize the effects of the economic crisis for the impoverished population at the municipal level. In Brazil unlike Mexico, state or municipal governments are in some cases more important than the federal government (Montero, 2011). Aware of the importance of local leaderships, the first CCT in Brazil (Bolsa Escola) was launched in 1995 in the Federal District (Brasilia)[6], the program was administered at the municipal level by a municipal civic committee whose members were appointed by the mayor. From the beginning the programme sought to fund those marginalized municipalities by requiring education as a necessary condition to access the programme (Ansell, et al., 2008; Zucco 2011). Later, this pilot became the second CCT in Latin America and the largest CCT programme in the region with more than 13 million household beneficiaries. In 1999 *Bolsa Escola* was expanded nationwide under the name of *Bolsa Alimentaçao* and restructured CCTs started as municipal initiatives but were later adopted nationally at the end of the Cardoso administration.

As a result of the effectiveness of the Plano Real in curbing hyperinflation, Brazil's new economic context led to the stabilization of the political system with low electoral volatility and high presidential competition during the re-election of President Cardoso in 1998. In the period from 1988 to 2012 the presidential competition was dominated by two parties: the

[6] Lindert, K., et al (2007).

PSDB and the PT. Political contestation changed from single party domination to alliances between larger parties and small ones. Plano Real not only brought economic stability, but it additionally brought the consolidation of democracy. Fernando Henrique Cardoso was able create consensus among political forces while promoting and implementing major reforms in macroeconomic and social policies and the political system (Power, 2010).

Because of the increasing political participation and the consolidation of democracy during Fernando Henrique Cardoso's tenure the PT grew exponentially in terms of seats held in the congress. Lula´s success in the election of 2002 despite Cardoso´s good administration was due to the increasing PT's party organization at both lower and regional levels delivering substantial electoral benefits by stimulating in 2000 the creation of local PT branches across Brazil (Van Dyck, 2014). By 2002 the party managed to hold up to 30% of the seats and become the leader of the leftist faction in congress. In the same year, in his fourth run for the presidency, Luiz Inácio Lula da Silva as candidate pledged to maintain Cardoso's reforms and to continue with the same macroeconomic route. Lula da Silva won the election over Fernando Henrique Cardoso, becoming president in 2003 and kept his word in maintaining the principles of the *"plano real"* and developing responsible economic policies.

2.3. CCTs' DEVELOPMENT

Both *Bolsa Família* and *Oportunidades* share the same foundations. Both programmes were created with the intention of involving the less well-off population not as mere recipients but as actors in the fight against poverty. Those ideas were drafted by politicians Cristovam Buarque and Santiago Levy and José Gómez de León (Brazilian and Mexican respectively). In this section the evolution of the development of *Bolsa Família* and *Oportunidades* are discussed within the specific context of the country is presented.

2.3.1. MEXICO: FROM PRONASOL TO OPORTUNIDADES

Mexico's social security law was introduced in 1943 with the aim of providing health coverage, social security and pensions to the employed population of the country. As a result,

an autonomous federal institution was created. The Mexican Institute of Social Security (IMSS) is an institution funded by the state, the employers and the employees. The benefits though are exclusively provided to contributors and their families leaving the rest of the population (unemployed and informal workers) without protection. It was not until the '70s that the first efforts of the Mexican government to meet the needs of the most vulnerable populations were carried out. To combat poverty several social programmes have been in place since 1977.[7] All these attempts were designed to break the intergenerational circle of poverty, whereby "poverty generates poverty" (Rodriguez 2009:276). These efforts comprised various programmes such as the Public Investment Program for Rural Development (PIDER), the Coordination of the National Plan of Economically Depressed Regions and Marginalized Groups (COPLAMAR), and the Mexican Food System (SAM). These three programmes (PIDER, COPLAMAR and SAM) can be considered as the precursors of poverty alleviation programmes, but they were isolated programmes which did not attract the political importance and interest of the successor *Pronasol.* This may have been because the number of impoverished people was not as big as it was to become during the next decade. It was until the mid-80s that poverty relief became one of the priorities of the government agenda when as a result of the continuous economic crisis impoverishment reached alarming levels (Palacios, 2007:146).

As discussed in the previous section of the chapter, another important policy introduced to mitigate the effects of poverty was the National Company of Popular Subsistence (*Conasupo*). The Company, created in the 1960s, focused on agriculture, food production and the rural economy and sought to boost economic activity in rural areas. The company, however, was characterised by widespread corruption and electoral manipulation. It was liquidated in 1999 by the Ernesto Zedillo administration, and with the liquidation of the company two important subsidies were cut off (for tortilla consumption and bread). Historically Mexico's social policy focused on giving affordable food to the urban and rural

[7] Since 1977 to 2014, 8 different programs have been in place in order to reduce poverty: a) 1977, Coplamar; b) 1980, Mexican Alimentary System (SAM), later called National Alimentary Program (PRONAL); c) 1988, Pronasol; d) 1993, Procampo; e) 1997, Progresa; f) 2002, Oportunidades; g) 2008, Vivir Mejor and; h) 2013, Crusade against Hunger (Rodríguez, 2009).

Mexican population; food was always seen as the principal clientelistic resource to link society with the government (Ansell and Mitchel, 2008).

Conasupo was used to create patron-client networks in three different ways: first to increase party loyalty among *conasupo's* food consumers, and according to Cornelius (1975) almost 70% of Mexican households used to received *Conasupo's* benefits; second, the company served to calibrate the electoral machinery between PRI and its corporatist sectors[8] (workers, peasant and popular organizations); and third, the company allowed PRI to expand its clientelistic network outside its corporatist structures (Ansell and Mitchell, 2008; Díaz-Cayeros et. al., 2008).

a. Pronasol

In 1988 after being elected president, Carlos Salinas decided to merge *Conasupo* with the National Solidarity Program (*Pronasol*), seeking to reorganize and expand government social aid across the country. The expansion was aimed to increase the targeted population. Besides *Pronasol*, two parallel infrastructures were created to bring food to the most affected areas by poverty (*Diconsa* and *Liconsa*). *Diconsa* aimed to abate poverty by supplying basic and supplementary food to rural communities and on the other *Liconsa* hand was created to ensure effective milk supply among the population.

Pronasol started the era of poverty relief programmes and set the standard in the fight against poverty. Its main objective was to reduce poverty in indigenous communities and in rural and urban areas through the execution of 6 basic components: food, health, education, housing, employment and productive projects. The programme was created as a response to the economic crisis and the structural adjustment policies which were implemented in the 1980s. These policies were characterized by the consolidation of public finances, macroeconomic stabilization, and structural changes in the economy which led to growing social demands that were beyond the capacity of institutions to respond (Palacios,

[8] PRI's corporatist organization serves to control unions in the country, only those linked to the ruling party could be a recognized trade union. The party created strong bonds with leaders by rewarding its leaders with positions at the congress

2007:155). These factors made *Pronasol* necessary as the structural changes in the economy made poor people poorer. Although peasants were granted property over their land, allowing them to sell it, the overall economic conditions, including high inflation rates and a weak currency exchange rate, made rural areas even poorer.

One of the most important features of the programme was the launch of community work programmes, through the "solidarity committees". Such committees established a new type of institutionalized social organization which became were the main channel for conveying the demands of the community to the both the municipality and the federal government. The rationale behind this idea was to eliminate the extreme bureaucracy existent in the previous social policies by creating a direct dialogue between the people and the government (Palacios, 2007:156).

Pronasol's aims were threefold: first, at a basic level it aimed to provide social welfare, improving living standards by meeting beneficiaries' basic needs; secondly, the programme tried to encourage and create self-employment opportunities by providing specialized training on farming, forestry and extractive activities; and finally, it aimed to stimulate regional development through the construction of basic infrastructure which could have an impact on the local economy (i.e. road construction) as well as by implementing specific regional programmes and by promoting municipality's development.

The implementation of *Pronasol* started as an attempt to reduce the massive government subsidies by means-testing. The programme worked through a scheme based on mechanisms of co-responsibility. Carlos Salinas' *Pronasol* was always considered as a compensatory programme not a poverty relief strategy since the constant economic crisis hit populations living in poverty conditions hardest (Rodriguez, 2007). Despite government efforts to improve living conditions among the less well off, these had not been enough to tackle the structural causes of poverty. In addition, the 1994 financial crisis eliminated any positive outcome in terms of poverty reduction that past poverty relief policies could have achieved. After 1994 new anti-poverty policies were born in a complex institutional context;

public opinion consistently pointed out that the programmes were opaque in their objectives and were created and used for electoral purposes (Palacios, 2007:175).

Notwithstanding the programme being an innovative instrument of social policy, sought to mobilize and create social capital as a mechanism to combat poverty (Cordera and Lomelí, 2005:16) its main problem was the generalised perception of the programme as the president's social policy flagship, meaning that the programme was related only to Carlos Salinas and not to either the PRI or the Government. *Pronasol* was significantly important because it aimed to manipulate beneficiaries' voting intentions and to promote the idea of partnership between the state and society in terms of the provision of loyalty and political support to the President and PRI (Cornelius et al. 1994; Fox, 1994; Diaz-Cayeros, et. al., 2008; Green, 2008).

b. Progresa

The 1994 economic crisis had a fundamental impact on the design of social policy and a new scheme of operations was established. The scheme combined measures which, firstly, provided the population with social assistance, health, education, job training and housing, and, secondly, directed a set of targeted actions to those living in extreme poverty, with the objective of investing in the human capital development of individual members of the impoverished households. To address the second objective, in 1997 the Program of Education, Health and Nutrition (*Progresa*) was implemented. The purpose of the programme was to increase the human capital of the impoverished population by combining food subsidies with a set of mandatory activities related to health and education objectives in order to receive financial support. The programme was focused on women and children living in rural areas in extreme poverty. In addition, *Progresa* sought to replace both *Pronasol* and *Conasupo* with the aim of ensuring greater efficiency in public spending and more transparency in its allocation (as noted earlier, less than 40% of the budget of *Pronasol* was really designated as antipoverty expenditure) (Fox, 1994).

Progresa promoted cross-cutting actions for education, health and nutrition for those families living in extreme poverty. By doing so the programme sought to strengthen their

human capacities, raise their standard of living and promote their incorporation into national development (Conprogresa, 2000). The programme combined the traditional role of social assistance with a new perspective of social investment: it was expected that in the short-term the programme would increase the poor households' income by means of the cash grant while in the long-run, by investing in human capital, the programme would ensure better health, more education and higher incomes (Lindert, et al. 2006). According to Bate (2004):

> The programme would simultaneously address three key elements of human capacity building: education, health and nutrition. It would continue to provide aid in cash, not in kind. It would expand the conditions that families must meet to remain in the programme. And it would put women at the center of the programme by making payments directly to them, and not to fathers.

The latter goals were to be fulfilled by the following components of *Progresa*: a) educational support through scholarships and school supplies in order to encourage school attendance; b) basic health care for all members of the household with free food supplements to pregnant and lactating mothers and to children under two years old; and c) cash transfers to support food consumption and nutritional status of the households (Sedesol, 1998; 62).

One of *Progresa´s* most important features was the targeting method. The programme relied on a new and more accurate "poverty map" in order to target the neediest families by improving the quality of Mexico's marginality index by aggregating a variety of social indicators, developing a points system that took into account various factors to objectively rank households as poor and by using a ranking system it sets the basis for a transparent and non-political allocating system (Bates, 2004).

The programme was administered by the Ministry of Social Development which was responsible through the National Coordination of *Progresa* to design, coordinate and evaluate the implementation of the programme. The operation involved federal and state governmental levels: at the federal level through the ministries of Social Development, Public Education, Health and the Mexican Institute of Social Security (IMSS); at the state level

governors were responsible for the provision of basic education and health care for the uninsured population.

c. Oportunidades

During the administration of Vicente Fox (2000-2006) *Progresa* was renamed as the Human Development Program (*Oportunidades*) in 2002. The newly branded programme sought to continue with the strategy employed in *Progresa* by retaining its main characteristics while integrating new actions with the objective of extending access to both rural and urban households living in poverty conditions. As a result, in 2007 a decade after *Progresa* was launched, around 5 million families in 2444 municipalities were beneficiaries of *Oportunidades* (Sedesol, 2008).

The programme aimed to fulfil the new government's objectives in Social Development: first to increase basic human capabilities of all members of the households living in poverty through a strategic triad of comprehensive actions in education, health and nutrition, with the participation of the three government levels and second to improve access of the families to development opportunities, promoting security and self-sufficiency of individuals (Sedesol, 2003: 15).

As with *Progresa*, *Oportunidades* was designed to break the intergenerational circle of poverty. The circle becomes a complex network of factors that prevent individuals from improving skills and education and even accessing the programme on the same footing as the rest of the population (Sedesol, 2003). In contrast with *Progresa*, *Oportunidades* had a National Coordination mechanism which brought together the activities of the Ministries of Social Development, Health, Public Education and the Mexican Institute of Social Security in one single office. *Oportunidades* was more innovative compared to the previous *Progresa* programme as it was extended to semi-urban and urban locations, the educational support was addressed to the young of the household to make them complete high school. The programme provided support to its beneficiaries once they stopped receiving benefits to transit to the productive stage as well. Finally, it used a formal methodology applied to the selection of poverty lines with the purpose of identify the target population more effectively.

It is important to note that the programme was sustained by Fox's successors Felipe Calderón from PAN and Enrique Peña-Nieto from PRI but, after the 2018 election, after twenty-one years of existence, the programme was curtailed by the new President Andrés Manuel Lopez Obrador arguing that the programme failed to reduce poverty.

2.3.2. Brazil: From Bolsa Escola, Bolsa Alimenteção, Auxilio-Gas, Tarifa Social de Luz and Cartão-Alimentação to Bolsa Familia

As a result of the hyperinflation and debt crisis in the '80s poverty increased severely across Brazil, with the countryside being the most affected. Consequently, the rural population started to move to urban areas with the hope to find better opportunities. This migration to the urban areas led to the creation of large, impoverished concentration areas (*favelas*). During the 1980s the government's efforts to reduce poverty were centred on boosting food distribution.

Cristovam Buarque (1987) proposed amongst other measures, that ensuring scholarships to the less well-off children of Brazil would maintain them in school, and this would make education the engine of the Brazilian model of development (Valencia 2013). This idea was replicated by Luis Inazio Lula da Silva in the 1990 Workers Party (PT) manifesto and then in 1994, during Lula's second run for the presidency (Aguilar and Araujo, 2002). In the same year Cristovam Buarque ran as candidate of the PT for governor of the Federal District, and included this proposal in his electoral platform he included this proposal. Cristovam Buarque won the election and once in office in January of 1995, his administration started *Bolsa Escola*. The programme was replicated across many municipalities, states and by the federal government (Suplicy, 2006; Draibe, 2006; Sugiyama, 2012). In 1995, other municipalities initiated similar experiences such as the *Programa Garantia de Renda Familiar Mínima* (Guarantee Program of Minimum Household Income) from the city of Campinas and in the municipalities of Ribeirao Preto and Santos, governed by the PSDB and PT respectively (Cardoso, 2011).

Between 1997 and 1998, different municipalities governed by different parties generated conditional cash transfer programmes and by the end of 1998 more than 60 programmes were in operation at local level (Draibe, 2006: 147). Between 1995 and 1999, the states of Amapá, Mato Grosso du Sud, Alagoas, Minas Gerais, Rio de Janeiro, Goiás and Acre also introduced conditional cash transfer programmes (Aguiar and Araujo, 2002: 44). Given the importance of these programmes at local level, the administration of Fernando Henrique Cardoso adopted and adapted such policies. In 1998 his administration introduced the *Bolsa Criança Cidadã*, to support municipalities in developing a programme of a minimum guaranteed income for the less well-off including the conditionality of school attendance; the programme was renamed in 2001 as *Bolsa Escola.*

It was under the leadership of Fernando Henrique Cardoso first as finance minister in 1993 and then as President from 1995 that the country's economic volatility was stabilised. In response to the effects of the economic crisis, the government introduced a new national social policy with a broader scope than previous attempts. In 2001, under Fernando Henrique Cardoso's administration the first nationwide CCT in Brazil was introduced under the name of *Bolsa Alimentaçao*. In 2003, under Luiz Inácio Lula da Silva´s administration, *Bolsa Família* emerged as the fusion of four major CCT programmes implemented in Brazil: *Bolsa Escola* (to increase school attendance), *Bolsa Alimentação* (for maternal nutrition), *Cartão Alimentação* (bank card to buy selected food), and Auxilio-Gas (gas subsidy). Later, a fifth CCT was included; *Programa de Erradicação do Trabalho Infantil* (a programme directed to eradicate child labour).

The logic behind the fusion of CCTs was to integrate in one single programme all different cash transfers avoiding duplication and rationalizing operating costs. The new-born programme had a special twist being aimed at families not individuals.

a) Bolsa Escola

Bolsa Escola, was a conditional cash transfer programme aimed to promote school attendance. As other CCTs it used a system to select its beneficiaries like the Cadastro Unico[9], the programme reached 4.6 million of beneficiaries (De La Briere and Lindert, 2005). By the end of 2002, *Bolsa Escola* was in operation in around the 99.7% of Brazil´s municipalities (Draibe, 2006).

b) Bolsa Alimentação

Bolsa Alimentação was a conditional cash transfer programme which aimed to promote health care and nutrition among young children and pregnant mothers. The programme used the Cadastro Unico to select its beneficiaries reaching circa 900,000 households in 2003 (De La Briere and Lindert, 2005).

c) Auxilio Gas and Tarifa Social de Luz

Both the gas and electricity subsidies were designed to help poor households pay their gas and electricity bills. Both subsidies reached up to 4.4 million households who were selected based on the Cadastro Unico.

d) Cartão Alimentação

Cartão Alimentação was a cash transfer programme (not conditional) which aimed to provide money to poor families to buy their basic food necessities. The programme used as method of selection the Cadastro Unico as a first step then the selection was confirmed or modified by the municipal councils. The municipal council was decisive in terms of eligibility (De La Briere and Lindert, 2005).

e) Bolsa Família

While *Bolsa Família* is very similar to the Mexican CCT *Oportunidades*, it is more flexible regarding the conditions imposed on its beneficiaries; the programme emphasizes poverty alleviation in the short term rather than the accumulation of human capital in the long term.

[9] The Cadastro Unico (Single Registry), is the mechanism that enables the MDS to identify the necessities of the poor segment of the population. Initially was used to collect data for the Bolsa Familia programme nowadays is used by more than 20 programmes (World Bank, 2015).

Bolsa de Familia was not a geographical randomized experiment, making it harder to evaluate the efficiency of the programme (Fiszbein and Shady, 2009).

Bolsa Família born as part of a social protection umbrella called zero hunger (*Fome Zero).* Later the programme was strengthened with decentralised management (Hall, 2006; Da Silva, et al. 2010; World Bank, 2010). As part of the strategy the Ministry of Food Security and Fight against Hunger was merged with the Ministry of Social Welfare in order to create a new Ministry of Social Development and Fight against Hunger (MSD). This action minimized the difficulties in programme administration by concentrating it in one Ministry. It unified the operational structure, beneficiaries' records, data collection and reporting and transfer systems. Even so, the collection of data, the registration of potential beneficiaries into a unified household registry (*Cadastro Unico*), and the inspection of the compliance with the conditions are among the actions remaining at the municipal level (Hall, 2006).

The *Cadastro Unico* is a database that allows the government to know with accuracy the socio-economic situation of the potential beneficiaries. The information consists of general characteristics of the households: access to public services, income level and basic data about each member of the household. It is used by the MSD for the selection of potential beneficiaries of *Bolsa Família*. In a first step, the municipalities are responsible for the integration of data; afterwards, the Federal Government consolidates them to a single database. Nowadays, the *Cadastro Unico* has more than 21 million registered potential beneficiaries.

Bolsa Família has two main objectives; a) to reduce poverty and inequality by direct cash transfers to poor families and; b) to reduce future poverty and inequality levels by investing in human capital (Lindert, 2005). To meet those objectives, the programme focuses on three main aspects: income transfers, conditions that need to be fulfilled and complementary programmes. The income transfer promotes immediate poverty alleviation, conditions are made to strengthen access to basic social rights (education, health and social care), and complementary programmes aim for the development of families in order to overcome the situation of vulnerability (MSD, 2012). The programme provides a monthly grant, up to a

maximum of R$172 (US$ 80), to poor and extremely poor beneficiaries. In the case of poor households, the grant is given to those with a total monthly income of less than R$140 (US$ 65), who have children up to seventeen years old with a maximum of five per family and/or to a pregnant woman. Grants are conditional upon a minimum school attendance of 85% for children from 6 to 15, minimum school attendance of 80% for those aged 16 and 17. It also requires nutrition monitoring for pregnant and nursing women, prenatal and postnatal monitoring for children aged 7 or younger and complete immunizations for all children. As for the extremely poor, which are households with a total income per month of R$ 70 (US$ 32), they receive besides the conditional grant a monthly extra grant of R$70 (US$ 32) and this grant is not subjected to any condition. In addition, all beneficiaries receive an energy subsidy of R$ 15 (US$ 7) every two months (Hall, 2006; Hall, 2008; Lindert, 2005; Soares et al., 2010).

2.4. IMPLEMENTATION

2.4.1. PROGRESA – OPORTUNIDADES

Progresa was initially implemented as a pilot programme in a set of randomly selected municipalities in seven of the poorest states in the country (except from Oaxaca due to avoid conflicts with the teacher's union). Once its effectiveness was proven, the programme was then gradually introduced throughout the country (Levy, 2006). The rationale behind a phased strategy was to be able to evaluate the programme's impact on the benefiting communities in comparison to those who did not receive these benefits (Levy, 2006).

Progresa´s targeted population were those households living in extreme poverty mainly in rural areas measured in multidimensional terms. Two methods of selection were applied in a consecutive manner, first to select locations marginalized and second to identify the poorest households within those locations. To select and then incorporate the targeted locations, a central criterion was preferred; ordering localities by using a marginalisation index. Once identified by following the marginalisation index, a set of locations that have

access to education and health services were considered eligible by following a distance criterion (Conprogresa, 1999).

After the randomized trial in seven states the programme was extended to 300,000 families across 6344 localities in 12 states with a budget of approximately US$ 5.8 million. The success of this phase led to the programme being gradually expanded, reaching more than 6.5 million families, almost 24 percent of Mexico's population by 2012. In terms of its geographical coverage, *Oportunidades* is now in operation in 187,000 localities in all the 32 states of the country and Mexico City covering 100% of the nation's municipalities with emphasis on the most marginalized households, deploying an annual budget of US$ 4.5 billion (Levy 2006; Gertler, et al. 2012).

Similar to *Progresa, Oportunidades* applied a rigorous system of identification of its beneficiaries. The programme used the National Survey of Income and Expenditures of Households (ENIGH) ran by the National Institute of Statistics and Geography (INEGI) to identify possible beneficiaries by a proxy means test of socioeconomic and demographic indicators among all the households in the eligible municipalities. Families incorporated into *Oportunidades* received their benefits based on their poverty conditions subject to compliance with the imposed conditions: regular attendance (once a month) to medical check-ups at the health services and regular assistance to the school.

Once a community was identified, a second household survey was performed in each locality to gather information about the socioeconomic characteristics of every household and then determine which families qualified as poor or extremely poor. The list was forwarded to community assemblies for an error test and feedback; feedback was of key importance as it helped to determine if families were erroneously excluded or included (Parker, 2003; Skoufias et al., 2001).

In accordance with the rules of operation (Sedesol, 2010), the design, measurement and identification of the families that were likely to be beneficiaries, was performed following an objective, homogeneous and transparent methodology. This methodology was based on an estimate of the household income, through a set of socioeconomic and demographic

variables that could vary according to the size of the locality in which they live. By using this methodology, the *Oportunidades* office could identify households with socio-economic and demographic conditions similar to the conditions of those households with an income per capita below the poverty line. Incorporation, reinstatement and permanence in the programme was defined based on the household's socio-economic (monthly per capita income estimated) and demographic conditions, except for those households living in localities with full coverage, in which case, every single household of the locality was eligible regardless of their per capita monthly estimated income (Sedesol, 2010).

Following the approach adopted by *Progresa*, the *Oportunidades* conditions of eligibility were extended to those households who fulfil the following priority criteria:

a) The estimated household monthly income per capita should have been below the line of minimum welfare.
b) The household must have had inhabitants aged under 22 years.
c) Households whose monthly income per capita was below the line of minimum welfare and had women of reproductive age.
d) Also, were eligible to remain in the Program, households whose monthly income per capita was less than the average of the permanent check of the socio-economic conditions.

2.4.2. BOLSA FAMILIA

Bolsa Família was designed as a targeted policy, being accessible only to those who fulfil the eligibility criteria. The basic selection criterion was to focus exclusively those who live in poverty and extreme poverty. Accordingly, the programme is intended for persons classified in the *Cadastro Unico* (single registry) as poor or extremely poor. In addition to the income criteria, a set of populations excluded from other social policies were included in *Bolsa Família*, notably people who live in rural settlements, on the street, on indigenous territories (MDS, 2005:13).

The single beneficiary registry is a database which aims to unify and support Brazil's many social assistance programmes. The *Cadastro Unico* was a response to the necessity to improve both the effectiveness of the country's safety net and the coordination between ministries, thereby cutting the double-counting of beneficiaries and ensuring better and less expensive administrative costs. The registry was designed in order to identify families classified as poor[10]. The programme provides a monthly grant to poor and extremely poor under five different types of benefits:

- Basic Grant: is a monthly non-conditional grant aimed at the families considered extremely poor with a value of R$70 (US$ 32) and this grant is not subjected to any condition.
- *Variavel* Grant: is given to poor or extreme poor families with a value of R$ 32.00 that has among its members children aged between 0 and 15 years, pregnant women and breast fed. This grant is given to each family and the can receive up to five benefits (R$ 160.00).
- *Variavel Jovem* Grant (BVJ): is a benefit aimed to adolescents between 16 and 17 years old the value of the grant is R$ 38.00. This benefit is granted to every household in the programme which has teenagers between 16 - 17 years old and attends school. Each household can receive up to two BVJs (R$ 76).
- *Variável Gestante* Grant: aimed to help pregnant women. It is worth to mention that a female teenager who receive the *Variavel Jovem* Grant (BVJ) may also receive the *Gestante* grant.
- *Caràcter Special* Grant (BVCE): this grant is awarded only in extreme case where a change of the family situation from the supplementary programmes (*Auxilio Gás, Bolsa Escola, and Bolsa Alimentação, Cartão Bolsa Alimentação*) to the *Bolsa Família*, will cause them financial losses.
- In addition, all beneficiaries receive an energy subsidy of R$ 15 (US$ 7) every two months (Hall, 2006; Hall, 2008; Lindert, 2005; Soares et al., 2010).

[10] Families whose income per capita was less than half a minimum wage.

On 14th of May 2012, during the Rousseff administration a new benefit was created; the grant of *Superação da Extrema Pobreza na Primeira Infância* (Overcoming Extreme Poverty in Childhood) aimed to provide additional support to those *Bolsa Família*'s recipients with children between 0 and 6 years. Its value is variable, as it is complementary income benefit granted by *Bolsa Família* to achieve family income to the sum of R$ 70.00 per capita.

Bolsa Família is decentralized in terms of its management. While the operation is managed between the federal, state and municipal governments, the MDS is the responsible institution for the Program and other initiatives of income transfer. The national government transfers public money to local governments and they deliver grants to *Bolsa Família* beneficiaries. Within municipalities, the municipal social assistance institution is responsible for the operation of *Bolsa Família*. The institution has the responsibility to establish programme's guidelines and to oversee the management of the benefits. The municipal manager has the power to decide on where and how potential beneficiaries are enrolled. The alteration of enrolment records is one of the main actions of the municipality in the process of management.

It is mandatory for the municipalities to execute and oversee the operation of *Bolsa Família*. In that sense, it is possible for the MDS to assess how the implementation of the Program will differ between municipalities, ensuring that the programme could identify different needs between municipalities or regions. The national government assigns the safety net budget and guidelines to the municipalities and these will implement the programme in accordance with the social assistance infrastructure they possess. As a result, the operation of the Program differs from city to city in terms of the implementation.

2.5. SUMMARY

In summary, while Mexico did not have a military dictatorship regime like Brazil, the ruling party had managed to stay in power for more than 70 years. Poverty relief programmes were focused on providing affordable food to urban and rural areas and were a clientelistic

resource to link social organisations to the government. After Carlos Salinas' tenure, Ernesto Zedillo came to office and after just 20 days Mexico's market value collapsed. As a result, more than half of the population fell into poverty, shrinking the country's GDP. In order to overcome this poverty crisis in 1997 *Progresa* was created by gathering all the existent poverty relief programmes in operation (15 subsidised food programmes) into a centralised public spending in social welfare (Levy, 2006). This programme had the aim of increasing human capital of the impoverished population combining food subsidies and mandatory activities related to health and education in order to receive a monetary grant. Then in 2002 *Progresa* was renamed to *Oportunidades* aiming to enhance access to both rural and urban households in poverty conditions. By 2007 the programme aided 5 million families in 2444 municipalities.

Similarly, in Brazil the authoritarian military dictatorship lasted twenty-one years with short democratic interludes during the 1950s and 1960s (Fausto, 2014). The authoritarian regime focused on clientelistic practices run by local or federal governments building a long-term patron client relationship. After the dictatorship, Brazil returned to democracy in 1984, later in 1989 Fernando Collor de Mello became the first elected president, but in 1992 was impeached after a corruption scandal and Fernando Henrique Cardoso was elected in 1995 (Fausto, 2014). During his tenure, he started programmes focusing on community kitchens and school meals, However, due to the effects of the economic crisis at a municipal level he implemented the first Brazilian CCT *Bolsa Escola*. This programme was a CCT aimed to promote school attendance. Other programmes were also developed such as *Bolsa Alimentação, Auxilio Gas* and *Tarifa social de luz* as well as *Cartão Alimentação* but in 2003 were merged to form *Bolsa Família*.

Bolsa Família and *Oportunidades* are very similar, but the first is more flexible with regard to the fulfilment of the conditions imposed to its beneficiaries while the second specified mandatory activities related to health and education in order to receive the monetary grant. *Oportunidades* was designed as a geographical randomized experiment in order to evaluate its efficiency but *Bolsa de Familia* was not making it harder to evaluate. These programmes share the same foundations and were created with the scope of involving those in economic

hardship in the fight against poverty and in contrast to previous poverty relief programmes were born with the intention of eroding clientelism and promoting social participation.

3. LITERATURE REVIEW

3.1. INTRODUCTION

As explained in the previous chapters, this study aims to contribute to the existing literature in terms of the effects of CCTs on political support towards the incumbent party. With that in mind, the first section of this chapter presents a review of the effects of CCTs on voting behaviour, looking first into how CCTs are seen as fiscal interventions which follow different strategies for the allocation of resources depending on their political benefit.

Then, the theories of voting behaviour are reviewed, the complementary rational and sociological approaches. Within the rational approach, the prospective theory from Downs (1957) and the retrospective theory from Fiorina are presented, while in the sociological approach, findings by Klesner are discussed. Existing literature focusing on the two theoretical approaches of voting behaviour from Mexico, Brazil and other Latin American countries is presented. However, existing literature on the effects of CCTs on voting behaviour is scarce when compared to literature focusing on the socioeconomic outcomes of the programmes. Moreover, most of these studies are single-country studies and to this researcher's knowledge, literature aiming to contrast the effects of the programmes on voting behaviour between countries is scarce. However, it is important to note that there is relatively little evidence regarding the effects of CCTs on voting behaviour. Moreover, literature is even scarcer when looking into the effects of CCTs on voting behaviour after a long period of exposure to the programme. This is followed by a brief discussion of clientelism and the differences between programmatic and non-programmatic policies.

Then a brief summary on studies available concerning the socioeconomic outcomes of CCTs including their effects on individual health and economics is presented. As following their introduction to the social policy arena, CCTs have been perceived to be an effective tool for reducing inequality and improving school enrolment and health among the targeted

population and these positive outcomes could also serve as motives shaping voting behaviour. Finally, a brief conclusion of the chapter is also included.

3.2. Evidence on the Effects of Conditional Cash Transfers on Voting Behaviour

This section considers the debate on the effects of CCTs in the context of the wider literature on voting behaviour. It presents first a brief description on how CCTs are seen as fiscal intervention and of why most programmes are directed to the less well-off particularly in Latin America. This is followed by a discussion of the two main approaches to the targeting of redistribution policies used by political parties to gain voters. The section then reviews the literature on the effects of CCTs on voting behaviour in terms of the rationalist and the sociological perspectives: the first of these focuses mainly on explaining how beneficiaries make informed political choices while the second examines whether beneficiaries may change their voting behaviour as a result of the conditionalities of the CCTs (such as school attendance or healthcare) increasing political participation within their communities.

3.2.1. CCTs as Fiscal Interventions

CCTs are often seen as a fiscal intervention as taxpayers´ money is redistributed. Explanations of the effect of fiscal interventions on voting behaviour are grounded on Key's (1966) model of fiscal interventions which argues that voters tend to reward the incumbent for programmes implemented and received during their period in office. However, the model also argues that there could be a counter effect when the expansion of social programmes is at the voters' expense (by means of increases in taxes), leading to support for other parties as an electoral punishment to the incumbent. The electorate often responds to economic situations, forcing the political parties to target interventions at the poorest as they are more likely to respond to economic boosts than voters in a better economic situation (Diaz-Cayeros et. al., 2007; Nichter, 2018). The large numbers of individuals living in poverty become relevant to this study because both CCT programmes operate in countries with high poverty rates. Around 50% of their population was living in poverty from the period of 1990

to 2002, (46.32% and 48.14% in Mexico and Brazil respectively) (World Bank, 2018). Following Key's (1966) theory, those receiving benefits are more likely to vote for the party in power, while those who are not beneficiaries may vote for the opposition as a punishment against the incumbent for not including them in the programme. For example, those citizens from the north of Brazil who are recipients of *Bolsa Família* are more likely to vote for PT when compared to citizens from the same region sharing the same socioeconomic conditions but that were not eligible to receive the programme. However, as in the sociological approach, it is important to consider that voters may often perceive fiscal interventions as actions improving the welfare of the community provided by the incumbent government. Under those circumstances, non-recipients will change their political patterns in favour of the incumbent as a response to their expected future utility.

3.2.2. Models of Redistribution Policies

Aside from targeting the less well-off through fiscal interventions, political parties tend to consider other characteristics in order to allocate social programmes. Two main models for the allocation of redistribution policies have been described with the main objective to grasp how likely voters are to respond to economic promises. The first one was presented by Cox and McCubbins (1986) and the second one was suggested by Diaz-Cayeros (2007) and Weinschenk (2010). The first model was introduced by Cox and McCubbins (1986) and built upon the distributive politics theory. Voters were divided in three groups: core voters, swing voters and opposition supporters. Voters differ from each other to the extent of how likely they are to respond electorally after an economic transfer is given. This theory argues that core voters are more responsive than the other two groups because of the adherence dimension, which is defined as a personal linkage between the party and a specific group of the electorate. Scholars such as Nichter (2018) called this form of adherence "relational clientelism" which he defines as an ongoing exchange relationship that is extended beyond the electoral period. "Relational clientelism" as described by Nichter (2018) refers to the awareness of the political parties of the electorate's needs and desires which is reflected on making promises focused on such needs in order to obtain a greater electoral response. By

targeting their existing electoral base, or core voters, parties increase their voter's adherence. This model is similar to Fiorina's (1981) theory of party identification, which is rational as voters are loyal to their parties because of a series of retrospective evaluations. In other words, partisanship is the accumulation of personal experiences along with evaluations of the incumbent´s politics; such evaluations are useful to identify and to understand changes in party identification (Weinschenk, 2010).

Drawing upon this model Diaz-Cayeros, et. al., (2007) identified as core supporters the electorate that seeks to maintain long term relations with the incumbent mainly based on loyalty. Following Kahneman and Tversky (1982) candidates who are more risk-averse[11] will rationally take a decision to focus redistribution on their core supporters as they are easier to target in order to obtain the highest electoral utility. In contrast, a candidate who is more risk-seeking will tend to target more resources to those who are less responsive to transfers. Evidence from low-income countries, where clientelistic practices are more common, shows that risk aversion is also applied by citizens, as they have shown preferences for parties providing immediate benefits. This explains why among politicians from this region, common clientelist policies include the distribution of benefits in a disproportionate way to the less well-off (Scott, 1969; Kitschelt and Wilkinson, 2007; Kitschelt, 2011; Stokes et al., 2013; Nichter, 2018).

Notwithstanding, there is a second model of distributive politics suggesting that political parties should provide benefits to those who are not their core supporters (i.e. swing voters). The reason behind this is that core supporters will vote for them regardless of whether transfers are made or not. By focusing on swing voters, parties should have higher chances of increasing their electoral performance. This model is particularly relevant for close elections where swing voters may have more influence. Given the fact that swing voters are

[11] According with the psychology of preferences a risk-averse decision is the one in which the decision maker will chose the option that leads to the highest utility. As an example of the above if someone must decide between two options. The first option guarantees a sure gain. The second option instead is a risky gamble that offers a greater gain with a small chance of winning nothing. Under these circumstances most people will prefer a certain gain rather than a small risk to not win. In opposition, a risk-seeking preference is common when it is necessary to make a choice between a sure loss and a substantial probability of larger loss. (Kahneman and Tversky, 1982; 160)

more prone to respond to economic stimulus, scholars have suggested that targeting resources to voters who have no attachments to a party may be more rational than focusing benefits only on the core supporters. (Diaz-Cayeros, et. al., 2007; Weinschenk, 2010).

Both models follow the same assumption: voters are rational and tend to reward parties and politicians for the benefits received. Several studies have demonstrated that when a country's economy grows and remains stable, there is a positive correlation between personal economy evaluations and vote share for the incumbent as a good personal economy is perceived as a benefit from the incumbent (Lindbeck and Weibull, 1987; Alesina and Rodrik, 1994; Lewis-Beck and Steigmeier, 2000; Diaz-Cayeros et. al., 2007; Stokes, 2007; Green, 2008; Fried, 2011; Zucco, 2013).

3.2.3. THEORIES OF VOTING BEHAVIOUR

Scholars have tried to understand the responses of voters towards these redistributive policies. In order to do so, two main approaches have been described. The first approach is the rational approach and is supported by Downs (1957) and Fiorina (1981). It highlights that citizens vote seeking for their own interests. The second is the sociological approach and is supported by Kelsner (1997). This approach argues that some individuals may cast the ballot focusing on improvements within the community disregarding whether they are recipients of the programme or not. Even if they are not opposing theories as it is a rational choice to cast a ballot for the incumbent if benefits are seen within the community, evidence from each of the theories will be discussed separately.

3.2.3.1. RATIONAL APPROACH

As briefly explained in the earlier paragraph, the rational approach draws mainly from the works of Anthony Downs (1957) and Morris Fiorina (1981). Both pointed out that citizens tend to act rationally based on their own interests. However, Downs´ theory is prospective, meaning that ballots are cast looking into the future, while Fiorina´s is retrospective, meaning that ballots are cast looking into the past. Downs (1957) suggested that voters act in accordance with their rational expectations and will cast a ballot by calculating the expected

utility of their choices (prospective theory). In his prospective voting theory, Downs (1957) suggested that voters respond better to future economic policies that a candidate or party may promise to enact once in power. He argued that the most difficult challenge regarding voting behaviour is the decision whether or not to participate in any election; in the end, rational citizens will vote for the political party or candidate that best represents their future personal interests. Downs suggested that under incomplete information about the opposition's promises, voters would choose to continue to favour the incumbent if they perceived a good economic performance during their tenure. For example, in the presidential elections of Mexico and Brazil over recent years, opposition candidates were willing, at least in terms of their political discourse, to maintain and to expand social policies such as *Oportunidades* and *Bolsa Família* in order to provide the less well-off better life opportunities. According to Nichter (2018), once the marginal utility of income is diminished poor citizens will give more value to economic benefits than their ideological preferences. Under these premises, opposition parties are able to benefit from programmes that are already in operation by promising the continuation of such policies and further expansion. By doing so such parties could diminish the electoral effects of the programme in favour of the incumbent. In the case of Mexico this strategy might help to explain the PRI´s return to power in 2012.

