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Empowerment for Whom?

Evaluating Women's Empowerment under Indigenous Self-Governance in Oaxaca, Mexico

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Recognising indigenous people's rights has been a priority for Latin American countries since the late 1990s. Yet, a legal recognition of their self-governance has been controversial as they are argued to contrast with liberal values of gender equality. This thesis investigates the effect of a reform in southern Mexico where most municipalities implemented a new form of governance system, where women have been excluded from political participation. Using data from the first gendered disaggregated census, we apply a geographical regression discontinuity design to investigate whether the change of governance system led to adverse effects for women's empowerment, measured through labour force participation, head of household gender and monolingualism. With a robust, biased-corrected estimation, we do not find any negative effects of the reform on these measurements of empowerment. Instead, we observe a positive impact on female labour force participation and has increased the prevalence of female head of households. We argue that, while indigenous autonomy could have other negative effects on women, liberal Western forms of municipal governance is not necessarily more empowering for women.

Keywords: Development, Governance, Gender Equality, Customary Law, Empowerment

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1 Introduction

"Every time I went back to my community, I could not understand why women were always empty-handed. The answer was 'You are a woman. First get a husband, then you might get something.' But at school, I was taught that the first article of my country constitution said that we are all equal. But that was not a reality there. *Sistema Normativo Indígena blocked that right*" - Eufrosina Mendoza Cruz, 2016

Is the recognition of minority group rights at odds with liberal understandings of gender equality? While the two sets of ideas share a common inheritance, they may also be in serious conflict. In many minority cultures, women are denied the same access to education as men, the right to choose whom to marry, and in extreme cases invoked to violent practices such as female genital mutilation (Kukathas, 2001). Recognising the rights for minority groups to practice harmful traditions without interference could therefore go against core values of liberal feminism and human rights.

In Latin America, the tensions between the protection of minority cultures and women's rights have become most evident in the questions relating to the indigenous peoples and their self-governance. Throughout the many indigenous communities of Latin America, local customs and traditions have long worked alongside the state formal legal system to help govern essential aspects of public life and social relations. In recent history, several countries in the region have begun recognising these communities with the right to partake in their local forms of governance in an effort to follow the United Nation Declaration on the Rights of Indigenous Peoples (UNDRIP). This development can be seen as a significant victory for indigenous rights movements, especially in a region where indigenous peoples have long been deprived of their distinct cultural heritage. However, a common concern among scholars and politicians is whether this recognition may result in the state legitimising gender discriminatory practices found *within* these communities. If this is the case, it implies that indigenous self-determination could perpetuate the already profound marginalisation of indigenous women in many Latin American societies. As Kuokkanen (2012) puts it, "existing indigenous self-governance arrangements have often failed to protect women from social and economic dispossession and from multilayered

violence experienced in their own communities".

In this thesis, we explore the gendered effects of an indigenous self-governance reform in the Mexican state of Oaxaca. We investigate whether there is reason to suspect that a change of governance, based on minorities' rights to their customs, has impacted gender equality, measured with a set of variables relevant for the Oaxacan context.

Oaxaca is the state in Mexico with the largest share of its population belonging to indigenous minorities INEGI2020. In 1995, the Oaxacan state congress amended its constitution to recognise the state's multicultural composition and the right of indigenous communities to determine their own rules of governance and voting procedures, a practice that until then had been formally prohibited Hiskey and Goodman (2011). This reform is upheld as one of the most advanced institutionalisations of indigenous peoples' rights to self-determination in Latin America Worthen (2021). In practice, the amendment assigned Oaxaca's 570 municipalities to be ruled by one of two distinct governance structures: either in line with the formal Mexican system of multiparty representative democracy; or in accordance to century-old practices of local indigenous customs, a system known as *sistema normativo indígena* (SNI).

SNI is controversial in Mexico and among feminist political theorists. As argued by Recondo (2013), SNI governance contributes to the construction of differentiated citizenships where factors such as sex can function as elements of discrimination.

The specific case of Eufrosina Mendoza Cruz is an example of the controversial aspects of SNI in practice. In 2009, Mendoza Cruz won the presidential election in her native SNI-municipality, but was never permitted to take office - on the sole basis of her gender. Her disqualification created a storm of criticism towards the system and led to a vast amount of media attention both at the national and international level (Eisenstadt, 2013).