In contrast, Fiorina (1981) introduced the retrospective economic voting theory which states that voters consider past events when casting their ballot. Regarding voters' response to economic conditions or to implemented policies during a certain period, Fiorina observed that voters tend to combine both approaches (prospective and retrospective). The retrospective theory, according to Fiorina, can be seen in two ways, as a "simple" vision which is one that reflects citizen's direct experiences with economic or political events individually and as a "mediated" vision, which reflects the sum of opinions regarding the economic performance or the general political situation (ibid: 80).

According to these theories, we may expect that any change in vote position can and will only occur when voters have a widespread discontent with the policies implemented by the government, this dissatisfaction being always influenced by economic discontent. Following

the same logic, scholars (Fiorina, 1981; Lewis-Beck 1985; 1988) suggest that voters do consider past governmental performance but only to make projections about future behaviour. Therefore, they are unlikely to vote for the incumbent if economic conditions are getting worse.

3.2.3.1.1. Evidence of a Rational Approach Among Voters from Mexico

Using data from *Pronasol*, studies from Molinar and Weldon (1994) regarding the relationship between public expenditure and electoral response found evidence that the programme spending was related to the incumbent´s electoral response capacity. They concluded that *Pronasol* was key for the PRI electoral recovery during the midterm election of 1991. In contrast to these findings by Molinar and Weldon (1994), Dion (2000) argues that the PRI´s electoral recovery in the 1991 elections was mainly due to macroeconomic variables, such as inflation and growth, and not to the distribution of *Pronasol* handouts.

Once Progresa was introduced, Diaz-Cayeros, Magaloni and Estevez (2007; 2008) pointed out that even if CCTs were introduced as a programmatic policy, where the allocation of public goods is rules-based making them less prone to political manipulation, could in fact affect voting behaviour. Following the prospective voting theory CCTs beneficiaries could change their voting preferences from the incumbent to another candidate or party in the subsequent electoral period by making rational decisions about their future utility rather than acting in line with their ideological predisposition. In their study Diaz-Cayeros, et. al. (2007) used survey and municipal level data combined with econometric matching techniques to analyse the effect of CCTs on incumbent support in Mexico's presidential elections. They concluded that during the 2000 presidential election CCTs beneficiaries were about 17% more likely to support the incumbent PRI than non-beneficiaries, while in 2006 they were 11% more likely to support PAN (new incumbent). They also found that contrary to Kitschelt's (2000) theory which posits that clientelism tends to fade with higher levels of development, in the Mexican context this was not the case as clientelism seemed to be stronger in areas with middle levels of development where there are larger levels of private

goods provision rather than in the poorest areas of the country (Diaz-Cayeros et. al., 2007; 2008).

Another important consideration when looking into the effects of CCTs on voting behaviour is the time exposed to the programme. Tina Hilgers posits that "the core element of clientelism is a long-term relationship of unequal power in which identifiable actors exchange goods and services that often involve political allegiance" (Hilgers, 2008; 7). Time and actors are two important elements for this work´s purposes as one of its main objectives are to identify if the longer the exposure of the CCTs to its beneficiaries have influenced voting preferences. Continuing with the discussion about the association between poverty and redistributive politics, Diaz-Cayeros, Estevez and Magaloni (2007; 2008) argue that CCT interventions in Mexico were mainly targeted at the poorest municipalities of the country for two main reasons: poverty alleviation alongside to the higher likelihood of less well-off individuals responding electorally to income transfers. They also show that the PRI's electoral strategy of *Pronasol* went further from their core supporters as the programme made more per capita transfers to municipalities where PRI's support was diminishing. Bruhn (1996) also argues that the distribution of *Pronasol* was driven by political interests. As a final remark, they posit that only private goods can be used by the political parties to create credible threats to the electorate (such as conditional cash transfers) in order to obtain political support (Diaz-Cayeros et. al., 2007: 32-36).

In contrast to Diaz-Cayeros et. al., (2007) study, Green's (2006) study is one of the two exceptions in literature about the effects of CCTs on political behaviour that did not find a positive relationship between the programme and vote share in the Mexican federal legislative elections in 2000. She used a regression discontinuity design to evaluate the political effects of *Progresa* in the 2000 presidential election. Her study was mainly focused on the short-term effect, only three years after the programme was implemented. By using the highest and lowest income percentiles of the target population, Green (2006) found that the programme had no significant effects on the incumbent vote share. The latter outcome was in spite of the mechanisms characterizing the political system during the PRI's tenure, whereby clientelistic relationships between the incumbent and the citizens were possible

because of corporate control of the population. Some of the political manipulation mechanisms that have been described in the literature included: threats of losing services such as water availability or gas infrastructure development; the offer of better infrastructure; threat of job loss; offering money in exchange for the voting ID; and offering money in exchange for votes for the incumbent (Aparicio, 2002). Green (2006) explains that PRI members were more likely to run the *Progresa* office as they were closer to the federal government. As a result, the political party was in control of the municipality and brokers were more likely to manipulate the municipality for voting for the incumbent or for not voting for certain parties. In addition, she also infers that recipients of the programme, as expected, will vote for the incumbent party as a result of the cash grant but those who are not recipients are more likely to vote against the new incumbent as they could have considered themselves to be unfairly excluded from the programme.

By the same logic Menocal (2001) using data from *Progresa*, reproduced the study made by Molinar and Weldon (1994) for the Mexican presidential election of 2000. Interestingly, her results found that the public expenditure in terms of handouts distributed in 1999 did not show any changes in the voting patterns. However, when the number of benefited households was considered in her model, evidence of political bias appeared.

Ana de la O (2013) reached similar conclusions by using a difference in difference approach. She took the year 1997 as baseline for her experiment and relied on data from a field experiment conducted in municipalities with full enrolment. She divided the observed population in households exposed to the programme from the beginning (circa 21 months) and those households exposed for only a few months before the 2000 presidential election. By doing that she found an increase in turnout rates of 7% and an increase in the incumbent vote share of 4%, which was not enough to keep the incumbent in power (though it is important to bear in mind that the exposed population to *Progresa* in that year was not extensive). She suggested that this 4% increase in incumbent vote-share was due to the rapid increment of *Progresa's* enrolment (16%) in the 6 months prior to the election. She inferred that CCTs did have an effect on voting behaviour patterns as a result of the increment in the number of the beneficiated household leading to a greater support towards the incumbent

in the short-term. Most interestingly, De la O's results suggest that during the 2000 elections, the increase in the vote share for the incumbent PRI, did not imply a decrease in the vote share for PAN (presidential election winner), the ideological opposite of PRI. Instead, she found that there was a decrease in votes for the leftist PRD. As she states, *Progresa* was a geographically randomized programme - those municipalities which benefited from *Progresa* from the very beginning had higher turnout and vote-share rates in favour of PRI than those municipalities who were included in the programme later. Her work suggests that the effect of *Progresa* on voting behaviour was stronger in the short-term rather than the long-term. She concludes that the programme would have the effect of increasing the voting of the ruling party that created and implemented the programme and that regions that receive more resources would present a higher turnout.

Contradicting Ana de la O's (2013) results, the work of Imai, Kosuke, et al. (2006) shows that CCTs may not have an effect in terms of political support in the localities where the programme was firstly introduced as she sustains. Imai, Kosuke, et al. (2006) posits that De la O's methodology and data was wrongly used. As she managed to compare total votes with vote share, in their work (Imai, Kosuke, et al., 2016, 3) they show that De la O's positive results about the "partisan effects of this nonpartisan programmatic policy were due to an unfortunate interaction between simple coding errors and highly unconventional model specifications in the data analysis" and after correcting De la O's errors, reach the conclusion that CCTs have no relationship with electoral behaviour in Mexico's presidential election in 2000.

3.2.3.1.2. Evidence of Rational Choice Among Voters from Brazil

Following the studies by Menocal (2001) and Ana de la O (2013) from Mexico, several studies from Brazil have also found a relationship between the number of recipients and votes for the incumbent. The studies of Marques et al. (2009) and Abensur et al. (2007) regarding the 2006 Brazilian elections found that the greater the number of benefited families of *Bolsa Família*, the greater the proportion of votes received by the incumbent specially in the impoverished regions (Northeast). A more recent study using Brazilian municipal level data

by Canêdo-Pinheiro (2015), found that an increase of one percent in the number of *Bolsa Família* beneficiaries raised Lula's vote by 0.55 percentage points, while the same variation in the GDP growth rate increases the voting only by 0.21 percentage points. His results suggest that the impact of the CCT on voting was greater than the impact of economic growth, but as in Menocal (2001) work this does not seem to be the main explanation for PT's vote share success in the less developed regions. He concludes that voters in the less developed regions, are more reliant on the government assistance and are more prone to vote for the incumbent, regardless of their party preferences.

The latter can be explained because all parties were in favour of continuing the programme. In terms of the economic voting theory, they may still be rational if in a competitive electoral race both incumbent and opposition parties have on their platforms the continuation and the expansion of the CCT among the population. De la O (2013) concludes that CCTs lead to a higher electoral participation. In the long-term, she sustains that once the programme gets institutionalized beneficiaries may vote for any party as they have no fear for the programme being curtailed. The underlying rationale is that they do not see any threat of losing their benefits if they shift their vote. She also concludes that the reason why voters may shift to the opposite party is that such party may offer more in terms of not only continuing the programme but expanding it. Both Diaz-Cayeros, et. al (2007) and de la O's (2013) studies suggested that changes in vote share are not ideologically motivated but are more likely utility driven, as expected by the retrospective voting theory (Fiorina, 1981).

Similarly, Layton and Smith (2011), posit that social assistance programmes do affect electoral behaviour because beneficiaries have a strong self-interest in maintaining their benefits. They also sustained, as with De la O (2013), that in case of doubt about whether the opposition party will continue such programmes, those who receive the benefits will vote for the incumbent because they want to secure their economic condition. Nicolau and Peixoto (2007) found that *Bolsa Família* had a positive impact at the municipal level on the president-elect's vote in 2006 regardless of the region or its socioeconomic situation. They conclude that Lula obtained higher voting percentages in municipalities that have received higher resources from *Bolsa Família*.

In that sense CCTs beneficiaries are likely to vote, once the programme gets institutionalized, for those parties or candidates who promise to improve their socioeconomic status. Beneficiaries in such scenarios take into consideration not only the incumbent's past performance but the chances of increasing their benefits if they shift their vote. This logic presupposes that beneficiaries are rational and utility oriented rather than ideologically motivated (Stokes, 2005). Most of these perspectives are based on the pocketbook theory which suggests that voters are mostly influenced by their personal conditions more than anything else (Kinder and Kiewiet, 1981). This leads us to infer that voters will support political parties that have shown the intent to preserve the benefit or their economic interests and will reject those who may be a threat to their interests.

In the same light, Hunter and Power (2007) raised a number of explanations about Lula's performance in the presidential election of 2006 and how successfully he managed to change the electorate's behaviour. They suggested that one of the key explanations, in accordance with what was previously presented, is related to economic factors: the less well-off voters would have voted largely for President Lula in return for having improved their living conditions. They also posited that the key to understand Lula's victory are focused social policies (such as *Bolsa Família*).

In both of his first studies on CCTs and its effects on voting behaviour, Zucco (2008; 2011), followed a similar approach to De la O (2013) and found that the Brazilian *Bolsa Família* had generated electoral boosts in favour of the Workers Party. Zucco highlighted that, although the programme was an important factor in the changing electoral support for the party during the 2006 presidential election, it was not as important as the country's strong economic performance. Similar to Zucco (2008), Carraro et al. (2007) found that Lula's votes were concentrated amongst the less developed municipalities mainly due to higher handouts from *Bolsa Família*. However, their results were not robust enough suggesting that, perhaps Lula´s electoral victory was due to the changes in the labour market, low inflation and the export success of the Brazilian economy than to the *Bolsa Família* benefits.

In a third study, Zucco (2013) looked at the effect of *Bolsa Família* in the long-term by analysing 3 presidential elections (2002, 2006 and 2010). He found that *Bolsa Família* had a significant effect on boosting vote shares for the incumbent party during the 3 past elections. In addition, Zucco also found that the increase in the incumbent's vote share was constant among *Bolsa Família* beneficiaries but such an effect tended to fade if the resources provided to the beneficiaries started to decrease. This is perhaps the only long-term effect study on the literature about the CCTs on voting behaviour.

Similar to De la O (2013), Zucco (2013) found that CCTs do not generate any kind of partisanship or party identification. Instead, beneficiaries tend to be strictly utility oriented. In the same vein, Diaz-Cayeros, et. al., (2007) maintain that "poor voters in vast areas of the developing world not only respond more to transfers than to ideology, but their partisan loyalties are significantly more responsive to these transfers than to symbolic appeals" (p.7).

In contrast to these studies, Bohn (2011) found no significant effect of *Bolsa Família* on Lula's re-election in 2006. Dismissing quasi-experimental techniques on the grounds that the programme had been implemented on a non-randomized basis, Bohn relied on a probit model to examine the effects of the CCT on the 2002 and 2006 Brazilian presidential elections. Bohn found that Lula's re-election was due to three factors: first, Lula's electoral base started to grow since 1994; second, most of *Bolsa Família* beneficiaries were already Lula's supporters in 2002; and finally, she points out the possibility that the existing social policies in the country like the Assistance Program for the Elderly were the key constituency that contributed to Lula's electoral success in 2006. In order to examine beneficiaries' socioeconomic background and past voting behaviour, she used individual level data from the Latin American Public Opinion Project (LAPOP) from Lula's first candidacy in 1989 until 2006. As a result, she found that Lula's constituency was gradually increasing during every election hence the shift in Lula's electoral base did not occur during 2002 and 2006 where *Bolsa Família* was expanded considerably as Zucco (2013) suggested. Based on her results she concluded that Zucco's (2013) statement about the increased in Lula's electoral base amongst the poorest was not because of the expansion of *Bolsa Família* but was due to other programmes such as the Assistance Program for the Elderly.

Zucco and Power (2013) challenge Bohn's findings and argue that *Bolsa Família* did have a significant effect on changes in voter patterns amongst beneficiaries and contributed to the increased electoral support that Lula received during the 2006 election. They posit that while Lula's successes in the elections of 2002 and 2006 were almost identical in terms of electoral support, in 2006, Lula received great support from the poorest areas in Brazil where he had not been strong. In order to prove that Lula's electoral base shifted from middle- and high-income supporters towards the most needed they rely on six different surveys. By doing so they showed that the individual level data used by Bohn (2013) tend to overestimate Lula's support as they conducted three different analyses using the same data used by Bohn. First, they tried to replicate Bohn's results and estimates; second, they made corrections to her independent variables and finally, using a non-parametric matching they tried to address covariate imbalance as the non-randomly assigned nature of *Bolsa Família*. In all cases, the results obtained from their analysis were the same; *Bolsa Família* was positively associated at individual level support for Lula (2013: 8) and in contrast to Bohn's statement their results showed that within the poorest population in Brazil, there was a shift in electoral support towards Lula in the 2006 election. As a conclusion, they suggest that the Latin America Public Opinion Project (LAPOP) survey used by Bohn do not reflect the reality of the results of the 2006 elections as it was conducted nine months after the election of 2006 and may be highly biased.

3.2.3.1.3. Evidence of Rational Choice among Voters from other Latin American Countries

Among the studies that examine the link between CCTs and political participation in other Latin American countries, the most relevant is the one by Manacorda, Miguel and Vigorito (2009). This study found that the *Plan de Atención Nacional a la Emergencia Social*[12] (PANES), a large-scale Uruguayan temporary CCT created with the intention to face the 2000 economic crisis, increased political participation and the intention to vote among women.

[12] As *Bolsa Família*, PANES was a non-randomized programme.

They sought to identify the effects of the CCT on voting behaviour in the long-term even though the programme was temporary. By using surveys, they found a positive effect of PANES on support for the incumbent party amongst beneficiaries. Using a discontinuity regression design and post-programme household survey data they could calculate that beneficiaries were up to 14% more likely to support the incumbent party in the short-term and even after the programme was cancelled until 2008. The results obtained from the study of Manacorda et. al., (2009) supports the hypothesis that beneficiaries tend to base their electoral preferences upon the past performance of the incumbent rather than partisan ideology. Following Key's (1966) theory on reward-punishment, beneficiaries of social programmes that perceive an increase in the household income tend to reward the party that provided those benefits. Nevertheless, it is worth noting that, when the study concluded, a proportion of beneficiaries were still receiving some of the programme components[13], a factor which could partially influence the results of their study.

Another relevant study is Nupia's (2010) quasi-experimental analysis of the effects of the Colombian CCT *Famílias en Accion* on voting behaviour he explored if the incumbent had been politically rewarded because of the expansion of the programme and if beneficiaries were prone to give up their political preferences so as to benefit from CCTs. Using fixed and random effects regressions he tested the effects of CCTs on vote share and the differences across voters with different ideologies. He used official voting information at municipal level data for the 2002, 2006 and 2010 presidential elections, covering almost 93% of the municipalities in Colombia (around the 97% of the Colombian population). He found that an increase of 1% in the *Famílias en Accion* eligibility rate resulted in an increase in the vote share for the incumbent of 0.5%. He found that the programme had a stronger effect on the vote share in municipalities with a stronger ideological alignment to the incumbent. However, in municipalities with a weaker alignment the correlation was still positive and significant. He concluded that municipalities with weaker alignment towards the incumbent are more likely to sacrifice their ideology in order to reward incumbents in exchange for

[13] Panes many components being the most important the cash transfer followed by a food card and a health card.

economic benefit. As a conclusion, he stated that higher poverty levels could give the incumbent a stronger incentive to expand the programme during its tenure as such actions could provide political advantages and reduce political competition in the short term.

Baez, Camacho, Conover and Zarate (2012) also examined the effects of the CCTs in Colombia. Using a regression discontinuity technique, they estimated the effect of enrolment in the programme on both the intention to vote and turnout rates during the 2010 presidential election. By using detailed data at individual level and voting booth levels they were able to find that CCTs are positively associated with incumbent support and voter turnout. Their study shows that turnout rates among beneficiaries are up to 2.5% higher than among non-beneficiaries. The latter can be explained mainly by women's participation which as in other CCTs are the main beneficiaries of the programme. The most interesting results from their study was means-tested programmes, such as *Famílias en Acción* or *Oportunidades*, lead to an increase in political activity among beneficiaries.

3.2.3.2. SOCIOLOGICAL APPROACH

The sociological approach tries to explain voters' behaviour with an emphasis on the influence of social participation on political participation. It is widely known that participation in generalized programmes will lead to higher political participation. Regarding social participation and based on Klesner (2007), CCTs may have a positive impact on democracy. The latter effect arises because by generating more educated, healthier and wealthier citizens who have more civic skills, CCTs lead to higher levels of participation in democratic activities. While it had been believed that means-tested programmes, such as CCTs, tend to reduce political participation (Campbell, 2003), recent studies such as De la O (2011), Zucco (2011), and Baez et al (2012) demonstrated that CCTs not only have a positive effect on turnout rates but they increase social participation among beneficiaries. The rational school and sociological school do not oppose each other, but rather complement each other in order to understand voting behaviour with regards to direction of the vote (the rational choice) and participation (the sociological school). Both schools are important for the hypotheses of this thesis as they help explain vote turnout among CCTs recipients.

This school includes two strands or models regarding political participation. The first model looks at the distribution of resources, which enables citizens to meet their basic needs; once these are met, citizens have the time to participate in the public life of their communities. CCTs therefore have a dual effect: on the one hand, through the provision of money that leads to an increase in household's income and thus beneficiaries could have more time to engage in public affairs as they do not need to seek other sources of income; on the other hand through the implementation of conditional activities related to the programme such as the regular attendance to educational talks, nutrition and health centres visits, thereby granting citizens greater civic skills (Brady et. al, 1995; Klesner, 2007; Schober, 2013).

The second model (Mobilization) examines the role that political parties play by exerting pressure on individuals to obligate them to participate in political activities. This model suggests that CCTs play an important role in increasing political participation amongst individuals that receive the programme. The logic behind this argument relates to the incentives that politicians may have which mobilize beneficiaries in order to involve them into political action and hence obtain high turnout rates. It is believed that if the benefits from the CCTs are attributed to the ruling party, it is likely that more beneficiaries will vote and will cast a vote in their favour. Thus, combining the rational and sociological schools, there would be a higher turnout for the incumbent. However, this role is closely linked to patronage practices as the incentives to provide grants in exchange for political support are high (Rosenstone and Hansen, 1993; Kitschelt, 2000).

It is worth remembering that to a certain extent political participation in Latin America is strongly linked to the implementation of social programmes as beneficiaries are compelled to do certain activities within the community leading to a better organised society. In some cases, when beneficiaries have a bad experience with the programme the result is the opposite as it may lead to lower social participation. Zucco's (2011) study on clientelism in developing democracies suggests that inhabitants of localities that benefit from CCTs might act as if they are following a common social welfare. The reason for this is that even non-recipients who live in localities with high rates of coverage with the programme, show higher support for the incumbent than non-recipients who live in localities with lower rates of

coverage. The above might be explained following the sociotropic voting theory, whereby beneficiaries vote according to the interest of the community and not by following their own narrow self-interest (Kinder and Kiewiet, 1981).

Others, such as Klesner (2007), contend that those citizens who have acquired civic skills are more likely to participate either in political or non-political activities of their communities. Latin America unlike other regions has moderate levels of non-political organizational involvement and voluntarism which may be explained mainly by the experience of authoritarian regimes past that many countries of the region have in common. Democracy, as he argues, encourages political participation while authoritarian regimes discourage it. During the last few decades countries like Mexico and Brazil had developed strong electoral institutions and a growing democracy. Investment in social capital is an important factor in encouraging higher levels of political participation. However, levels of interpersonal trust are low in most countries of the region. In this regard Klesner (2007) sustains that interpersonal trust has increased in countries where CCTs are in operation, as beneficiaries, due to the conditions of the programme, must interact with other members of the community leading to the creation of trust linkages between community members. Similarly, Ana de la O (2011) sustains that after a long-term exposure to CCTs the programme leads to higher electoral participation.

Following the above and in order to clarify the discussion about the effects of CCTs on the enhancement of political participation it is necessary to define what we mean by political participation. Booth and Seligson (1978: 6) define political participation as a “behaviour influencing or attempting to influence the distribution of public goods". As previously stated, public goods are those that are consumed collectively, and no one can be excluded, for example, roads, hospitals, urban infrastructure, schools or other services provided by the government (Cornes and Sandler, 1986). Furthermore, Booth and Seligson (1978:6) sustains that the provision of public goods is not an exclusive activity of the government as communities can provide it in the form of social participation “through the collective expenditure of such resources as money, labour, and materials donated by residents”.

Political participation in relation to social policy has been widely studied in the United States (Campbell, 2003: Pierson, 1993; Kitschelt, 2000). The consensus is that means-tested programmes do not increase but decrease participation. In contrast to what's been observed in the USA, recent studies on the effect of transfer programmes in Latin America arrived at opposite results: means-tested programmes such as *Progresa* and *Bolsa Famila* have increased political participation among the beneficiaries (Diaz-Cayeros, 2008; De la O, 2011; Zucco, 2011). Moreover, other studies not related to CCTs have observed the effects of the implementation of social policies in increasing political participation in Latin America. Klesner (2007) observed that investment in social capital in countries like Argentina, Chile, Mexico and Peru increased political participation amongst its citizens, arguing that citizens living in a democratic environment are more likely to participate in political activities. In the same way Brady, Verba and Lehman (1995) posit that the increase in monetary resources of a household as a result of the implementation of a cash transfer programme could lead a larger involvement in the community and by being actively involved beneficiaries' civic skills increased allowing them to participate in politics.

Garay's (2007) study on the upsurge of protests in 1997 led by the unemployed and informal workers in Argentina draws on the idea that living under democratic conditions and having a larger income could lead to greater political participation. Her study hypothesized that the Argentinian workfare programme played a key role in the proliferation of complaints because of the participation in the workfare programme. She concludes that due to the participation in the programme, the unemployed generated a sense of community as well as common interests.

As for the case of Mexico, it is to be noted that the first attempt to include social participation through a governmental programme was during the introduction of the *Pronasol* programme. According to its rules of operation the programme aimed to provide public goods to the poorest. Instead the programme acted as an effective tool to create strong linkages between the beneficiaries and the President. A few years later during Zedillo (PRI) administration, the Mexican government embarked on another endeavour with *Progresa*. However, this programme attempted to reduce political manipulation by excluding

intermediaries between the federal government and beneficiaries (Cornelius et al. 1994; Fox, 1994; Rubio, 1998; Diaz-Cayeros, et. al., 2008).

In contrast to the previous example, Montero (2010) posits that *Bolsa Família* was not very effective in diminishing clientelism in the Brazilian northeast. Although in the 2006 presidential election Lula had tremendous support in almost all the regions in the country, at the local level conservatives retained power by using their past clientelistic practices. According to Montero it seems that the generalised economic growth had no effects on vote shares towards the incumbent at local level. The latter might be better explained by Weitz-Shapiro (2012) who pointed out that in any high political competition, the threat of patronage is latent, especially in countries where poverty rates are high while among in richer countries the incentive to use clientelistic practices is almost zero. Accordingly, with Weitz-Shapiro, the social participation theory posits that the higher the income among the electorate the lower the clientelistic practices. Consequently Weitz-Shapiro concludes that in order to eliminate patronage incentives it is necessary to combine political competition and the creation of a larger middle class.

Similarly, Anthony Hall (2008) found that, after longer periods of exposure, CCTs, such as *Bolsa Famila*, may create a dependency on the cash grant, thereby encouraging clientelistic uses of the programme. In addition, Phillip Keefer (2007) found that in younger democracies such as the Latin American ones, politicians might not be trustworthy as a result of the long periods of dictatorships and clientelistic practices. Keefer sustains that politicians might use CCTs as a way of targeting public spending in order to gain political support among a portion of the population. He as well as De la O (2013) found out that this effect may disappear when the programme is institutionalized, which is when it acquires political credibility. In terms of the sociotropic voting theory, whereby beneficiaries vote according to the interest of the community and not by following their own benefit (Kinder and Kiewiet, 1981) it seems that CCTs have increased social participation and created a generalised sense of community in areas where there was no integration and participation amongst its citizens.

3.3. Clientelism and the Role of Programmatic and Non-Programmatic Policies

Mexico and Brazil went, with their great differences, from authoritarian regimes to regimes with high electoral competition. Competition together with robust electoral authorities and rules, high turnout, and pressure and concern from international agencies to avoid the political use of social programmes have paved the way for a new political dynamic. In this context, conditional transfer programmes (CCTS) have emerged, and have been considered an effective instrument to reduce poverty as they serve to increase the economic means of the less well-off (Nichter, 2018). But they have also been seen as a potential tool for reducing, though not eradicating, old clientelist practices (Fox, 2012).

Clientelism, as a socio-political phenomenon has been present and has been the object of study across different times and regions of the world. Jean Francois Médard (1976: 103) defined clientelistic relationships as those "of personal dependence not linked to kinship, which is based on a reciprocal exchange of favors between two people, the employer and the client, who control unequal resources". This definition has changed over the decades and with the diversity of practices and actors that make up the clientistic relationship. Although clientelism has been the object of study within political science, it has not been able to constitute, on the one hand, its own academic field and, on the other, a unique concept around which conditions must be met in order to be defined (Vommaro & Combes, 2019).

Before providing the definition of clientelism that will be used in this study, a brief review of the literature available on the broader concept of clientelism is presented. Following Trotta (2003: 24), the existing literature can be grouped according to the following characteristics: those that pose clientelistic relationships as expressions of social conflict and domination (Berman, 1974; Auyero, 1999; Scheiner, 2007; Hilgers, 2011) and those that, like Fox (1994), define them as relationships that are maintained for the exchange of political favors for social benefits, these relationships are maintained cooperatively between employers and clients (Tapia and Gatíca, 2016).

When looking into clientelism through the eyes of Trotta, the traditional perspective on clientelism defines it as a top-down phenomenon where clientele relations are based on a total domination of the client. (Campbell, 1964). In this sense, clients are seen as simple actors who, once in the relationship, obey and follow the instructions of the elite. Considering this, clientelistic relationship would follow a pyramidal structure with the patron at the top, the broker in the middle and the client at the bottom. The idea of domination[14] of the patron over the client and the characteristics of the relationship between these actors occurs through the broker, as he is the one in charge of the distribution of resources and mobilization of voters (Strokes, 2013). Vommaro and Combes (2019) point out that the figure of the broker is vital in the clientellistic relationship as the patron relies on it to channel resources to the areas of political interest, brokers have a more or less direct political role at the local level.

In the context of this research, the role of brokers in the distribution of resources through non-programmatic policies[15] was vital since brokers are the ones to decide whether to grant benefits to loyal supporters or to deliver them to swing voters. As will be discussed later in the chapter where the types of voters are presented, Stokes, et. al., (2013: 31) argue that in developing democracies (such as Mexico and Brazil) swing voters are very sensitive to the delivery of benefits since they receive very few benefits and do not have any partisan commitment whereas loyal supporters have a strong partisan preference and are less sensitive to such benefits.

Clientelism is a phenomenon that varies depending on the time, the region, and regional political characteristics. Social changes have permeated the way in which clientelist reality is observed and that is why, speaking within the Mexican context, it could no longer be sketched from relations of domination (Molinar, 1991). It is in this sense that authors such as Piattoni, Daieff and Nichter point out that the patronage pyramid is actually an inverted pyramid, where the base is placed on top. The role of the client ceases to be passive and

[14] It occurs by strengthening the client o voter partisan identification
[15] Understood as a policy where delivery of public goods is conditioned on their political support.

becomes the active ingredient of the clientelist relationship (Nichter, 2018), and the ones responsible for the survival of the clientelistic practice. In this same line, Piattoni (2007) argues that clients today are not forced to enter into a clientelistic deal if they are not willing. Nevertheless, they choose it to gain privileged access to public resources.

This paradigm shift leads to the second aspect stipulated by Trotta; clientelistic relationships are understood as cooperation between clients and patrons. This is in line to the rational choice approach discussed further in this chapter. The clientelistic relationship is understood as an exchange in which both parties seek to maximize profit. In this sense, it is important to mention the study by Kitschelt and Wilkinson (2007) theorizing about the nature of the ties between citizens and politicians which they define as a transaction. In this transaction citizens' vote exchanged for direct payments or continuous access to goods, services and or employment. They argue that granting a benefit to a citizen is to a certain extent a clientelistic practice as it is possible that in the absence of the benefit, voters would change parties (Kitschelt and Wilkinson, 2007: 14).

In this sense, as it was reviewed in the previous section, a significant number of studies have been carried out based on the work of Downs (1957) in order to study from a rational approach the effect of redistributive policies on electoral behaviour (Coughlin, 1986; Cox and McCubbins, 1986; Lindbeck and Weibull, 1987; Dixit and Londregan, 1995; 1996; 1998). Once the change in the structure of the clientele pyramid has been observed, newer research has focused on studying the active role of clients (Auyero, 1999; Hilgers, 2008; Daieff, 2015; Nichter, 2018) to explain that the actions taken by citizens on a frequent basis reinforce and explain the emergence and survival of clientelism. Nichter (2018) points out that this survival is due to the fact that citizens often seek to maintain the clientelistic relationship if the state is not capable of mitigating some of their vulnerability (ie poverty). This means that when citizens have a perception that social policies are inadequate or have been politicized, they seek to maintain continuous exchange relations with politicians or parties that provide benefits. In this sense, the link that results from the patron-client relationship is the product of a maximization of mutual utility (Piattoni, 2001).

Differences between programmatic and non-programmatic policies and clientelism.

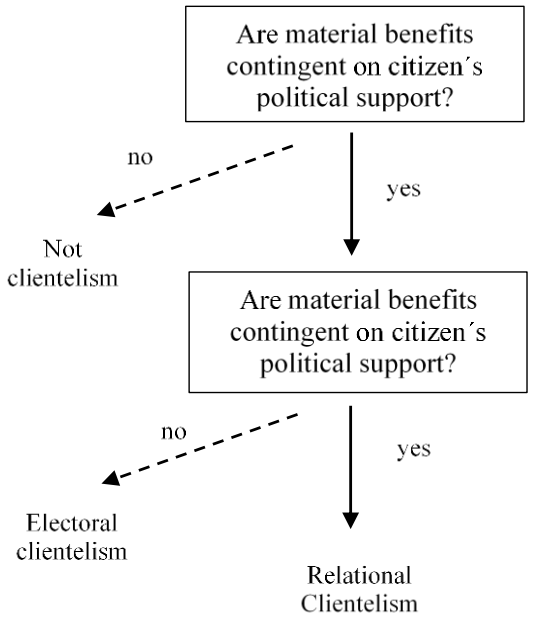
One of the great challenges surrounding the conceptual definition of clientelism has to do with the way in which power relations and other forms of political exchanges differ. Because of this, it is important to group the different distributive policies into two main categories: programmatic and the non-programmatic. While the first have clear, transparent and public operating rules which establish who receives what, the second do not have clear operating rules. The latter is relevant as much of the existing literature places an important emphasis on the concept of clientelism proposed by Fox (1994: 153) "a relationship based on political subordination in exchange for material rewards". Such a definition could be seen as failing not only to distinguish between clientelism and other forms of reciprocal exchanges between actors but also to determine to what extent the use of material incentives by political parties are able to influence electoral behaviour (Fox, 2012).

Specifically, in the Latin American case, it has manifest itself in a diversity of practices, and as such has proved difficult to define (Fox, 1994). In this sense, although CCTs can favor large portions of society, the benefits are distributed following an orderly and transparent system to all those people who can access these benefits regardless of the way they have voted. Nevertheless, establishing operating rules does not completely eradicate the possible clientelistic uses of the programmes (Nichter, 2018). Because of this Kitschelt & Wilkinson (2007) established five key components to identify the typology of links that exist between citizens and politicians. These components are: a) contingency of the exchange (if it changes the behaviour of the voter); b) the nature of the goods offered to voters (individual or collective); c) predictability, the probabilities that the voters react to an incentive; d) elasticity, understood as the number of votes that were won by the number of resources used and; e) supervision (monitoring) of the amount of information available on the needs of the electorate.

Considering this, authors such as Kitschelt (2000), Nichter (2018) and Daieff (2015) point out that programmatic policies should not be considered as clientelistic since, in a certain way, they lack one of the constitutive elements of the clientelism; the contingency (contigency),

understood as the granting of a benefit in exchange for the vote. As seen in figure 3.1. Daieff points out, based on Kitschelt and Wilkinson, that we must be attentive to the distinction that exists between the links that may arise derived from clientelism and from programmatic politics. Although the differences between the two are subtle, not having a clear idea of what one or the other entails could lead us to consider as clientelism a policy that in reality is not (Daieff, 2015).

Figure 3.1. Attributes and modalities distributive politics



Source: Adapted from Relational clientelism: Defining attributes and citizen mecanisms (Nichter, 2018: 9)

In the same vein, Fox (2012) points out that many definitions of clientelism focus on a subset of political bargaining relationships that involve the exchange of private (non-programmatic) goods, in contrast to programmatic policies, often associated with public goods (programmatic). While private goods are considered more susceptible to discretionary use and therefore to be politicized, public goods are granted following rules-based procedures and therefore are less susceptible to political manipulation. However, Fox points out that because there are very few public goods that can be universal, then there will always be room for their discretionary distribution. Although the implementation of programmatic

policies follows strict criteria for the allocation of resources, it is very difficult if not impossible to find a developing state where the allocation process and the infrastructure of the programmes are completely rule-based. This leaves room to certain degrees of discretionary allocation of resources.

Fox (2012: 198) points out that the key difference for distinguishing clientelism is not whether public investment takes the form of public or private goods, but rather whether the allocation process is consistently and transparently based on rules, and if citizens have access to effective reporting channels in the event of political abuse.

Table 3.1. Types of Allocation Criteria of Public Resources: Discretionary Versus Rules-Based

Allocation criteria	Private goods (individualized)	Club goods (excludable)	Local public goods	Public Goods
Clientelistic discretionary (rewards loyalty, mobilizes supporters or tries to sway swing constituencies) • Political discretion by the elites • Opaque mecanisms	Discretionary, politicized criteria for allocation to individuals (the process may follow formal rules)	Discretionary, partisan/politicized criteria for allocation to membership groups	Politicized geographic targeting (pork barrel politics)	
Rules-based (follows programmatic logics) • CCTs • Means tests social programmes	Allocation to individuals or families based on objective indicators of need, membership in under-represented groups and/or qualifications.	Demand-driven, based on match between qualifications, proposal and policy priorities, to organizations	Policy-driven geographic distribution criteria	Broader policy-driven priorities (i.e., human capital, public and environmental health, equitable public security)

Adapted from More Contrasting Principles for Allocating Public Resources: Discretionary Versus Rules-Based (Fox, 2012).

Table 3.1. Illustrates the different types of allocation of public resources: on a discretionary basis (not programmatic) and those that follow operating rules (programmatic). As seen in table 3.1, it can be observed that programmatic policies could be designed creating a space for discretionary use and condition the allocation of resources with a political purpose. As Fox points out, access to programmes may be conditional of affiliation to the party in power considerably prior to the election.

However, despite the existence of a margin of maneuver for political manipulation within programmatic policies, in democracies with effective competition and solid electoral institutions there is the impossibility of the verification of the citizen's vote. This, together with constant monitoring, review of the operating rules and the effectiveness of the benefits delivered for the purpose for which they were designed of CCTs, clientelism would constitute an expensive and inefficient strategy.

As previously pointed out, clientelism remains an elusive and difficult concept to determine. However, for the purposes of this research, it is defined as a) a personalized political relationship between actors with unequal resources, b) in which there is an exchange of goods, c) generally public. Clientelism is the exchange of citizen´s political support through the delivery of goods (tangible or intangible) with selectivity criteria oriented by political interests.

3.4. Impact on Socioeconomic Outcomes

While this study will focus only on the effects on voting behaviour, it is important to bear in mind that most of the literature about CCTs is about its socioeconomic effects. They are fundamental for the accumulation of human capital, as Valencia (2008: 489) argues: "if girls from poor families stay in school longer, in the future they will keep their own children in school longer".

Literature on the effects of CCTs on socioeconomic outcomes is wide and extensive. In most of these works, CCTs are addressed in terms of whether they are an effective tool for

reducing inequality and improving health among the targeted population. The increasing poverty rates among many nations in Latin America has led to the implementation of programmes that could, somehow, ease the poverty and health deficiencies that affect a large part of its population. In this case, the literature can be explained in terms of the effects on socioeconomic outcomes on three main aspects: income, education and nutrition.

3.4.1. HEALTH IMPROVEMENT

The health improvement approach places its attention on three important elements of health: height and weight, nutrition and child mortality. Based on an extensive range of studies, a group of scholars was considered (Fernald et al, 2009; Galarraga et al, 2010; Gertler, 2004; Frenk, 2006; Homedes and Ugalde, 2009; Lagarde et al, 2007; Paes-Sousa, 2011; Rawlings, 2005; Segal-Correa et al, 2008; Soares et al, 2006; Soares et al, 2010) such group concluded that CCTs have been a success in terms of nutrition outcomes among the targeted population in both Mexico and Brazil. They have found that beneficiary households were more likely to consume healthier food (vegetables and fruits) rather than non-beneficiaries. In terms of weight and height, they have found that children under 5 years old and new-borns from mothers on the programme were more prone to have normal height and weight.

As for health, based on studies about the impact of health care meetings, they have found that child mortality has been reduced at important rates, attributable to improvements on health conditions among beneficiaries. However, most of them have observed no variance in terms of vaccination in both countries, and this may be because of high immunization campaigns that have taken place in both countries during the last decades; however, regarding nutrition monitoring they have found positive effects.

Authors focused on health and nutrition outcomes (Fernald et al, 2009; Galarraga et al, 2010; Gertler, 2004; Frenk, 2006; Homedes and Ugalde, 2009; Lagarde et al, 2007; Paes-Sousa, 2011; Rawlings, 2005; Segal-Correa et al, 2008; Soares et al, 2006; Soares et al, 2010) generally found that CCTs require a better budget allocation and an adequate evaluation in

order to reach the more needed. Most of them have agreed that the aim of the health care meetings is to achieve disease prevention. On this point, Galarraga (2010) found evidence to support the claim that the universal health insurance in countries with low and middle income, has a protective effect on health expenditures. Some of the authors cited above have concluded that in terms of nutrition and health, where positive outcomes could be noticed, there is no differences between early beneficiaries and later groups (regularly those who join the programme after one or two years).

Progresa has been a particular focus for those assessing on the socioeconomic effects of CCTs. Since the beginning of the programme, *Progresa* was designed as randomly assigned with the intention of being evaluated and examined in terms of the possible positive effects on the accumulation of human capital and therefore it success in reducing poverty levels and to break the intergenerational cycle of poverty. Many scholars (Attanasio and Mesnard, 2006; Berhman and Hoddinott, 2005; Fernald et. al., 2009; Gertler, 2004; Lagarde et. al., 2007; Soares et. al., 2010), using different techniques as multivariate regression, panel data analysis, probit estimates, difference-in-difference estimators, propensity score matching among others have tried to estimate its effects. For example, Fernald et. al., (2009) using a T-test and a multivariate regression analysis tried to compare the effect of the programme on (1) height for age, (2) body mass index and (3) cognitive language and behavioural assessments. Their results present no significant differences between early treatment groups and late treatment regarding height for age and body mass index; however, their findings regarding behavioural problems were the opposite, showing that early treatment led to a positive reduction compared to those on late treatment. Nonetheless, they did find that children aged between 8 to 10 from uneducated mothers who have received up to 18 months more of the programme before they have reach 3 years old are 1.5 cm taller than those who did not received the programme.

Focusing on the same and using a panel data analysis approach Berhman and Hoddinott (2005) arrive at similar conclusions as Fernald et. al. (2009), finding that amongst the initial treatment group in *Progresa,* children present an increase in height of about 1cm after one year of being in the programme. In the same line of study Gertler (2004) found that among

children aged between 1 to 3 after an exposure to the programme for one year were almost 1 cm taller that those who were not exposed. However, those who present higher size are those who belong to the oldest group of recipients (Lagarde et. al., 2007). The main conclusion about the increase in height on *Progresa's* children is that they received additional nutritional supplements which may have boosted the effects of the programme in height and not necessarily because of the monetary grant. In contrast to the previous statement, Soares et. al., (2010) by comparing the Colombian *Famílias en Accion* to the Mexican *Oportunidades* were the first to show positive outcomes in both weight and height. Such results are mainly attributed to the cash component and not because of nutritional supplements. In the same tone Attanasio and Mesnard (2006) find a positive effect of the programme on consumption of better and most nutritious food with the first year of being a recipient.

Regarding the effect of CCTs on nutrition, the debate about the two flagship programmes in the region (Brazil and Mexico) has been intense due to the disparity in the results about malnutrition. While in Mexico the programme has shown a significant impact on increasing height, weight and nutrition, in Brazil *Bolsa Família* has not being able to increase nutrition on children aged 1 to 3 years old. The latter may be due to the relaxed nature of the fulfilment of the conditions in Brazil. For example, even though regular visits to the health centre is a mandatory requisite of the CCT, in Brazil - in contrast to Mexico - the social health service has a reduced amount of coverage services. This may be the key explanation of why have not been observed bigger growth rates in children in Brazil (Behrman and Hoddinott, 2005; Soares et al, 2010).

Due to the diversity in the design of the different CCTs in operation, the target population and the amount of public expenditure transferred to the beneficiaries, the results vary considerably. Improvements in health, nutrition and mortality rates among beneficiaries are significant and positive among every CCT in place. Nonetheless, regarding nutrition results among every CCT are positive, many studies have shown that beneficiary households are more prone to consume of food with improved nutritional value leading to both higher stature and a dramatic reduction in malnutrition (Britto, 2004; Cohen et. al, 2006; Valencia, 2008). Regarding health outcomes is clear that the CCTs tend to be much higher in children

under three years and have been a major factor in the decline of infant mortality (Gertler, 2004; Lagarde et. al., 2007).

In terms of sickness children under the age of 3 presents a 22% less probability to be reported sick after one month of being in the programme, the effect goes further across time, after 1 year of being receiving *Progresa-Oportunidades* children younger than 3 show a decrease in sickness report up to 25%. The most shocking effect is that only 20 months after of being in the programme, children were 40% less likely to be sick (Gertler, 2004; Lagarde et. al., 2007).

Despite the results of the many studies cited here, one conclusion is constant, further research is needed in order to assess the effects of CCTs on health outcomes among poor populations at the long-term as most of the studies presented here are focused on the short-term.

3.4.2. Socio-Economic Approach

The socio-economic approach places its attention on the effects of CCTs on education, school attendance and poverty rates. Scholars like Fernald et al (2009), Skoufias et al (2001), Amuedo-Dorantes and Juarez (2012), Gitter and Barham (2008), Gantner (2007), Hall (2008), Handa and Davis (2006), Todd, Winters and Hertz (2010), Soares et al (2010), Lindert (2005), Fiszbein and Shady (2009) have found that in the case of education, seen as school attendance, CCTs programmes have been effective in increasing attendance and reducing dropout rates in almost every country where a CCT is in place. This effect is mainly because of the school conditionality of the programme in addition the percentage of child employment has decreased at similar rates in both countries.

A main concern in most of the studies presented here is that attendance rates are increasing but it does not mean that children are becoming more educated. The school grant is conditional upon school attendance, not on school performance. Behrman et. al (2009) pointed out that CCTs have led to positive rates in terms of not only school enrolment but also grade completion. However, there was no positive effect on achievement scores. In the

Mexican case Soares et. al, (2010) and Behrman et. al, (2009) sustains that the latter may be due to two reasons, first because of children who are beneficiated by the programme in most of the cases have never been in school before or have been out of it for a long period of time placing them behind regarding those who have been frequent in school and second because of the influence of the CCT on children to enrolment. In the case of Brazil there is a positive effect on school attendance and enrolment rates. In terms of dropout Brazil has shown a massive decrease of about 9%.

Regarding poverty alleviation, CCTs are quite effective in attacking poverty in rural and urban areas, though more so in urban than in rural areas. Regardless of the positive effect of CCTs on poverty alleviation, the programmes still have serious operational problems, for example in targeting the population (notably in Brazil). Likewise, a common concern among scholars is that such programmes can generate a dependency upon them; therefore, CCTs have not fulfilled their main objective of breaking the intergenerational cycle of poverty (Skoufias., et al, 2001; Lindert, 2005; Handa and Davis, 2006; Gantner, 2007; Gitter and Barham, 2008; Hall, 2008; Fiszbein and Shady, 2009; Fernald., et al, 2009; Soares., et. al, 2010; Todd, Winters and Hertz, 2010; Amuedo-Dorantes and Juarez, 2012).

There is still an outstanding issue that, even with the increase in family income, has not been resolved: the high inequality contexts, which may help to perpetuate poverty. There is also an academic criticism about targeting cash transfers to women. Most of the criticisms are made around the role of women on the productive activities of the households. Some scholars such as Levy (2006) argue that by giving the grant to the mother, it is possible to reduce inequalities between men and women within the households, and in some cases these grants help women to contribute more than men to the household income, making them more independent. According to Lustig et. al, (2011) in 13 of the 17 countries a significant decrease in the Gini coefficient has occurred since 2002. This reduction is mainly explained first by changes in the composition of labour supply and second because of the Conditional Cash Transfer programmes. Thanks to the CCTs, the distribution on human capital in Latin American countries is now more equal. Others, as Glitter and Barham (2008),

in support of Levy's argument, have found that increasing income of the female head of households is a powerful way to increase key welfare outcomes for the entire family.

In the same tone, Behrman and Skoufias (2006: 266) consider that "resources controlled by women are more likely to yield greater improvements in child health and nutrition than resources placed in the hands of men". They also found that by increasing women resources, they have more bargaining power within the household. Against these positions are those like Valencia (2008) who argue that by giving the grant to women, they place on them the responsibility of the households as a full-time job, leaving no room for other type of economic activities and therefore reinforcing the classical division of labour between men and women.

Cash Transfer programmes seek not only to promote school attendance but to prevent child labour. Some scholars (Levy 2006; Rawlings 2005; Morley and Coady, 2003; Cohen and Franco, 2006) argue that benefits from education are permanent among the targeted population under the logic that when such children become adult those will be more trained and educated and will be to find better jobs with higher incomes, leaving poverty behind. It is important to note that cash transfers will not by themselves eradicate poverty; they will only contribute to national and individual growth. According to this logic, other scholars as Todd, Winters and Hertz (2010) argue that if any of the beneficiaries use a part of the additional income to invest in any generating activity, the programme will not only prevent future poverty of children by breaking the intergenerational cycle of poverty but will reduce future poverty among parents as well.

3.5. SUMMARY

In summary as stated in the previous sections of this chapter, while there is only a limited literature available on the effects of CCTs on voting behaviour at the long-term, some conclusions can be drawn from the review of the literature about the possible effects on voting behaviour in the short-term. After an extensive review of the principal studies regarding political consequences of CCTs in Latin-America it seems that CCTs have led to an

increase in political participation among CCT's beneficiaries not only by increasing turnout rates at both local and federal elections but by positively affecting the vote-share of the party in power. A second aspect is the possible effect that CCTs can have on changing the outcome of an election. Some scholars argue that CCTs have been or could have been a key element to predict the course of the election. With regards to the Mexican case Diaz-Cayeros et. al. (2008) and Ana de la O (2011) have argued that at local level CCTs may have a strong effect however more research on the long-term effect is needed. This study seeks to contribute to the literature in this respect as at least 3 presidential elections were analysed.

After the review of the different studies presented on this chapter, it is important to mention that a variety of methods were used to analyse the effects of the CCTs on voting behaviour. In the case of CCTs that were randomly assigned (i.e. *Oportunidades*), scholars have used difference-in-differences, regression discontinuity and panel data techniques to evidence the effects of such programmes on the vote decisions of recipients by comparing them with the non-recipients. As for the CCTs that were not randomly assigned (i.e. *Bolsa Família*), scholars such as Cesar Zucco (2013) used non-parametric matching techniques to compare different treated – untreated populations. This point is relevant as a diversity of studies using different techniques have not arrived at common results regarding the effects on political behaviour. As we will see in the next chapter, this study will try to obtain comparable results by using the same techniques while analysing both CCTs.

After an extensive review of the literature, it is important to notice that the literature did not look for long-term effects on voting behaviour. Two studies (Zucco, 2013; Manacorda et al., 2009) tried to show long-term effect; however, such studies were not convincing. As for the case of Uruguayan *PANES* (Macorda, et al., 2009) it was a temporary poverty relief programme and some of its beneficiaries were still receiving the benefits while analysed. The latter emphasises the need to provide more clear answers regarding what could be the effects of the programme after a longer period of exposure. This work seeks to contribute to the literature by examining such long-term effects. It is important to notice that many of the studies that have studied the long-term effects of CCTs have focussed on the socioeconomic rather than the political effects.

In addition, there is a gap in the available studies regarding CCTs and its effect on electoral behaviour that this work will try to fulfil which is the lack of cross-country comparisons. This study will contribute to the literature by making a comparison of the effects of CCTs on voting behaviour, both short- and long-term, between Mexico and Brazil. This study will bring together the two strands of literature by looking at the beneficiaries' voting behaviour in both in the short and long run while observing how a diversity of independent variables have been effective in increasing support for the incumbent and how they may have had an impact on their electoral choices through time.

While this study will not focus on the effects of CCTs on socioeconomic outcomes, the present literature review has served to observe that the effects of conditional cash transfer programmes on socioeconomic outcomes are significant. In programmes such as *Oportunidades* and *Bolsa Família*, similar results have been observed in terms of health, education, and nutrition, demonstrating a consensus on the socioeconomic effects of CCTs which does not exist regarding their effects of CCTs on voting behaviour.

Regarding health, the literature shows positive results in most of the programmes in the region, highlighting improvements for children up to the age of three years and indicating that the more time they are exposed to the programme the greater their levels of nutrition and height in comparison to those who were not part of the programme. However, there are some exceptions regarding nutrition, for example in Brazil where it appears that the effect of the programme has not been as positive as in other countries. Results about education attendance and enrolment are positive too, as a curious fact which many of the scholars have noticed is that high rates of enrolment do not necessarily lead to better performance at school.

Conditional Cash Transfer programmes were created with the main objective to reduce poverty and to eradicate its intergenerational persistence. As a result, various approaches were used to design and to implement CCTs across the region. Two main models took place one in Mexico and the other in Brazil both share the same goals but the way to tackle their objectives is different. While the Mexican model sought to eradicate poverty through human

capital accumulation, primarily by increasing education of beneficiaries by boosting better educational skills that could lead to better work positions (clearly a long-term effect model) the Brazilian model sought to eradicate poverty in the short term by transferring money to the poorest households of the country thereby seeking to increase income and therefore consumption, also by increasing school attendance and decrease drop-out rates. As *Oportunidades* it sought to have a positive impact on adult labour force participation of women. While the results in both cases have shown positive outcomes in reducing poverty rates, in both countries high rates of poverty persist even if CCTs have being in operation for more than two decades (World Bank, 2018).

These findings are relevant for the purposes of this study. As mentioned briefly in the section 3.3. of the chapter clientelism is considered to be about political support in exchange of goods. In this sense, some scholars (Soares et al, 2010; Ferreira et al, 2013; Nichter, 2018;) have considered that CCTs along with the vulnerability due to the concentration of poverty could imply some margin of manoeuvre for political gain of such programmes even if are programmatic in nature. Despite having clear rules, they are not available for all of the population, they have selectivity criteria including the targeted population being the less well-off who are more prone to political mobilisation.

In summary, for this research perspective, clientelism is the exchange of citizens´ political support through the delivery of goods with selectivity criteria oriented by political interests. Having this in mind, even if CCTs are programmatic policies, the way the benefits are allocated could be oriented by the incumbent party in order to have higher turnout rates (sociological approach) in their favour (rational approach).

4. METHODOLOGY

4.1. INTRODUCTION

The aim of this chapter is to present the research methods used to find whether Conditional Cash Transfer Programs (CCTs) have been successful as a political weapon in terms of its effectiveness to increase voting support towards the incumbent party among CCT beneficiaries. As presented in Chapter 3, the existing literature on the effects of CCTs is extensive with regards to their effects on health, nutrition, and school attendance (Lindert et al. 2006). However, studies looking into its effects on political behaviour among CCTs beneficiaries are fewer. Such studies focus predominantly on the short-term effects of these programmes. Crucially, there is still considerable debate in the literature on the subject as some studies have argued that CCTs have benefited the incumbent party electorally, while others have found no evidence of such effects. (Green, 2008; Bohn, 2011).

The importance of looking into the possible political and electoral impacts of these programmes with regards to the targeted population relies on the fact that CCTs have been implemented in most Latin American countries as a tool to diminish poverty. As explained in the previous chapters, targeted beneficiaries of such programmes are those at the bottom of the income distribution and as a result are more susceptible to political manipulation. Hence the significance of this study, as it seeks to test whether CCTs lead to a larger electoral support for the incumbent party in two stages (long and short term) by examining whether the introduction of those programmes increases on one hand the likelihood of beneficiaries to vote for the incumbent party and to the other by conducting a long-term study to observe if loyalty towards the incumbent remains after a longer exposure to the programme.

The three research questions of this study were drawn using rational retrospective and prospective theories elements and the sociological theory:

a) Are CCT beneficiaries more likely to vote for the incumbent following their self-interest?

b) Does time influence the effect of CCTs on voting behaviour?

c) Do CCTs increase incumbent support in both beneficiaries and non-beneficiaries?

If CCT beneficiaries follow their self-interest, the likelihood of voting for the incumbent party would increase after the introduction of CCTs. These changes in political patterns could be attributed to many factors such as higher income, better education, region or to a margin for clientelism produced by the programme. This should be studied further.

To provide a better understanding about the effects of CCTs on voting behaviour, this chapter proceeds as follows. Section 4.2 provides the research design including the hypothesis and the expected results, section 4.3. provides the rationale behind the selection of *Oportunidades* from Mexico and *Bolsa Família* from Brazil. This is followed by section 4.4, describing the different datasets used for analyses. Then, section 4.5 presents the variables used for each of the models with the operationalisation of each of them. Following this, section 4.6 describes the statistical methods used in this study at a municipal and individual levels. For Mexico panel data analyses were performed at individual level and cross-sectional analyses were performed at municipal level, while for Brazil cross-sectional analyses were performed at individual level while panel data analyses were performed at municipal level. Finally, section 4.7 presents a summary of the key aspects that were discussed in the chapter.

4.2. Research Design

As discussed previously in chapter 3, the implementation and organization of poverty reduction programmes involves a series of complex relationships between individuals, social organizations (communities) and governments. With regards to CCTs, these relationships exist within communities with a dense population of beneficiaries and communities where their presence is minimal. This leads on the one hand to non-beneficiaries feeling displaced from a certain public policy and to the other hand to political operators looking to gain electoral advantage because of their implementation (or expansion). In that sense, beneficiaries of the CCTs may feel compelled to vote for the incumbent while non-beneficiaries could act in two different ways; first by voting for the incumbent with the

purpose of obtaining the benefits to which they do not have access to at the time and second, non-beneficiaries could vote against them as a form of punishment for not having access to the programme.

Having this in mind, this research follows one hypothesis:

a) The more recent a CCT programme is, the more positive its impact on support for the party that governs at national level.

This study assumes that beneficiaries are rational, and follow their self-interests, meaning that their electoral choices correspond to their material concerns (immediate benefit).

By assuming that voters act differently depending on time elapsed this study relies on two periods of observation; in the short-term this work assumes that voters consider the recent governmental performance or in our case, the introduction or expansion of a safety net via the CCT, and tend to reward the incumbent because of the introduction of such policy. In the long-term voters will contemplate the incumbent´s past performance to make projections about its future performance (Fiorina, 1981; Lewis-Beck, 1988). If voting were motivated by judgements of past events, we could conclude that changes of voting behaviour of the beneficiaries could be a result of discontent with the incumbent's performance.

To test the hypothesis this study follows a quantitative approach using secondary data and a qualitative approach when comparing results from both countries as a pooled dataset was not possible. Constrains were found along the construction of the datasets from each country, those limitations along with the different electoral systems did not allow to pool the data and formally compare differences between countries. However, by analysing each country at the municipal and individual levels inferences on the effect of the implementation and the political regimes were possible. As is described later in the chapter, for each of the countries there are descriptive statistics, logistic regressions at municipal and individual level and panel data analyses. The next section focuses on the rationale and justification of the case selection of Mexico and Brazil.

4.3. CASE SELECTION

The effects of *Oportunidades* from Mexico and *Bolsa Família* from Brazil because they are the two largest and oldest CCTs in operation in Latin America. However, comparative research requires certain similar characteristics between cases. Following Halperin, et. al. (2012: 203) this chapter understands that "comparative politics is frequently based on comparing differences (or similarities) between countries. But it can also be used to compare differences between units within countries, such as regions, organizations, political parties, pressure groups, or whatever". In that sense, there are several similarities between Mexico and Brazil, from a comparative perspective, the justification of this study is twofold. First, both countries are highly affected by poverty; however, at the macroeconomic level, according to the World Bank ranking in terms of real gross domestic product (GDP) these two countries are located in the fourteenth and seventh rank respectively. Both countries are upper-middle-income (World Bank, 2018) but still with a large population living in poverty (in 2016 Mexico had a poverty rate of 34.50% while in Brazil the rate was 20.7%). CCTs appeared to have played a key role in reducing poverty. The literature suggests that Brazil has been more effective in this respect, but Mexico has been more successful in reducing inequality. Both countries have CCTs in operation and since the early 2000's such policies have experienced a large expansion in terms of the number of beneficiaries and in terms of the governmental expenditure as a percentage of GDP.

Mexico and Brazil share similarities in terms of population growth rates, both nations have been independent for about 200 years, in terms of income they are two of the biggest upper-middle-income developing countries in Latin America (OECD, 2019) and finally both countries are considered as new democracies after long periods of dictatorship with some democratic interludes in the case of Brazil and a single ruling party in the case of Mexico. In terms of their political background, as described in Chapter 2, both countries have had a long and difficult path towards democracy, mainly due to the struggle and demands of their citizens. Similarly, both nations share comparable growth experiences, but we must remember that

Brazil used to suffer hyperinflation rates in contrast with Mexico's price stability (Maddison, 1992).

Comparing the results from these countries it is possible to disentangle the determinants of voting behaviour following the introduction and institutionalization of CCTs. To date, apart from Maddison (1992), there is no evidence in the literature of a long-term comparative study between Mexico and Brazil. The existing evidence does not provide a good explanation regarding the possible outcomes in terms of political behaviour related to the implementation of the CCTs. Some scholars have partially explained their effects as a natural effect of distributive policies. Scholars such as Cesar Zucco (2008; 2011: 2013) suggest that the introduction of CCTs has been effective to generate support towards not only the incumbent party in most regions of Brazil, but also the presidential candidate of the incumbent party.

There are, however, several differences on the implementation of the CCTs between Mexico and Brazil. While *Oportunidades* was created as a means-tested programme, and it started as a randomized[16] trial with a limited number of beneficiaries in rural areas of the poorest states of Mexico (Levy, 1991); *Bolsa Família* was implemented also as a means-tested transfer but with a less rigid process of selection when compared to Mexico. In contrast to Mexico's *Oportunidades* programme, *Bolsa Família* did not start as a randomized experiment; the programme was implemented throughout the country, not gradually as in Mexico. These differences in implementation could affect the way that CCTs influence voting behaviour.

Another crucial difference between countries that could affect the effect of CCTs on voting preferences are their political regimes. On one hand, during the Mexican revolution the "*caudillos*" decided to integrate a unique and strong political force, that could gather in one institution the diversity of political leaderships in the country, so the National Revolutionary

[16] Randomization means that experimental units were randomly allocated across the treatment groups. In experimental design, randomization is very important since it helps to reduce cofounders by equalising any possible omitted variables.

Party (now PRI) was created in 1929. The so-called Mexican "soft dictatorship" led the PRI to hold power until year 2000.

The PRI was very effective in retaining power mainly because of its clientelistic practices and the massive state electoral machinery (Fox, 1994), the state set the rules, prepared, counted and then provided the validity of the election. It was until year 2000 when Mexico turned to democracy. On the other hand, Brazil's political background included the military dictatorship from 1920 to 1945, a period of democracy from 1945 to 1964 when a coup led by Humberto Castelo Branco put the military back in power. The military ruled again from 1964 to 1985. Democracy returned in 1985 with José Sarney, followed by Fernando Collor de Mello in 1989 (Fausto, 2014; Braga & Acuña, 2015). These remarkable differences could also help to answer if incumbency support, because of the implementation of the CCTs, is higher in countries with less democratic history rather than in more democratic ones. In that sense, it may be more likely to find stronger effects of incumbency support in Brazil when compared to Mexico.

Even if the creation of a pooled dataset including data from both countries was not possible, by comparing qualitatively results from the two countries this work analyses data at different levels of aggregation (individual and aggregate data) and combined different domestic aspects that are relevant to explain CCTs' outcomes in political behaviour. Despite the methodological constraints where the same panel data analyses at individual and municipal levels from both countries were not possible, comparisons of the effects of CCTs between Mexico and Brazil at the individual level (behavioural attitudes) and at the aggregate level (context) were made with the available information from each country. The latter sought to explain how common socio-economic variables could affect the behavioural process of the beneficiaries while casting a ballot. In the next section, a more detailed discussion on how the datasets used for analyses in each of the countries were constructed is presented. This is followed by the statistical methods used to analyse the available data.

4.4. DATA

This section provides information about the creation of the datasets as well as the operationalisation of the variables for each country. Datasets from both countries were created using secondary data provided by different public institutions. With such data two independent datasets were constructed for each country (four datasets in total), in order to compare the allocation of CCTs and the effects of these on voting behaviour at two different levels of observation (municipal and individual).

The first Mexican dataset was constructed using two different sources: The Household Income and Expenditure Survey (ENIGH) which is a survey carried out every two years since 1992 by the National Institute of Statistics and Geography (INEGI), and the electoral data reported by the Federal Electoral Institute (IFE). This dataset was used to analyse the aggregated data at a municipal level. The second dataset (individual-level data) used to analyse the effects at an individual level was the Mexico Panel Study (MPS), which is a large longitudinal study that allowed us to identify which voters changed their electoral preferences during the campaign (Lawson, et. al, 2001).

The third dataset was created for Brazil using three different sources of data: The National Household Sample Survey (PNAD[17]), a Brazilian cross-sectional survey carried out by the Brazilian Institute of Geography and Statistics (IBGE), a survey from the Unified Registry of Brazil's Ministry of Social Development (MDS) and electoral data from the Supreme Electoral Court (TSE) at the municipal level. The fourth dataset created at the individual level was done by merging data from the Brazilian Electoral Panel Study (BEPS) and the Brazilian Institute of Public Opinion and Statistics (IBOPE), which provide data at the individual level.

The use of these surveys allowed testing for nearly identical control variables over different time periods in the two countries. To provide a tailored measure of the indicators subject of the thesis, I constructed data sets which were both valid and reliable. In that sense validity was provided by the confirmation of my theoretical expectations, in other words how good the set of variables mapped what was intended to be measured. Following Bryman (2012) validity is obtained when a set of indicators can represent accurately or measure the subject

[17] In Portuguese: Pesquisa Nacional por Amostra de Domicilios.

of the study. Regarding reliability all the set of questions to measure the concept were selected to be consistent. However, the problem with reliability is that even if the measure is precise it may not be valid. Therefore, following that criterion, the study included measures used in previous research using different data sources to explore the relationship between receiving CCTs and voting behaviour.

Because of the secrecy of ballot, voting behaviour was not directly observable at the municipal level using the secondary data available from both electoral authorities in Mexico and Brazil. Hence, individual data collection was analysed to provide a baseline which could describe best not only the socioeconomic characteristics of the individuals prior to implementation of the CCTs but their voting preferences. To determine the effects on voting behaviour this study used two strategies. First, at the aggregate (municipal) level, data from Mexican Federal Electoral Institute (IFE) of the 2000 - 2012 presidential elections and data from the Brazilian Supreme Electoral Court (TSE) of the 2002 – 2014 presidential elections were used to construct measures of electoral vote shares at the municipal level following a similar strategy as Green (2006). With such data municipal trends of voting preferences were possible to identify by looking into the proportion of households covered by the CCTs' in each municipality and look into the associations of these to vote for the incumbent.[18] By doing this, it was able to identify any increases on vote share for the incumbent after the implementation of the CCTs. A second strategy was to use public opinion surveys such as MPS, IBOPE and BEPS as such surveys focus on randomly selected individuals throughout the municipalities of the country and include questions about demographic and income characteristics, self-reported vote and partisanship over time, government performance, political ideology, CCT coverage and political participation. The surveys include only adults in voting age. Given that this study aims to demonstrate the effect of CCTs on voting behaviour at the municipal and the individual level, a group of datasets that could reflect the evolution of the socioeconomic characteristics and political attitudes of both municipalities and

[18] Section level voting data is public and available at www.ife.org.mx and www.tse.jus.br/

individuals was necessary. A detailed discussion about the construction of the dataset for each level of analysis of each country is provided in the next subsections.

4.4.1. MEXICO

In order to identify the effects of *Oportunidades* on voting behaviour a set of different datasets were used to provide robust evidence of such effects at two different levels of observation.

4.4.1.1. MUNICIPAL LEVEL

For the first level of observation, data from the Household Income and Expenditure Survey (ENIGH), a survey carried out every two years since 1992 by the Mexican Statistics Office was used. This survey follows a stratified multiphase sampling design using basic geostatistical areas (AGEB), stratified according to 5 geographic areas and socio-economic criteria. Localities were selected following four criteria: urban, urban with high population density, urban with low population density and rural. The ENIGH dataset was deployed with a sample of 10,000 households in every round of the survey and it includes household's socioeconomic information from a representative sample of all the municipalities in Mexico. For the purposes of this study, only 3 waves of the survey (2000, 2006 and 2012) were used corresponding to each of the three electoral periods analysed. A set of variables were created to reflect the effects of the programme on socioeconomic characteristics. However, in order to test the likelihood of the beneficiaries to vote for the incumbent party a second dataset was necessary to analyse such effects on voting patterns in Mexico. Therefore, both ENIGH and IFE datasets were merged into a new dataset reflecting municipal data that could allow the analysis of these characteristics in each of the three elections analysed.

Merging both datasets was challenging for several reasons; however, the most challenging was to correctively match INEGI and IFE identifiers of the municipalities. Given the autonomous nature of both INEGI and IFE they use different identifiers for municipalities, localities, and regions. For this study purposes to find a rightfulness correspondence was demanding and in most of the cases, to avoid wrongly matching, a manual correspondence

was necessary as many of the municipalities in Mexico share the same name. Once the information was merged a set of variables were created, they are useful to make inferences about the effects of CCTs on the impoverished households and the correlation with the average voting preferences within each municipality and to analyse the effect of the proportion of beneficiaries on the proportion of votes for the incumbent cross-sectionally (short-term).

4.4.1.2. INDIVIDUAL LEVEL

As stated previously in the chapter, a second level of observation was required. At the individual-level analyses, a longitudinal survey with data regarding voting attitudes of the Mexican electorate was used. The Mexico Panel Study is a large longitudinal study on voting behaviour that allows assessing the political attitudes of the Mexican electorate. The survey consists of three rounds (2000, 2006 and 2012) with three waves each year. The survey documents which types of voters changed their electoral preferences during the campaign (Lawson, et. al, 2001). With this survey, it was possible to identifying CCTs beneficiaries' political preferences and if there was any change in their political ideology when voting. With this dataset, it was able to calculate the effect of having the programme and voting intentions as well as voting behaviour.

4.4.2. BRAZIL

A similar strategy was followed for Brazil in order to identify the impact of the implementation of *Bolsa Escola* (for the 2002 election) and *Bolsa Família* (for the following elections) on its beneficiaries. Two different types of data were used to complete the analysis at both levels, and data from three surveys were included (see Table 4.1)

Table 4.1 Waves used for the logistic regressions at individual level models from MPS, BEPS and IBOPE

SURVEY	2000	2002	2006	2010	2012	2014
MPS	X		X		X	
BEPS				X		X
IBOPE		X	X			

4.4.2.1. MUNICIPAL LEVEL

In order to establish the proportion of *Bolsa Família´s* beneficiaries per municipality, data from the household survey from the Ministry of Social Development (MDS) and the National Household Survey (PNAD) carried out by the Brazilian Institute of Geography and Statistics (IBGE) were analysed. The PNAD survey is conducted by means of a sample of individuals from 211,344 permanent households distributed among 3,500 municipalities in Brazil. It focuses mainly on overall population characteristics, education, labour, income and housing as well as characteristics about migration, fertility, civil status, health, food security among others. These statistics are mainly collected to identify the socioeconomic development and improvement of life conditions in Brazil (IBGE, 2014).

Using these two surveys it was possible to include the proportion of households receiving the programme as well as general socioeconomic characteristics of the households at municipal level regarding income, age, gender and years of schooling. Transformations to these individual level data were applied with the intention of having an aggregated level of analysis (municipal).

To identify results regarding vote share per candidate, party and demographic group this study used municipal level data available from the Electoral Supreme Court (TSE). This data set includes electoral and voting results from past Brazilian elections. To determine the effects of *Bolsa Família* on voting behaviour this study uses a similar strategy to one previously used by Green (2006). She used aggregated data from the 1998 through the 2014 Mexican presidential elections as a set of measurements of electoral vote share of the beneficiaries and coverage of the programme across targeted localities. Following the latter similar measurements were created to identify how Brazilian municipalities with higher proportion of CCT beneficiaries voted in different electoral periods.

4.4.2.2. INDIVIDUAL LEVEL

In an effort to build a comprehensive dataset, data from two surveys carried out by the

Brazilian Electoral Panel Study (BEPS) and the Brazilian Institute of Public Opinion and Statistics (IBOPE) was merged into one dataset. These surveys randomly select individuals throughout the municipalities of the country and included questions about demographic and income characteristics, self-reported vote and partisanship over time, government performance, political ideology, CCT coverage and political participation. The surveys include only adults aged 16 years of age or older.

The first survey used to create the dataset was the Brazilian Institute of Public Opinion and Statistics (IBOPE) survey, carried out in 2002 and 2006. While the first wave of this survey does not include questions on CCT benefits, the survey aims to measure self-reported vote for the presidential election with a sample size of 2778 respondents (1,419 females and 1,369 males). The second wave of the survey in October 2006 includes a sample size of 2002 (953 males and 1049 females) respondents in 199 municipalities. This second wave of the survey includes data on CCT benefits as well as on self-reported vote.

The second survey used to create the dataset was the Brazilian Electoral Panel Study (BEPS) carried out in 2010 and 2014. This survey was designed to capture the voter's perception of politicians at individual level during the observed electoral periods of 2010 and 2014 and to identify which factors might affect the final voting decision. As regards the 2010 edition BEPS is composed of three waves: the first wave 6 months before the election, second wave during the campaigning and the third wave just after the second round. The panel aimed to define baseline measures of self-reported vote and policy preferences (BEPS, 2010). This survey has a sample of 2269 respondents, but for this work's purposes and following a strategy used by Zucco (2013), only respondents involved in all three waves were used, decreasing the sample size to 1221. As for the second edition of the survey in 2014, it was replicated in seven waves from May to November. This enables the capturing of movements in voting, evaluation of government and policy preferences.

The sample is representative of the Brazilian population and it covers 22 of the 27 states and 118 municipalities in all regions of the country with a total number of 4303 respondents. For the purposes of this analysis only one wave was used; wave 6 taken in October 2014 to reflect

actual voting. It is to be noted that this data has some additional limitations that were not mentioned before. Pooled surveys provide an insight into voting preferences not the actual voting, which is important as social desirability bias could push an individual to answer differently (Bryman, 2012). This problem was reported by Zucco's study in 2013 and he tried to minimise this effect by using surveys taken close to the election (IBOPE, Vox Populi and BEPS).

4.4.2.3. LIMITATIONS OF THE BRAZILIAN DATA

Conditional Cash Transfers programmes in Brazil were introduced in the late 1990s a decade characterised by its opacity in terms of accountability as a result of the legacy of the military regime and the persisting patron-client power relationships at state and municipal level. As a result of this opacity, the Brazilian CCT did not incorporate impact evaluations in the initial design making it harder to assess its effects among beneficiaries (Fiszbein and Shady, 2009) contrary to the similar *Oportunidades* programme in Mexico.

- *Limitations of the Municipal data*

As stated in the previous paragraph the absence of impact evaluations on the design of the programme makes it hard to analyse its effect among the targeted population. This is because of the universal introduction of the programme at the same time and in all regions. Another limitation is that TSE data cannot be used to perform individual analysis given the secrecy of the ballot. This limitation was solved by using pooled surveys.

- *Limitations on Individual data*

At the individual level, it was necessary to rely on two different surveys carried on by the IBOPE and BEPS. The main problem with such surveys was that they were constructed differently from each other. Hence, it was necessary to use similar questions between surveys in order the reflect the proportion of families with *Bolsa Família* and their vote preferences.

4.5. VARIABLES

This section describes the rationale behind the inclusion of each of the variables in the models and highlights their operationalisation. As this study seeks to disentangle the effects of the implementation on CCTs on voting behaviour in both the short and long term. To different levels of observation was followed. Because voting behaviour could be a multifactorial process, this study includes for each of the models at the different levels of observation, demographic characteristics of both the municipalities and the individuals and socioeconomic attributes. Since the construction of the different sources of data is different within each country some models (panel data) include different variables and thus are explained within the analyses for each country.

4.5.1. OUTCOME VARIABLES

4.5.1.1. VOTE FOR THE LARGER PARTIES AT THE MUNICIPAL LEVEL

In order to analyse voting behaviour, at the municipal level in every model three outcome variables were used in the case of Mexico (vote for PRI, PAN and PRD) and two in the case of Brazil (vote for PT and vote for PSDB) for each wave of observation. The dependent variables at municipal level were constructed as a dichotomous variable reflecting won the election at each municipality. Taking values of 0 if lost and 1 if won in order to find whether the increase in of coverage of CCTs had an effect on electoral wins of the incumbent party at municipal level. The variables were constructed using data from IFE in the case of Mexico and from TSE in the case of Brazil. Variations in voting behaviour among municipalities are good indicators when analysing the political effects of CCTs.

4.5.1.2. VOTE FOR THE LARGER PARTIES AT THE INDIVIDUAL LEVEL

The dependent variable reflects the *actual vote*. It was created from one common question across surveys from both countries, where respondents were asked about their voting

preferences. “who did you vote for?” The possible answers took up to 5 values depending on the preferred candidate in the case of Mexico and up to 3 values in the case of Brazil; however, it was recoded as binary taking the value of 1 if the actual vote was for the incumbent candidate and 0 if the individual intended to vote for any other party.

4.5.2. INDEPENDENT VARIABLES

4.5.2.1. INDEPENDENT VARIABLES AT THE MUNICIPAL LEVEL

For each of the countries analysed in this work, several demographics, socioeconomic and political variables were considered. The demographic, socioeconomic and political variables used for the analysis at the municipal level were:

4.5.2.1.1. HOUSEHOLDS WITH CCT

This variable was constructed in order to reflect households that receive benefiting from CCTs in each municipality. The rationale behind this variable is to help to identify and to reflect the proportion of households receiving any of both programmes and observe if a higher proportion of households within the municipality lead towards incumbent’s party support. Other studies have included this variable in order to identify a relationship between coverage and party support (Zucco, 2013).

4.5.2.1.2. REGION

Region was coded as a categorical variable as the programme targets the less-well off in all the different regions: centre, north, west, east and south. Poverty is not uniformly distributed in Mexico and Brazil hence it was useful to use such a variable to identify if the less well off from each of the regions differed with regards to the impact of the programmes.

4.5.2.1.3. Educational Level (Achievements)

This variable was created in order to show any possible correlation between education and voting preferences. Educational level was coded as a continuous variable. This variable reflects the total number of years of schooling per head of the household in each municipality. As briefly mentioned in the previous chapters, scholars have shown an association between lower educational achievement with a higher propensity to vote for clientelistic parties. In addition, higher educational achievement conditioned by the CCTs could have affected voting turnout as higher levels of education are related to higher participation (Putnam 2000). The variable was recoded into four categories reflecting a high (13 years or more), medium high (7 - 12 years), medium low (1-6 years) and low (0 years) levels of education for each of the countries of focus.

4.5.2.1.4. Rural Municipality

Rural or urban municipality was constructed as a dichotomous variable taking the value of 1 if the municipality was considered rural or 0 if it was urban. This variable helped analyse the effect of how rural municipalities voted over the past elections and if this changed when CCTs were implemented or expanded in this area when compared to urban areas. For the case of Mexico, this variable was very important as *Oportunidades* was firstly introduced in rural municipalities and later expanded to urban areas. Apart from this, it is widely known that the most impoverished and less educated municipalities are situated in rural areas in both Mexico and Brazil, hence it was relevant to observe if such areas were willing to change their allegiance to the party that first introduced the programme in the subsequent elections.