While there is a body of research that seeks to assess, with divergent findings, the extent to which women's political exclusion occurs within the Oaxacan municipalities governed by SNI, not much is known regarding the reform's wide-spanning effects on the lives of Oaxacan women and their role in society. As there have been several reports of gender discrimination across SNI municipalities, restricting women's decision-making power and space in public life, we hypothesise that the reform could have had adverse

effects on women's lives - beyond the scope of numerical representation in local government. We believe that this knowledge is of great relevance for the debate on SNI in Mexico. Currently, this debate is based mainly on anecdotal evidence and at times deeply-rooted preconceptions of indigenous culture as something backwards and antidemocratic (Worthen, 2021). In addition, as Oaxaca is one of the few contexts in the world where indigenous customs have been made official governance law, evaluating SNI can provide valuable evidence regarding the theorised conflict between gender equality and self-determination for indigenous peoples. Lastly, evaluating the outcomes of the SNI system is policy-relevant since other municipalities in neighbouring states are considering implementing a similar system ¹.

The unique context of Oaxaca allows for an empirical assessment regarding the outcomes of indigenous self-governance, as it circumvents two major challenges for researchers within the field. Firstly, it is difficult to untangle the effects of indigenous self-governance - which is often informal, tolerated or even sanctioned by the state - from the general political conditions of the places where they are used Magaloni et al. (2019). The 1995 reform in Oaxaca essentially separated "formal" municipal governance from "informal" governance, facilitating empirical analysis between indigenous customs and formal state law. This setting provides an opportunity to tease out the effect of indigenous self-governance on measures of gender inequality. Secondly, the possibility to identify the causal impacts of permitting indigenous self-governance is usually limited - both globally and in Mexico. In Oaxaca, villages and cities outside of the municipal capital have been found to be excluded from the decision of whether to implement SNI or not. This feature allows for an estimation of the effects of self-governance through observational data without the risk of selection bias.

Exploiting these institutional features, we follow Magaloni et al. (2019) and make use of a geographic regression discontinuity design, comparing towns and villages that lie within a short distance from municipal borders where the governance system changes discontinuously. This identification strategy allows us to compare measures of gender equality in localities that are indistinguishable in a long list of socioeconomic and cultural characteristics but happen to lie on different sides of a border determining governance.

¹In 2020, La Jornada reported that municipalities in the state of Guerrero have demanded that their indigenous self-governance is recognised legally

We use high-detail census data from 2010 to investigate women’s position on the labour market, the share of female heads in the household and the prevalence of monolingualism with a local linear regression, with polynomial sensitivity checks. We find evidence suggesting that the recognition of the SNI system has increased female labour force participation in the state of Oaxaca, but we do not find significant effects of the reform in terms of the share of household heads being women or for monolingualism. These results lead us to call for a more nuanced understanding of indigenous autonomy and its effects on women, in Oaxaca and elsewhere.

The rest of the paper is structured as follows. First, we present the context of Oaxaca, which is the basis of our study. In the second section, we define the research aim and the underlying concepts on which we base our hypothesis. In section 3, we describe the data along with the choice of outcome variables. Our method is described in further detail in section 4, and the results of the estimations are shown in section 5. Section 6 discusses possible mechanisms that could explain the results and how these can contribute to the research field. This section also discusses some limitations of our study. The last section concludes the paper.

2 Background

This section describes the historical and institutional setting surrounding the *Sistema Normativa Indígena* (SNI) reform of 1995. First, we delve into the historical significance of the reform and how the reform relates to the human rights frameworks for indigenous peoples and their strides in Mexico. Second, we discuss the fundamental practices of SNI in greater detail, comparing it to the standard form of municipal governance in the country. The final section describes the role of women under SNI.