4.5.2.1.5. Municipal Income

Income was constructed as a categorical variable divided in tertials with the first tertial being the lowest income category. The inclusion of this variable aimed to address if the voting patterns between higher or lower income municipalities differed. Most studies have found a

correlation between higher income and stronger support for the incumbent party (Green, 2006; Bohn, 2011; De la O, 2013; Zucco, 2013).

4.5.2.1.6. GOVERNOR FROM THE INCUMBENT PARTY AT THE FEDERAL LEVEL

The analyses included whether the municipality had *governor from the incumbent party at federal level.* The variable was constructed as dummy to reflect the possible effect of having a governor from the incumbent party on votes for the incumbent party candidate for the presidency. This variable is relevant as respondents could associate the benefit with the governor rather than with the president and thus could be more likely to vote for the incumbent governor regardless of the president's party. This is particularly pertinent for the case of Brazil as the implementation of the program is decentralised from the national level to the state and municipal levels. Because of this, recipients would vote for the governor's party associating the program to the governor. The rationale behind this variable is that having a governor from the incumbent national party could influence the voting preferences of the electorate in two separate ways; first, towards the incumbent national party (it takes value of 1) and second, towards governors' parties (it takes values of 0). This variable became important in the 2012 election in Mexico when PRI ruled in the majority of states even though the party was in the opposition at federal level. The variable additionally helps to show if there is a possible effect of the CCTs depending on the region. By doing this, it is possible to infer to a certain extent the degree of political influence by the local incumbent on the presidential election. Further research can be done on this matter by using data from the local electoral institutes.

In the following subsection the operationalisation of the independent variables at the individual level is described.

4.5.2.2. INDEPENDENT VARIABLES AT THE INDIVIDUAL LEVEL

Most of the variables that were included in the municipal level were also introduced at the individual level analyses. However, using the exit polls surveys, other variables were included

for the individual analysis. Such variables were particularly important for explaining voting behaviour at the individual level such as gender, age, or ethnicity (skin colour). Each of the independent variables will be described in this section.

4.5.2.2.1. CCT BENEFICIARY

A constant question in almost every survey (see table 4.1) used to construct the dataset at individual level, with the exception of the 2002 IBOPE, was about Conditional Cash Transfers; the question asked if "*during the last 3 years the respondent or anyone living in the household has been a beneficiary of a CCT programme"*. This variable was also coded as a dichotomous variable taking values of 1 for being a CCT beneficiary and 0 otherwise.

4.5.2.2.2. GENDER

Gender was included in order to observe female electoral behaviour as both O*portunidades* and *Bolsa Família* as women are the main recipients of the CCTs. This could impact voting behaviour of women. The dichotomous variable gender was coded with values of 1 if female and 0 if male. This variable was also relevant as previous research shows a "*traditional gender gap*" in political preferences, meaning that women tend to be more conservative than men (Box-Steffensmeier et. al., 2004; Inglehart and Norris 2003). Many scholars have also argued that by empowering women through CCTs*,* they could its economic benefits to increase the household wellbeing and turn out to vote (De la O, 2009, Diaz Cayeros, et. al, 2009; Levy, 1991).

4.5.2.2.3. AGE

Age was included to observe voting behaviour at different age strata. The variable was coded as a categorical variable (6 categories). The rationale behind these categories for the Mexican case was that it is assumed that the youngest led Vicente Fox to the presidency in year 2000 while those aged 51 to 70 were more prone to support Andres Manuel Lopez Obrador in 2006. As for the case of Brazil, previous studies (Bonn 2011; Zucco 2013) show that older adults were reluctant to vote for Lula in 2002 but by 2006, after the increasing benefits

provided to the elderly during Lula's tenure, their voting preferences changed radically favouring the PT in the next electoral period. This means that different age groups supported different candidates and with the increasing proportion of older adults, their vote could shift the results.

4.5.2.2.4. Skin Colour (Ethnicity)

A self-reported variable on Ethnicity was coded as a categorical variable. Three different categories were created white, light brown and dark brown. This variable is useful to identify if respondents who categorised themselves as white were more educated and received a higher income. The latter is a result of the general assumption that income inequalities in countries like Mexico and Brazil are because of racial disparities in opportunities.

4.5.2.2.5. Marital Status

Marital Status was also included as some scholars recognise that married individuals tend to vote more conservative than single individuals (Weisberg 1987). The variable was constructed as categorical that takes values of 1 when single, 2 when in partnership and 3 when separated, widowed or divorced.

4.5.2.2.6. Religion

Religion was constructed as a categorical variable. It takes values of 1 if Catholic, 2 if Christian or non-Catholic and 3 for other religions. Some scholars (Zucco, 2013) argued that religion influences voting behaviour particularly in the most impoverished regions.

4.5.2.2.7. Years of Study

Similar to the independent variables at a municipal level, self-reported *years of education* was created as a categorical variable in order to show any possible correlation between education and voting preferences. This variable ranges from having zero years of education

to college and it reflects on average the total years of education of respondents. Such categories reflect the different school achievements of the respondents (none, non-formal education, primary, secondary, high school and university). This variable was included because school attendance is linked with the conditionalities of the CCTs.

4.5.2.2.8. EMPLOYMENT

Employment status was included as unemployed respondents are expected to vote for the party which provides more benefits, and perhaps hoping to receive the programme. It was constructed as a dichotomous variable that takes values of 1 if employed and 0 if otherwise. Survey respondents were asked if they had been in paid work during the past week and were classified as paid workers if they were "employed" or "non employed".

4.5.2.2.9. TYPE OF LOCALITY

Similar to the type of municipality, type of locality was designed as a categorical variable taking values of rural, urban and mixed. The reason behind these categories is to observe if individuals living in rural communities were more prone to support the incumbent party in the following election after the introduction of the programmes (De la O, 2007).

4.5.2.2.10. REGION

As with the municipal independent variables, *Region* was also included for the individual analyses. Because poverty is not uniformly distributed in Mexico or Brazil it was useful to use such variable to identify if the poorest regions in the country were more inclined to vote for the incumbent party because of having access to CCTs. Region was coded as a categorical variable with up to 4 regions in Mexico and 5 regions in Brazil. This study hypothesised that regions with higher proportion of individuals living in poverty would be more likely to vote for the incumbent due to a higher input of resources in their area.

4.5.2.2.10. Ideological Placement

Ideological placement was constructed as a categorical variable, and its values ranged from strong left to strong right. Respondents were asked to place themselves in one of the different categories. The variable is important for this study purposes as it is possible to observe respondent's political ideology.

4.5.2.2.11. Ex-president Approval

The effect of the approval for the previous president was also included in these models, this in order to find whether respondents casted a punishment vote if they did not like the previous administration. This variable was coded in a likert scale ranging from approved a lot and disapprove a lot.

4.5.2.2.12. Personal Economy Perception (improved during the past administration)

As explained previously in this chapter, macroeconomics and microeconomics play an important part when casting a ballot. A better perceived economic situation may encourage individuals to vote for the incumbent to maintain the same economy. Whereas a much worse perceived situation may lead the voter to seek for change. This variable was coded in a Likert scale from better to worse. In the following section the statistical approach will be discussed.

4.6. Statistical Approach

The first step for the statistical analyses is to describe the waves of each of the surveys. This was followed by logistic regressions highlighting differences between municipalities with a higher proportion of recipients of CCTs at the municipal level, and differences at the individual level between those receiving the CCT and non-recipients. While for Mexico a

longitudinal panel was performed at the municipal level, for Brazil the panel was constructed at the individual level because of the different availability of data in each of the countries.

4.6.1. Descriptive Statistics

In both, the chapter focusing in results from Mexico, and the chapter focusing on results from Brazil, the first sections of results at municipal and individual levels present results from descriptive statistics. These sections provide an overview of the general context including the socioeconomic conditions of the target population (like income levels, education, gender and access to health services) before and after the introduction of the programmes. This is significant because as a result of the political background of both countries, a strong clientelistic bond between the less well-off and the incumbent are expected.

4.6.2. Logistic Regressions

Similar to previous studies, logistic regressions were used to investigate the cross-sectional effect of having a CCT or not in each of the countries of focus. In addition, these regressions serve to examine if the associations of CCTs and voting behaviour were a result of other characteristics aside from the programme. As explained in the section focusing on the operationalisation of the variables, for the municipal analyses, logistic regressions using the dichotomous variable of the party was performed. At the individual analyses, the dependent variables were intention to vote and votes for the incumbent at each electoral period.

4.6.3. Panel Data Analyses

Even if randomized experiments are the best weapon to identify trustworthy estimates of the effect of a programme, further differences of respondents can be attributed as an effect of the programme when using panel data analyses (Allison, 2009). Due to the lack of resources, this study could not perform a randomized experiment and it relied on the second-best option, namely quasi-experimental methods. To have an effective quasi-experimental approach it was necessary to have randomly assigned people to treatment (the

CCT) and control groups (without CCT). The randomisation was done in the surveys where they randomly selected individuals for the case of Mexico and municipalities for Brazil. A second but fundamental step is to collect baseline data, and subsequently follow-up data must be collected for both groups. A third step consists in estimating the programme's impact in terms of the mean outcome for both the treatment and the control group and comparing the difference.

By using panel data, I was able to analyse the effect of the programme longitudinally. Panel data are observations at multiple times including individuals (i) and time (t) as subscripts on each of its variables. This is important as one of my hypotheses is that time plays an important role on the effect of the CCT on voting behaviour. Mainly that after the institutionalisation of the programme the effects on voting behaviour could be lost or change. Unfortunately, I was not able to perform a panel data analysis at the municipal level in Mexico, as the municipalities included for the survey are randomised and change at each election period. However, for the case of Brazil I was able to perform a fixed effects model at this level. For the individual level, I was able to perform this type of analysis for the case of Mexico but not in Brazil, as the dataset I constructed did not use the same respondents. One of the benefits of panel data is that it includes the sum of unobservable effects $(u_{it} = \mu_i + V_{it})$ where u_{it} is the unobservable individual effect which is constant over time and V_{it} is the remaining disturbance or error term (Baltagi 2005). This is the basic equation for a panel data regression:

$$Y_{it} = \alpha + X'_{it}\,\beta + u_{it}$$

The advantages of panel data analyses include accounting for the combination of inter municipal (for the case of Brazil) or inter individual (for the case of Mexico) differences. This is similar to a cross-sectional analysis, but the analysis also accounts for intra municipal (for the case of Brazil) and intra individual (for the case of Mexico) changes of support for the incumbent across the different electoral periods (Baltagi 2005). The two most common statistical methods for panel data include fixed effects (FE) and random effects (RE) models (Baltagi 2005; Bell, Fairbrother, and Jones 2019; Bell and Jones 2015; Dieleman and Templin

2014; Firebaugh, Warner, and Massoglia 2013). FE models are able to explore the relationship between having a higher proportion of recipients and wins for the incumbent in Brazil in each municipality by looking into the change of wins within the municipality (within-effects) removing the effect of omitted variables unique to each municipality (Baltagi 2005; Bell, Fairbrother, and Jones 2019). In the panel data analysis from Mexico, FE are able to look into the effect of a change of status (becoming a recipient) on votes for the incumbent. By looking at change, FE models provide a more robust causal inference because the heterogeneity bias is controlled for (Boyce and Wood 2011; Menon et al. 2018). As FE look into the effect of change, several variables could not be included such as gender or education. However, as the main objectives of the thesis look into the effect of a change in the recipient status and the Hausman test was significant, I chose FE over RE for these analyses. (Baltagi 2005; Bell and Jones 2015)

4.7. SUMMARY

The aim of this chapter was to explain the rationale behind choosing *Oportunidades* and *Bolsa Família* as case studies. Also to provide a description behind the construction of the datasets highlighting the difficulties and differences in each of the countries. The research strategy and research methods were also described, while at the same time explaining why the adopted methodology was appropriate for answering the questions subject of this research. By using linear models and panel data analyses this work contributes to the existent literature as it provides results regarding the effects of CCTs at two levels of aggregation municipal and individual in two different countries. It also provides a general overview of the voting preferences of beneficiaries across time, to be specific across the last four electoral periods in both countries even if the panel in Brazil is at the municipal level and in Mexico at the individual. By combining these different approaches to analyse the diversity of outcomes that CCTs may or may not have on voting behaviour.

5. THE EFFECT OF OPORTUNIDADES ON VOTING BEHAVIOUR

5.1. INTRODUCTION

This chapter examines the effect of *Oportunidades* on the voting behaviour of its recipients. Drawing on the retrospective economic voting theory, this chapter aims to demonstrate that recipients of CCTs are following their material self-interests (pocketbook voting) rather than party identification. Following both the retrospective and pocketbook voting theories, this work expects that CCT recipients base their voting on two strands, first by expectations about their future benefits and second by evaluating incumbent's past policies and rewarding the incumbent party (Fiorina, 1981; Lewis-Beck, 1985). In addition, this works theorises about voters' behaviour in the long run; it is expected that initially, recipients are more responsive to real policy outcomes but after those polices have been in operation for a long period of time, voters are more likely to switch their political preferences (Key, 1966) towards a different party as they feel that the continuation of the programmes is guaranteed (De la O, 2013). Anthony Downs (1957) suggested that voters base their voting behaviour by comparing their expected utility of voting for the incumbent with the expected utility of voting for the opposition party. The utility differential would determine their voting when casting a ballot. In other words, recipients might change their voting based on their expectations of future policies on electoral promises (Downs, 1957). Thus, the research questions of this study were drawn using rational (prospective and retrospective) and sociological theories elements: are CCT beneficiaries voting following their self-interest? How does time influence their voting behaviour? And finally, do CCTs increase incumbent support in both beneficiaries and non-beneficiaries?

To answer these questions, this study relies on three statistical models using data from the Mexican Institute of Geography and Statistics (INEGI), the Electoral Federal Institute (IFE) and from the Mexico Panel Study (MPS). By means of retrospective evaluations, this study aims to demonstrate that CCTs changed their party voting preferences towards the incumbent party.

In order to understand the effects of CCTs better, effects of the programme were analysed at a municipal level and at the individual level. Within these two sections, a brief summary of the descriptive findings is provided, followed by results from bivariate correlations. Then a series of logistic regressions are presented and finally, for the individual level analyses results from a fixed effects panel data analysis are discussed. Finally, the chapter presents a conclusion.

5.2. The Effect of Oportunidades at the Municipal Level

5.2.1. Descriptive Statistics

In order to find the effects of CCTs on vote share, the first descriptive statistics describe the overall voter turnout and support for each of the parties. First, Table 5.1 presents the pattern of electoral participation in Mexico over the past four elections. Results show that the 1994 election was the election with the highest participation when comparing it to the other three electoral periods.

Table 5.1. *Electoral Participation Years 1994 – 2012*

Year	Voter Turnout	Total Vote	Registration	Population in Voting Age
1994	**78.50%**	35,545,831	45,279,053	53,944,640
2000	63.96%	37,603,923	58,789,209	62,684,899
2006	58.55%	41,791,322	71,374,373	66,061,738
2012	63.14%	49,087,446	77,738,494	76,008,240

Calculations using data from INE (2015)

With regards for vote share for the incumbent Table 5.2., shows that the proportion of vote share for the incumbent decreased in each electoral period. Even if this is not analysed by CCT status, it is interesting as it could be a result of a punishment vote because of the persistent socioeconomic problems.

Table 5.2. *Vote share for the incumbent per municipality 2000-2012.*

	Votes for the incumbent				
2000	Obs	Min	Max	Mean	Std. Dev.
PRI	379	0.21	0.82	0.41	0.12
2006	Obs	Min	Max	Mean	Std. Dev.
PAN	526	0.02	0.71	0.33	0.15
2012	Obs	Min	Max	Mean	Std. Dev.
PAN	377	0.03	0.59	0.26	0.11

Calculations using data from ENIGH-INEGI (2002, 2006, 2012).

In order to look into differences between recipients of the programme and non-beneficiaries within municipalities, a descriptive analysis of households with and without the programme over the different electoral periods is presented. Prior to the implementation of the programme, the average total years of schooling was only 5 years. After the introduction of the programme, as presented in Table 5.3., the average years of schooling increased in both, the population with and without *Oportunidades*. Overall, in 2000 households had a mean of 5 years of schooling while in 2012 they reached an average of 7 years. When comparing households with and without the programme, in 2006, households with *Oportunidades´* beneficiaries had a mean of 5 years of education, while non-beneficiaries had almost 6. When looking into the minimum years schooling, *Oportunidades* beneficiaries had 0 years while non beneficiaries had 3 years as minimum. These findings are in line with *Oportunidades* targeting rules. The programme seemed to have increased years of schooling across the population. However, these descriptive statistics are only illustrative and do not prove whether the programme was effective in increasing years of schooling. A more detailed statistical analysis is needed to be conclusive in this regard.

Table 5.3. *Years of schooling per household 2000-2012.*

Years of schooling					
2000	Obs	Min	Max	Mean	Std. Dev.
years of study	379	0	14	5.31	2.478
years of study (*oportunidades*)	0	0	0	0	0
years of study (other social programme)	98	0	12	3.24	2.510
N	379				
2006	Obs	Min	Max	Mean	Std. Dev.
Years of study	526	1	14	7.01	2.345
years of study (*oportunidades*)	245	0	16	4.88	2.818
years of study (other programme)	432	0	14	5.61	2.079
N	526				
2012	Obs	Min	Max	Mean	Std. Dev.
Years of study	377	3	16	7.61	2.100
years of study (*oportunidades*)	143	0	16	5.33	2.527
years of study (other social programme)	373	2.3	16	7.07	1.863
N	377				

Calculations with data from ENIGH-INEGI (2000, 2006, 2012).

Normality tests were applied to continuous variables such as vote share, average number of households with the programme, years of schooling, income etc., in order to decide whether to use parametric or non-parametric tests when looking into differences between groups. As the data was not distributed normally, non-parametric tests were used. The next tables present a summary of the characteristics of the municipality in each electoral period.

When looking into income (table 5.4) we can observe that the average income of the general population is larger when compared to households benefited by *Oportunidades* or by any other social assistance programme. As the std. deviation shows, income in the *Oportunidades* group is more dispersed from the average when compared to the population in general.

Table 5.4. *Income per household per municipality (2000 - 2014).*

	Income*				
	Obs	Min	Max	Mean	Std. Dev
avg. total income	1659	6,427.1	93,949.98	28,652.4	14,910.2
avg. total income (*Oportunidades*)	382	5,059.1	169,365.8	26,017.6	23,783.9
avg. total income (Other social programme)	885	5,424.0	87,230.7	23,080.5	11,935.9
N	1659				

Calculations using data from ENIGH-INEGI (2000, 2006, 2012, 2014).
* Currency in actual Mexican Peso.

Due to the not normal distribution of income, a logarithmic conversion was done, nevertheless it still was non-Gaussian, so Friedman test was applied showing that income was significantly different between groups $p<0.001$.

Household composition did not differ between those with *Oportunidade*s and those without (table 5.5). Approximately all households included a mean of five individuals. However, differences when looking into the maximum number of members per household. Those with the programme reached twelve and the std. deviation among the households with *Oportunidades* showed that the difference within this group was when comparing it to the general population.

Table 5.5. *Household composition (General, with Oportunidades and households with any other social programme*).

People per household					
	Obs	Min	Max	Mean	Std. Dev
avg. number of people per household	1691	2	9	4.83	.9712
avg. number of people per household with *Oportunidades*	388	1	12	4.74	1.808
avg. number of people per household with any programme	903	1	12	4.94	1.358

Calculations using data from ENIGH-INEGI (2000, 2006, 2012, 2014).

5.2.2. Municipal Bivariate Analysis Between Independent Variables and Vote Share for the Incumbent

Table 5.6. shows correlations between the independent variables and the vote share for the incumbent parties from 1994 to 2012 electoral periods. These correlations are illustrative and do not imply any causality.

Table 5.6. *Correlation Incumbent Parties. Presidential Elections 1994-2012.*

	(1994) PRI	(2000) PRI	(2006) PAN	(2012) PAN
Rural	0.391***	0.386***	-0.164***	-0.062
Household total income	-0.444***	-0.401***	0.383***	0.220** *
State Governor (Incumbency)	0.0449	0.168***	0.443***	0.105*
Years of school	- - -	-0.421***	0.274***	0.058
Proportion of families with *Oportunidades*	- - -	0.221***	-0.150***	-0.068
Proportion of affiliates to *Seguro Popular*	- - -	- - -	0.199***	0.177
N	409	379	526	377

Calculations using data from INE (2015) INEGI (2000, 2006, 2012, 2014).
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results of table 5.6 show that when looking into the effects of having a CCT on the electoral decision of its beneficiaries, municipalities with a higher proportion of families with *Oportunidades* were significantly more likely to have a higher vote share for the incumbent PRI in 2000 while it was significantly less likely to have a higher vote share for the incumbent PAN

in 2006 despite the fact that this party had expanded the programme nationally to both rural and urban areas.

An additional control variable was included in these correlations; the proportion of affiliates to *Seguro Popular*. The rationale behind the introduction of this variable was that the *Seguro Popular* was introduced during President Fox's tenure and was a component of the *Oportunidades* CCT scheme of conditions, requiring that beneficiaries of *Oportunidades* need to attend regular meetings at the health centre. These health centres were mostly operated by the newly established health system. Municipalities with a higher proportion of households affiliated to the *Seguro Popular* had significantly higher vote share for the incumbent PAN in 2006. Surprisingly in the electoral period of 2012, this did not seem to influence vote share for the PAN. Being affiliated to this programme did not significantly influence in the next electoral period. This is important because the operation of the *Seguro Popular* was decentralised at state level so it may be that individuals rewarded not the party in power at presidential level but to the party in power at state level.

The results from table 5.6 also show that rural municipalities were significantly more likely to vote for the incumbent PRI in both 1994 and 2000. However, in 2006 rural municipalities were significantly less likely to vote for the incumbent PAN despite the fact that it was under the PAN´s administration that the expansion of *Oportunidades* and the introduction of the *Seguro Popular* took place. In 2012 the difference between rural and urban municipalities was no longer significant. The fact that rural municipalities were more likely than urban municipalities to vote for the incumbent in 1994 and 2000, but less likely to do this in 2006 suggests that perhaps incumbency as such was irrelevant, though the PRI may have been rewarded initially for introducing CCTs.

When looking into income, higher household income was correlated with lower support for the incumbent PRI in 1994 and 2000 and higher support for the incumbent PAN in 2006 and 2012. Across the electoral periods of 2000-2012, having a governor from the same party as the nationally incumbent meant higher support for the incumbent. In terms of education, higher years in education was correlated with lower support for PRI in 2000 and higher support for the PAN only in 2006. It seems then, that the less-well off households and households with lower educational achievements were more likely to vote for PRI in 1994 and 2000 while better

off households with more educated individuals were more prone to support PAN in 2006 and 2012.

A set of correlations were run for the non-incumbent parties. Results from these correlations are illustrative of a new shaping of the electorate after the implementation of the CCTs. It appears that CCTs managed to create a sense of partisanship towards PRI; as we can observe in table 9.9 in the appendix, the PRI showed a higher likelihood of winning in municipalities with a higher proportion of households with *Oportunidades* in the electoral periods of 2006 and 2012 when the PAN was incumbent. In the same way, municipalities belonging to rural areas, those with a higher proportion of less well of households and those with households with lower educational achievements were significantly willing to support the PRI more than the incumbent PAN.

5.2.3. The Effect of Oportunidades on Voting Behaviour at the Municipal Level: Results from Logistic Regressions

This section shows results from logistic regression analyses at the municipal level. By using this type of analyses, the inclusion of categorical variables and the operationalisation of other otherwise continuous characteristics into categorical variables was possible. As briefly explained in the methodology section, instead of using the share of votes for the incumbent party as the dependent variable, for these analyses a dummy variable capturing whether the *incumbent won* within the municipality was constructed. This was done to take account of the many political parties and different alliances between them at the municipal level and to establish whether the introduction or expansion of the programme increased the likelihood of winning for the party in power.

Table 5.7. The effect of *Oportunidades* on voting behaviour at the municipal level in the 2000-2012 electoral periods: *Logistic regression*										
Variable	Category	2000			2006			2012		
		PRI (Inc)	PAN	PRD	PRI	PAN (Inc)	PRD	PRI	PAN (Inc)	PRD
Proportion of households with CCTS		6.32*	-4.78	-10.83	0.63	-0.44	-0.30	24.7**	-35.65	-19.8*
	Standard error	4.99	5.33	12.16	0.26	0.26	0.29	9.24	25.77	9.36
Region	Centre	ref	ref	ref	ref	ref	ref	ref	ref	ref
	North	-0.28	0.44	-0.74	-0.20	0.07	-0.09	-0.23	0.24	0.20
	Standard error	0.32	0.31	0.69	0.54	0.27	0.27	0.30	0.44	0.32
	West	0.89	-0.85	-6.27	2.45*	1.32*	-2.79***	0.23	1.64*	-3.12**
	Standard error	0.635	0.630	29.986	1.072	0.571	0.711	0.596	0.801	1.139
	East	1.645	-1.794*	-5.302	1.114	1.559	-1.944*	3.113**	-2.545	-2.751*
	Standard error	0.914	0.905	25.729	1.578	0.808	0.833	0.993	1.512	1.102
	South	1.253	-2.209	3.705	1.642	-1.374	0.639	-0.334	-1.959	0.871
	Standard error	1.208	1.195	2.696	2.061	1.045	1.040	1.110	1.692	1.180
Educational achievements	0 years	0.812	-0.863	0.267	2.185*	0.100*	-2.005***	0.107	1.766**	-1.046
	Standard error	0.467	0.467	1.026	0.933	0.490	0.505	0.490	0.718	0.557
	1 – 6 years	0.715	-0.710	0.199	1.478	1.375***	-1.720***	0.243	0.584	-0.655
	Standard error	0.412	0.406	1.006	0.907	0.431	0.438	0.366	0.520	0.409
	7 -12 years	-0.074	-0.108	0.846	0.306	0.359	-0.340	0.265	-0.330	-0.214
	Standard error	0.376	0.360	0.858	0.812	0.327	0.334	0.335	0.497	0.366
	> 13 years	ref	ref	ref	ref	ref	ref	ref	ref	ref

Table 5.7. Continued

Variable	Category	2000			2006			2012		
		PRI (Inc)	PAN	PRD	PRI	PAN (Inc)	PRD	PRI	PAN (Inc)	PRD
Rural	Yes	0.268	-0.359	0.397	-0.182	-0.702**	0.712**	0.310	-0.185	-0.327
		0.294	0.295	0.578	0.350	0.243	0.243	0.304	0.474	0.334
	NO	ref	ref	ref	ref	ref	ref	ref	ref	ref
Municipal Income	1st tertile	1.239**	-1.331***	0.493	1.094	-1.401***	0.924	0.887*	-2.127***	0.078
	Standard error	0.404	0.400	0.872	0.793	0.431	0.438	0.386	0.635	0.426
	2nd tertile	0.550	-0.647	0.571	0.732	-1.424***	1.189***	0.479	-1.024*	0.027
	Standard error	0.331	0.319	0.743	0.737	0.349	0.349	0.293	0.429	0.327
	3rd tertile	ref	ref	ref	ref	ref	ref	ref	ref	ref
Governor from same party as incumbent	Yes	0.363	-0.254	-0.363	-0.713	1.901***	-1.650***	-0.637*	0.672	0.386
	Standard error	0.292	0.289	0.630	0.468	0.269	0.275	0.283	0.410	0.295
	No	ref	ref	ref	ref	ref	ref	ref	ref	ref
N		379	379	379	526	526	526	377	377	377
Pseudo R2		0.168	0.184	0.121	0.258	0.219	0.194	0.156	0.208	0.186

* p<0.01, **p<0.05, ***p<0.001

Calculations using data from INE (2015) and ENIGH (2000.2006,2012). Figures in the cells show logistic regression coefficients.

Results from table 5.7 show that in the year 2000 in municipalities with a higher proportion of households receiving what was then called *Progresa,* the PRI (the incumbent party at the time) was more likely to win. However, this was not true when PAN was incumbent nationally in 2006. PRI was significantly more likely to win in municipalities with a high proportion of households receiving *Progresa* or *Oportunidades* in 2012 when PAN was still incumbent nationally.

When looking into the other control variables, the PAN was more likely to win in 2006 and 2012 in municipalities from the western states, while the PRI was more likely to win in municipalities from the east in 2012. Municipalities from the eastern Mexico are poorer when compared to those in the west.

Also, the PRI was more likely to win in 2000 in municipalities with households with lower average of years of education, while in 2012 this was true for the PAN. When looking into rural and urban areas, the PRD was more likely to win in municipalities in the rural areas in the election of 2006, while the PAN was significantly less likely to win in these municipalities.

When looking into the municipality income, the PRI was significantly more likely to win among municipalities with higher number of households in the lower tercile of income during the elections of 2000 and 2012. By contrast, the PAN was significantly less likely to win in these municipalities.

In municipalities with a governor from the incumbent party, the PAN had a higher likelihood of winning in the year 2000. However, this variable was only significant for that year. Surprisingly, that same year, in municipalities with a governor from the PRD there was a significantly lower likelihood for the PRD winning.

In summary, descriptive statistics showed that the PRI had a significantly higher vote share in municipalities with a higher proportion of families with *Progresa* in 2000. However, this was not true when the PAN was incumbent in 2006 or 2012; this party had significantly less vote share in 2006. The municipal level logistic regressions showed different results. During the years 2000 (incumbent PRI) and 2012 (incumbent PAN) the PRI was more likely to win in municipalities with a higher proportion of households receiving a CCT, but this did not happen in 2006 (incumbent PAN). The other control variables do not show consistent results. It appears

that in municipalities with higher income, the PAN was less likely to win across the three electoral periods. The results also suggest that municipalities with low average education were more likely to vote for the incumbent PAN in 2006 and 2012.

5.3. The Effect of Oportunidades on Individual Voting Behaviour

5.3.1 Descriptive Statistics

This section provides results from the descriptive statistics of the baseline data for each wave of the Mexico Panel Study (MPS). It includes comparisons of data from the first wave with the 3 different editions of the Panel (MPS, 2000-2012). The population in each one of the samples was 2400 individuals aged 18 and over. Respondents' baseline characteristics are summarised in Table 5.8 All proportions were taken from the weighted data of the samples while the population (N) size was taken from the unweighted data. The survey included don't know or refuse as possible answers however as this possibility was not consistent across all waves, they were coded as missing values. Nevertheless, analyses were carried out considering these possible answers with no changes in the results.

Table 5.8. *Cross sectional descriptive statistics* of the baseline samples of MEPS 2000, MEPS 2006, and MEPS 2012.				
Variables		2000 (n=2400)	2006 (n=2400)	2012 (n=2400)
Type of Municipality	Urban	70	70	73
	Rural	22	20	26
	Mixed	7	10	1
Gender	Male	47	49	48
	Female	53	51	52
Age	Mean	38yrs	40yrs	40yrs
	18-30	36	33	34
	31-40	23	23	24
	41-50	18	19	18
	51-60	11	12	11
	61-70	6	8	7
	70+	4	5	6
Marital Status	Single	24	24	24
	Married or in a partnership	71	71	70
	Divorced, separated or widowed	5	5	6
Ethnicity	White	18	19	19
	Light Brown	46	50	50
	Dark Brown	35	31	31
	Other (Black/Asian)	1	---	---
CCT Beneficiary*	Yes	13	23	20
	No	85	77	80
Religion	Catholic	90	83	81
	Christian – Non-Catholic	5	8	8
	Other	1	2	4
	None	4	7	7

Table 5.8 continued

Variables		2000 (n=2400)	2006 (n=2400)	2012 (n=2400)
Employed	Yes	43	87	87
	No	56	12	12
Income (in MX pesos)	0 – 2000	52	28	28
	2001 to 6000	33	50	50
	6001 to 16000	13	22	22
	More than 16000	2	--	--
Years of education	Mean	2.9yrs	3.2yrs	3.2yrs
	No education	10	5	4
	Primary	39	33	28
	Secondary	22	23	31
	High School	17	19	20
	College	11	20	16
Ideological Placement	Strong left	9	7	7
	Somewhat Left	4	18	13
	Centre-Left	7	7	7
	Centre	22	25	24
	Centre-Right	15	7	7
	Somewhat Right	15	13	12
	Strong Right	28	8	8
	None	---	15	22

Table 5.8 continued

Variables		2000 (n=2400)	2006 (n=2400)	2012 (n=2400)
Self-reported vote	PRI	46	29	39
	PAN	36	27	24
	PRD	15	36	27
	Others	1	6	8
	None	2	2	2
Region	Centre	44	42	41
	North	22	20	24
	South	22	24	21
	Western	12	14	14

* N was taken from the unweighted sample, but proportions and significance tests were obtained using the weighted samples. Significance: * p<.05; ** p<.01; *** p<.001. Calculations using data from MEPS (2000, 2006, 2012).

As Table 5.8 shows, the proportion of individuals living in urban localities ranged from 70% in 2000 to 73% in 2012 while the proportion of rural localities ranged from 22% to 26%, the remainder living in mixed localities. The variation in the percentage of individuals that are beneficiaries of a CCT ranged from 13% in 2000 to 20% in the 2012.

Income distribution ranged from having no income to more than 16,000 pesos (USD $810) per month. Between 2000 and 2012, the proportion of people living with less than 2000 pesos (USD $101) per month decreased from 52% to 28%. These findings support the hypothesis that the introduction of CCTs have led to an overall increase of income across the beneficiary families, thereby reducing the gap between poor and extreme poor. With regards to the individuals being employed a higher proportion of individuals in 2012 reported working for pay than in 2000, the proportion of employed individuals rising from 43% to 87%. These results seem consistent with current statistics from INEGI (2014) regarding the active labour force in Mexico. In addition, the latter results could be also the reason of why income seemed to have increased over the period in which CCTs were in operation.

Given the design of the survey, it was possible to identify ideological placement of the respondents, based on a question asking the respondents to place themselves in one of a set of categories ranging from strong left to strong right. As can be seen in table 5.8., most respondents were centre oriented (25% in 2006 and 24% in 2012) rather than left or right wing except for year 2000 where 28% of respondents placed themselves as strong right wing.

Self-reported vote, by contrast, is more illustrative of the true political choices than party orientation and ideological placement. As the results show, the proportion of individuals that stated an intention to vote for the PRI ranged from 46% in 2000 to 39% in 2012, 2006 being PRI's worst year in terms of self-reported vote (29%). These results are in line with the final electoral results that place PRI as the third political force in 2006. As regards the individual's intention to vote for PAN it is possible to observe from table 5.8 that it's political force in terms of declared self-reported vote has fallen since the 2000 election ranging from 36% to 24%. As with the previous results this is also in line with the electoral results published by IFE placing PAN as the third political force in 2012. It is to be noted that PRD's self-reported vote increased from 2000 to 2006 but did not increase for 2012.

As regards the socioeconomic characteristics of the population, individuals from wave one had the lowest average years of education (2.9) compared to the second (3.2) and the third (3.2) waves. As explained previously, education categories were created from having zero years of education to college. The introduction of education policies and reforms to the education system made Mexico overcome a 40% illiteracy rate during 1960 to a 5% illiteracy rate by 2010 (Olvera, 2013). However, despite having as a Constitutional right (art.3) the access to a basic free and public education and having a literacy rate of 95%, the average years of schooling was only 8.8 throughout the period of study (years 2000 to 2012). Meaning that the large share of the population had access only to basic education but not to secondary education, high school or university. It is to be noted that after the introduction of CCTs in the 90's and the introduction of a policy aimed to provide universal coverage to every child in the country under PAN's administrations it is possible to observe an incremental improvement in the mean years of study. This effect is also visible when looking at years of education categories in table 5.8, the proportion of individuals with zero years of education passed from 10% to 4% in 12 years.

Finally, when describing the demographic characteristics, the mean age reported by respondents was 48. The variation in the proportions within each age category is very small between waves. In all the waves the proportion of individuals reported being married is on average 70%, while the proportion of respondents being divorced, separated or widowed is 5% and the proportion of individuals that were never married was almost on average 24%. As it regards to ethnicity in all the waves, around the 49% of the respondents were self-categorised as light brown, 19% white and the rest as dark brown (32%). As regards to religion 84% of the respondents across the three waves identified themselves as Catholics whereas the rest of the respondents reported other religion preferences.

5.3.2 Individual Bivariate Analysis Between Independent Variables and Votes for the Incumbent

In order to find which individual characteristics were significantly associated with the vote for the incumbent, bivariate analyses between self-reported vote and other independent variables were performed. Results presented on table 5.9 show the row per cent and significance values of these analyses.

Table 5.9. *Bivariate analysis (Chi2)* of self-reported vote for the incumbent party and independent variables										
Characteristics		2000 N=2363			2006 N=2337			2012 N=910		
		Vote for PRI %	Did not vote for PRI %	Significance	Vote for PAN%	Did not vote for PAN %	Significance	Vote for PAN %	Did not vote for PAN %	Significance
CCT Recipient	Yes	53	47	55.071 0.000 ***	20	80	11.363 0.003 **	21	79	0.135 0.935
	No	30	70		21	79		22	78	
Age category	18-30	35	65	5.166 0.396	38	62	4.638 0.462	22	78	2.158 0.827
	31-40	37	63		38	62		24	76	
	41-50	36	64		35	65		21	79	
	51-60	40	60		31	69		19	81	
	61-70	35	65		33	67		19	81	
	70+	35	65		29	71		19	81	
Gender	Male	32	68	28.798 0.000 ***	21	79	0.463 0.496	20	80	1.401 0.236
	Female	39	61		22	78		23	77	
Ethnicity	White	34	66	5.257 0.262	30	70	32.547 0.000 ***	21	79	3.579 0.516
	Light Brown	37	63		21	79		17	83	
	Dark Brown	36	64		17	83		19	81	
Marital status	Single	33	67	27.479 0.000 ***	23	77	6.516 0.259	19	81	6.754 0.240
	Married	39	61		21	79		23	77	
	Divorced	53	47		19	81		18	82	
Religion	Catholic	40	60	31.184 0.000 ***	23	77	14.880 0.005 **	23	77	7.377 0.117
	Christian	50	50		17	83		22	78	
	Other	42	58		11	89		10	90	
	None	18	82		18	82		14	86	

Table 5.9 Continued…

Characteristics		2000			2006			2012		
		Vote for PRI %	Did not vote for PRI %	Significance	Vote for PAN %	Did not vote for PAN %	Significance	Vote for PAN %	Did not vote for PAN %	Significance
Years of study	None	49	51	100.460 0.000 ***	17	83	16.182 0.006 **	18	82	12.104 0.033 *
	Primary	42	58		20	80		16	84	
	Secondary	37	63		20	80		25	75	
	H. School	29	81		20	80		23	77	
	College	25	75		28	72		24	76	
Employed	Yes	37	63	5.364 0.068	21	79	0.797 0.673	26	74	13.928 0.001 *
	No	41	59		23	77		16	84	
Type of Locality	Urban	32	68	70.239 0.000 ***	22	78	3.403 0.182	18	82	0.874 0.646
	Rural	45	55		20	80		15	85	
	Mixed	41	59		17	83		23	77	
Region	Center	31	69	60.952 0.000 ***	21	79	28.568 0.000 ***	13	87	19.457 0.000 ***
	North	41	59		29	71		25	75	
	South	39	61		15	85		14	86	
	West	41	59		26	74		20	80	
Ideological Placement	Strong Left	23	77	150.743 0.000 ***	13	87	20.134 0.010 **	16	84	44.013 0.000
	Some Left	24	76		17	82		15	85	
	Center Left	25	75		20	80		12	88	
	Center	27	73		22	78		25	75	
	Center right	38	62		29	71		29	71	
	Some Right	42	58		23	77		31	69	
	Strong Right	45	55		29	71		37	63	

Table 5.9 Continued…

Characteristics		2000			2006			2012		
		Vote for PRI %	Did not vote for PRI %	Significance	Vote for PAN %	Did not vote for PAN %	Significance	Vote for PAN %	Did not vote for PAN %	Significance
Previous election vote	PRI	69	31	555.274 0.000 ***	4	96	377.401 0.000 ***	6	94	230.023 0.000 ***
	PAN	10	90		42	58		48	52	
	PRD	6	94		4	96		5	95	
	Other	18	82		0	100		19	81	
	Didn´t vote	29	71		20	80		20	80	
Ex-President Approval	Approve a lot	54	46	231.197 0.000 ***	40	60	246.207 0.000 ***	45	55	124.552 0.000 ***
	Approve somewhat	38	62		25	75		26	74	
	Neither	31	69		13	86		11	89	
	Disapprove somewhat	28	72		8	92		11	89	
	Disapprove a lot	18	82		2	98		6	94	
Personal Financial Situation	Much Better	57	43	51.377 0.000 ***	38	62	125.717 0.000 ***	32	68	45.182 0.000 ***
	Somewhat Better	47	53		34	66		33	67	
	Same	41	59		18	82		23	77	
	Somewhat Worse	30	70		11	89		17	83	
	Worse	22	78		5	95		9	91	

Significance *p<.05; **p<.001; *** p<.001. Calculations using MPS (2000, 2006 and 2012).

As the table 5.9. shows, individuals with *Progresa* significantly had higher self-reported vote towards the incumbent party PRI in 2000 and individuals with *Oportunidades* did not show higher self-reported vote towards the incumbent PAN in 2006 and 2012. When analysing the demographic variables age did not seem significantly related towards votes for the incumbent. There were significant differences in self-reported vote by gender only in 2000 where more men intended to vote for the incumbent. When analysing ethnicity (which in Mexico is assessed as skin colour), a significantly lower proportion of darker skinned respondents intended to vote for the incumbent only in 2006. A higher proportion of respondents without religion or non-Catholics or Christians intended did not vote significantly more for the incumbent. While in the year of 2000 a higher proportion of individuals with college education voted for other party than the incumbent and a higher proportion of individuals without education voted for the incumbent. This differed in the posterior elections of 2006 and 2012 where individuals with college education and secondary education significantly intended to vote for the incumbent.

A significantly higher per cent of individuals without an employment voted for the incumbent only in 2012. Individuals from mixed localities were significantly more likely to vote for the incumbent in 2000 while in 2006 a significantly higher proportion of individuals in a rural environment were more likely to vote for the incumbent.

There was a significantly higher proportion of individuals from the north with self-reported vote for the incumbent across the three electoral periods. Also, across the three periods, a higher percentage of individuals with a right ideological placement were significantly more likely to intend to vote for the incumbent. Whereas in 2000 a higher proportion of individuals that had previously voted for PRI intended to vote for the incumbent, in 2006 and 2012 a higher proportion of respondents that had previously voted for PAN intended to vote for the incumbent. Individuals with the highest approval for the previous administration were significantly more likely to vote for the incumbent. Finally, individuals with the worse financial situation were more likely to vote for the incumbent in 2000, while in 2006 and 2012 individuals with the highest personal financial situation were more likely to vote for the incumbent.

5.3.3 Individual Logistic Model

While logistic regression models from section 5.1.3 showed results at a municipal level using aggregated data, this section used a national poll targeting individuals. As briefly explained in the methods chapter, the Mexico Panel Study is a cross sectional random stratified sample of Mexican eligible voters and has been going on since the year 2000. This survey includes several variables valuable for the study of the effects of CCTs on voting behaviour. Logistic regression analyses were performed, having the self-reported vote for the incumbent party in every election from 2000 to 2012 as a dependent variable, whereby the vote for the incumbent was coded as 1, and 0 otherwise.

Results on table 5.10 show that when including all the variables in the model, respondents with *Oportunidades* did not vote significantly more for the incumbent in any of the electoral periods when compared to those without the programme. Results also show that during the year 2000, those belonging to a rural or mixed community were more likely to vote the incumbent than those in urban communities. Respondents with the centre left and centre right ideological placements were more likely to vote for the incumbent than those identifying with the strong right. Individuals reporting their personal economy as worse, somewhat worse or the same were less likely to vote for the PRI when compared to those reporting a better economy. Similarly, respondents disapproving the ex-president performance or approving somewhat the president performance were less likely to vote for the PRI compared to those approving the past administration.

Table 5.10 also shows that in the year 2006 respondents with primary, and secondary education were significantly more likely to vote for the incumbent PAN when compared to those with university degree. Individuals that approved somewhat, disapprove somewhat and disapproved a lot the ex-president's administration were less likely to vote for the PAN when compared to those approving the administration a lot.

Finally, the table also shows that for the elections of 2012, when the PAN was incumbent, only individuals approving somewhat and disapproving a lot the ex-presidents administration were significantly less likely to vote for PAN.

Table 5.10 The effects of *Progresa - Oportunidades* on voting behaviour at the individual level: *Results from logistic regressions*.										
Election Year										
Variable	Category	2000			2006			2012		
		PRI Incumb	PAN	PRD	PRI	PAN Incumb	PRD	PRI	PAN Incumb	PRD
CCT beneficiaries	Yes	0.005	-0.006	-0.014	0.047	0.024	-0.098***	-0.072	-0.066	0.159
	Standard error	0.010	0.051	0.080	0.047	0.055	0.060	0.049	0.062	0.043
	NO	ref	ref	ref	ref	ref	ref	ref	ref	ref
Gender	Female	0.359	-0.050	-0.659***	0.218	0.028	-0.276	-0.004	0.193	-0.230
	Standard error	0.192	0.035	0.035	0.049	0.011	0.043	0.021	0.041	0.043
Age category (in years)	18-30	-0.106	-0.076	0.069	-0.161**	0.012	-0.034	0.021	-0.132	-0.087
	Standard error	0.011	0.052	0.078	0.015	0.046	0.050	0.023	0.057	0.029
	31-40	-0.101	-0.068	0.059	-0.167	0.013	-0.033	0.022	-0.137	-0.085
	Standard error	0.025	0.048	0.075	0.057	0.033	0.024	0.022	0.051	0.062
	41-50	-0.094	-0.066	0.057	-0.159	0.014	-0.037	0.020	-0.128	-0.073
	Standard error	0.064	0.068	0.065	0.079	0.053	0.065	0.056	0.083	0.050
	51-60	ref	ref	ref	ref	ref	ref	ref	ref	ref
	61-70	-0.107	-0.067	0.084	-0.162	0.012	-0.038	0.018	-0.126	-0.082
	Standard error	0.030	0.057	0.071	0.077	0.076	0.053	0.066	0.010	0.097
	70+	-0.110	-0.075	0.070	-0.162*	0.012	-0.033	0.023	-0.148	-0.089
	Standard error	0.029	0.047	0.053	0.064	0.064	0.076	0.049	0.035	0.052
Skin Colour	Light brown	0.025	-0.158	-0.110	0.006	-0.169	0.119	0.144	-0.052	-0.075
	Standard error	0.031	0.072	0.061	0.072	0.057	0.039	0.029	0.021	0.053
	Dark brown	0.028	-0.156	-0.111	0.009	-0.193	0.124	0.181	-0.072	-0.077
	Standard error	0.057	0.060	0.082	0.068	0.031	0.092	0.031	0.033	0.014
	White	ref	ref	ref	ref	ref	ref	ref	ref	ref

Table 5.10. Continued

Variable	Category	2000			2006			2012		
		PRI Incumb	PAN	PRD	PRI	PAN Incumb	PRD	PRI	PAN Incumb	PRD
Marital Status	Married or in a partnership	0.159	-0.180	-0.169	-0.039	0.033	0.016	0.042	0.031	-0.038
	Standard error	0.084	0.042	0.059	0.028	0.032	0.082	0.067	0.050	0.060
	Divorced, separated or widowed	0.168	-0.114	-0.168	-0.051	0.038	0.013	0.048	0.033	-0.025
	Standard error	0.035	0.082	0.033	0.025	0.043	0.052	0.056	0.045	0.077
	single	ref	ref	ref	ref	ref	ref	ref	ref	ref
Religion	Catholic	ref	ref	ref	ref	ref	ref	ref	ref	ref
	Christian, not catholic	-0.119	0.003	0.087	-0.122	-0.027	0.020	-0.181	-0.160	0.134
	Standard error	0.018	0.044	0.056	0.028	0.064	0.033	0.068	0.050	0.022
	Other	-0.127	0.003	0.091	-0.114	-0.026	0.025	-0.200	-0.196	0.135
	Standard error	0.021	0.030	0.090	0.066	0.033	0.017	0.012	0.040	0.040
Years of Study	None	-0.225	0.225	-0.185	-0.304***	0.250	0.052	-0.156	0.177	-0.030
	Standard error	0.021	0.059	0.060	0.024	0.009	0.064	0.046	0.086	0.030
	Non-formal education	-0.213	0.242***	-0.165	-0.425	0.159	0.054	-0.167	0.172	-0.034
	Standard error	0.050	0.093	0.062	0.045	0.038	0.067	0.069	0.063	0.037
	Primary	-0.239***	0.127	-0.182	-0.411	0.229*	0.051	-0.177	0.252	-0.032
	Standard error	0.061	0.010	0.050	0.036	0.029	0.021	0.014	0.045	0.030
	Secondary	-0.187**	0.187*	-0.169	-0.534*	0.189*	0.055	-0.149	0.207	-0.031
	Standard error	0.046	0.051	0.046	0.075	0.043	0.054	0.064	0.032	0.056
	High school	-0.192	0.190*	-0.185	-0.409	0.200	0.046	-0.169	0.209	-0.031
	Standard error	0.043	0.070	0.046	0.049	0.030	0.094	0.039	0.042	0.036
	University	ref	ref	ref	ref	ref	ref	ref	ref	ref

Table 5.10. Continued

Variable	Category	2000			2006			2012		
		PRI Incumb	PAN	PRD	PRI	PAN Incumb	PRD	PRI	PAN Incumb	PRD
Employed	Yes	0.076	0.033	-0.304	0.025	0.021	-0.098	-0.021	0.159	-0.388
	Standard error	0.070	0.035	0.046	0.040	0.064	0.050	0.068	0.076	0.061
	NO	ref	ref	ref	ref	ref	ref	ref	ref	ref
Type of Locality	rural	0.359*	-0.332	-0.304	-0.170	0.127	0.050	-0.153	0.022	0.169
	Standard error	0.052	0.020	0.056	0.019	0.039	0.060	0.065	0.064	0.039
	mixed	0.408***	-0.291	-0.295	-0.172	0.101	0.049	-0.149	0.021	0.165
	Standard error	0.029	0.039	0.053	0.062	0.048	0.092	0.100	0.068	0.061
	urban	ref	ref	ref	ref	ref	ref	ref	ref	ref
Region	North	0.153	-0.058	-0.050	0.343**	-0.022	-0.295*	-0.153	0.128	0.012
	Standard error	0.015	0.061	0.070	0.068	0.065	0.042	0.062	0.058	0.068
	South	0.150	-0.067	-0.043	0.274*	-0.039	-0.251	-0.108	0.157	0.014
	Standard error	0.071	0.027	0.016	0.044	0.011	0.053	0.063	0.014	0.039
	Center	ref	ref	ref	ref	ref	ref	ref	ref	ref
	Western	0.135	-0.064	-0.051	0.278	-0.029	-0.321	-0.154	0.160	0.013
	Standard error	0.090	0.072	0.032	0.063	0.033	0.023	0.069	0.052	0.060

Table 5.10. Continued

Variable	Category	2000			2006			2012		
		PRI Incumb	PAN	PRD	PRI	PAN Incumb	PRD	PRI	PAN Incumb	PRD
Ideological Placement	Somewhat left	0.189	-0.045	-0.153***	0.023	0.051	-0.117*	0.049	0.036	-0.282
	Standard error	0.087	0.060	0.052	0.036	0.060	0.029	0.075	0.057	0.042
	Center-left	0.208**	-0.041	-0.231	0.025	0.052	-0.093	0.040	0.048	-0.197
	Standard error	0.078	0.076	0.040	0.026	0.068	0.035	0.059	0.083	0.052
	Center-center	0.209	-0.046	-0.215	0.029	0.053	-0.123	0.044	0.036	-0.224*
	Standard error	0.084	0.031	0.036	0.029	0.033	0.063	0.063	0.071	0.046
	Center-right	0.208*	-0.052	-0.207*	0.023	0.044	-0.138**	0.046	0.051	-0.233
	Standard error	0.042	0.040	0.010	0.076	0.060	0.074	0.032	0.063	0.025
	Somewhat right	0.208	-0.040	-0.228**	0.025	0.052	-0.117	0.046	0.043	-0.239***
	Standard error	0.024	0.031	0.069	0.054	0.080	0.050	0.030	0.041	0.064
	Strong right	ref	ref	ref	ref	ref	ref	ref	ref	ref
Ex-President Administration Approval	Approve a lot	ref	ref	ref	ref	ref	ref	ref	ref	ref
	Approve somewhat	-0.209*	0.107	0.034	0.078	-0.586***	0.129	0.111	-0.329***	0.061
	Standard error	0.042	0.056	0.049	0.074	0.059	0.053	0.024	0.038	0.023
	Neither approve nor Disapprove	-0.199	0.118	0.044	0.061	-0.671	0.097	0.114	-0.329	0.073
	Standard error	0.041	0.061	0.029	0.038	0.008	0.051	0.067	0.059	0.049
	Disapprove somewhat	-0.221	0.091	0.041	0.072	-0.597*	0.088*	0.108	-0.301	0.047
	Standard error	0.040	0.050	0.044	0.041	0.024	0.099	0.054	0.056	0.025
	Disapprove a lot	-0.208***	0.099	0.044	0.069	-0.559**	0.107**	0.107	-0.413**	0.057
	Standard error	0.032	0.047	0.078	0.054	0.045	0.035	0.042	0.043	0.067

Table 5.10. Continued

Variable	Category	2000			2006			2012		
		PRI Incumb	PAN	PRD	PRI	PAN Incumb	PRD	PRI	PAN Incumb	PRD
Personal Economy Improved Past Administration	Better	ref	ref	ref	ref	ref	ref	ref	ref	ref
	Somewhat better	-0.216	0.004	0.056	0.136	-0.175	0.014	-0.049	-0.126	0.011
	Standard error	0.078	0.067	0.032	0.029	0.060	0.067	0.075	0.060	0.079
	The same	-0.244*	0.004	0.071	0.119	-0.168	0.014	-0.053	-0.134	0.011
	Standard error	0.050	0.056	0.058	0.057	0.061	0.043	0.039	0.088	0.067
	Somewhat worse	-0.258**	0.003	0.069	0.118	-0.144	0.015	-0.051	-0.152	0.009
	Standard error	0.050	0.057	0.064	0.082	0.086	0.064	0.029	0.048	0.026
	Worse	-0.224*	0.003	0.069	0.119	-0.144	0.015	-0.051	-0.151	0.010
	Standard error	0.036	0.005	0.066	0.078	0.019	0.027	0.042	0.092	0.062
N		2363	2363	2363	2337	2337	2337	910	910	910
Pseudo R2		0.117	0.038	0.045	0.087	0.126	0.073	0.034	0.127	0.083
F	0.906									

* p<0.05, ** p< 0.01, ***p <0.001

Calculations using data form MPS 2000, 2006 and 2012. Figures in the cells show logistic regression coefficients

5.3.4 Longitudinal Effects of Oportunidades on Voting Behaviour: Panel Data Analysis

In order to find if the longitudinal exposure of a CCT such as *Progresa - Oportunidades* had an effect on voting behaviour, a panel data analysis was performed with the dependent variable being the vote for the incumbent. Results are shown in table 5.11.

Table 5.11. Longitudinal effects of Progresa - Oportunidades on voting behaviour (vote for the incumbent): Panel data analysis fixed effects		
Variables	Categories	Dependent Variable Vote Incumbent
Progresa Oportunidades	Yes	-.019 (0.608)
	Std. Err.	0.038
	No	REF
Age Category	18-30	REF
	31-40	0.039 (0.377)
	Std. Err.	0.044
	41-50	-0.018 (0.713)
	Std. Err.	0.049
	51-60	-0.115* (0.048)
	Std. Err.	0.058
	61-70	-0.040 (0.565)
	Std. Err.	0.070
	70+	0.073 (0.368)
	Std. Err.	0.082
Years of Study	No education	-0.095 (0.288)
	Std. Err.	0.089
	primary	-0.135** (0.007)
	Std. Err.	0.050
	secondary	-0.064 (0.192)
	Std. Err.	0.049
	High school	-0.043 (0.397)
	Std. Err.	0.051
	University	REF
Ideological Placement	Somewhat left	REF
	Strong left	-0.004 (0.949)
	Std. Err.	0.078
	Somewhat Left	-0.055 (0.336)
	Std. Err.	0.058
	Center-Left	0.115 (0.058)
	Std. Err.	0.061
	Center-Right	0.085 (0.235)
	Std. Err.	0.071
	Somewhat Right	0.027 (0.607)
	Std. Err.	0.052
	Strong Right	0.110 (0.153)
	Std. Err.	0.077
	PRI	REF

Past Vote Previous Election	PAN	-0.074 (0.208)
	Std. Err.	0.059
	PRD	-0.161** (0.003)
	Std. Err.	0.054
	Other	-0.014 (0.941)
	Std. Err.	0.182
	didn't vote	-0.117* (0.039)
	Std. Err.	0.039
Ex-President´s Approval	Approve a lot	REF
	Approves somewhat	-0.031 (0.490)
	Std. Err.	0.045
	Neither	-0.234*** (0.000)
	Std. Err.	0.064
	Disapproves somewhat	-0.248*** (0.000)
	Std. Err.	0.056
	Disapproves a lot	-0.229*** (0.000)
	Std. Err.	0.064
Personal Economy Has improved	Better	REF
	Somewhat better	0.171* (0.040)
	Std. Err.	0.083
	The same	0.150*** (0.000)
	Std. Err.	0.042
	Somewhat worse	-0.020 (0.690)
	Std. Err.	0.050
	Worse	-0.092 (0.080)
	Std. Err.	0.052
Constant		0.384*** (0.000)
Observations (N)		2554
R-Squared		0.169
Region		4

It seems that having *Progresa - Oportunidades* did not significantly increase the number votes for the incumbent when compared to individuals without the programme. However, certain individual characteristics were significantly negatively associated with votes for the incumbent across the three electoral periods. Individuals from the 51-60 age category were significantly less likely to vote for the incumbent than those in the reference category. Individuals belonging to the primary school group also were significantly less likely to vote for the incumbent than those in the reference category university. Respondents with past votes for the PRD and those who didn't vote showed significantly less likelihood of voting for the incumbent than those in the reference category (PRI). Those neither approving nor disapproving, and those somewhat

disapproving or disapproving lot the previous administration were also negatively associated towards votes for the incumbent than those in the reference category (approve a lot). A higher likelihood for voting for the incumbent was seen among those whose economy became somewhat better or remained the same when compared to those with a perception of a better economy.

5.4. Discussion and Conclusions

The aim of this chapter was to investigate the relationship between *Progresa - Oportunidades* and voting behaviour at a municipal and individual levels. This section presents a discussion of the results from the statistical analyzes contrasting them with the relevant literature.

5.4.1 The Effects of Progresa - Oportunidades on Voting Behaviour at the Municipal Level

As a summary when looking into the effects of *Progresa - Oportunidades* on voting behaviour, results from the correlations presented in table 5.6., suggest that the incumbent PRI was more likely to win in municipalities with higher proportion (coverage) of households with *Progresa* in the year 2000. These results are in line with results presented by Ana de O (2017). They are also able to answer the hypothesis of this work "The more recent a CCT programme is, the more positive its impact on support for the party that governs at national level" as it was in 1997 where *Progresa* was put in place. So it seems that, despite not changing the election as Vicente Fox from PAN won that year, the programme produced favorable results for the PRI in municipalities with the highest coverage in the year 2000. Results from the correlations for all parties in the following elections (table 9.9 appendix) suggest that among municipalities with higher proportion of households with *Progresa,* the PRI was more likely to win when compared to the incumbent party. This relationship could be the result of the association between delivery of goods in exchange for political support, or as suggested by De la O (2013), the programme may have had the effect of increasing the vote for the party introducing it in the short term and sustaining itself in the long term. These results are in line with the

findings regarding the *Seguro Popular* introduced in 2003. Individuals with this insurance were more likely to vote for the PAN (incumbent) in 2006. However, the effect stopped being significant by 2012. This shift supports the hypothesis of this research by showing that the effect of programmes on support for the incumbent party at national level weakens over time. As de la O (2013) argued, it seems that the effect of *Progresa* (later *Oportunidades*) in the long term diminished.

In contrast to these results, correlations from table 9.9 in the appendix, the proportion of municipalities with *Seguro Popular* was positive for the PRI in 2012. These results could be due to the way in which *Seguro Popular* was operated and implemented, which was administered by the governors of the states. This could, in some way, have influenced the positive effect for the PRI in 2012. However, this is not the scope of this research as *Seguro Popular* is not a CCT. The proportion of those affiliated to the *Seguro Popular* was not considered in the logistic models since this variable is non-existent in Brazil. However, without a doubt, it opens space for future research.

When looking into the other characteristics associated with votes for the incumbent, correlations from table 5.6, show that rural municipalities were significantly more likely to vote for the PRI when it was the incumbent in 1994 and 2000 elections, but also when it was in the opposition in 2006 and 2012 (table 9.9 of the appendix). This reflects the power of the PRI in the rural and most marginalized communities of the country. It is an interesting finding as *Progresa - Oportunidades* started and was expanded in rural municipalities, and in these areas *Seguro Popular* was introduced first. In rural municipalities the PAN was less likely to win in 2006 and in 2012.

The effect of the PRI in rural municipalities could be explained in terms of patronage, since, as Hilgers (2008) argues, the central element of patronage is the long-term relationship in which there is an unequal situation of power where generally there is a political alliance. The result contrasts with what was indicated by Diaz-Cayeros, Estevez and Magaloni (2007; 2008) in the sense that interventions such as CCT were aimed at the poorest municipalities because they are the most likely to respond electorally (in the form of votes or alliances) to income transfers. However, in this case it seems that the tie to the PRI was so strong, that the widening of the programme did not work for the PAN.

When observing the effect of income, results from the bivariate analysis show that it seems that beneficiaries from *Progresa - Oportunidades* vote following their economic self-interest. As results from table 5.6, show, for municipalities where households reported a higher income, the vote share for PRI in the years 1994 and 2000 was lower, while for 2006 and 2012 vote share was higher for PAN. This is in accordance with what was stated in the review of the literature in chapter three in which both Diaz-Cayeros, et. al (2007) and de la O's (2013) suggest that voters are much more likely to vote utility driven, as expected by the retrospective and prospective voting theory. Even if authors such as Menocal (2001), Marques et al. (2009) and Abensur et., Al. (2007) and Canêdo-Pinheiro (2015) argue that the greater the coverage of the programme, the greater the number of votes received favoring the incumbent, it seems, from the results obtained in this study that this is not true in the case of *Progresa*. The relationship between the proportion of households with the programme and wins for the incumbent was only positive in 2000 for the PRI and was never positive for the PAN. These results partly confirm the hypothesis of this study: it seems that *Progresa* had a short-term effect at this level of observation.

After controlling for all other independent variables, logistic regression models at the municipal level show that the PRI was more likely to win in municipalities with a higher proportion of households receiving the programme during the 2000 elections (see table 5.7), similar to results from the bivariate analyses. This is also in line with results obtained by Ana de la O (2013). Despite the positive effect of *Progresa* in 2000 for the PRI, it was not decisive and the PAN won the elections. Perhaps this was because the proportion of households with the programme was small.

The lack of a significant effect of the programme at the individual level in 2000 could be a result of the strict regulations and programmatic implementation of *Progresa* not having an effect of creating clients and that, despite improving the quality of life of the municipalities, there was no effect on the elections at the municipal level during the subsequent presidential elections for the PAN. These results agree with previous studies by Díaz Cayeros et al (2012) and Nichter (2018) arguing that despite the persistence of clientelism in Mexico, this phenomenon has decreased over the years. These scholars

also reflect that the design of *Progresa - Oportunidades* was successful of being if not completely, at least partly isolated from political interference.

Aside from this, results also show that the PAN was more likely to win across the three electoral periods in municipalities with higher income and in 2006 and 2012 in municipalities with higher average years of education.

5.4.2 The effects of Oportunidades on Voting Behaviour at the Individual Level

Owing to the secrecy of the vote, it is practically impossible to know with certainty who someone is voting for. That is why this study considered the need to use two sources of information, one at the municipal level with data from the aggregate vote and socioeconomic characteristics by municipality, and another at the individual level with data on voting intention obtained through a nationally representative survey.

According to the bivariate analysis (table 5.9.) beneficiaries of *Progresa/Oportunidades* were more prone to vote for the incumbent party PRI in 2000 and individuals with *Oportunidades* reported a higher self-reported vote towards the incumbent PAN in 2006, but not in 2012. In the same way as in the results at the municipal level, these results seem to verify the first two hypotheses of this study. On the one hand the positive effect of *Progresa/Oportunidades* for the incumbent in the short term, and on the other hand that this effect decreases with time. However, as this relationship could be a result of other characteristics, logistic regressions and panel data analyses were performed at the individual level.

Results from the cross-sectional logistic regression analyses show that once controlling for demographic and socioeconomic characteristics, individuals receiving *Oportunidades* did not vote significantly more for the incumbent than those without *Oportunidades*. Results also show that during the year 2000, the variables associated with higher votes for the incumbent were belonging to a rural or mixed community and having centre left or centre right ideological placements. In addition, years on formal education were only relevant for the incumbent in 2006.

Results on the longitudinal effect of the programme using panel data fixed effects (table 5.11.) show that *Oportunidades* did not significantly increase the number of self-reported vote for the incumbent when compared to individuals without the programme. Individuals aged 51-60 were significantly less likely to vote for the incumbent. Individuals belonging to the primary school groups also were significantly less likely to vote for the incumbent longitudinally. The only characteristic positively associated with a higher likelihood for voting for the incumbent was seen among those whose economy became somewhat better or remained the same when compared to those with a perception of a better economy. Further analyses were carried out using datasets from the comparative study of electoral systems (CSES). Results from this panel analyses, also did not show a significant association between having *Oportunidades* and votes for the incumbent (See Appendix 9.1.).

These results are consistent with the study by Green (2006), in which an effect of *Oportunidades* on voting behaviour was not found. The importance of this null result could be explained in two strands: the first is derived from the relatively lower proportion of beneficiaries when compared to other countries (24% of the population) (Cecchini and Atuesta, 2017), which has not been enough to determine political support in the long term. The second, that the implementation of programmatic policies as well as the establishment of solid electoral institutions (see chapter 3) has resulted in the erosion of clientelism.

The foregoing is consistent with the relevant literature since, as Nichter (2018) argues, the design of *Progresa/Oportunidades* has allowed to contain any type of political manipulation previously exercised by brokers in non-programmatic policies. Nichter also points out that having institutions guaranteeing the secrecy of the vote has challenged greatly the survival of clientelistic practices. During the administrations of the PAN (2000-2012) an immense effort to curtail brokers was made, this was accompanied by and effort to limit and prohibit any transfers from the central government towards the less well-off. By doing so, CCTs were isolated from any political maneuver to secure votes from this population. In terms of Vommaro and Combes (2019) a vital part of the clientelistic relationship was removed. Unlike non-programmatic policies, *Oportunidades* was designed in a way that there was no requirement for the government to have delegates

(brokers) at a local level. However, this design led to decentralization in the operation of some of the components of the programme. Meaning that the components operating at the local level could have an effect of political manipulation. Results from this study are not significant in this regard. However, future research could explore the effect of *Oportunidades* in the election of governors.

In summary, while it seems that cross-sectionally there was an effect of *Progresa/Oportunidades* for the PRI at a municipal level in 2000, individually and longitudinally beneficiaries of *Oportunidades* did not seem to vote more for the incumbent. This could suggest that the incorporation of *Oportunidades* to the Mexican political scene resulted in a decrease in clientelism. Although the hypothesis of this thesis arguing that the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level is not verified at the individual level, at the municipal level it is confirmed as the PRI had a significantly higher vote share in municipalities with a higher proportion of families with *Progresa-Oportunidades*. This discrepancy leaves room for further reflections on the use of polls and not on the real information on the direction of the vote at the individual level, despite being is impossible in a democratic society where the right to free and secret suffrage is respected.

6. THE EFFECT OF BOLSA FAMILIA ON VOTING BEHAVIOUR.

6.1. INTRODUCTION

Similar to chapter 5 where the effect of *Oportunidades* on voting behaviour was examined, this chapter focuses on the effect of *Bolsa Escola (2001-2003) and Bolsa Família (2003-to date)* on Brazilian voters. The models of this study allow for testing both retrospective and prospective theories. These theories posit that electors follow their personal economic situation when casting a ballot (Lewis-Beck, 1985). Kahneman and Tversky (1979) suggested that since people preferred to avoid losses rather than obtain additional gains, so voters will prefer to vote for the incumbent party in order to maintain their current gains. In the same line scholars (Scott, 1969; Kitschelt and Wilkinson, 2007; Kitschelt, 2011; Stokes et al., 2013; Nichter, 2018) have found evidence from low-income countries that risk averse citizens show preferences for parties providing them with immediate benefits.

Thus, this chapter examines voting behaviour among recipients of *Bolsa Escola* and *Bolsa Família* within two strands. First, retrospectively (Fiorina, 1981), meaning that beneficiaries vote based on how this policy has increased their income by means of the monthly stipend transfers. Secondly, following the prospective theory (Downs, 1957), some scholars (Bohn, 2011; De la O, 2013; Zucco, 2011) have suggested that not only *Bolsa Família* beneficiaries but non-*Bolsa Família* beneficiaries could respond electorally, based on their future expectations of the performance and expansion of the CCT programmes. Using this type of analyses, the aim of this study was to identify if there the effect of *Bolsa Família* on voting behaviour by assessing the effects of the programme longitudinally on the incumbent-supporting constituency over the past four presidential elections. As explained in the introduction, it is assumed that beneficiaries are rational and income oriented in this sense, incumbent's vote share is a function of both time and the expenditure destined for CCT Programs.

On this basis, this work contributes by providing insights to the rationale behind voters' choices. Although this work's hypotheses have been explained in more depth in the previous chapters (3 and 4), it is useful to restate them briefly: the research strategy holds that, the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level. The latter is also explained by the pocketbook theory (Lewis-Beck, 1985) in which higher dependence on programme resources is associated with a greater vote share for the incumbent. However, results from this work on Mexico suggest that the CCTs did not have a significant influence for the incumbent to win at the municipal level, or for voters to cast a ballot for the incumbent if receiving the benefit. Thus, it seems that institutionalisation of these programmatic programmes may decrease their effect on voting behaviour in the long term.

This chapter is structured similar to the chapter focusing on the effects of *Oportunidades* on voting behaviour. The statistical analyses were performed with data from different sources such as the Ministry of Social Development (MDS) and the National Household Survey which are carried out to measure the population's participation in the labour market and both demographic and educational characteristics. Data from the Brazilian Institute of Public Opinion and Statistics (IBOPE) and the Brazilian Electoral Panel Study (BEPS) and data from the Electoral Supreme Court (TSE) was also incorporated.

Results are presented first showing the influence of *Bolsa Família* at the municipal level, providing descriptive statistics, cross-sectional bivariate analyses and results from logistic regressions. In contrast to Mexico, for the case of Brazil, it was possible to build a panel data analyses at a municipal level. This is followed by the individual level analyses including a section on descriptive statistics and followed by results from logistic regressions. Finally, a section discussing the results and contrasting them with available studies and the conclusions are presented.

6.2. The Effect of Bolsa-Escola/Bolsa Familia at the Municipal Level

6.2.1. Descriptive Statistics

This section, similar to the Chapter focusing on the effect of *Oportunidades*, presents first results from descriptive statistics. They focus on electoral participation and on presenting municipal characteristics. Table 6.1 presents the pattern of electoral participation in Brazil over the past four elections.

Table 6.1. *Electoral Participation Years 2002 – 2014*

Year	Voter Turnout	Total Vote	Registration
2002	**79.53%**	91,664,001	115,254,113
2006	**81.01%**	101,997,079	125,913,479
2010	**78.5%**	106,563,671	135,753,295
2014	**78.9%**	112,683,879	142,822,046

Source IFES (2017).

Despite voting being compulsory in Brazil, the highest vote turnout of the studied periods was in 2006. When looking towards vote share for the incumbent (see Table 6.2.), results show that it differed in every electoral period being highest in 2006.

Table 6.2. *Vote share for the incumbent per municipality 2002-2014.*

		Votes for the incumbent				
	2002	Obs	Min	Max	Mean	Std. Dev.
PSDB		5567	0	0.740	0.497	0.425
	2006	Obs	Min	Max	Mean	Std. Dev.
PT		5567	0.149	0.933	0.691	0.453
	2010	Obs	Min	Max	Mean	Std. Dev.
PT		5570	0.196	0.965	0.594	0.153
	2014	Obs	Min	Max	Mean	Std. Dev.
PT		5573	0	0.958	0.576	0.185

Calculations using data from TSE.

Even if this was not analysed by *Bolsa Escola/ Bolsa Família* status, it is interesting as it could be a result of a reward vote to the incumbent in 2006 but this effect declined over the next two periods perhaps because of the presidential corruption scandals.

Descriptive statistics at the municipal level (see table 6.3) also show that vote share for the incumbent was not higher than 50% in the first round but support for the incumbent grew in the second round. It also shows that a higher proportion of municipalities belong to the incumbent party and that the proportion of households with the programme, similar to the Mexican case is less than a third of all households.

Table 6.3. *Characteristics of the municipalities in years 2002-2014*

Variables	N	Mean	Standard Deviation	Min	Max
Incumbent Vote Share	22278	0.493	0.426	0	42.046
Incumbent Vote Share 2nd Round	22278	0.590	0.581	0	63.933
Proportion of Households with CCTs 1. *Bolsa Escola*, 2001-2003 2. *Bolsa Família*, 2003-to date	22292	0.261	0.177	0	0.729
CCT Governmental Expenditure	22265	0.893	0.811	0	5.902
Household total income	27778	10.913	1.509	7.445	20.162
% impoverished households	27831	31.669	21.853	0.129	86.595
% extremely impoverished households	27463	19.824	586.603	0.014	227.680
Years of Education	27840	9.117	1.579	2.853	23.396
Governor from the incumbent party at the federal level	27865	0.518	0.410	0	1
Region	5572	3.564	1.228	1	5

Source: Own elaboration using secondary data collected from TSE, IPEADATA and PNAD, IBGE (2014).

Table 6.3 also shows that years of schooling were higher in Brazil. While in Mexico many households reported 0 years of schooling, in the surveys from Brazil, the minimum number of years was 2.8. Data from Brazil provides the proportion of impoverished households and extremely impoverished households. By adding these two numbers, results show that more than half of the households are impoverished. Disparities in socioeconomic and demographic characteristics between the municipalities are evident as municipalities display large variation. These disparities could confirm, as suggested by

Marques et al. (2009) and Abensur et al. (2007), that the higher number of beneficiaries, the higher the proportion of votes for the PT (see table 6.4).

6.2.2. Municipal Bivariate Analysis Between Independent Variables and Vote Share for the Incumbent

Table 6.4. shows correlations between the independent variables and the vote share for the incumbent parties from 2002 to 2014 electoral periods. These correlations are illustrative and do not imply any causality.

Table 6.4. *Bivariate analyses between support for PSDB and PT and municipal characteristics for Presidential Elections in Brazil 1994-2012*								
Variables	2002		2006		2010		2014	
	PSDB (inc)	PT	PSDB	PT (inc)	PSDB	PT (inc)	PSDB	PT (inc)
Household total income	0.210***	0.263***	0.322***	0.220***	0.308***	-0.402**	0.232***	-0.418***
Governor from the incumbent party at the federal level	-0.036**	-0.038**	0.059***	-0.009	-0.339***	0.358***	0.033*	0.043**
Years of School	-0.011	0.065***	0.182**	-0.055***	0.347***	-0.351**	0.015	0.002
CCT Governmental Expenditure	0.042**	-0.095***	-0.255***	0.049***	-0.710***	0.747***	-0.786***	0.768***
Proportion of Households with CCTs 1. *Bolsa Escola* 2001-2003 2. *Bolsa Família* 2003-to date	-0.013*	-0.070***	-0.253***	0.039**	-0.702***	0.735***	-0.809***	0.781***
% Impoverished households	-0.019	-0.091***	-0.259***	0.049***	-0.676***	0.719**	-0.758**	0.753***
% Extremely impoverished households	-0.001	-0.083***	-0.233***	0.046***	-0.637***	0.692***	-0.646***	0.658***
Region	-0.028**	0.039**	0.074**	-0.009	0.189***	-0.258**	0.322*	-0.304***
N	5564							

Calculations using data from TSE, IPEADATA and PNAD, IBGE (2014).

* p<0.05, **p<0.01, ***p<0.001

Results from table 6.4., also show that the expenditure on CCTs is related to higher electoral wins for the nationally incumbent party: in 2002, PSDB; in 2006-2014, PT. As expected, this influence was positive and statistically significant for all the electoral periods. As will be addressed in the discussion and conclusions section, these results are in line with previous research suggesting that the expansion and higher expenditure on the programme tend to favour the incumbent.

6.2.3. The Effect of Bolsa Familia on Voting Behaviour at the Municipal Level: Results from Logistic Regressions

Logistic Regression analysis was used to analyse the electoral performance of the incumbent following the implementation of *Bolsa Escola/Bolsa Família* in Brazil. Results from table 6.5 show that, during the first electoral period (2002) the proportion of families with *Bolsa Escola* was positively associated (but not significant) with electoral support for the PSDB. However, in the following elections of 2006, 2010 and 2014 the proportion of households with *Bolsa Familia* seemed to be positively associated with electoral wins for the nationally incumbent party (PT) at municipal level. This is in line with previous research focusing on the effect of CCTs on voting behaviour suggesting that the effect of the introduction of a programme is positive towards the incumbent at the short term. These results continue to be in line with the rational theory as in the last two electoral periods, municipalities with a higher proportion of households with *Bolsa Família* were more likely to support PT (the incumbent at the time). This could demonstrate a significant effect when the programme expanded. These results are in line with the hypothesis of this thesis.