2.1 Indigenous Peoples’ Self-Governance

The practice of local government is not inherent to the indigenous communities of Oaxaca but a central practice of indigenous peoples worldwide. The somewhat elusive term of indigenous self-governance refers to the myriad of ways in which indigenous peoples structure their societies and group identities (Virtanen, 2019). These forms of governance

vary substantially, reflecting the diversity of indigenous peoples globally. Some are vested within single household units, such as the case of the Samí in Scandinavia, where rules regarding land tenure, hunting and reindeer herding are organised alongside family lines (Dahl et al., 2020). Others take the form of participatory democratic institutions under customary law, such as in the Bolivian Andes where local communities of Aymara and Quechua peoples govern themselves under village councils (Tockman, 2017).

Self-governance is considered the backbone of indigenous peoples' group identity and is instrumental for maintaining their distinct cultural heritage (Anaya et al., 2004). As such, self-governance plays a vital role in international legal frameworks for indigenous peoples and the demands of indigenous rights movements. As stipulated by the United Nation's Declaration on the Rights of Indigenous Peoples:

"By virtue of self-determination, indigenous peoples have the right to freely determine their political status and freely pursue their economic, social and cultural development [...] in exercising their right to self-determination, [indigenous peoples] have the right to autonomy or self-government in matters relating to their internal and local affairs" (UNDRIP, 2017)

As a consequence of colonisation, indigenous governance systems have eroded gradually throughout the centuries (Anaya et al., 2004). Despite this fact, many communities have managed to maintain their practices *de facto*, which has primarily been the case in Oaxaca. Oaxaca's precolonial Zapotec and Mixtec civilisations were largely decimated by the Spanish conquest of the sixteenth century, but were subsequently allowed to reorganise into small, decentralised societies. Within these societies, local customs came into contact with the Spanish system of municipal organisation, giving rise to the indigenous governance systems that have survived across the region to the present day. This institutional hybrid is the origin of SNI: all-encompassing norms of participatory democracy where local leaders are chosen in town assemblies and where citizens are expected to voluntarily contribute to the public good (Danielson and Eisenstadt, 2009).

While indigenous peoples' right to self-governance has been recognised *declaratively* in multiple constitutions across Latin America since the 1990s, Oaxaca stands out for being one of few places where it has been formally accommodated within one of the key institutions of democracy - the electoral system (Muñoz, 2005). Following decades

of increasing demands for autonomy among indigenous rights activists², the federal government of Oaxaca recognised the practice of this system in order to compromise with the substantial indigenous population of the state (Worthen, 2021). Through this recognition, the 570 municipalities of Oaxaca were each given the possibility to either maintain the state legal system for municipal governance or abide by their local forms of traditional governance.

2.2 SNI in Practice

Given the diversity of indigenous cultures in Oaxaca, the practices of indigenous self-government through SNI varies across the state. As noted by Eisenstadt (2011), SNI is an umbrella term that encompasses various indigenous governance forms. However, a few key institutions distinguish SNI from municipal governmental institutions in the rest of Mexico (from here on referred to as national governance law). We highlight some of the main similarities and differences between the two governance structures below.

2.2.1 The Structure of the Mexican Municipio

All municipalities in Oaxaca, and in Mexico for that matter, share some important institutional structures, regardless of whether SNI governs them or not. All municipalities must select a municipal president, a decision-making council and a local attorney, based on the rule of power division found in most federal countries (Benton, 2009). Municipal presidents are in charge of decisions regarding investments in the local public good provision. These include the maintenance of roads, markets, public lighting, sewerage, cemeteries, street pavements and public security. In addition, the municipal government assists the state and federal government in the provision of elementary education, fire protection and medical services, environmental protection, and the maintenance of historical landmarks (Diaz-Cayeros et al., 2014). In poor municipalities, the local government has the additional task of distributing federal transfers for social infrastructure projects, which are provided based on state measured poverty indicators.

²Which famously culminated in the violent Zapatista uprising of 1994 in Oaxaca's neighbouring state of Chiapas (see e.g. Munoz (2004))

2.2.2 Electoral Practices

The electoral process through which municipal government officials are selected is arguably the most notable difference between SNI and National Governance Law (NGL). In most municipalities of Mexico, the municipal president and members of the council are selected through principles of representative parliamentarianism. In municipal elections, Mexican citizens are granted the right to universal suffrage by secret ballot. Citizens vote for party-affiliated presidential candidates, who each present a closed list of candidates for the local council. The presidential candidate who receives the plurality vote wins the election and is through a complex allocation formula almost always granted the majority of seats in the council (Benton, 2009).

In contrast, while the Oaxacan municipalities governed by SNI are legally obliged to select a municipal president, the election is neither anonymous nor based on principles of universal suffrage. Elections occur within a central decision-making assembly, most often in the form of an elder's council, which constitutes the SNI-municipalities' highest political authority. The most common voting procedures within the assemblies include hand-raising, using a blackboard and queuing up behind the preferred candidate. Candidates for leadership positions are formally not allowed to hold any affiliations with established political parties (Benton, 2009). Political participation - to vote and make one's voice heard - is not regarded as a right, but rather a privilege granted to those deemed eligible. This eligibility can depend on different factors such as sex, age, religion and previous experience in community work.

2.2.3 Community Volunteering

At the heart of SNI lies a culture of volunteering for the community through two interrelated practices of *cargos* and *tequios*.

Cargos are a set of public positions in the local government which all citizens (or, as discussed in the coming section, all men) are expected to fulfil. These positions entail responsibilities relating to the provision of public goods in the municipality, often organised on a project basis. Examples of tasks include coordinating public works, policing and raising funds for annual festivals. All families are expected to offer cargos on a rotating

basis, with increasing responsibilities as people get older. Traditionally, only the highest-level cargos are remunerated (Eisenstadt, 2006). In municipalities governed by NGL, positions of power within the government are determined internally by the ruling party, and often given to those who wish to pursue a political career. (Magaloni et al., 2019).

Tequio is another form of community work that is central to SNI. They are similar to cargos in the sense that all families within the community are expected to partake. However, while cargos entail long-term and often time-consuming responsibilities, tequios are performed on a more regular basis, with less tedious labour involved. Examples of tequio include the paving of roads, repairing public buildings and keeping clean in public parks. Tequios can be seen as a tax system in which citizens "pay" for municipal services through their manual labour.

Cargos and tequios are tightly linked to the electoral practices of SNI: in order to gain access to the local decision-making assembly, a citizen must have a proven record of cargos or tequios. The hierarchical nature of cargos implies that those with more experience of community work are often granted higher degrees of political influence within the community (Canedo, 2008).

2.3 Gender Discrimination and SNI

SNI and its consequences for development have been much debated. Supporters refer to its importance for the indigenous rights movement in Mexico and Latin America, and argue that it has fostered participatory democratic practices in Oaxaca and facilitated the provision of public goods (Magaloni et al., 2019; Diaz-Cayeros et al., 2014). Critics note that the lack of federal and state government intervention permits municipal politicians to formally discriminate against women by depriving them of the right to vote in local elections and to partake in public life (see e.g. Recondo, 2013; Eisenstadt, 2006). In this subsection, we discuss gender discrimination within the SNI municipalities.

2.3.1 Women's Political Participation

Until 2015, SNI municipalities were governed autonomously without major interference from federal or state authorities (Cleary, 2020), which some argue allowed SNI municipalities to deprive certain citizens of their political rights - most notably women.

Official data from the Mexican National Institute of Statistics and Geography (INEGI) states that in 2006, more than one-fifth of SNI municipalities *formally* excluded women from voting in the local assembly. However, as noted by Cleary (2020), Oaxacan women's de facto exclusion was likely to be higher, as INEGI's figures are based on self-reported surveys of local officials and therefore likely biased. This underestimation is supported by a survey conducted by Danielson and Eisenstadt (2009): In 2008, 42% of citizens in SNI municipalities believed that women did not vote in local elections, while the corresponding number was 15% in the municipalities following national governance law. This seemingly systematic exclusion of women from local politics in SNI municipalities is also apparent in political representation. Cleary (2020) notes that by 2010, only 11 of Oaxaca's 570 municipalities had been governed by female presidents, of which three had been elected under SNI governance (despite SNI governing 70% of Oaxaca's municipalities).