Table 6.5. The effects of *Bolsa Escola - Família* on voting behaviour at the municipal level: Logistic regression of the 2nd Round of electoral periods 2002-2014									
Variable	Category	2002		2006		2010		2014	
		PT	PSDB (Inc)	PT (Inc)	PSDB	PT (Inc)	PSDB	PT (Inc)	PSDB
Proportion of households with CCT 1. *Bolsa Escola* 2001-2003 2. *Bolsa Família* 2003-to date		-0.275***	0.268	0.694	-0.702	0.046***	-0.054	0.015***	-0.016
	Standard error	0.090	0.009	0.039	0.009	0.079	0.0002	0.010	0.010
Region	South East	ref	ref	ref	ref	ref	ref	ref	ref
	North	0.089	-0.094	0.123	-0.130	0.246	-0.254*	0.196	-0.200*
	Standard error	0.008	0.010	0.045	0.008	0.085	0.006	0.111	0.007
	North East	0.057	-0.064	0.108	-0.114	0.214	-0.223	0.165	-0.174
	Standard error	0.045	0.010	0.046	0.009	0.100	0.010	0.096	0.009
	Centre	0.076	-0.084	0.061	-0.067	0.189	-0.191	0.188	-0.188
	Standard error	0.067	0.010	0.036	0.010	0.101	0.008	0.104	0.008
	South	0.075**	-0.080	0.017	-0.026	0.178	-0.187	0.202	-0.209
	Standard error	0.101	0.008	0.014	0.007	0.078	0.015	0.116	0.008
Years of formal education	0 years	0.446	-0.448	0.253	-0.261	-0.138	0.138	0.254	-0.262
	Standard error	0.087	0.009	0.051	0.008	0.108	0.111	0.141	0.009
	1-6 years	0.422	-0.426	0.204	-0.206**	-0.102	0.097	0.216	-0.225*
	Standard error	0.108	0.216	0.055	0.008	0.052	0.090	0.120	0.010
	7-12 years	0.398	-0.403	0.106	-0.114	-0.084	0.080	0.239	-0.240
	Standard error	0.114	0.009	0.044	0.007	0.045	0.089	0.131	0.009
	≥ 13 years	ref	ref	ref	ref	ref	ref	ref	ref
Rural	Yes	-2.620***	2.615	-0.448***	0.444	-0.005**	-0.002	0.082	-0.088
	Standard error	0.081	0.010	0.065	0.225	0.029	0.026	0.050	0.010

Table 6.5. Continued.

Variable	Category	2002		2006		2010		2014	
		PT	PSDB (inc)	PT (inc)	PSDB	PT (inc)	PSDB	PT (inc)	PSDB
Municipal Income	1st tertile	--	--	-0.579	0.574	2.524	-2.530	1.688	-1.689
	Standard error	--	--	-0.630	0.556	2.377	-3.711	-1.707	-1.709
	2nd tertile	--	--	-0.412	0.404	2.019	-2.024	1.516	-1.518
	Standard error	--	--	-0.436	0.387	1.847	-1.540	0.534	-1.540
	3rd tertile	ref	ref	ref	ref	ref	ref	ref	ref
Governor from the incumbent party at the federal level	Yes	-0.324	0.315	-0.464	0.457	0.188	-0.195	0.649	-0.649
	Standard error	0.110	0.009	0.033	0.007	0.099	0.124	0.011	0.010
N		5564		5564		5564		5564	
Pseudo R2		0.052		0.283		0.372		0.437	

* p<0.05, **p<0.01, ***p<0.001 Figures in the cells show logistic regression coefficients

When looking into the effect of *years of formal education*, municipalities with lower number of *years on formal education* were less likely to vote for the PSDB during 2006 and 2014. This variable produces few significant effects, possibly be due to the PT's classic constituency consisting of not only workers but also intellectuals and more educated people. The effects of *proportions of households with CCTs* become statistically significant in the first round in year 2010 and in the second round in 2014. In this model having a *governor from the incumbent party at federal level* when analysing for the PT status is not significant. Although this may seem like a contradictory finding this could be caused by the small number of governors the PT had in those years (see table 6.6).

Table 6.6. Number of states governed by party

Party Name	Year of Election			
	2002	2006	2010	2014
PP	2		1	
PDT	1	1	2	
PT	**3**	**3**	**5**	**5**
PMDB	6	5	7	5
PSL		1		
PPS		2	2	
DEM	6	4	1	2
PMN				1
PSB	2	4	3	6
PSDB	**7**	**7**	**6**	**7**
PSD				1
Total	**27**	**27**	**27**	**27**

Source: Own creation using data from TSE

6.2.4. Longitudinal Effects of Bolsa Familia on Voting Behaviour at the Municipal Level: Panel Data Analyses

The data from Mexico at a municipal level was not suitable to perform panel data analyses; however, as briefly explained in the methodology chapter, data from Brazil allowed these types of analyses. Because of this and in order to find if there was a significant effect of a higher proportion of households with *Bolsa Família* and wins for the incumbent at the municipal level, panel data analyses were performed, with the assumption that municipalities with a higher proportion of households with CCTs should have an increased likelihood for a win from the incumbent party. As discussed in chapter

4, panel data contain repeated observations at different periods of time for each of the observed units.

This kind of data allows controlling for unobserved heterogeneity at unit level. In other words, by adopting a fixed effects model we can control for stable characteristics whether they are measured or not. The rationale behind this is that any possible effects those time-invariant variables can have at any specific period of time will have the same effects in the following periods of time because the values of the variables do not change over time (Allison, 2009).

Panel Data was constructed using longitudinal data from the TSE and the IBGE. This subset of the data has observations for the 5564 municipalities in Brazil over 4 periods of time 2002, 2006, 2010 and 2014. In order to test the null hypothesis (a strong relationship between electoral incumbent support and *Bolsa Escola - Família*) this work performed a set of regression analyses using longitudinal data. Following De la O (2009) the percentage of vote share for the incumbent was considered as the dependent variable. In addition to the incumbent vote share model, two other models were performed to reflect the effects on voting behaviour, having as dependent variable vote share for PSDB and vote share for PT respectively. By doing this it is possible to observe how the independent variables affects the outcome variable depending on the party. These two additional models were performed per each party and are included as tables 9.10 and 9.11 from the appendix.

For the incumbent party models (table 6.7), FE and RE models were performed. However, because of its robustness and results from the Housman Test, only results from the FE model are presented. The others can be found in appendix table 9.12. It is important to note that results from the two different approaches showed that a higher proportion of families with CCTs seem to influence favourably vote support for the incumbent.

As explained briefly in the methods chapter, the model was specified using vote share for the incumbent party as the dependent variable. Vote share was calculated as the number of ballots cast for the incumbent divided by the total number of votes. The same logic was followed when calculating vote share for each party.

Results from the FE models in table 6.7 show that the incumbent was more likely to have a higher vote share in municipalities with a higher proportion of households receiving CCTs. This could be a result of the increasing expansion of the programme during Lula's tenure but also of the larger grants provided by Dilma Rousseff. However, having a governor from the incumbent party at the federal level seemed to be negatively correlated with vote support for the incumbent, suggesting that CCT's decentralisation could create stronger ties between voters with the local authorities rather than to the federal government. These results can be subject of following analysis given the importance of the governors at local level.

Table 6.7. Panel data analysis: The longitudinal effect of the proportion of households with CCTs on vote share for the incumbent party at municipal level (2002-2014).		
VARIABLES		Fixed Effects
Proportion of Families with CCTs per Municipality		0.646***
	SE	(0.119)
Governmental expenditure in CCTs per Municipality		-0.045*
	SE	(0.016)
Household Municipal Income		0.036**
	SE	(0.011)
% of poor		0.002*
	SE	(0.001)
Years of Formal Education Municipal Level		0.006*
	SE	(0.002)
Governor from the incumbent party at the federal level (Dummy)		-0.047*
	SE	(0.022)
Incumbent Vote Share - PSDB (2002) - PT (2006-2014)		0.350***
	SE	(0.021)
Constant		-0.231
	SE	(0.149)
Observations		22,207
R-squared		0.190
Number of regions		5
Region FE		YES

Interestingly higher CCT expenditure appeared to be negatively related with vote support for the incumbent and as stated previously, for individual parties this may imply that it is not the amount of money spent of on the programme per family, but the actual number of families enrolled on the programme what dictates higher ballots for the incumbent. As

the model confirms, as expected, that Brazilian recipients of CCTs who are living in poverty and receive 1 year of education (overall at household level) are more likely to vote for the incumbent party.

In order to provide robustness to the study and following Zucco's approach (2013; 2015) a new set of variables were introduced to the model (GDP growth, religion as the proportion of Pentecostals and the proportion of non-white population). Such variables follow Zucco's (2009; p.37) arguments that Lula and the PT should have performed better amongst communities with a larger concentration of Brazil's poor population (such as non-whites and Pentecostal). These models were also ran for each party (tables 9.8 and 9.9 of the appendix) confirming that Lula da Silva had a higher vote share in municipalities with a higher share of non-white population, while the PSDB had a significantly lower vote share. Municipalities with higher proportion of Pentecostals were significantly associated with vote support for PSDB and negatively to PT.

Table 6.8. The longitudinal effect of the proportion of households with CCTs on vote share for the incumbent party including religion and ethnicity (2002-2014)

VARIABLES	Fixed Effects	
Proportion of Families with CCTs per Municipality		0.642***
	SE	(0.112)
Governmental expenditure in CCTs per Municipality		-0.045*
	SE	(0.017)
Household Municipal Income		0.039**
	SE	(0.011)
% of poor		0.002*
	SE	(0.001)
Years of Formal Education Municipal Level		0.007***
	SE	(0.002)
Governor from the incumbent party[1] at the federal level (Dummy)		-0.047*
	SE	(0.022)
GDP Growth		-0.048***
	SE	(0.009)
Proportion on non-white population		0.000**
	SE	(0.000)
Proportion of Pentecostals		-0.003***
	SE	(0.001)
Incumbent Vote[1] Share		0.349***
	SE	(0.021)
Constant		-0.252

	SE	(0.149)
Observations		22,140
R-squared		0.191
Number of Region		5
Region FE		YES
Region RE		
[1] PSDB (2002) / PT (2006-2014)		

As mentioned in the previous paragraphs, OLS and RE models were also performed on the vote share for the PSDB and PT (appendix tables 9.9 and 9.10). For the PSDB, a higher share of extreme poverty seemed to favour a higher vote share, while higher government expenditure on CCTs and proportion of families with *Bolsa Família* had a negative influence vote share for this party. For the PT, municipalities with a higher proportion of families with *Bolsa Família* and years of schooling had a positive effect on vote share for this party. These results are in line with this work's hypothesis. Results from the models by party in Appendix tables 9.9 and 9.10 show that as the number of beneficiaries increases the more the support for the incumbent PT while there is a negative significant relationship between PSDB and the percentage of families with *Bolsa Família*. Interestingly the governmental expenditure on CCTs is negatively related with PT in the 3 models.

In summary, at a municipal level both, the logistic regressions and the panel data fixed effects analyses show that municipalities with a higher proportion of recipients of *CCT´s* were more likely to vote for the incumbent party. Results from the cross-sectional logistic regressions provide a positive association favouring the PSDB in 2002, logistic regressions across all the other electoral periods suggest that municipalities with higher proportion of recipients were more likely to vote for the PT in 2006, 2012 and 2014. In parallel, results from the panel data analyses show that longitudinally it seems that there is a positive association between a higher proportion of households receiving the programme and a higher vote share for the incumbent.

6.3. The Effect of Bolsa Familia on Individual Voting Behaviour

As mentioned in the methodology chapter and the introduction, similar to the analyses from Mexico, this chapter includes two different levels of data with the intention of identifying the effects of CCTs on voting behaviour not only at an aggregated (municipal) level, covered in the previous section, but also at an individual level. Such individual-level analysis is limited by the confidentiality of vote and the non-randomised introduction of the programme. However, in order to overcome these limitations and compare the effect on voting behaviour on beneficiaries and non-beneficiaries this part of the study relies on exit poll surveys which include self-reported vote as a proxy for the actual voting behaviour of the beneficiaries.

6.3.1. Descriptive Statistics

In order to understand the population interviewed, this section present a brief description focusing on their reported vote for the incumbent or other, and their beneficiary status. It also provides a summary of the main demographic characteristics of the population.

Table 6.9. *Cross sectional descriptive statistics* of the baseline samples of IBOPE 2002-2006 and BEPS 2010-2014.

Variables		2002 (n=2788)	2006 (n=2005)	2010 (n=1220)	2014 (n=4303)
Type of Municipality	Urban	78	--	87	89
	Rural	22	--	13	11
Gender	Male	49	49	46	48
	Female	51	51	54	52
Age	16 – 24	25	21	17	18
	25 – 34	25	24	22	29
	35 – 44	30	20	21	18
	45 – 59	11	23	25	23
	60+	9	13	15	15
Marital Status	Single	26	35	31	29
	Married or in a partnership	43	53	56	63
	Divorced, separated or widowed	9	12	13	8

Ethnicity	White	38	43	36	41
	Light Brown	45	42	47	44
	Dark Brown	7	9	10	12
	Other (Black/Asian)	10	6	7	
CCT Beneficiary*	Yes	--	22	32	35
	No	--	78	68	65
Religion	Catholic	69	65	63	61
	Christian – Non-Catholic	18	21	28	26
	Other	5	4	3	5
	None	8	10	6	8
Employed	Yes	71	68	64	61
	No	29	32	36	39
Income (in BR reals)	0 - 1039	44	19	24	51
	1040 – 5200	30	58	63	35
	5201 – 10399	16	15	13	7
	≥ 10400	9	8	--	6
Years of education	00-00	6	19	5	2
	00-04	12	34	19	6
	04-08	30	24	26	39
	08-12	21	31	49	43
	12-16	22	11	1	9
	16+	10	--	--	1
Ideological Placement	Strong left	13	15	11	15
	Somewhat Left	9	9	8	5
	Centre-Left	13	7	21	6
	Centre	24	26	15	9
	Centre-Right	27	15	19	37
	Somewhat Right	4	7	7	6
	Strong Right	1	11	9	8
	None	9	10	10	14
Self-reported vote	PSDB	54	48	49	68
	PT	46	52	51	32
Region	North-Centre	13	14	31	38
	North East	27	27	24	19
	South	15	15	20	11
	South East	45	44	27	31

Source: IBOPE 2002 and 2006; BEPS 2010 and 2014.
Variables are shown as the reference categories used in the regressions.

As observed on table 6.9., the proportion of votes for the incumbent varied from 54% in 2002 (PSDB) to 32% in 2010 (PT). Also, the proportion of beneficiaries interviewed increased over each electoral period. There was a higher proportion of individuals earning less than $5200 reals and most of the individuals reported less than 12 years of schooling. Finally, the sample population was balanced across waves when looking into to gender.

6.3.2. INDIVIDUAL LEVEL LOGISTIC REGRESSION MODEL

While results from logistic regressions and panel data analyses at the municipal level supported a relationship of the incumbent winning or having a higher vote share among municipalities with higher proportions of beneficiaries of *Bolsa Família,* this section is set to disentangle whether there is an individual level effect of the programme. Similar to the chapter focusing on Mexico, this part of the study relies on logistic regression analysis because the dependent variable was coded as dichotomous: whether the respondents vote for the incumbent or not. With this type of models, we can estimate the likelihood of belonging to a given category given the values of the explanatory variables (Field, 2005). Using this technique, this work sought to predict whether a respondent has voted for the incumbent candidate based on a set of individual characteristics (*CCT* beneficiary, age, gender, income, education and region).

Different to the aggregated data, as table 6.10 illustrates, being a beneficiary of a CCT increased the likelihood of voting for the incumbent party only in 2006. Women were significantly more likely to vote for the PT in 2006, but over the next two periods it seems that women were less likely to vote for the incumbent PT than men. This follows the "traditional gender gap", in which women tend to vote for more conservative parties than men. The only significant differences within the age categories, were seen in the likelihood to vote for PT in 2006, where individuals aged 31-40 were more likely to vote for this party when compared to the reference age category 51-60. There was no significant difference between marital status or religion across the three electoral periods. Similarly, no differences were seen between education, and employment categories across all electoral periods. Surprisingly, most rural communities were less likely to vote for PT across all electoral periods when compared to urban communities.

When looking into the different regions in Brazil, across all electoral periods only the South was less likely to vote for the PT when compared to the South East. Results on self-reported vote show that having a somewhat left ideological placement was significantly associated for votes for the PT in 2006 and 2014, while negatively associated with votes for the PSDB across all electoral periods when compared to having a strong right ideological placement. No significant differences of self-reported vote were found with

regards to the different categories of ex-president approval or of perceived economic improvement during the past administration.

In summary, while municipal data did show a higher likelihood of winning and on vote share for the incumbent in municipalities with a higher proportion of *Bolsa Família* recipients, the individual analyses only showed this significant association during the electoral period of 2006.

Table 6.10. Logistic Regression at the Individual Level Brazil (2. Round)							
Election Year							
Variable	Category	2006		2010		2014	
		PT	PSDB	PT	PSDB	PT	PSDB
CCT Beneficiary	Yes	2.315***	-2.317	2.327	-2.328	2.334	-2.335
	Standard error	0.009	0.009	0.009	0.009	0.010	0.009
	No	ref	ref	ref	ref	ref	ref
Gender	Female	0.841**	-0.843	0.830	-0.832	0.833	-0.835
	Standard error	0.009	0.010	0.009	0.010	0.009	0.009
	Male	ref	ref	ref	ref	ref	ref
Age category	18-30	0.705	-0.707	0.717	-0.719	0.722	-0.724
	Standard error	0.010	0.010	0.009	0.009	0.009	0.009
	31-40	0.700*	-0.702	0.706	-0.708	0.708	-0.710
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	41-50	0.985	-0.987	0.990	-0.992	0.986	-0.988
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	51-60	ref	ref	ref	ref	ref	ref
	61-70	0.713	-0.715	0.753	-0.755	0.787	-0.789
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	70+	0.568	-0.570	0.651	-0.652	0.704	-0.706
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
Skin Colour	Light brown	-0.158	0.157	-0.136	0.134	-0.039	0.037
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Dark brown	0.065	-0.067	0.094	-0.096	0.184	-0.186
	Standard error	0.009	0.009	0.009	0.009	0.010	0.009

	White	ref	ref	ref	ref	ref	ref
Marital Status	Married or in a partnership	0.056	-0.058	0.055	-0.057	0.056	-0.058
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Divorced, separated or widowed	0.049	-0.050	0.049	-0.051	0.050	-0.052
	Standard error	0.009	0.009	0.009	0.010	0.009	0.010
	Single	ref	ref	ref	ref	ref	ref
Religion	Catholic	ref	ref	ref	ref	ref	ref
	Christian, not catholic	-0.006	0.004	-0.006	0.004	-0.022	0.020
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Other	-0.006	0.004	-0.016	0.015	-0.007	0.005
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
Years of Study	None	0.002	-0.004	0.002	-0.004	-0.007	0.005
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Non-formal education	-0.005	0.003	-0.015	0.013	-0.006	0.004
	Standard error	0.009	0.010	0.010	0.009	0.009	0.009
	Primary	-0.005	0.003	0.002	-0.004	-0.001	-0.001
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Secondary	-0.005	0.003	0.004	-0.006	0.017	-0.019
	Standard error	0.009	0.009	0.009	0.009	-0.009	0.009
	High school	-0.004	0.003	-0.016	0.015	-0.008	0.007
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	University	ref	ref	ref	ref	ref	ref
Employed	Yes	1.084	-1.086	1.077	-1.079	1.078	-1.080
	Standard error	0.009	0.009	0.009	0.010	0.009	0.009
Type of Locality	Rural	-0.611***	0.609	-0.617***	0.615	-0.612***	0.610

	Standard error	0.009	0.009	0.009	0.009	0.010	0.009
	Mixed	0.165	-0.167	0.154	-0.156	0.146	-0.148
	Standard error	0.009	0.010	0.009	0.009	0.009	0.010
	Urban	ref	ref	ref	ref	ref	ref
Region	North	-0.224	0.001	-0.217	0.215	-0.228	0.226
	Standard error	0.009	0.009	0.009	0.009	0.010	0.009
	North-East	-0.225	0.223	-0.233	0.232	-0.233	0.232
	Standard error	0.010	0.009	0.009	0.009	0.009	0.009
	Center	-0.185	0.183	-0.176	0.174	-0.166	0.164
	Standard error	0.009	0.009	0.009	0.009	0.009	0.010
	South	-0.101**	0.099	-0.109**	0.107	-0.119**	0.117
	Standard error	0.009	0.010	0.009	0.009	0.009	0.009
	South East	ref	ref	ref	ref	ref	ref
Ideological Placement	Somewhat left	0.055**	-0.056**	0.058	-0.059	0.067**	-0.068**
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Center-left	0.042	-0.044	0.030	-0.032	0.026	-0.028
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Center-center	0.035	-0.037	0.043	-0.045	0.040	-0.042
	Standard error	0.009	0.009	0.010	0.009	0.009	0.009
	Center-right	0.022	-0.024	0.015	-0.017	0.006	-0.008
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Somewhat right	0.019	-0.020	0.023	-0.024	0.026	-0.027
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Strong right	ref	ref	ref	ref	ref	ref
Ex-President Administration Approval	Approve a lot	ref	ref	ref	ref	ref	ref

	Approve somewhat	-0.006	0.005	0.007	-0.009	0.011	-0.012
	Standard error	0.009	0.009	0.009	0.010	0.010	0.009
	Neither approve nor Disapprove	-0.006	0.004	-0.008	0.006	0.003	-0.002
	Standard error	0.009	0.009	0.009	0.009	0.009	0.010
	Disapprove somewhat	-0.006	0.004	-0.006	0.004	0.007	-0.009
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Disapprove a lot	-0.005	0.004	-0.014	0.012	-0.026	0.024
	Standard error	0.009	0.009	0.010	0.009	0.009	0.009
Personal Economy Improved Past Administration	Better	ref	ref	ref	ref	ref	ref
	Somewhat better	-0.0004	-0.005	-0.016	0.012	-0.022	0.022
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	The same	-0.0004	-0.005	-0.004	0.0020	0.004	-0.008
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Somewhat worse	-0.0003	-0.003	-0.009	0.008	-0.016	0.012
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
	Worse	-0.0003	-0.003	0.010	-0.012	0.017	-0.016
	Standard error	0.009	0.009	0.009	0.009	0.009	0.009
N		1214	1214	1214	1214	1214	1214
Pseudo R2		0.002	0.001	0.001	0.001	0.002	0.002
*** p<0.01, ** p<0.05, * p<0.1							
Calculations using data from IBOPE 2002 and 2006; BEPS 2010 and 2014. Figures in the cells show logistic regression coefficients							

6.4. Discussion and Conclusions

The aim of this chapter was to investigate the effects of *Bolsa Escola* (2003) and *Bolsa Família* (2003-to date) on electoral behaviour at the municipal and individual level. This section presents a discussion between the literature and the results obtained from the statistical analyses presented in the previous sections.

6.4.1. The Effects of Bolsa Escola and Bolsa Familia on Voting Behaviour at the Municipal Level

When looking into bivariate statistics at the municipal level (table 6.4), results suggest that municipalities with households with higher average number of years of formal education were significantly more likely to vote for PT in 2002 but significantly less likely in 2006 and 2010. They were also significantly more likely to vote for the PSDB in 2006 and 2010. Results also show that municipalities with a higher percentage of poor and extremely poor households were more likely to vote for the PT in the electoral periods from 2006, 2010 and 2014 (see table 6.4), but not in 2002. Bivariate analyses in table 6.4, surprisingly show that the municipalities with a higher proportion of households with *Bolsa Escola* in 2002 were less likely to vote for the PSDB. These variables were important to include in the logistic regressions and models as they portray the main characteristics of municipalities where the PT was more likely to win i.e. those with households with lower years of formal schooling and those with a higher proportion of households receiving the programme.

Logistic regressions were used to analyse the municipal electoral success of the incumbent party (PSDB 2002 and PT 2006-2014) after the implementation of *Bolsa Escola* and *Bolsa Família*. Results from table 6.5., show that for the year 2002 the PSDB was more likely (though not significantly) to win among municipalities with a higher proportion of families with a *Bolsa Escola*. Despite being non-significant, this higher likelihood could support the hypothesis of this work, proposing that the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level. This effect was more evident in the results focusing on *Oportunidades* and go hand in hand to those suggested by Ana de la O (2013) on the 2000 elections from Mexico. Where a positive relationship was found between the

implementation of the programme and electoral support for incumbent at the municipal level. Similar to results from *Oportunidades*, these results seem to confirm the rational theory, as during the other two presidential elections (2010 and 2014), the PT obtained greater support from municipalities with a higher proportion of households receiving *Bolsa Família*.

Despite a higher win for the PSDB in the 2002 electoral periods among municipalities with *Bolsa Escola*, the PT won this electoral period. This could be a result of the lower proportion of households receiving the programme, as it was during Lula's tenure when the programme expanded. This is supported by previous scholars such as Hall (2006) and Power (2010) who suggest that the higher proportion of families living in poverty was the reason leading to the PT's win. According to Zucco (2011) the relationship between *Bolsa Família* and the PT became stronger and led to a change in the electoral base of Lula da Silva through an alliance with this population through the continuous expansion of the programme consolidating his political strength. This is also agrees with the theoretical framework of this study as results from municipalities with a higher proportion of *Bolsa Família* seem to vote according to the retrospective and prospective theories, suggesting that they seek to maintain benefits in the long term.

The proportion of households benefited by CCTs plays a key role in several of the studies discussed in Chapter 3. Findings from the literature review suggest that the electoral success of the PT in the elections following those from 2002 was a result of two main factors: coverage and expenditure (expenditure) in social programmes (Hunter and Power 2007; Zucco 2008). These studies suggest that in municipalities where more households receive *Bolsa Família* (there is higher coverage), the proportion of votes received by the PT was higher compared to those municipalities where the proportion of households with the programme was lower. Canêdo-Pinheiro (2015) suggested that each 1 percent increase in the number of families with *Bolsa Família* led to an increase of 0.55 percent of votes favouring Lula da Silva.

In contrast to previous studies (Hunter and Power 2007; Zucco 2008, Canêdo-Pinheiro, 2015), this study found that despite the increasing coverage of the *Bolsa Família*, going from 8.84% in 2003 to 25.91% in 2006 (Senarc, 2016), the incumbent did not have a significantly higher vote share among municipalities with a higher proportion of households receiving *Bolsa Família* during the 2002 and 2006 elections (table 6.11).

Table 6.11 *Bolsa Família* Coverage 2003 – 2014			
Year	Individuals	% Population	Beneficiary Families
2003	16,124,195	8.84%	3,600,000
2004	29,434,906	15.92%	6,571,842
2005	38,968,779	20.81%	8,700,441
2006	49,115,238	25.91%	10,965,810
2007	49,461,308	25.79%	11,043,076
2008	47,288,662	24.37%	10,557,996
2009	54,494,728	27.78%	12,370,915
2010	55,344,950	27.92%	12,778,220
2011	56,884,187	28.41%	13,361,503
2012	58,158,901	28.76%	13,902,155
2013	57,888,228	28.36%	14,086,199
2014	56,513,631	27.44%	14,003,441

Source: Own elaboration using data SENARC (2016): Secretaria Nacional de Renda de Cidadania, Relatório de Gestão do Exercício 2004-2016. Website: http://mds.gov.br/acesso-a-informacao/auditoria

As shown in table 6.5, results from the logistic model at the municipal level suggest that during 2002 and 2006 there was a non-significant positive relationship between the proportion of families with CCT´s and the vote share for the incumbent. This changed and in the following electoral periods this effect was significant, and the incumbent was more likely to win among municipalities with a higher proportion of households receiving *Bolsa Família*.

As reported in Chapter 2, 2006 was particularly successful in terms of vote share for the incumbent PT and its candidate Lula da Silva (table 6.2.) Where the proportion of votes it received was the highest of the four periods followed in the analyses. This confirms what Zucco (2008) pointed out, as a result of the favourable conditions in which the PT participated during the electoral period of 2006 such as: a good economy, high degrees of acceptability among the population and the high coverage of the programme, its electoral base was expanded among various sectors of the population. These results are also agreement to those presented by another work from Zucco (2011) and to a study by de la O (2013). As explain in an earlier paragraph they help answer the hypothesis of this work " the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level" because during 2002 the PSDB had implemented *Bolsa Escola* and in 2003 the PT implemented *Bolsa Família*. However, contrary to what Zucco and de la O suggested, the relationship between the implementation of the programmes and vote share for incumbent was not as evident as in their studies. Results from this thesis show that the programmes produced a favourable effect

in the short term but not significant. This is evident in the 2006 election where, despite having a positive effect for the PT, the PT was not significantly more likely to win among municipalities with a higher household share of recipients. This finding is in line with results suggested by Bohn (2011).

Contrary to what was expected, results from table 6.5 suggest that the PT was less likely to win in rural municipalities, but this was after controlling by proportion of households receiving *Bolsa Família.* So what this results suggest is that, according to Key's (1966) reward-punishment theory, maybe the proportion of households living in rural municipalities and not receiving the programme were less likely to vote for the PT. This would be a punishment vote against the PT for not providing them with the same programme as those receiving *Bolsa Família*. Another possible explanation is that the influence of the programme was indistinct of whether it was received by a rural or urban municipality, increasing support from both beneficiaries and non-beneficiaries. If this were true, it would be in line with one of the research questions of this work, as it seems that *Bolsa Família* increased support for the incumbent among beneficiaries and non-beneficiaries. In accordance to the above, studies on clientelism in developing democracies suggest that individuals living in municipalities with a higher proportion of beneficiaries could behave as if the programme were social welfare, making the influence of the programme indistinct when voting. The latter agrees to the sociotropic voting theory, whereby beneficiaries vote according to the interest of the community and not by following their own narrow self-interest (Kinder and Kiewiet, 1981).

The results of the logistic regression (see table 6.5) looking into the relationship between the vote share for the incumbent and the proportion of CCT beneficiaries could reject the hypothesis of this work, since, as observed, the effect was significantly positive in the last two periods. The hypothesis of the study stated that "the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level". However, support among municipalities with a higher proportion of households receiving the programme was significant for the PT and these results would help answer the question whether time influenced the relationship between CCTs and voting behaviour. Contrary to what happened in Mexico with *Oportunidades*, it seems that the effect of *Bolsa Família* was strengthened in the long term despite the institutionalization of the programme and contrary to what Ana de la O (2013) posits. Results from the 2010 and 2014 elections are consistent

with those presented by Zucco in 2013(2013), where *Bolsa Família* had a significant effect increasing the vote share of the incumbent at the municipal level in the long term (during the 3 last presidential election).

These results were verified with the more robust longitudinal analyses presented in tables 6.7 and 6.8. Results from the FE panel data analyses showed that municipalities with the highest proportion of households with CCTs were longitudinally more likely to vote for incumbent.

In contrast to the results obtained in Mexico, where the effect of the programme seemed to fade in the long term, in Brazil results were opposite at the municipal level. This may be because of programme implementation differences. This is in line with what suggested by Piattoni (2007), Daieff (2015) and Nichter (2008). These authors explain that possible success of CCTs in electoral terms is a result of the exchange relationship between the beneficiary and the incumbent happened to be an inverted pyramid, despite the fact that CCTs were created as programmatic policies and the margin of maneuver for political use is minimal. In this sense, Nichter (2018) suggests that the beneficiaries acquire an active role in this exchange situation, being them, the ones deciding to maintain the relationship in order to receive gains.

6.4.2. The effects of Bolsa Escola and Bolsa Familia on Voting Behaviour at the Individual Level

Similar to the analyses from Mexico, due to the secrecy of the vote, the accurate determination of the direction of the vote of individuals is practically impossible. Therefore, data from a nationally representative individual survey were used. Given Brazil's democratic history this study sought to demonstrate to what extent CCTs have influenced the electoral behaviour of their beneficiaries. Logistic regressions at the individual level provided evidence on the effect of *Bolsa Família* on the electoral behaviour of its recipients. The impact of *Bolsa Escola - Família* in the presidential electoral periods from 2002 to 2014 has been addressed by previous scholars as a key factor in PT's electoral success. Results from this work agree and found that *Bolsa Família* (whether directly or indirectly) has brought electoral rewards to the incumbent at a municipal level. However, individual level analyses did not provide such evidence. Results presented in table 6.10 suggested that the vote for the incumbent party was significantly

related to receiving CCT and being female only in the electoral period of 2006 and was non-significant during the other electoral periods. These findings contrast with findings by Zucco (2013) where he suggested a significant effect of *Bolsa Família* with a higher vote share for the incumbent party during the last 3 electoral periods.

Results could suggest that at the individual level, *Bolsa Família* is only related to more votes towards the incumbent in the short term, confirming the hypothesis of this study as beneficiaries were more receptive to vote for the incumbent that implemented the programme in the following electoral period. However, these results may be due to three reasons: first that differences are not seen at individual level but rather at municipalities with higher proportion of beneficiaries following the sociological theory, second these types of surveys contain selection bias as they are not randomised and nationally representative and finally, that according to De la O (2013) the institutionalization of the programme leads to a fading of the support for the incumbent in the long term. These results would suggest that the effect of *Bolsa Família* on voting behaviour was stronger in the short-term rather than the long-term, coinciding with those from *Progresa* of Ana de la O (2013).

However, it is important to note that the most robust models are those from the panel data FE models at the municipal level. As explained briefly in the previous paragraph, between the results obtained in both levels of observation may be explained by the sociological school, municipalities that have improved in socio-economic status may generate that non-beneficiaries support the incumbent by voting according to the interests of the community, so municipalities with a higher proportion of individuals receiving the programme increase the vote share for the incumbent among non-beneficiaries (making individual results non-significant in the long term, but vote share between municipalities significantly different depending on the proportion of recipients) (Kindergarten and Kiewiet, 1981).

Although results at the individual level seem to be similar to those from Mexico, and it could be inferred that the design of *Bolsa Família* has been able to contain to some extent the political manipulation, as argued by Nichter (2018) and Daieff (2015), at the municipal the most robust evidence suggest a significantly higher vote share for the incumbent among municipalities with a higher proportion of households. This suggests that the design of the programme may still be subject to manipulation.

In summary, the different findings at municipal and individual level suggest that there was a significant individual effect of the programme at the short term. But the more robust municipal effects of the expansion of *Bolsa Família* showed that municipalities with a higher proportion of households with the programme were more likely to vote for the incumbent longitudinally. These findings could be explained in two strands: first that at the short term, accordingly to the rational theory, beneficiaries were more likely to vote for the incumbent, and second according to the sociological school, it seems that the incumbent had a higher vote share in municipalities with a higher proportion of households with *Bolsa Família* as the effect of the programme may have generated support for the incumbent by non-beneficiaries.

7. CONCLUSIONS

7.1. INTRODUCTION

Conditional Cash transfer programs (CCTs) were created with the intention of solving the inter-generational cycle of poverty through the adoption of various novel social policies with similar approaches. The novelty of these programmes, their rapid expansion through low- and middle-income countries and their possible effects on the societal structure drew the attention of scholars. One of their main research interests was the possible effects of this type of redistributive policies on electoral behaviour. While some scholars believe that beneficiaries vote considering past performances of the incumbent to evaluate future welfare according to the retrospective theory (Fiorina, 1981; Lewis-Beck 1985; Duch and Stevenson, 2008), others such as Downs (1957), Kinder and Kiewiet (1981) and Stokes (2005) consider that beneficiaries vote thinking of their possible benefits in the future (prospective theory). Another theory of voting behaviour considered by authors such as Brady et. al, 1995 and Klesner, 2007 suggests that voters decide based on what is best for the community disregarding whether they are recipients of the programme or not (social theory). Some authors have considered that because of the prospective theory, their use is linked to political manipulation and that they have served as effective tools to guarantee voter support during electoral processes (Fox, 1994; Auyero, 1999; Hilgers, 2011; Nichter, 2018).

Considering this, the objective of this study was to contribute to the existing literature by comparing the different effects on electoral behaviour of two of the largest CCTs in operation. This work aimed to identify the effects of *Oportunidades* and *Bolsa Familia* on the electorate from Mexico and Brazil respectively, in terms of both the time period (short and long term) after their implementation and the level of observation (municipal and individual).

As addressed previously in the introductory chapter of this thesis, the relevance of this work relies on answering whether beneficiaries vote following their self-interests, if the time of exposure to the CCTs influences their voting behaviour and if the CCTs increase the political support for the presidential incumbent party. These are the central research questions of the thesis. Analyses aimed to shed some light not only on voting preferences in municipalities with

a higher proportion of households receiving CCTs, but also on the effects of the programmes individually upon their recipients. Notwithstanding similarities between Mexico and Brazil, findings from this work show differences in the effects in both countries: in both the short and long term and the two levels of observation. While results from Mexico at the municipal level showed a positive effect of the programme towards votes for the incumbent in the short term but not in the longer term, this was not the same for Brazil, where the programme did not seem to influence significantly recipients' short-term voting behaviour (though the effects were positive in the longer term). There were also differences between the two cases at the individual level. While in the case of Mexico no effects were seen, meaning that individuals with the program did not report a higher likelihood of voting for the incumbent, results from Brazil showed that respondents with the program reported a higher likelihood of voting for the incumbent party.

This chapter provides a brief summary of the main findings from each of the countries at the municipal and individual levels and at the short and longer term, comparing them and describing briefly possible explanations for their differences. The chapter then brings focus to the strengths and limitations of the study highlighting the scarce literature comparing the effect of CCTs between countries. It then brings light of the implications of findings and provides new ideas for future research.

7.2. Main Findings

Overall, results show that the effects of CCTs on voting behaviour depend on the country (implementation) and within each country they also depend on whether the analyses are made at the municipal or individual level. They also depend on the time frame analysed (short or long term). The next section presents results at each level of analysis comparing results from the two countries.

7.2.1. The Effects of Conditional Cash Transfer Programs at at the Municipal Level

7.2.1.1. Municipal Level Results from Mexico

As explained in the previous chapters Mexico implemented its CCT programme addressing poverty in rural areas. Hence, the programme targeted municipalities characterised by high levels of marginalization with the aim of eradicating extreme poverty. Although *Oportunidades* has been widely recognised for its effectiveness in reducing poverty and inequalities (UNDP, 2012). Despite that, as discussed in Chapter 5, the program has not been truly effective in terms of poverty reduction, the likelihood of the incumbent president's party winning in municipalities with a higher proportion of households receiving the program was analysed (Villatoro, 2005).

The correlations on the bivariate analysis presented in chapter 5 show that in the short term, three years after *Progresa/Oportunidades* was introduced, the PRI was much more likely to be voted for during the presidential election in 2000 in municipalities with a higher proportion of households with the program. Results are consistent with those presented by Ana de O (2013), and confirm that "the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level", which is the hypothesis of this dissertation as this program was established in 1997 by the PRI. However, analyses provided other unexpected findings. According to the correlations in the post-2000 electoral periods between votes for each political party and the proportion of households with the program, (table 9.9 appendix), the PRI was much more likely to get more votes than the incumbent party, PAN, in municipalities with the higher proportions of households receiving *Oportunidades*. This effect seems to indicate that, as suggested by De la O (2013), the programme had a positive effect on the proportion of votes for the party introducing the program (short term). These correlations showed that the effect remained positive for the PRI in the long-term meaning that municipalities with a higher proportion of beneficiaries were more likely to vote for the PRI in the other electoral periods despite this party not being the incumbent. These findings disagree to what was proposed by De la O (2013).

Consequently, to demonstrate the effects of CCTs on voting behaviour, a series of statistical analyses were performed. Due to the data limitations that this study encountered at the municipal level and to verify the results obtained by the correlations described in the previous paragraph logistic regression analyses were performed. Similar to results presented by the correlations, the logistic regression showed a positive relationship between the proportion of households with *Progresa* and votes for the PRI for the year 2000. However, this effect did not

continue after that year. Findings from these analyses did not show that municipalities with a higher proportion of households had higher vote share for the PAN in the following elections. Thus, PRI (the incumbent) was more likely to win among municipalities with a higher proportion of households with *Progresa*, suggesting that the programme had a positive effect in terms of voting for the incumbent only at the short-term at this level of observation.

The relevance of these results is that they confirm this work hypothesis as the PRI had a significantly higher vote share in municipalities with a higher proportion of families with *Oportunidades*. In addition, they also confirmed the hypothesis as the capacity of the CCT to increase support for the party in power at national level weakens over time. Results highlight that for the following presidential elections (2006 and 2012) the newly incumbent PAN did not show a higher likelihood to win among municipalities with a higher proportion of households with the programme.

Other information provided by results at this level of observation show that the only consistent variables related to votes for the incumbent were those municipalities with higher income where the PAN was more likely to win across the three electoral periods and average years of education, where municipalities with households with higher educational achievements were more likely to vote for the incumbent PAN in 2006 and 2012.