2.3.2 Cargos as a Basis for Discrimination

Women's low levels of political participation under SNI is thought to be due to the cargo practice and its close ties to the electoral system. Throughout Southern Mexico, norms regarding gender roles and the division of labour are prevalent and central to the everyday lives of men and women (Stephen, 2002). While men are typically expected to be active citizens within the community, engaged in remunerated labour and local politics, women are expected to marry, raise children and take care of the household. While women do important work in their households and within the community, their labour is generally not considered legitimate forms of cargos or tequios (Worthen, 2015). As such, women who follow their normative gender role become systematically disregarded from political participation under SNI, as they are generally not perceived to have "worked" for the good of the community - the main criteria for voting rights.

This idea is further supported in a report by the Governmental Institute of Oaxacan Women (IMO), based on interviews of women from municipalities all over the state. Interviewed women from SNI municipalities report on the prominent barriers to political participation due to the practice of cargos and tequios: in order to gain political rights, they have to go against deeply rooted gender norms, and/or find the time and energy to spend on unpaid community work once reproductive and household work have been taken care of. According to the report, women throughout the state are heavily deprived in

terms of time compared to men: women's daily labour supply (this includes productive work as well as taking care of the household and family) accounts to 16 to 18 hours a day, while the corresponding number for men is that of 8 to 10 hours (de la Mujer Oaxaquena, 2009).

Briseño and Bautista (2016) notes that women who do partake in cargos are often single, widows, or wives of men who have migrated to work in larger Mexican cities or the United States. Women who take on these responsibilities outside of the household often report feeling not listened to, frowned upon among family and friends, overworked due to lack of social and economic support, as well as verbally and sometimes physically abused (Briseño and Bautista, 2016).

The IMO report concludes that the SNI-institutionalisation of the cargo practices reinforces a gendered labour division. As men in SNI communities are expected to provide unpaid labour to the community, women need to support their men by taking on a larger share of responsibility within the household. This specialisation makes it difficult for women to perform legitimate forms of cargos themselves, which limits their political influence needed to change the prevailing norms (de la Mujer Oaxaquena, 2009). While similar norms are prevalent throughout Southern Mexico, SNI is thought to perpetuate these norms by making them part of the municipal political institution.

3 Theoretical Framework

Previously, we have outlined evidence suggesting that the 1995 SNI reform limited women's political participation and reinforced norms of gendered labour division. While we believe these discriminatory practices to be violations against women's civil rights in themselves, we hypothesise that they may in turn subjugate women's positions in other realms of Oaxacan society.

In this theoretical framework, we outline the literature upon which we base our main hypothesis - that SNI alters power relations between men and women in Oaxaca and strengthens local gender norms. First, we will present the concept of women's empowerment and how women become affected when their decision-making power is diminished in society. Second, we discuss feminist critique of multiculturalism. Lastly, we apply these theories

in the context of Oaxaca and discuss possibilities in measuring their predicted outcomes.

3.1 Women's Empowerment

There is a vast literature conceptualising the gendered power dynamics between men and women in society, community and household. For the purposes of this paper, we examine the gendered consequences of SNI based on the theory of women's empowerment.

Broadly defined, women's empowerment refers to the ability of women to make decisions and affect outcomes of importance to themselves and their families (Malhotra et al., 2002). The concept was first developed by Sen (1990), who approached the term as the capability for people to live the life they want. According to Sen, empowerment should be viewed as a process of "altering the power dynamics which constrain women's options and autonomy and adversely affect health and well-being". Kabeer (1999) developed the term more formally, by conceptualising empowerment as consisting of the three interlinked domains of *resources*, *agency* and *achievements*. Resources are described as preconditions needed for a person to be able to make choices, and include both material resources in the conventional economic sense, and human and social resources in the broader sense. Agency refers to the *process* through which choices are made - defining and pursuing one's own goals, even when faced with opposition from others. Lastly, achievements are seen as the outcomes of empowerment: the results of granting decision-making power to those who were previously without it. Gender inequality through this way of thinking is thus represented by differences in men and women's *capacity* to make choices for themselves and to influence external factors that matter for their respective welfare.

Women's empowerment is often illustrated through the use of non-unitary household bargaining models, as introduced by Manser and Brown (1980). According to these models, households consist of a husband and wife who bargain over decisions related to the family and the allocation of resources³. Decisions are reached by choosing the allocation that maximises the combined utility, which in turn depends on the husband and wife's respective preferences and bargaining powers. The husband and wife will decide to agree on household decisions as long as both find it preferable to the option of opting out.

³This can be modelled to entail measures of e.g. labour supply, marital outcomes, child rearing or fertility

In the context of the model, opting out implies divorce. The model allows for multiple cooperative outcomes - some of which are more preferable to one household member than to the other. The individual whose preferences are given most influence in the decision-making process is determined by each household member's respective bargaining power. Traditionally, models of household bargaining have mainly described bargaining power as a positive function of income: if a household member contributes more than the other, then this member is given more influence in determining how to distribute the contribution within the household (see e.g. Manser and Brown, 1980; and McElroy and Horney, 1981).

The main implication of the model is that when power imbalances exist, decisions are made that benefit the powerful at the expense of the weak. Women's empowerment, through its representation in the model, is thus the process in which women are granted larger degrees of bargaining power in strategic life decisions - such as the choice to marry, bear children, gain education and human capital or enter the labour market.

Later adaptations of the model have allowed for more complex understandings of power dynamics and its determinants. Some, like Folbre (1997), include exogenous "gender-specific environmental parameters" into the model to account for the fact that gender discriminatory laws, customs and norms outside of the household can affect women's bargaining power. Men and women can internalise gender discriminatory norms regarding their appropriate behaviour in the bargaining process (see e.g. Lundberg and Pollak, 1993; Browning and Chiappori, 1998). These norms can make women feel less entitled to make their voices heard, or lead to men feeling superior and perceiving women's preferences as less important. In both of these cases, women's bargaining power decreases, regardless of their relative income-level. These extra-household parameters could also affect women's bargaining power by constraining their ability to earn an income, e.g. in cases where gender norms and laws dictate the division of labour between men and women.

While originally developed to illustrate intrahousehold behaviour, Agarwal (1997) notes that the non-unitary bargaining model can (and should) be used to describe bargaining processes in domains outside of the household - such as the market, community and state. Gender discriminatory perceptions, norms and practices affect bargaining not just within the home but also in the public space. She argues that the community is particularly

important for rural women, as it constitutes the public space in which they can bargain over gender norms and the distribution of communal resources. If women are excluded from community-level decision-making, they lose the ability to enforce and modify rules governing the distribution of public goods and social norms.

The notion of community-level decision-making power being central to the empowerment process is shared by Kabeer (1999). Similar to Agarwal, Kabeer views political influence as both an outcome and determinant of empowerment. According to her framework, political influence can be described as an 'authoritative resource', which she defines as the power to set priorities and enforce claims in society. Those who hold this power are able to distribute resources - both economic, social and authoritative - in ways that benefit themselves, and may even set the norms and rules that govern the distribution of these resources. As such, a gender unequal distribution of authoritative resources can reinforce gender disparities in community-level empowerment.

3.2 Is Multiculturalism Bad for Women?

“[Group rights for minority cultures] substantially limit the capacities of women and girls of that culture to live with human dignity equal to that of men and boys, and to live as freely chosen lives as they can” Okin (1999)

Studies of SNI and its effects on Oaxacan women almost unanimously refer to feminist critique of multiculturalism. As defined by Reddy (2019), multiculturalism refers to a policy or process whereby distinctive identities of cultural groups within a society are maintained or supported.

Proponents of multiculturalism highlight the importance of cultural group identity as a human right, as well as a means to reconcile with minority group oppression and colonialism (see e.g. Kymlicka, 2012; and Vásquez, 2008). Critics argue that multiculturalism, while strengthening the power of minority cultural groups vis-à-vis the majority, worsens the position of the most vulnerable members within minority groups (Eisenberg and Spinner-Halev, 2005). This concern, referred to by Eisenberg and Spinner-Halev (2005) as the conflict of minorities within minorities, is also common among feminist critics of multiculturalism. They worry that by granting multicultural rights to minority cultural groups, patriarchal cultures will become permitted and perpetuated in ways that subjugate

women.