7.2.1.2. MUNICIPAL LEVEL RESULTS FROM BRAZIL

In Brazil, the literature review showed that the introduction of social policies and the expansion of them contributed significantly to the poverty reduction, to economic stability and decreased inflation rates, but also they also seemed to be related with PT's electoral performance after 2002. Scholars suggested that the increasing success of the PT during Lula's second period in 2006 remained after the following election period and Hunter and Power (2008) have sustained that the impressive support that Lula da Silva received among municipalities with a higher proportion of *Bolsa Família*'s recipients was a result of the target population of the program. As discussed in the literature review, these municipalities are located in the most economically and educationally marginalised areas of Brazil, allowing Lula and the PT to generate an extensive electoral base helping him succeed during this second term.

Results on the correlations from the bivariate analyses showed that municipalities with a higher percentage of households receiving the program were more likely to vote for the PT in the electoral periods from 2006, 2010 and 2014 (table 6.4), but not in 2002. Surprisingly, analyses from 2002 show that with a higher proportion of households with *Bolsa Escola* were less likely to vote for the then incumbent PSDB.

Similar to analyses from Mexico, in order to disentangle whether results from these bivariate analyses remained after controlling for other characteristics of the municipalities, logistic regression analyses were performed at the municipal level looking into the vote share for the incumbent after the implementation of *Bolsa Escola* and *Bolsa Família* respectively. Results highlight that in 2002 the PSDB was more likely (though not significantly) to win among municipalities with a higher proportion of families with *Bolsa Escola* (table 6.5). Despite being non-significant, this higher likelihood could support (partially) the hypothesis of this work (the more recent the implementation of the program, the more positive the effect on electoral support for the nationally incumbent party). In contrast to Mexico, it seems that in Brazil the effect of the introduction of the programme was not evident in the short term. Logistic regression analysis also showed that in 2006, despite the fact that the proportion of households with CCTs increased significantly during Lula administration, contrasting to Hunter and Power (2007), Zucco (2008) and Canêdo-Pinheiro, (2015) the vote share for the PT was not significantly higher in such municipalities when compared to those with a lower proportion of households receiving the programme. While not necessarily due to the CCT scheme, it is to be noted that in 2006-2014 electoral periods, the PT won despite results not being significantly different between municipalities with higher and lower proportions of households receiving the programme. This phenomenon is in line with the results obtained by Cesar Zucco (2008) in which he points out that, probably the electoral success of the PT was mainly due to a series of favorable conditions such as a good economy, the popularity of the president as well as the CCTs. This could be related to the sociotropic voting theory introduced by Kinder and Kiewiet (1981) where individuals vote for the benefit of the community rather than for their own gain. Results from logistic regressions in the following electoral periods (2010 and 2014) did show that the PT was more likely to win among municipalities with a higher proportion of households

with the programme. These results could confirm the sociotropic theory, and could be related to the expansion of the programme made during Lula's administration.

Because of the characteristics from the data obtained from Brazil, I was able to deepen the analyses by performing longitudinal panel data analyses using fixed effects models. In summary, findings from these analyses suggest that in Brazil, municipalities with higher proportion of households receiving *Bolsa Familia* were more likely to vote for the incumbent even after controlling for other variables. Despite not being able to perform the same analyses in Mexico, when comparing the two countries, it seems that while in Mexico, the effect of the program at a municipal level faded in the long term, while in Brazil results showed that municipalities with a higher proportion of recipients were more likely to vote for the incumbent president's party longitudinally. Results from Brazil oppose suggestions by the study by Ana de la O (2013). The effect of *Bolsa Família* does not disappear over time but seems to strengthen despite the institutionalization of the program. Logistic regression results and the longitudinal study presented in the previous chapter show that municipalities with a high proportion of families benefiting from *Bolsa Família* had a significant effect on voting for the incumbent PT, as pointed out by Zucco (2013). However, in Brazil there was no municipal effect in the short term (2002 for the PSDB) and this could be because the municipalities targeted by the programme at the beginning already had an allegiance for the PT (Zucco, 2013).

These results serve to reject the hypothesis of this research work for the case of Brazil, "the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level", as a significantly positive effect was observed in the logistic regressions using data from the 2010 and 2014 elections and the fixed effects models.

7.2.2. The Effects of Conditional Cash Transfer Programs at the Individual Level

In general, results from both countries looking to the effects of CCTs on voting behaviour at the individual level are not conclusive with respect to the hypothesis raised by this study. A limitation that should be considered is that results rely on self-reported vote. However, through the construction of a series of datasets taking into consideration national representative surveys (electoral panel studies) it was possible to obtain sufficient information

that allowed this work to analyse the effects of CCTS at individual level for both Mexico and Brazil.

7.2.2.1. INDIVIDUAL LEVEL RESULTS FROM MEXICO

At the individual level, results of the bivariate analyses from Mexico (table 5.9.) show that individuals with *Progresa* (year 2000) were more likely to report votes for the incumbent party PRI in 2000. In the following electoral periods (2006 and 2012), individuals with *Oportunidades* were not more likely to repot voting for the now incumbent PAN. Results from the more robust cross-sectional regressions and the longitudinal panel data analyses suggests that individuals receiving either *Progresa or Oportunidades* were not significantly more likely to vote for the incumbent party when compared to those without the program.

It is important to mention that results at the individual level are not in agreement with results at the municipal level showing a positive short-term effect of the program favouring the incumbent, thus confirming hypotheses one and two. The individual level results indicate that having *Oportunidades* does not make one more likely to vote for the incumbent. This could be due to the possibility that there is a lower proportion of beneficiaries compared to other countries with large scale CCTs and that the economic amount of the benefit is not as high as in other Latin American countries (Cecchini and Atuesta, 2017). The latter could be considered as a determining element in explaining the failure of *Oportunidades* to consolidate political support in the long term. Undoubtedly, and elaborating on Nichter (2018), the strict operationalization of the programme could have had an eroding effect on practices that conditioned the vote through this programme.

7.2.2.2. INDIVIDUAL LEVEL RESULTS FROM BRAZIL

Similar to the Mexican case, a nationally representative individual survey focusing on self-reported vote was used to observe the effects of *Bolsa Família* on electoral behaviour. Scholars have argued that *Bolsa Família* was a determining factor in the electoral success of the PT in the three presidential elections from 2006 to 2014. However, the results obtained in this

individual-level research work contradict those studies as they do not suggest such an association.

Results show that individuals with the program reported a higher vote share in favour of the incumbent PT only for the 2006 election, controlling for the number of beneficiaries of *Bolsa Família* and gender. However, this effect was not significant for the other electoral periods. This result, unlike what happens at the same level of observation in Mexico, suggests that the more recent the implementation of the program, the greater the electoral support for the incumbent. These findings contrast with findings by Zucco (2013) where he suggested a significant effect of *Bolsa Família* with a higher self-reported vote for the incumbent party during the last three electoral periods at the individual level.

These results suggest that at least at the individual level, the effect of *Bolsa Família* on electoral behaviour is only fulfilled in the short term. The results obtained, however, may have been this way because the effect is more evident at an aggregate level than at the individual level, according to sociological theory where individuals cast their ballot focusing on the benefit of the community rather than their own. Another element to consider is the selection bias of the survey. This study was unable, as is explained in the section on strengths and weaknesses, to use the same survey for all periods.

These individual level analyses would confirm Ana De la O's (2013) argument that the institutionalization of the program weakens the impact of the CCTs on electoral behaviour. This is because the beneficiaries are not afraid of their disappearance, thus verifying the hypothesis of the study "the more recent a CCT programme is, the more positive its impact on support for the party that governs at national level".

While there were no associations between being a recipient of the program and a self-reported vote for the president´s incumbent party in Mexico, the results from Brazil suggest that recipients of *Bolsa Família* were significantly more likely to vote for the incumbent when compared to non-recipients only in the short-term rather than the long-term. These results confirm the hypothesis of this work for the case of Brazil at the individual level as the programme showed a positive effect at the short term.

7.3. The Contrasting Results Between Mexico and Brazil

It seems that the contrasting results between Mexico and Brazil are explained by differences in the implementation and operation of the program within each of the countries.

a) Municipal Level

As previously stated, in the case of Mexico at municipal level the effect was only visible at the short term while for Brazil at the municipal level a positive effect was found in all regressions and longitudinal models for the incumbent PT. Contrary to what happened in Mexico with *Oportunidades*, it seems that the effect of *Bolsa Família* was strengthened in the long term despite the institutionalization of the program. This may be a result of the registration process that Brazil follows, where access to the program is done following a self-rated poverty index. This differs from Mexico where there is a means tested process, with mandatory conditions and rigorous operating rules. The less rigorous rules by *Bolsa Familia* and the expansion of the program associated with Lula's tenure could have influenced follows less rigorous rules both in its implementation and in its evaluation.

b) Individual Level

Unlike results from the analyses at a municipal level, results for Mexico at the individual level show that individuals receiving the program were not more likely to report voting for the incumbent when compared to non-recipients. While individuals with Bolsa Familia from Brazil were more likely to report voting for the incumbent only in the short term, specifically for the 2006 electoral period.

However, the PT (the incumbent after 2006) won the elections in the following three terms, with increasing votes both among recipients and non-recipients. This suggest that voters from Brazil at the individual level, act according to the sociological theory by casting their vote with their communities in mind regardless of whether they are beneficiaries of the program or not. In this sense, non-recipients change their political patterns in favor of the incumbent as a response to their expected future utility, this effect is more evident and is only visible at the individual level and not at the aggregate level as results shown that Lula´s voting grew in both recipients and non-recipients.

Another important element that serves to explain the divergent results is the relationship between CCTs and political participation and civic culture. Brazil has a stronger civil society which was strengthened by *Bolsa Familia*, in Mexico participation and interest in public life is much lower (Russel, 2010; LAPOP, 2013, Ramírez, 2014).

Aside from these characteristics, another difference between *Oportunidades* and *Bolsa Família* which could explain the different results is the number of individuals and families covered by the program, and the increase of coverage during the years in operation. The coverage of the program is linked with the evolution of poverty and with the ultimate goal of the CCTs, which is to eradicate the intergenerational cycle of poverty.

In this sense, when comparing Mexico and Brazil, in terms of their success in alleviating poverty, it seems that Brazil has been more successful in decreasing the proportion of people living under the poverty line when compared to Mexico (IBGE, 2014) mainly due to the expansion of the programme and the benefits provided. Perhaps this effect has helped increase the effect of the program on voting behaviour at the long term in terms of support for incumbent, since according to World Bank *Bolsa Família* has been a key factor to reduce extreme poverty in Brazil from 9.7% to 4.3% of the population (World Bank, 2013) compared to Mexico *Oportunidades* show lower success in terms of extreme poverty reduction from 9.8% to 7.4% (CONEVAL, 2015) for the period observed.

7.4. Strengths and Limitations of the Study

7.4.1. Strengths of the Study

The existing literature on the effects of CCTs on voting behaviour is scarce when compared to literature focusing on other outcomes such as health or socioeconomic conditions. Most of previous research focuses on single-country outcomes and, to this researcher's knowledge no other study provides country comparisons on the potential effects of CCTs on voting behaviour. Accordingly, the first strength of this study is that it compares two countries with the longest and largest running CCTs. This is important as it has allowed us to test whether the assumptions made in other studies could be extrapolated to other countries or if differences in implementation could produce different results with regards to their effect on voting

behaviour. For example, it seems that while in Mexico the program is means tested, and has mandatory conditions, the lesser monetary aid provided and the lesser proportion of individuals covered could explain the effect in the short term and the lack of effect over the long term (despite it potentially being easier for governors to use the program for clientelistic purposes). In Brazil, by contrast, where they use less institutionalised and less strict rules for enrolment with a self-rated poverty scale, the *cadastro unico* is associated with Lula da Silva's government and the monetary aid as well as the proportion of individuals covered is larger, the effect of the program towards the incumbent party persists in the long term. It seems that we can conclude that what makes a beneficiary of a CCT vote for the incumbent is the strategy of implementation by the government rather than the program itself.

Another strength of this study is that it follows two levels of observation and uses different statistical techniques in order to identify the effects of the program on voting behaviour of both communities and individuals. As discussed in the methodology chapter, these models were able to address the effect of CCTs on voting behaviour at municipal and individual levels cross sectionally and longitudinally. This study highlights that the effects of CCTs vary across the level of observation with the most effect seen at the municipal level. This could imply that perhaps the surveys in both countries are constructed differently, the time in relation to the electoral period could also differ and could cause desirability bias. Also, the methodology followed by the interviewers could be different and bias the results making differences between the two countries even more pronounced.

Additionally, this dissertation follows a broader approach in terms of the literature reviewed focusing on the theoretical approach of voting behaviour trying to provide a possible answer to the way in which beneficiaries casted their ballot. This takes relevance when discussing the results, as findings suggested that there is no one prevalent theory that could explain differences by country or by level of observation.

7.4.2. LIMITATIONS OF THE STUDY

There are some limitations to this study. First, in both countries due to the secrecy of the ballot, we cannot verify votes for a specific party, and even if in all democratic systems this limitation cannot be overcome, it is important to highlight a possible social desirability bias. Respondents

could think that interviewer was linked to the government and thus give a biased reply. However, because we analysed actual vote shares at the municipal level, we were able to compare results and thus partially overcome this problem. Another way of overcoming this limitation only available for Brazil, was by using the surveys which followed the interviewees at three points in time (before, during and after) across each electoral period; as this is a longitudinal panel, results are more robust. In contrast, in Mexico, the sample from the INEGI was not longitudinal so I was not able to perform the same analyses. In order to deal with this problem cross sectional analyses were run by municipality. However, the municipality codes from the INEGI and the electoral institute are different and in order to overcome this issue I had to match and recode each municipality manually.

Similar to the issues for municipal data from Mexico, for the case of Brazil, one of the main limitations was the access to the individual longitudinal datasets of the voting panel. This was solved by generating a dataset from the data used by Zucco (2013). However, this was not longitudinal data but rather cross-sectional data per electoral period, so analyses were performed cross sectionally at the individual level. In Mexico, there is a nationally representative panel dataset of vote and self-reported vote, in this country a panel data fixed effects model analysis was performed at the individual level.

Regarding clientelism and as discussed in depth in Chapter 3 CCTs, have been considered effective instruments in reducing poverty but also in reducing old clientelist practices (Fox, 2012; Nichter, 2018). However, a large strand of the literature argues that in developing democracies where the socioeconomic circumstances of voters are not ideal, they are more sensitive to the influence of goods provided by political parties. Following the latter, some scholars posit that programmatic policies such as CCTs are better to some extent at containing clientelism, however they do not eradicate it. This is because the role of the client (beneficiary) is no longer passive but the active ingredient of the clientelistic relationship as they are the ones looking for the benefits provided by such party (Piattoni, 2007; Hilgers, 2008; Daieff, 2015; Nichter, 2018). To test such claims, this thesis gathered secondary data and analysed to what extent a relationship between having a CCTs was associated with votes for the incumbent, and whether these programmes were able to prevent clientelism by finding no such association. However, even if results shed some light to the fact that associations seemed more prevalent in Brazil where the program is less rigorously implemented, the data available

is not ideal. To overcome this, and as discussed in the implications of findings, surveys focusing on the effect of the programmes on voting behaviour or a study including qualitative fieldwork in the countries analysed would be necessary.

7.5. Implications of Findings

Findings from this study provide a window of opportunity for policy development in order to avoid the electoral use of the programmes, they also provide insight on voting behaviour theories. This section summarises the implications of findings first, by looking into the design and implementation of CCTs, second regarding the transparency and accuracy on available data focusing on measuring the on the effects of CCTs on voting behaviour and third by presenting implications for voting behaviour theory.

Results from this study highlight that the implementation of CCTs should be done by autonomous institutions in order to avoid the risk of influencing voting behaviour. This would allow the development of specific strategies to ensure that those responsible for the implementation avoid, or at least limit, any relationship with the incumbent government. The congress and political opponents should be vigilant of these relationships at a federal and municipal level in order to avoid clientelistic practices by the incumbent at any of those levels. CCTs, as results from this study suggest, should be designed and implemented as means tested policies with periodic evaluations. They should have budgetary locks in order to avoid the discretionary use of the funds, their discretionary expansion or delivery of goods to a specific section of the population.

These independent institutions should also be in charge of data collection regarding to the social, political and electoral outcomes of the programmes. Data should be open access for the academic community in order to evaluate these effects not only in political matters but also in the socioeconomic and health effects on the targeted population. Preferably, with regards to the collection of reliable data, each of the programs should introduce a survey measuring aggregated and disaggregated levels of data as results from this study suggest that electoral results may be seen in either of or both levels of observation. Results also showed that that coverage matters in terms of electoral support for the incumbent, particularly in Brazil, where municipalities with a higher proportion of beneficiaries had higher vote shares for incumbent

in the long term. Scholars (Menocal, 2001; Marques et al., 2009; Abensur et., Al., 2007; Canêdo-Pinheiro, 2015) have argued that the greater the coverage of the program, the greater the number of votes in favor of the incumbent. While results from Mexico do not show this, it is important to remember the slower increase in the proportion of beneficiaries in this country when compared to Brazil. These surveys targeted to analyse these relationships could shed light on whether the positive effects of the programme expansion decrease if a more rigorous institution existed.

Beyond the policy implications, this study also has theoretical implications with regards to voting behaviour. Prospective, retrospective and sociological theories are not mutually exclusive. It appears that in Mexico individuals' voting behaviour is linked to both rational prospective-retrospective and sociological reasonings with one weighting more when casting their ballot as no pattern was found in the long term. While in Brazil differences between individual and municipal analyses could be related to a sociological theory being present among non-beneficiaries, voting for the incumbent party in municipalities with a higher prevalence of households receiving the program. These theoretical frameworks are almost impossible to test without an individual level panel data analysis in a national representative sample asking specifical questions focusing on the reasons behind the individuals voting choice.

When an individual casts a ballot, he makes both retrospective, prospective, and sociological evaluations. However, the discussion around these theories is diffuse. It would be necessary to have instruments to be able to holistically evaluate the influence of the use of both the political discourse around the CCTs and the influence of the marketing that the incumbent can use to create a much more solid electoral base.

7.6. Future Research

All things considered, and as mentioned throughout the study there are several gaps that should be covered by future research. First, a more detailed study of information from local electoral institutes is needed in order to disentangle the relation between national and local and legislative representation and voting behaviour of CCT beneficiaries. Also, further research is needed on the effect of CCT programs in the "traditional gender gap" on voting behaviour.

In addition, during 2018 both countries had elections, 21 years after the programs started. Studies could focus on finding if those who were born with their family receiving the program have any alliance to the incumbent when their families first received the aid. Such study could suggest whether the effect of CCTs is maintained over long periods of time and passed on between generations. Unfortunately, for the case of the Mexican *Oportunidades* this could not be followed up as the programme was eliminated by the Lopez Obrador government in 2019 and with it an important source of studies on the effect of these programs on both the socio-economic and political aspects was lost.

Further studies are needed focusing on the effects of CCTs at the local and regional level. Hilgers (2008) points out that in regions of the Mexican state of Oaxaca social policies with both redistributive and clientelistic approaches have survived in those regions for two main reasons, one because of the adherence of citizens to local or regional political leaderships and to other side because partisan adherence was generated. That perspective focuses on analysing how, when and in what form a social policy can shape and define our political preferences.

Following this and in relationship with the limitations of this study regarding clientelism, future research in terms of testing whether CCTs helped to erode or to contained clientelism is needed either by conducting field work or by creating a national level survey that could reflect this effect.

Additionally, results from this thesis suggest that the higher proportion of coverage as well as diverse forms of operationalisation may have contrasting results. Future research could usefully focus on investigating the role of these variables in shaping the relationship between CCTs and voting behaviour. Also, a broader research focusing on the role of Governors and, where appropriate, Mayors in the operation of CCTs and their possible manipulation for political purposes at the local level. Such study would shed light on the relevant literature by studying at different levels of incumbency.

7.7. Final Reflections

This work furthers the understanding on the effects of CCTs on voting behaviour. While in general these effects seem to depend on the design and implementation of the programme

within each country, results contrasts depending on the level of observation and time frame analysed. While in Mexico at the individual level, those receiving *Oportunidades* were not more likely to vote for the incumbent when compared to non-recipients in the short and long terms. However, at the municipal level, municipalities with a higher proportion of recipients had a higher vote share towards the incumbent at the short term. Contrastingly, results from Brazil suggest that individuals receiving the program were more likely to vote for the incumbent at the short term, but when looking into municipalities, those with a higher proportion of recipients had a higher vote share for the incumbent longitudinally. This could mean that the benefit seen by the community increases the votes towards the incumbent despite being a recipient or not.

The future of CCTs in Latin America will continue to be central in the implementation of redistributive policies and the fight against poverty. However, and despite indications that the effect of CCTs on poverty reduction has been generally positive, these programs have not been able to reduce social inequality. Indeed, in the particular case of Mexico, *Oportunidades* was unable to significantly reduce social inequality and poverty has increased notably in recent years. This outcome is despite Mexico being a pioneer country in the implementation of CCTs and after having achieved good results on poverty reduction when it was initially implemented.

As mentioned throughout this work, there are many innovations that would help CCTs work efficiently and reduce the risk of political manipulation. One of these relates to the way in which beneficiaries are identified and enrolled. By reducing inclusion errors and increasing coverage, discretionary and political use would be greatly reduced. Paradoxically, although Mexico has not been able to significantly reduce poverty with the use of *Oportunidades*, it seems from the results provided in this thesis that the programme was able (apparently) to break the inertia of the political use of social programmes.

Perhaps the best guarantee of limiting political manipulation of CCTs is to foster the development of political participation amongst the beneficiaries. This with the aim to promote a more effective model of auditing and social control of public resources, seeking to end the old electoral malpractices by promoting greater political participation, civic culture, and a more educated society.

In general, this study has studied the effects of CCTs on electoral behaviour through an analytical lens in order to understand the motivations of citizens to vote for incumbent in the short and long term, starting from the premise that voters make decisions based on the benefits that could be obtained. However, from the results, it seems that citizens may, in some cases, have sociotropic rather than rational motivations when casting their vote. It is necessary to carry out a much broader study, which includes several countries with CCTs in operation and measure the electoral attitudes of their population in order to have elements to understand the logic and motivations of citizens when casting the vote. Unfortunately, in Mexico the CCTs were suppressed by the López Obrador government, seeking to return to the implementation of non-programmatic policies, thereby missing a valuable opportunity to investigate the effects of the institutionalization of social programs. At the same time, in Brazil Bolsonaro´s government announced in late 2020 that a new programme called *Renda Cidada* (citizen rent) will replace *Bolsa Família* in time to come. These two changes will undoubtedly result in the loss of valuable data regarding the effects of these CCTs that where in place for more than 20 years. Hopefully, the new programmes brought by these two governments will consider improving their implementations as well as data collection regarding their social, economic, health and effects on voting behaviour.

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9. APPENDIX

This part of the study provides further estimations and extended results regarding the statistics

9.1. APPENDIX A: COMPARATIVE STUDY OF ELECTORAL SYSTEMS (CSES)

The CSES dataset is comprised of 5 waves, 2002, 2002, 2006, 2010, 2014. This dataset comprises individual level data with demographics, perception of government and democracy, government and political sympathies. One downside is that the study does not follow the same population and the samples are of unequal size between studies. On the other hand, it gives a good idea of the political opinion, of the sample.

For the years 2000 – 2014 the perception of the national economy, the separation between rural and urban populations and the ideological placement are important factors. Unfortunately, the studies do not cover CCT receivership, but education levels that can be used as a proxy. These factors take more significance in the 2010 and 2014 elections where education, ideological placement in the left-right spectrum, the rural/urban population and the perception of the economy favour the incumbent party even though it was widely regarded as responsible for corruption scandals and the economic crisis. Which suggests a relationship between clientelistic policies and voting behaviour.

9.1.1. CSES MEXICO

Table 9.1. Logistic Model Mexico's 2000 Election				
Variables	Categories	PRI	PAN	PRD
Sex	Woman	0.1396	-0.0369	-0.1085
		(-0.107 - 0.387)	(-0.239 - 0.165)	(-0.442 - 0.225)
Age	18-25	0.6349**	-0.1647	0.3497
		(0.239 - 1.031)	(-0.457 - 0.128)	(-0.168 - 0.867)
	25-34	0.5918**	0.0581	0.3174
		(0.179 - 1.005)	(-0.249 - 0.366)	(-0.226 - 0.861)

	35-44	0.6539**	0.124	0.4715
		(0.192 - 1.115)	(-0.234 - 0.482)	(-0.129 - 1.072)
	45-54	0.8085**	-0.1588	0.0539
		(0.279 - 1.338)	(-0.601 - 0.283)	(-0.714 - 0.822)
	55-64	ref	ref	ref
	65+	1.1486***	-0.2304	-0.3731
		(0.57 - 1.727)	(-0.746 - 0.286)	(-1.285 - 0.539)
Income	1st quintile	-0.4865*	0.2229	-0.1927
		(-0.903 - -0.07)	(-0.144 - 0.59)	(-0.727 - 0.342)
	2nd quintile	-0.4687*	0.4469*	-0.421
		(-0.891 - -0.047)	(0.078 - 0.815)	(-1.008 - 0.166)
	3rd quintile	-0.2385	0.2236	-0.2363
		(-0.657 - 0.18)	(-0.147 - 0.594)	(-0.8 - 0.327)
	4th quintile	-0.5134*	0.4011	-0.6804
		(-1.009 - -0.017)	(-0.006 - 0.808)	(-1.364 - 0.004)
	5th quintile	ref	ref	ref
Education	None	-0.3105	0.2839	-0.4494
		(-0.663 - 0.042)	(-0.035 - 0.603)	(-0.938 - 0.04)
	Elementary/lower secondary	-0.3308	0.4093*	-0.3741
		(-0.733 - 0.072)	(0.059 - 0.76)	(-0.928 - 0.179)
	Higher Secondary	-0.3363	0.3369	-0.447
		(-0.769 - 0.096)	(-0.035 - 0.709)	(-1.048 - 0.154)
	University	ref	ref	ref
Ideological placement in the political spectrum	LEFT	-0.3524	0.1388	0.6847
		(-1.708 - 1.004)	(-0.756 - 1.033)	(-0.294 - 1.664)
	2	-0.6407	-0.0193	0.6029
		(-1.979 - 0.698)	(-0.868 - 0.829)	(-0.307 - 1.513)
	3	0.1986	0.5111	-0.5114
		(-0.86 - 1.257)	(-0.221 - 1.243)	(-1.525 - 0.503)
	4	0.1271	0.8068*	-1.0206
		(-0.931 - 1.185)	(0.04 - 1.574)	(-2.312 - 0.271)
	5	0.4416	0.3342	-0.7373*
		(-0.201 - 1.085)	(-0.124 - 0.792)	(-1.341 - -0.133)
	6	0.8674*	0.3646	-1.1933*
		(0.087 - 1.648)	(-0.251 - 0.98)	(-2.177 - -0.21)
	7	-0.1551	0.8725**	-2.0551**
		(-1.016 - 0.705)	(0.297 - 1.448)	(-3.309 - -0.802)
	8	0.5157	0.6686*	-1.1591**
		(-0.195 - 1.226)	(0.143 - 1.194)	(-1.959 - -0.359)
	9	0.8642	0.0317	-0.4304

		(-0.091 - 1.819)	(-0.772 - 0.835)	(-1.48 - 0.619)
	RIGHT	ref	ref	ref
Religion	Catholic	ref	ref	ref
	Protestant	0.4028	-1.1807**	-0.2087
		(-0.26 - 1.066)	(-1.895 - -0.466)	(-1.282 - 0.865)
	OtherChristian	-0.3644	-0.2221	0.8395*
		(-1.112 - 0.383)	(-0.789 - 0.345)	(0.098 - 1.581)
	Jewish	-15.8329	-0.5472	2.1658
		(-6657.649 - 6625.984)	(-3.003 - 1.909)	(-0.29 - 4.621)
	Buddhism	1.211	-13.304	2.3105
		(-1.631 - 4.053)	(-1198.168 - 1171.56)	(-0.565 - 5.185)
	Non-believer	-0.6925*	-0.3225	-0.2998
		(-1.32 - -0.065)	(-0.72 - 0.075)	(-0.978 - 0.379)
	Other	-1.1032	-0.0447	0.6669
		(-3.209 - 1.003)	(-1.283 - 1.194)	(-0.95 - 2.284)
	Don't know	-12.1708	11.6409	-7.3374
		(-1419.189 - 1394.847)	(-539.64 - 562.922)	(-253.716 - 239.041)
	Missing	0.7346	0.3877	-17.0978
		(-0.735 - 2.204)	(-1.048 - 1.823)	(-11900 - 11900)
Rural		0.2736	-0.1655	-0.3341
		(-0.082 - 0.629)	(-0.479 - 0.148)	(-0.806 - 0.138)
Constant		-1.5316***	-1.0943**	-0.9754*
		(-2.349 - -0.714)	(-1.729 - -0.46)	(-1.909 - -0.042)
N		1766	1766	1766
R		0.01698	0.01026	0.0062

* p<0.05, ** p<0.01, *** p< 0.001

Table 9.2. Logistic Model Mexico's 2006 Election

Variables	Categories	PRI	PAN	PRD
Sex	Woman	-0.1018	0.1603	-0.1267
		(-0.386 - 0.183)	(-0.065 - 0.385)	(-0.363 - 0.11)
Age	18-25	0.281	0.3878*	-0.4333*
		(-0.236 - 0.798)	(0.033 - 0.743)	(-0.804 - -0.063)
	25-34	0.5965*	0.2253	-0.2089
		(0.094 - 1.099)	(-0.136 - 0.586)	(-0.574 - 0.156)
	35-44	0.4786	0.283	-0.1702
		(-0.072 - 1.029)	(-0.114 - 0.68)	(-0.574 - 0.233)
	45-54	0.9255**	0.1853	-0.3001
		(0.324 - 1.527)	(-0.289 - 0.66)	(-0.8 - 0.2)
	55-64	ref	ref	ref
	65+	0.9563**	-0.1989	-0.093

		(0.34 - 1.572)	(-0.717 - 0.319)	(-0.597 - 0.411)
income	1st quintile	-0.1499	0.4137**	-0.1089
		(-0.53 - 0.23)	(0.119 - 0.709)	(-0.423 - 0.206)
	2nd quintile	-0.2899	0.2459	-0.2395
		(-0.853 - 0.273)	(-0.163 - 0.655)	(-0.671 - 0.192)
	3rd quintile	-0.2328	0.5484	0.2051
		(-1.139 - 0.674)	(-0.079 - 1.175)	(-0.429 - 0.839)
	4th quintile	-0.5768	0.4726	-0.1769
		(-1.485 - 0.332)	(-0.089 - 1.035)	(-0.738 - 0.384)
	5th quintile	ref	ref	ref
Education	None	-0.0967	0.1196	-0.0469
		(-0.459 - 0.265)	(-0.162 - 0.402)	(-0.353 - 0.259)
	Elementary/lower secondary	-0.3567	-0.0074	0.0847
		(-0.831 - 0.118)	(-0.349 - 0.334)	(-0.265 - 0.435)
	Higher Secondary	-0.6637	0.1531	-0.0138
		(-1.466 - 0.138)	(-0.343 - 0.649)	(-0.519 - 0.491)
	University	ref	ref	ref
Ideological placement in the political spectrum	LEFT	-20.2292	0.5757	-0.2332
		(-30900 - 30900)	(-0.844 - 1.996)	(-1.169 - 0.703)
	2	1.2302*	0.1585	-0.4661
		(0.026 - 2.434)	(-1.481 - 1.798)	(-1.437 - 0.505)
	3	0.6161	0.3742	-0.9438*
		(-0.628 - 1.861)	(-1.038 - 1.787)	(-1.829 - -0.059)
	4	0.5833	-0.3012	-0.5853
		(-0.842 - 2.008)	(-2.452 - 1.849)	(-1.588 - 0.418)
	5	0.3834	1.4328***	-1.578***
		(-0.354 - 1.121)	(0.63 - 2.236)	(-2.099 - -1.057)
	6	0.3032	1.8427***	-2.0232***
		(-0.562 - 1.168)	(0.971 - 2.715)	(-2.712 - -1.334)
	7	0.2582	2.1532***	-1.8652***
		(-0.585 - 1.101)	(1.316 - 2.991)	(-2.501 - -1.23)
	8	0.6484	2.0838***	-1.6966***
		(-0.062 - 1.359)	(1.302 - 2.866)	(-2.215 - -1.178)
	9	0.2033	2.4394***	-1.6497***
		(-0.577 - 0.983)	(1.634 - 3.244)	(-2.212 - -1.087)
	RIGHT	ref	ref	ref
Religion	Catholic	ref	ref	ref
	Protestant	0.3173	-0.7193**	-0.0971
		(-0.231 - 0.866)	(-1.26 - -0.178)	(-0.607 - 0.413)
	Other Christian	-0.2383	-0.2706	0.6698*
		(-1.127 - 0.651)	(-0.931 - 0.389)	(0.066 - 1.273)
	Non-believer	0.355	-0.5669*	-0.1702

		(-0.225 - 0.935)	(-1.053 - -0.081)	(-0.654 - 0.313)
	Agnostic	-9.3425	-12.0782	-9.3736
		(-435.825 - 417.14)	(-663.2 - 639.044)	(-231.535 - 212.788)
Rural		-0.5162**	-0.0953	0.3023*
		(-0.827 - -0.205)	(-0.361 - 0.171)	(0.01 - 0.595)
Constant		-1.8867***	-2.8752***	0.74*
		(-2.692 - -1.081)	(-3.707 - -2.043)	(0.159 - 1.321)
N		1591	1591	1591
R		0.05485	0.0853	0.0716

* p<0.05, ** p<0.01, *** p< 0.001

Table 9.3. Logistic Model Mexico's 2012 Election				
Variables	Category	PRI	PAN	PRD
Sex	Woman	-0.0439	0.3751**	-0.0636
		(-0.224 - 0.137)	(0.145 - 0.605)	(-0.288 - 0.161)
Age	18-25	0.1552	-0.0351	0.3429
		(-0.141 - 0.451)	(-0.405 - 0.334)	(-0.035 - 0.72)
	25-34	0.2759	0.2813	0.1566
		(-0.025 - 0.577)	(-0.085 - 0.647)	(-0.235 - 0.548)
	35-44	0.1962	0.0335	0.4203*
		(-0.113 - 0.505)	(-0.353 - 0.42)	(0.024 - 0.817)
	45-54	0.2174	0.2504	0.3577
		(-0.129 - 0.564)	(-0.184 - 0.685)	(-0.085 - 0.801)
	55-64	ref	ref	ref
	65+	-0.0929	0.1539	0.7703**
		(-0.467 - 0.281)	(-0.315 - 0.623)	(0.309 - 1.232)
Income	1st quintile	0.1372	0.1115	-0.1522
		(-0.171 - 0.445)	(-0.303 - 0.526)	(-0.544 - 0.24)
	2nd quintile	0.0564	0.0684	-0.0704
		(-0.246 - 0.358)	(-0.337 - 0.474)	(-0.449 - 0.308)
	3rd quintile	0.2004	0.1858	-0.0616
		(-0.15 - 0.551)	(-0.263 - 0.634)	(-0.516 - 0.392)
	4th quintile	-0.039	0.2528	0.1159
		(-0.381 - 0.303)	(-0.181 - 0.687)	(-0.308 - 0.54)
	5th quintile	ref	ref	ref
Education	None	0.022	0.3554	0.184
		(-0.263 - 0.307)	(-0.037 - 0.748)	(-0.181 - 0.549)
	Elementary/lower secondary	-0.1634	0.5146*	0.4222
		(-0.533 - 0.206)	(0.036 - 0.993)	(-0.043 - 0.887)

	Higher Secondary	-0.3707	0.6999**	0.0797
		(-0.779 - 0.038)	(0.193 - 1.207)	(-0.424 - 0.584)
	Universitary	ref	ref	ref
Ideological placement on the political spectrum	LEFT	-0.4408	0.5572	0.0758
		(-1.652 - 0.77)	(-0.693 - 1.807)	(-0.649 - 0.801)
	2	-0.1611	-0.5018	0.3613
		(-1.321 - 0.998)	(-2.06 - 1.057)	(-0.397 - 1.12)
	3	0.8725	-0.9578	-0.245
		(-0.171 - 1.916)	(-2.714 - 0.798)	(-1.021 - 0.531)
	4	1.073*	-0.1205	-0.2546
		(0.05 - 2.096)	(-1.584 - 1.343)	(-1.036 - 0.527)
	5	1.1981**	0.8115	-1.7727***
		(0.366 - 2.03)	(-0.256 - 1.879)	(-2.367 - -1.178)
	6	1.8062***	0.7253	-1.7787***
		(0.956 - 2.656)	(-0.38 - 1.831)	(-2.422 - -1.135)
	7	1.8644***	0.8012	-2.1188***
		(1.019 - 2.71)	(-0.292 - 1.894)	(-2.773 - -1.464)
	8	2.0415***	1.2749*	-2.5369***
		(1.211 - 2.872)	(0.211 - 2.339)	(-3.183 - -1.891)
	9	2.0527***	1.2557*	-2.7625***
		(1.207 - 2.898)	(0.178 - 2.333)	(-3.479 - -2.046)
	RIGHT	ref	ref	ref
Religion	Protestant	-0.0763	-1.3982	-0.1112
		(-1.067 - 0.915)	(-3.458 - 0.662)	(-1.447 - 1.225)
	Other Christian	-0.0525	-0.1956	0.0074
		(-0.481 - 0.376)	(-0.729 - 0.338)	(-0.547 - 0.561)
	Non-believer	-0.6032**	-0.083	-0.2095
		(-1.042 - -0.164)	(-0.59 - 0.424)	(-0.734 - 0.315)
	Other	-0.4417	-0.9172	0.3452
		(-1.276 - 0.393)	(-2.166 - 0.331)	(-0.494 - 1.184)
	Missing	-0.4604	0.0222	-0.1181
		(-1.224 - 0.303)	(-0.836 - 0.88)	(-1.044 - 0.808)
Rural	Yes	-0.0994	-0.2292	0.0675
		(-0.418 - 0.219)	(-0.671 - 0.212)	(-0.347 - 0.482)
Constant		-2.1773***	-2.4088***	-0.2941
		(-3.109 - -1.246)	(-3.604 - -1.214)	(-1.112 - 0.524)
N		2400	2400	2400
R		0.0697	0.1081	0.1447