Political theorist Susanne Okin, one of the most cited feminist critics of multiculturalism, sparked much academic attention through her provocatively titled essay "Is Multiculturalism Bad for Women?". Okin believes that liberal Western culture, while not perfect, has made further strides towards gender equality compared to other cultures, and therefore provides a preferable alternative to women living within minority cultures. Based on this assumption, Okin claims that multiculturalism is at odds with the feminist aspiration of ensuring that women are not disadvantaged on the basis of their gender. To prove her point, she highlights examples of gender discriminatory practices found among African immigrant communities in France and the United States, such as polygamous marriage and female genital mutilation. In cases like these, she argues that in order to ensure the well-being of minority women, assimilation of minority cultures into their surrounding majority culture is necessary. Ayalat Schachar finds that multicultural accommodation of minority cultures can reinforce power dynamics that render the most disadvantaged group members of a minority, especially women, even more vulnerable to injustices. She labels this phenomenon as the paradox of multicultural vulnerability. Friedman states that girls and women are especially affected by minority cultural practices, as these often relate to sexuality, reproduction and household labour.

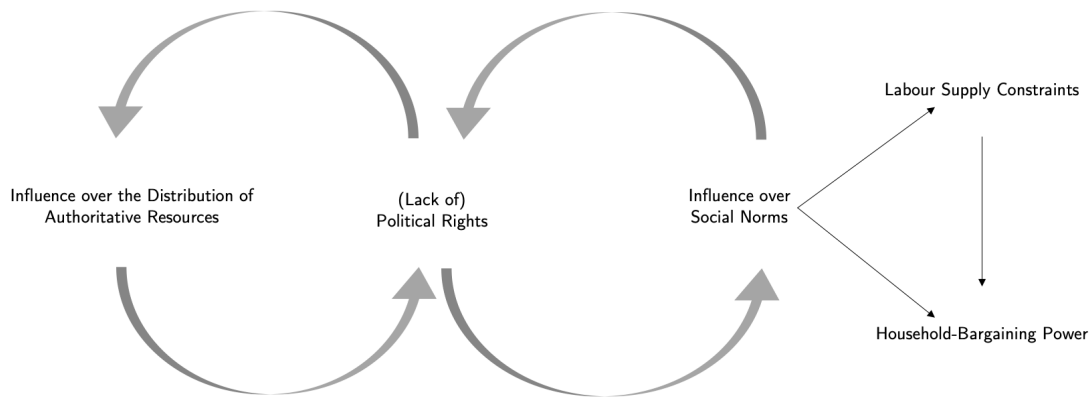
Okin's work has been highly criticised. Al-Hibri (1999) accuses Okin of portraying a racist depiction of non-Western cultures as alien and backward-looking (Al-Hibri, 1999). Seudo Herr states that Okin's claims are at best to be seen as speculations, as opposed to empirical statements. In addition, the examples Okin lifts to portray all minority cultures as patriarchal is often built on sensationalised customs performed by a small segment of certain immigrant groups - and rarely in such extreme forms as female genital mutilation. In Seudo Herr's view, gender inequality within minorities is not solved through assimilation, but through democratisation processes within minority cultures, where subjugated voices are lifted (Herr, 2004). Danielson et al. (2013) and Zardo (2012) take on a more compromising approach - acknowledging the importance and right to self-determination for minority cultures, however calling for state intervention if cultural practices clash with principles of human rights and democracy.

3.3 Conceptualising the Empowerment Process in SNI

Empowerment theory posits that political participation and gender discriminatory norms affect women's access to material and authoritative resources, which limits the capacities of women to make strategic life decisions for themselves. In addition, feminist critique of multiculturalism raises concerns that autonomy for minority group cultures may permit and perpetuate patriarchal norms.

In the context of Oaxaca, we hypothesise that SNI reinforces mechanisms that disempower women. Figure 1 illustrates how we conceptualise these processes in Oaxaca.

Figure 3.1: Political Rights and the Empowerment Process



Fundamentally, SNI can be seen as a negative shock to women's political rights. According to empowerment theory, this would imply an amplification of two reinforcing mechanisms that limit women's empowerment.