* p<0.05, ** p<0.01, *** p< 0.001

9.1.2. CSES BRAZIL

Table 9.4. Logistic Model Brazil's 2002 Election						
Variable	Categories	PT	PSDB	OTHER	PT 2nd	PSDB 2nd
Sex	Woman	-0.1999*	0.2512*	0.0537	-0.197*	0.3012**
		(-0.372 - -0.028)	(0.031 - 0.471)	(-0.122 - 0.229)	(-0.366 - -0.028)	(0.102 - 0.5)
Age	18-25	-0.00004209	0.3757*	-0.2031	0.1143	0.1527
		(-0.247 - 0.247)	(0.041 - 0.711)	(-0.454 - 0.048)	(-0.127 - 0.356)	(-0.144 - 0.449)
	25-34	0.1365	0.2534	-0.2901*	0.3844**	0.2648
		(-0.128 - 0.401)	(-0.107 - 0.614)	(-0.562 - -0.018)	(0.123 - 0.646)	(-0.046 - 0.576)
	35-44	0.0862	0.4336*	-0.3575*	0.2443	0.2826
		(-0.206 - 0.379)	(0.056 - 0.811)	(-0.661 - -0.054)	(-0.043 - 0.532)	(-0.056 - 0.621)
	45-54	-0.0454	0.5573**	-0.2946	0.176	0.5782**
		(-0.38 - 0.289)	(0.14 - 0.975)	(-0.636 - 0.047)	(-0.149 - 0.501)	(0.207 - 0.949)
	55-64	ref	ref	ref	ref	ref
	65+	-0.7472***	0.5323*	0.3656*	-0.6046**	0.3645
		(-1.111 - -0.383)	(0.111 - 0.954)	(0.027 - 0.704)	(-0.946 - -0.263)	(-0.02 - 0.749)
Income	1st quintile	0.2152	0.1146	-0.2907*	0.1374	0.2285
		(-0.071 - 0.501)	(-0.236 - 0.466)	(-0.579 - -0.003)	(-0.14 - 0.415)	(-0.098 - 0.555)
	2nd quintile	0.2638	-0.1466	-0.1845	0.1325	-0.1039
		(-0.025 - 0.553)	(-0.521 - 0.228)	(-0.475 - 0.106)	(-0.149 - 0.414)	(-0.45 - 0.243)
	3rd quintile	0.2497	-0.055	-0.2267	0.0587	0.1982
		(-0.048 - 0.547)	(-0.437 - 0.327)	(-0.527 - 0.074)	(-0.232 - 0.349)	(-0.146 - 0.543)

	4th quintile	-0.0094	0.5005*	-0.3201	-0.3036	0.757***
		(-0.34 - 0.321)	(0.1 - 0.901)	(-0.653 - 0.013)	(-0.625 - 0.017)	(0.392 - 1.122)
	5th quintile	ref	ref	ref	ref	ref
Education	None	-0.0772	-0.2477	0.2109	0.0212	0.0489
		(-0.328 - 0.173)	(-0.594 - 0.099)	(-0.04 - 0.462)	(-0.223 - 0.265)	(-0.247 - 0.345)
	Elementary/lower secondary	0.1268	-0.053	-0.1016	0.1276	0.1708
		(-0.12 - 0.374)	(-0.372 - 0.266)	(-0.356 - 0.153)	(-0.116 - 0.371)	(-0.111 - 0.453)
	Higher Secondary	0.1405	0.0123	-0.1933	0.4231*	-0.1142
		(-0.25 - 0.531)	(-0.453 - 0.478)	(-0.605 - 0.218)	(0.034 - 0.812)	(-0.55 - 0.321)
	Universitary	ref	ref	ref	ref	ref
Ideological placement on the political spectrum	LEFT	-0.322	0.3539	0.1903	-0.2541	0.4888
		(-0.837 - 0.193)	(-0.423 - 1.131)	(-0.358 - 0.738)	(-0.785 - 0.276)	(-0.192 - 1.17)
	2	-0.0205	-0.2396	0.1366	-0.0322	0.0201
		(-0.501 - 0.46)	(-1.065 - 0.586)	(-0.375 - 0.648)	(-0.535 - 0.47)	(-0.665 - 0.705)
	3	-0.1551	0.5544	-0.0986	-0.1086	0.4499
		(-0.599 - 0.289)	(-0.07 - 1.179)	(-0.583 - 0.386)	(-0.566 - 0.349)	(-0.135 - 1.035)
	4	-0.6067**	0.8239**	0.2247	-0.4451*	0.8725**
		(-1.046 - -0.167)	(0.233 - 1.415)	(-0.243 - 0.692)	(-0.888 - -0.003)	(0.331 - 1.413)
	5	-0.7705***	0.809**	0.411*	-0.6649***	0.8794***
		(-1.094 - -0.447)	(0.341 - 1.277)	(0.074 - 0.748)	(-0.991 - -0.339)	(0.456 - 1.303)
	6	-1.1763***	1.3938***	0.3351	-0.7954**	1.338***
		(-1.678 - -0.675)	(0.806 - 1.981)	(-0.17 - 0.84)	(-1.273 - -0.318)	(0.784 - 1.892)
	7	-0.7029**	0.7684*	0.376	-0.4974*	0.7678**
		(-1.167 - -0.239)	(0.142 - 1.395)	(-0.102 - 0.854)	(-0.957 - -0.038)	(0.197 - 1.339)
	8	-1.1851***	1.1534***	0.5548*	-0.8286***	1.2146***

		(-1.624 - -0.746)	(0.611 - 1.696)	(0.123 - 0.987)	(-1.247 - -0.411)	(0.717 - 1.712)
	9	-0.6285**	0.9745**	0.1248	-0.7231**	1.1264***
		(-1.093 - -0.164)	(0.381 - 1.568)	(-0.37 - 0.619)	(-1.185 - -0.261)	(0.585 - 1.668)
	RIGHT	ref	ref	ref	ref	ref
Religion	Catholic	ref	ref	ref	ref	ref
	Protestant	-1.0517***	-0.904**	1.4311***	-0.2243	-0.0408
		(-1.516 - -0.587)	(-1.555 - -0.253)	(1.009 - 1.853)	(-0.629 - 0.18)	(-0.507 - 0.426)
	Other Christian	-0.9976***	-0.648**	1.2545***	-0.4946***	0.1252
		(-1.265 - -0.73)	(-1.015 - -0.281)	(1.007 - 1.502)	(-0.737 - -0.252)	(-0.153 - 0.403)
	Jewish	-1.0349	-28.7643	1.8049*	-0.6982	-23.6353
		(-2.657 - 0.587)	(-2380000 - 2380000)	(0.201 - 3.409)	(-2.138 - 0.742)	(-148000 - 148000)
	Non-believer	-25.712	1.2532	0.8612	-1.2416	0.8142
		(-400000 - 399000)	(-0.733 - 3.24)	(-1.115 - 2.837)	(-3.521 - 1.038)	(-1.176 - 2.804)
	Agnostic	-0.4384**	-0.4507*	0.6917***	-0.2298	-0.5529*
		(-0.75 - -0.126)	(-0.9 - -0.002)	(0.383 - 1)	(-0.536 - 0.076)	(-0.975 - -0.131)
	Other	0.209	-0.0694	-0.1881	0.069	-0.2245
		(-0.196 - 0.614)	(-0.562 - 0.423)	(-0.631 - 0.254)	(-0.338 - 0.476)	(-0.696 - 0.247)
Rural		0.2287*	-0.6048***	0.2131	0.2202	-0.4387**
		(0.001 - 0.456)	(-0.873 - -0.336)	(-0.023 - 0.45)	(-0.002 - 0.443)	(-0.687 - -0.19)
Constant		0.3833	-2.0692***	-1.0282***	0.6287**	-2.204***
		(-0.012 - 0.779)	(-2.623 - -1.516)	(-1.437 - -0.619)	(0.235 - 1.022)	(-2.709 - -1.699)
N		2514	2514	2514	2514	2514
R		0.0277	0.0669	0.0744	0.0462	0.0576

* p<0.05, ** p<0.01, *** p< 0.001

Table 9.5. Logistic Model Brazil's 2006 Election						
		PT	PSDB	OTHER	PT 2nd	PSDB 2nd
Sex	Woman	-0.3482*	0.2364	0.1099	-0.3123*	0.4115*
		(-0.622 - -0.074)	(-0.09 - 0.563)	(-0.208 - 0.428)	(-0.588 - -0.037)	(0.09 - 0.733)
Age	18-25	0.596**	-0.2663	-0.649**	0.9102***	-0.224
		(0.202 - 0.99)	(-0.888 - 0.355)	(-1.096 - -0.202)	(0.511 - 1.309)	(-0.851 - 0.403)
	25-34	0.8413***	-0.0944	-0.9291***	0.9968***	-0.455
		(0.429 - 1.254)	(-0.716 - 0.527)	(-1.41 - -0.448)	(0.584 - 1.409)	(-1.104 - 0.194)
	35-44	0.5026*	-0.4685	-0.7148**	0.6125**	-0.3363
		(0.043 - 0.962)	(-1.101 - 0.164)	(-1.244 - -0.186)	(0.154 - 1.071)	(-0.974 - 0.301)
	45-54	0.2986	-0.3098	-0.9347**	0.6013*	0.0232
		(-0.232 - 0.83)	(-0.968 - 0.349)	(-1.579 - -0.29)	(0.068 - 1.135)	(-0.631 - 0.677)
	55-64	ref	ref	ref	ref	ref
	65+	-0.3583	-0.4088	0.1352	-0.072	0.0901
		(-0.945 - 0.228)	(-1.178 - 0.361)	(-0.49 - 0.761)	(-0.657 - 0.513)	(-0.652 - 0.832)
Income	1st quintile	0.092	-0.1946	-0.5723	0.0962	-0.1232
		(-0.498 - 0.682)	(-0.974 - 0.585)	(-1.297 - 0.152)	(-0.501 - 0.693)	(-0.873 - 0.626)
	2nd quintile	-0.2342	-0.2909	-0.0008	-0.3753	-0.5124
		(-0.84 - 0.372)	(-1.089 - 0.507)	(-0.7 - 0.698)	(-0.986 - 0.236)	(-1.323 - 0.298)
	3rd quintile	-0.4502	0.383	0.1944	-0.4991	-0.0185
		(-1.092 - 0.191)	(-0.329 - 1.095)	(-0.538 - 0.926)	(-1.147 - 0.148)	(-0.741 - 0.704)
	4th quintile	-0.2216	0.144	0.0461	-0.3993	0.4238
		(-0.692 - 0.249)	(-0.573 - 0.861)	(-0.485 - 0.578)	(-0.876 - 0.077)	(-0.261 - 1.108)
	5th quintile	ref	ref	ref	ref	ref

Education	None	-0.7306***	0.0612	0.4492	-0.6258**	-0.7264
		(-1.131 - -0.33)	(-0.526 - 0.649)	(-0.013 - 0.912)	(-1.023 - -0.228)	(-1.614 - 0.161)
	Elementary/lower secondary	-0.802**	-0.4866	-0.1148	-0.5391*	-0.1873
		(-1.282 - -0.322)	(-1.354 - 0.38)	(-0.687 - 0.457)	(-1.018 - -0.061)	(-0.972 - 0.598)
	Higher Secondary	-1.7224***	-0.4209	-0.009	-1.5692***	0.3378
		(-2.533 - -0.912)	(-1.197 - 0.356)	(-0.978 - 0.96)	(-2.369 - -0.77)	(-0.461 - 1.137)
	Universitary	ref	ref	ref	ref	ref
Ideological placement on the political spectrum	LEFT	2.0867	-0.0173	-0.6352	0.4368	0.0167
		(-0.174 - 4.348)	(-0.809 - 0.775)	(-2.944 - 1.673)	(-1.201 - 2.075)	(-0.943 - 0.977)
	2	0.4758	0.2878	0.1347	0.2353	-0.137
		(-0.812 - 1.764)	(-0.654 - 1.23)	(-1.318 - 1.587)	(-1.08 - 1.551)	(-1.698 - 1.424)
	3	-0.9188	0.4122	0.4775	-1.1943	0.4257
		(-2.099 - 0.262)	(-1.043 - 1.868)	(-0.921 - 1.876)	(-2.4 - 0.011)	(-0.69 - 1.541)
	4	0.1709	-0.8337	0.4517	-0.4865	0.6089
		(-0.999 - 1.341)	(-2.394 - 0.727)	(-0.872 - 1.776)	(-1.647 - 0.674)	(-0.432 - 1.649)
	5	-0.4528	0.7143	0.3205	-0.6289	-0.6111
		(-1.25 - 0.344)	(-0.341 - 1.77)	(-0.658 - 1.299)	(-1.46 - 0.203)	(-1.877 - 0.655)
	6	-0.7275	0.3367	0.3646	-0.9565	-0.1767
		(-1.701 - 0.246)	(-0.717 - 1.39)	(-0.822 - 1.551)	(-1.962 - 0.049)	(-0.797 - 0.443)
	7	-0.5386	0.0555	0.0378	-1.2003*	-0.5965
		(-1.533 - 0.456)	(-0.572 - 0.683)	(-1.199 - 1.275)	(-2.225 - -0.176)	(-1.626 - 0.432)
	8	-0.8051	0.0442	0.4221	-1.1943*	0.689
		(-1.72 - 0.109)	(-0.876 - 0.965)	(-0.701 - 1.545)	(-2.142 - -0.247)	(-0.145 - 1.523)
	9	-0.1599	0.4929	0.3698	-0.604	0.527

		(-1.15 - 0.831)	(-0.364 - 1.35)	(-0.801 - 1.54)	(-1.617 - 0.41)	(-0.224 - 1.278)
	RIGHT	ref	ref	ref	ref	ref
Religion	Catholic	ref	ref	ref	ref	ref
	Protestant	-0.4187*	-0.0491	0.4229*	-0.4517*	0.2071
		(-0.764 - -0.073)	(-0.796 - 0.698)	(0.031 - 0.815)	(-0.801 - -0.102)	(-0.195 - 0.609)
	Other Christian	-0.0429	-0.1913	-0.3148	0.4075	-0.3381
		(-1.021 - 0.936)	(-1.458 - 1.075)	(-1.598 - 0.969)	(-0.631 - 1.446)	(-1.632 - 0.956)
	5	8.5499	0.0734	-8.8606	8.9178	0.2782
		(-248.909 - 266.009)	(-0.346 - 0.493)	(-309.485 - 291.763)	(-263.353 - 281.189)	(-5.65 - 6.207)
	Islam	-19.2271	-0.8667	24.0315	-15.97	0.058
		(-19600 - 19500)	(-2.5 - 0.766)	(-114000 - 114000)	(-3787.143 - 3755.203)	(-5.063 - 5.179)
	Buddhist	-25.1579	0.2233	28.8245	-0.4887	0.1682
		(-256000 - 256000)	(-4.206 - 4.652)	(-1070000 - 1070000)	(-3.625 - 2.648)	(-3.561 - 3.897)
	Ethnoreligion	-0.3857	0.1494	0.7396	-0.25	-0.0596
		(-1.262 - 0.49)	(-4.248 - 4.547)	(-0.211 - 1.69)	(-1.128 - 0.628)	(-1.089 - 0.97)
	12	-0.8259***	0.3855	0.658**	-0.7634**	0.4678
		(-1.284 - -0.368)	(-0.123 - 0.894)	(0.173 - 1.143)	(-1.222 - -0.305)	(-0.036 - 0.972)
Rural		-0.1696	0.1204	-0.1206	-0.2564	0.0662
		(-0.557 - 0.217)	(-0.358 - 0.599)	(-0.563 - 0.322)	(-0.646 - 0.134)	(-0.403 - 0.535)
Constant		1.5714**	-1.2322*	-1.5048*	1.6565**	-1.4115*
		(0.552 - 2.591)	(-2.367 - -0.097)	(-2.703 - -0.306)	(0.611 - 2.702)	(-2.549 - -0.274)
N		1000	1000	1000	1000	1000
R		0.0857	0.0349	0.0771	0.0899	0.0553

* p<0.05, ** p<0.01, *** p< 0.001

Table 9.6. Logistic Model Brazil's 2010 Election						
		PT	PSDB	OTHER	PT 2nd	PSDB 2nd
Sex	Woman	-0.1699	0.1452	0.07	-0.0491	0.1417
		(-0.36 - 0.021)	(-0.065 - 0.356)	(-0.143 - 0.284)	(-0.237 - 0.139)	(-0.056 - 0.339)
Age	18-25	0.1449	-0.0718	-0.1101	0.1087	-0.0563
		(-0.152 - 0.441)	(-0.396 - 0.252)	(-0.431 - 0.211)	(-0.182 - 0.399)	(-0.36 - 0.247)
	25-34	0.1624	-0.0747	-0.1235	0.0922	-0.0639
		(-0.156 - 0.48)	(-0.423 - 0.274)	(-0.47 - 0.223)	(-0.22 - 0.404)	(-0.391 - 0.263)
	35-44	0.2701	-0.1935	-0.1437	0.1315	-0.0797
		(-0.066 - 0.606)	(-0.569 - 0.182)	(-0.518 - 0.23)	(-0.202 - 0.465)	(-0.43 - 0.271)
	45-54	0.071	0.1738	-0.2929	-0.0052	0.2642
		(-0.288 - 0.43)	(-0.213 - 0.56)	(-0.706 - 0.12)	(-0.358 - 0.348)	(-0.102 - 0.63)
	55-64	ref	ref	ref	ref	ref
	65+	16.4299	-9.1643	-7.9722	17.5659	-14.9704
		(-6806.896 - 6839.756)	(-227.051 - 208.723)	(-279.891 - 263.946)	(-12900 - 13000)	(-3556.947 - 3527.006)
Income	1st quintile	-0.312*	0.2414	0.2416	-0.2915*	0.1729
		(-0.598 - -0.026)	(-0.075 - 0.558)	(-0.116 - 0.599)	(-0.578 - -0.005)	(-0.13 - 0.476)
	2nd quintile	-0.4909**	-0.0145	0.6847***	-0.3876*	0.2212
		(-0.805 - -0.176)	(-0.371 - 0.342)	(0.315 - 1.054)	(-0.7 - -0.075)	(-0.109 - 0.552)
	3rd quintile	-0.4454**	0.375*	0.2843	-0.3685*	0.3264
		(-0.763 - -0.128)	(0.024 - 0.726)	(-0.093 - 0.662)	(-0.684 - -0.053)	(-0.007 - 0.659)
	4th quintile	-0.4351*	0.329	0.3238	-0.4863**	0.4784**
		(-0.781 - -0.089)	(-0.054 - 0.712)	(-0.079 - 0.727)	(-0.83 - -0.143)	(0.119 - 0.838)
	5th quintile	ref	ref	ref	ref	ref
Education	None	-0.5678***	0.5427***	0.1889	-0.4758**	0.6364***

		(-0.847 - -0.289)	(0.243 - 0.842)	(-0.137 - 0.514)	(-0.753 - -0.199)	(0.348 - 0.924)
	Elementary/lower secondary	-0.6102***	-0.054	0.8021***	-0.3607**	0.287*
		(-0.869 - -0.351)	(-0.349 - 0.241)	(0.512 - 1.092)	(-0.618 - -0.104)	(0.014 - 0.56)
	Higher Secondary	-1.0193***	0.1059	1.0609***	-0.714**	0.638**
		(-1.482 - -0.557)	(-0.389 - 0.601)	(0.602 - 1.52)	(-1.155 - -0.273)	(0.187 - 1.089)
	Universitary	ref	ref	ref	ref	ref
Ideological placement on the political spectrum	LEFT	0.1689	-0.5542	0.1556	-0.8489	0.3131
		(-0.74 - 1.078)	(-1.889 - 0.781)	(-0.863 - 1.174)	(-1.755 - 0.057)	(-0.754 - 1.381)
	2	-0.6307	0.0199	0.7148	-0.6236	0.6605
		(-1.466 - 0.205)	(-1.032 - 1.071)	(-0.157 - 1.587)	(-1.464 - 0.216)	(-0.263 - 1.584)
	3	0.619	-1.2769	-0.11	0.5062	-0.7381
		(-0.107 - 1.345)	(-2.565 - 0.011)	(-0.908 - 0.688)	(-0.321 - 1.333)	(-1.804 - 0.327)
	4	-0.5779	0.0923	0.5766	-0.5979	0.444
		(-1.337 - 0.181)	(-0.898 - 1.082)	(-0.217 - 1.37)	(-1.373 - 0.177)	(-0.455 - 1.343)
	5	-0.8149**	0.7719*	0.3055	-1.0685***	1.0836***
		(-1.317 - -0.313)	(0.152 - 1.392)	(-0.246 - 0.857)	(-1.597 - -0.54)	(0.483 - 1.684)
	6	-1.1842**	0.7191	0.7247*	-1.5551***	1.4235***
		(-1.879 - -0.49)	(-0.067 - 1.505)	(0.021 - 1.429)	(-2.246 - -0.864)	(0.686 - 2.161)
	7	-1.0321**	1.0755**	0.2499	-1.4698***	1.2092**
		(-1.672 - -0.393)	(0.344 - 1.807)	(-0.449 - 0.949)	(-2.124 - -0.816)	(0.496 - 1.923)
	8	-0.6867*	1.1981***	-0.3701	-1.1414***	1.4846***
		(-1.24 - -0.133)	(0.538 - 1.858)	(-1.022 - 0.282)	(-1.72 - -0.563)	(0.841 - 2.128)
	9	-1.0288**	0.856*	0.5018	-1.2862***	1.2661***
		(-1.65 - -0.407)	(0.134 - 1.578)	(-0.172 - 1.176)	(-1.92 - -0.652)	(0.569 - 1.963)
	RIGHT	ref	ref	ref	ref	ref

Religion	Catholic	ref	ref	ref	ref	ref
	Protestant	-0.4686***	-0.1878	0.7419***	-0.3264**	0.1427
		(-0.705 - -0.232)	(-0.446 - 0.07)	(0.491 - 0.993)	(-0.556 - -0.097)	(-0.094 - 0.38)
	Other Christian	-0.1151	-0.6529	0.7003	0.0632	-0.4869
		(-0.92 - 0.69)	(-1.658 - 0.352)	(-0.144 - 1.545)	(-0.735 - 0.862)	(-1.381 - 0.407)
	Jewish	34.3203	-13.5972	-26.4647	35.0549	-21.0421
		(-17000000 - 17000000)	(-1442.782 - 1415.588)	(-755000 - 755000)	(-55600000 - 55600000)	(-45500 - 45500)
	Buddhist	-0.918	-14.9298	2.402*	-0.2841	-0.5495
		(-3.202 - 1.366)	(-2555.21 - 2525.35)	(0.079 - 4.725)	(-2.281 - 1.713)	(-2.859 - 1.76)
	Ethnoreligions	-0.2133	-0.2678	0.5028*	-0.2145	-0.2406
		(-0.656 - 0.23)	(-0.781 - 0.245)	(0.044 - 0.961)	(-0.648 - 0.219)	(-0.712 - 0.231)
	Non-Believer	-0.162	-0.2583	0.4569*	-0.0914	-0.131
		(-0.49 - 0.166)	(-0.641 - 0.124)	(0.1 - 0.813)	(-0.418 - 0.235)	(-0.483 - 0.221)
	Agnostic	-8.7806	12.1436	-18.1572	-11.8484	14.2106
		(-301.136 - 283.575)	(-654.504 - 678.791)	(-20900 - 20800)	(-1131.726 - 1108.029)	(-2522.536 - 2550.957)
	DK	0.0834	0.5481	-14.5218	-0.0441	0.2986
		(-2.724 - 2.891)	(-2.272 - 3.368)	(-4501.181 - 4472.137)	(-2.85 - 2.762)	(-2.51 - 3.107)
Rural		-0.1409	-0.1866	0.4378**	-0.1537	-0.1356
		(-0.408 - 0.126)	(-0.476 - 0.103)	(0.119 - 0.757)	(-0.419 - 0.112)	(-0.411 - 0.14)
Constant		1.3695***	-1.7187***	-2.5001***	1.8142***	-2.1092***
		(0.805 - 1.934)	(-2.404 - -1.033)	(-3.16 - -1.84)	(1.222 - 2.407)	(-2.774 - -1.445)
N		2000	2000	2000	2000	2000
R		0.0616	0.0458	0.0878	0.0484	0.0446

* p<0.05, ** p<0.01, *** p< 0.001

Table 9.7. Logistic Model Brazil's 2014 Election						
		PT	PSDB	OTHER	PT 2nd	PSDB 2nd
Intercept		1.6999***	-2.599***	-1.8491***	1.6055***	-2.4852***
		(1.126 - 2.273)	(-3.244 - -1.954)	(-2.457 - -1.241)	(1.039 - 2.172)	(-3.094 - -1.877)
Sex	Woman	-0.0721	0.0412	0.0563	0.0127	0.1079
		(-0.228 - 0.084)	(-0.124 - 0.207)	(-0.11 - 0.223)	(-0.14 - 0.166)	(-0.052 - 0.267)
Education	18-25	0	0	0	0	0
		0	0	0	0	0
	25-34	0.1943	-0.2017	-0.0287	0.2718*	-0.2281
		(-0.052 - 0.44)	(-0.461 - 0.058)	(-0.284 - 0.227)	(0.031 - 0.513)	(-0.478 - 0.022)
	35-44	0.1043	-0.1452	0.0234	0.1874	-0.1738
		(-0.154 - 0.363)	(-0.417 - 0.127)	(-0.245 - 0.292)	(-0.065 - 0.44)	(-0.436 - 0.088)
	45-54	0.0656	0.0741	-0.1647	0.1088	0.1631
		(-0.204 - 0.335)	(-0.205 - 0.353)	(-0.449 - 0.12)	(-0.155 - 0.372)	(-0.107 - 0.433)
	55-64	ref	ref	ref	ref	ref
	65+	-0.2177	0.0314	0.2172	-0.2464	0.2592
		(-0.546 - 0.11)	(-0.317 - 0.38)	(-0.124 - 0.558)	(-0.569 - 0.076)	(-0.074 - 0.593)
Income	1st quintile	-0.4877***	0.3677*	0.2868*	-0.4493**	0.4453**
		(-0.746 - -0.229)	(0.061 - 0.674)	(0.001 - 0.573)	(-0.708 - -0.191)	(0.158 - 0.733)
	2nd quintile	-0.6755***	0.5005**	0.3724*	-0.6572***	0.5583**
		(-0.981 - -0.371)	(0.155 - 0.846)	(0.043 - 0.702)	(-0.96 - -0.355)	(0.231 - 0.886)
	3rd quintile	-0.7838***	0.8252***	0.1366	-0.7067***	0.879***
		(-1.082 - -0.486)	(0.5 - 1.151)	(-0.191 - 0.464)	(-1 - -0.413)	(0.567 - 1.191)
	4th quintile	-0.8688***	0.8895***	0.1303	-0.7695***	0.8697***
		(-1.157 - -0.58)	(0.577 - 1.202)	(-0.18 - 0.441)	(-1.052 - -0.487)	(0.57 - 1.169)

	5th quintile	ref	ref	ref	ref	ref
Education	None	-0.4686**	0.3367*	0.2936	-0.3893**	0.4429**
		(-0.742 - -0.196)	(0.017 - 0.657)	(-0.019 - 0.606)	(-0.663 - -0.116)	(0.137 - 0.749)
	Elementary/lower secondary	-0.7965***	0.6203***	0.369*	-0.6122***	0.9049***
		(-1.098 - -0.495)	(0.276 - 0.964)	(0.03 - 0.708)	(-0.912 - -0.312)	(0.575 - 1.235)
	Higher Secondary	-0.9842***	0.6399**	0.5182*	-0.7945***	0.9415***
		(-1.371 - -0.597)	(0.233 - 1.047)	(0.108 - 0.928)	(-1.171 - -0.418)	(0.547 - 1.336)
	Universitary	ref	ref	ref	ref	ref
Ideological placement on the political spectrum	LEFT	0.1947	0.0084	-0.2228	0.2432	0.2113
		(-0.756 - 1.145)	(-1.048 - 1.065)	(-1.257 - 0.811)	(-0.701 - 1.187)	(-0.738 - 1.16)
	2	-0.408	0.1611	0.2919	0.54	-0.2864
		(-1.218 - 0.403)	(-0.73 - 1.053)	(-0.508 - 1.091)	(-0.264 - 1.344)	(-1.144 - 0.571)
	3	0.2385	-0.1684	-0.1445	0.4639	-0.8256*
		(-0.413 - 0.89)	(-0.917 - 0.58)	(-0.841 - 0.552)	(-0.193 - 1.121)	(-1.573 - -0.078)
	4	-0.3708	0.1282	0.2701	-0.1515	-0.1374
		(-0.994 - 0.253)	(-0.541 - 0.797)	(-0.35 - 0.89)	(-0.758 - 0.455)	(-0.768 - 0.494)
	5	-0.4766*	0.2815	0.2573	-0.2671	0.2083
		(-0.943 - -0.011)	(-0.217 - 0.78)	(-0.209 - 0.724)	(-0.722 - 0.187)	(-0.254 - 0.671)
	6	-0.3315	0.7971**	-0.476	-0.2536	0.4186
		(-0.824 - 0.161)	(0.277 - 1.318)	(-1 - 0.048)	(-0.737 - 0.229)	(-0.073 - 0.91)
	7	-0.2417	0.6014*	-0.3364	-0.08	0.287
		(-0.74 - 0.256)	(0.076 - 1.127)	(-0.857 - 0.184)	(-0.567 - 0.407)	(-0.208 - 0.782)
	8	-0.2354	0.7435**	-0.5418*	-0.1422	0.3314
		(-0.732 - 0.261)	(0.22 - 1.268)	(-1.076 - -0.008)	(-0.629 - 0.344)	(-0.164 - 0.827)
	9	-0.3892	0.9807**	-0.6694*	-0.4238	0.6975*

		(-0.974 - 0.196)	(0.382 - 1.579)	(-1.323 - -0.016)	(-0.998 - 0.151)	(0.122 - 1.273)
	Right	ref	ref	ref	ref	ref
Religion	Catholic	ref	ref	ref	ref	ref
	Protestant	-0.3838***	-0.2357*	0.6498***	-0.2897**	0.119
		(-0.567 - -0.2)	(-0.432 - -0.039)	(0.463 - 0.837)	(-0.469 - -0.111)	(-0.066 - 0.304)
	Other Christian	-1.1832	-2.0597	2.1001***	-0.337	-1.5062
		(-2.509 - 0.142)	(-4.171 - 0.051)	(0.927 - 3.273)	(-1.438 - 0.764)	(-3.089 - 0.077)
	Jewish	-7.343	7.1544	-9.5869	-8.3622	7.7557
		(-141.19 - 126.503)	(-43.252 - 57.561)	(-293.23 - 274.056)	(-201.878 - 185.153)	(-76.194 - 91.706)
	Buddhist	-0.0766	-1.0046	0.9211	0.1819	-1.3019
		(-1.833 - 1.68)	(-3.171 - 1.162)	(-0.722 - 2.564)	(-1.473 - 1.837)	(-3.447 - 0.844)
	Ethnoreligion	-0.1659	0.1022	0.0626	-0.2668	-0.0383
		(-0.583 - 0.251)	(-0.3 - 0.505)	(-0.373 - 0.498)	(-0.674 - 0.141)	(-0.439 - 0.363)
	Non-believers	-0.3893**	-0.2941	0.6883***	-0.2707	-0.1988
		(-0.678 - -0.101)	(-0.598 - 0.009)	(0.409 - 0.968)	(-0.548 - 0.007)	(-0.49 - 0.092)
	DK	-0.032	0.3725	-0.3564	-0.3642	1.0692
		(-2.244 - 2.179)	(-2.257 - 3.002)	(-3.061 - 2.348)	(-2.547 - 1.819)	(-1.092 - 3.23)
Rural		-0.1409	-0.1866	0.4378**	-0.1537	-0.1356
		(-0.408 - 0.126)	(-0.476 - 0.103)	(0.119 - 0.757)	(-0.419 - 0.112)	(-0.411 - 0.14)
Constant		1.6999***	-2.599***	-1.8491***	1.6055***	-2.4852***
		(1.126 - 2.273)	(-3.244 - -1.954)	(-2.457 - -1.241)	(1.039 - 2.172)	(-3.094 - -1.877)
N		3136	3136	3136	3136	3136
R		0.0491	0.0289	0.0186	0.0491	0.0289

* p<0.05, ** p<0.01, *** p< 0.001

9.2. APPENDIX B: ADDITIONAL ESTIMATIONS MEXICO

On tables 9.8 and 9.9, there are estimations about the evolution of poverty by income and correlations regarding non-incumbent parties in Mexico.

Table 9.8. *Evolution of poverty by income, 1992-2012 (Percentage)*

Year	National		
	Nutritional[1]	Capacity[2]	Patrimonial[3]
1992	21.4	29.7	53.1
1994	21.2	30.0	52.4
1996	37.4	46.9	69.0
1998	33.3	41.7	63.7
2000	24.1	31.8	53.6
2002	20.0	26.9	50.0
2004	17.4	24.7	47.2
2005	18.2	24.7	47.0
2006	14.0	20.9	42.9
2008	18.6	25.5	47.8
2010	18.8	26.6	51.1
2012	19.7	28.0	52.3
Average	22.01	29.78	51.51

1. Nutritional poverty its defined by CONEVAL as the incapacity to obtain one basic food basket even spending the entire household income. 2. Capacity poverty is not having enough income to pay for a basic food basket and to cover health and education expenses even spending the entire household income 3. Patrimonial poverty is not having sufficient income to pay for a basic food basket, cover health, clothing, housing, transportation and education expenses even spending the entire household income.

Source: Estimates from CONEVAL based on information from the ENIGH

Table 9.9. *Correlation Table Non-Incumbent Parties. Presidential Election 1994-2012.*

	1994		2000		2006		2012	
	(1) PAN	(2) PRD	(3) PAN	(4) PRD	(5) PRI	(6) PRD	(7) PRI	(8) PRD
Rural	-0.333***	-0.0276	-0.340***	0.0577	0.314***	-0.0428	0.279***	-0.116*
Household total income	0.487***	-0.0701	0.452***	-0.185***	-0.480***	-0.0538	-0.342***	0.0386
State Governor (Incumbency)	-0.152**	0.108*	-0.194***	0.0952	-0.238***	-0.292***	-0.111*	-0.0183
Years of school	- - - -	- - - -	0.402***	-0.104*	-0.525***	0.0871*	-0.280***	0.113*
Proportion of families Procampo/ Oportunidaes	- - - -	- - - -	-0.271***	0.0566	0.319***	-0.0761	0.295***	-0.130*
Proportion of affiliates to Seguro Popular	- - - -	- - - -	- - - -	- - - -	-0.00408	-0.194***	0.130*	-0.0972
N	409	409	379	379	526	526	377	377

Calculations using data from IFE and INEGI.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

9.3. APPENDIX C: ADDITIONAL ESTIMATIONS BRAZIL

Tables 9.10 and 9.11 show the individual model per each party (PSDB and PT).

Table 9.10. *PSDB Panel Data Regression 2002 - 2014 (Municipality Level)*

VARIABLES	(1) Pooled OLS	(2) Fixed Effects	(4) Random Effects
Proportion of Families with Bolsa Família	-0.343***	-0.264***	-0.343***
per Municipality	(0.051)	(0.052)	(0.041)
Governmental expenditure in CCTs per	0.012	0.010	0.012*
Municipality	(0.015)	(0.012)	(0.007)
Log Municipal GDP	0.008	0.009	0.008***
	(0.007)	(0.005)	(0.002)
% of poor	-0.003**	-0.003**	-0.003***
	(0.001)	(0.001)	(0.000)
Years of Schooling Municipal Level	0.002	0.005	0.002
	(0.005)	(0.006)	(0.002)
Incumbent Governor	0.027**	0.038**	0.027***
(Dummy)	(0.007)	(0.012)	(0.005)
Lagged Vote Share	0.436***	0.435***	0.436***
PSDB	(0.004)	(0.005)	(0.006)
Constant	0.275*	0.192	0.275***
	(0.127)	(0.109)	(0.037)
Observations	16,694	16,694	16,694
R-squared	0.366	0.305	
Number of region		5	5
Region FE		YES	
Region RE			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 9.11. *PT Panel Data Regression 2002 – 2014 (Municipality Level)*

VARIABLES	(1) Pooled OLS	(2) Fixed Effects	(3) Random Effects
Proportion of Families	0.293***	0.226***	0.293***
with Bolsa Família per	(0.037)	(0.032)	(0.053)
Municipality			
Governmental expenditure	-0.041**	-0.042***	-0.041***
in CCTs per Municipality	(0.009)	(0.006)	(0.009)
Log Municipal GDP	0.003	0.000	0.003
	(0.007)	(0.006)	(0.003)
% of poor	0.004***	0.004**	0.004***
	(0.001)	(0.001)	(0.000)
Years of Schooling	0.003	0.001	0.003
Municipal Level	(0.003)	(0.004)	(0.003)
Incumbent Governor	-0.038**	-0.050***	-0.038***
(Dummy)	(0.010)	(0.010)	(0.007)
GDP Growth	0.033	0.033	0.033
	(0.027)	(0.026)	(0.022)
Proportion on	0.001*	0.001	0.001**
non-white population	(0.000)	(0.000)	(0.000)
Proportion of	-0.003**	-0.002*	-0.003***
Pentecostal	(0.001)	(0.001)	(0.001)
Lagged PT	0.492***	0.492***	0.492***
Vote Share	(0.004)	(0.005)	(0.004)
Constant	0.122	0.178*	0.122***
	(0.091)	(0.081)	(0.047)
Observations	16,633	16,633	16,633
R-squared	0.566	0.552	
Number of region		5	5
Region FE		YES	
Region RE			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Tables 9.12 and 9.13 show the individual model per each party (PSDB and PT) following Zucco's strategy using religion and race as controls.

Table 9.12. *PSDB Panel Data Regression 2002 - 2014 (Municipality Level)*

VARIABLES	(1) Pooled OLS	(2) Fixed Effects	(3) Random Effects
Proportion of Families with	-0.299***	-0.233***	-0.299***
Bolsa Família per Municipality	(0.039)	(0.041)	(0.042)
Governmental expenditure in	0.020	0.022**	0.020***
CCTs per Municipality	(0.013)	(0.008)	(0.007)
Log Municipal GDP	0.009	0.012	0.009***
	(0.007)	(0.006)	(0.002)
% of poor	-0.002*	-0.002*	-0.002***
	(0.001)	(0.001)	(0.000)
Years of Schooling Municipal	-0.000	0.003	-0.000
Level	(0.003)	(0.005)	(0.003)
Incumbent Governor	0.023*	0.040**	0.023***
(Dummy)	(0.009)	(0.010)	(0.005)
GDP Growth	-0.028	-0.029	-0.028
	(0.029)	(0.026)	(0.017)
Proportion on	-0.001*	-0.002*	-0.001***
non-white population	(0.000)	(0.001)	(0.000)
Proportion of	0.002**	0.001	0.002***
Pentecostal	(0.001)	(0.001)	(0.001)
Lagged PSDB	0.434***	0.431***	0.434***
Vote Share	(0.005)	(0.005)	(0.006)
Constant	0.279*	0.225*	0.279***
	(0.106)	(0.103)	(0.037)
Observations	16,633	16,633	16,633
R-squared	0.368	0.308	
Number of region		5	5
Region FE		YES	
Region RE			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 9.13. *PT Panel Data Regression 2002 – 2014 (Municipality Level)*

VARIABLES	(1) Pooled OLS	(2) Fixed Effects	(3) Random Effects
Proportion of Families	0.293***	0.226***	0.293***
with Bolsa Família per Municipality	(0.037)	(0.032)	(0.053)
Governmental expenditure	-0.041**	-0.042***	-0.041***
in CCTs per Municipality	(0.009)	(0.006)	(0.009)
Log Municipal GDP	0.003	0.000	0.003
	(0.007)	(0.006)	(0.003)
% of poor	0.004***	0.004**	0.004***
	(0.001)	(0.001)	(0.000)
Years of Schooling	0.003	0.001	0.003
Municipal Level	(0.003)	(0.004)	(0.003)
Incumbent Governor	-0.038**	-0.050***	-0.038***
(Dummy)	(0.010)	(0.010)	(0.007)
GDP Growth	0.033	0.033	0.033
	(0.027)	(0.026)	(0.022)
Proportion on	0.001*	0.001	0.001**
non-white population	(0.000)	(0.000)	(0.000)
Proportion of	-0.003**	-0.002*	-0.003***
Pentecostal	(0.001)	(0.001)	(0.001)
Lagged PT	0.492***	0.492***	0.492***
Vote Share	(0.004)	(0.005)	(0.004)
Constant	0.122	0.178*	0.122***
	(0.091)	(0.081)	(0.047)
Observations	16,633	16,633	16,633
R-squared	0.566	0.552	
Number of region		5	5
Region FE		YES	
Region RE			YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1