The first one takes place mainly within the political realm, built on the idea that authoritative resources are redistributed to those who already hold decision-making power. This seems to be the case across Oaxaca, based on the generally low levels of women's political power in the state. However, given that *all* women are granted voting rights in NGL municipalities, we believe that they have greater capability to influence the

choice of political authorities compared to women ruled by SNI. The second reinforcing mechanism is found within the realm of social norms: without political power, women are less able to determine and shape social norms in the community. As these social norms, through their close ties to cargos, determine who gets political rights in SNI municipalities, they also lead to further barriers to political influence for women.

Social norms on gender equality may in turn impact women's decision-making within the household directly, by affecting their self-esteem and/or the rules governing appropriate behaviour in bargaining processes. In addition, if social norms dictate the amount of labour supply men and women can provide, then they may also impact household-bargaining indirectly through their effect on income. In Oaxaca, we believe this effect to be particularly relevant in SNI municipalities given that it institutionalises the social norm for households to partake in cargos. As suggested by Worthen (2021) and de la Mujer Oaxaquena (2009), while men work for free in the community, women have to make up for the implied losses in household labour and remunerated labour that their men would have provided otherwise.

SNI is essentially multicultural policy, developed to increase the autonomy of indigenous cultures in Oaxaca. Feminist critics of multiculturalism would argue that the exclusion of women from politics under of SNI is due to indigenous cultures being inherently more patriarchal than those built upon liberal Western principles. NGL should according to this theory be seen as less "bad for women" compared to SNI in the sense that it allows for greater state-interference in indigenous minority culture. According to this theory, the autonomy for indigenous people under SNI would perpetuate patriarchal social norms.

The aim of this paper is to quantitatively investigate the outcomes of the empowerment process in Oaxaca. While there is literature suggesting the existence of a reinforcement mechanism limiting women's political power in SNI, there is a considerable dearth of quantitative work assessing women's empowerment in other realms of Oaxacan society. We seek to contribute to this identified research gap, by investigating three indicators of empowerment that we believe to be relevant for the Oaxacan context: female labour force participation, the share of female-headed households and monolingualism.

4 Data

In the following section, we will present the data used in this paper, display the summary statistics of the data set and argue for our choice of outcome variables. Despite gender inequality being time-consuming, costly and complex to measure, we believe that the rich data set of the Mexican 2010 census could indicate whether the SNI implementation indeed had adverse effects on women’s empowerment.

4.1 Data Sources

For investigating the effects of the SNI implementation, we rely on locality-level census data from 2010 provided by INEGI, the Mexican Institute for statistics and Geography (INEGI, 2010). The data was collected between May and June in 2010 as part of the extensive Census project, where over 106 000 interviewers had the mission to visit all homes in Mexico in order to ask questions related to the respondent’s living situation. This provides for a detailed analysis of demographic and socioeconomic trends at a geographically refined level.

The variables include demographic information, household characteristics and economic data from households in Oaxaca at a locality level. Among these are 20 variables with information on housing situation (number of rooms, access to electricity, ownership of TV, etc) and 32 provide demographic and socioeconomic characteristics for individuals present in the locality (religion, education level, age, etc).

We choose the year 2010 since this was the first time a complete census investigation was conducted with gender disaggregated data at a sufficiently level of detail. In the 2010 census, most variables are divided according to gender and at least five age-based subcategories. Thus, the dataset provides detailed information based on relevant subcategories for our analysis - such as the percentage of women aged 18-25 who exclusively speak an indigenous language in a certain locality. Unfortunately, there is no similar data set for the period before the implementation of the SNI reform. We have included a summary table of the 1990 census in Appendix A, based on data from INEGI (1990), but that data-set does not allow for a similar analysis since the variables are not divided into gender on a locality level.

The more recent census of 2020 does also provide population data at our preferred level of detail. However, as the Oaxacan state governed started interfering with the electoral practices of SNI municipalities after 2015, we do not find it suitable for the sake of our research purpose - to assess the empowerment outcomes of SNI *autonomy*.

We have used the same data as Magaloni et al. (2019) to account for each locality's distance to the border. The data that Magaloni uses for these purposes is created with ArcGIS. It is based on official geographical data from INEGI (2020).

4.2 Data Description

The full census dataset includes information from all of the 7 529 localities in Oaxaca. At the time, 3 735 821 people were living in the state. We choose to exclude localities that constitute the *cabeceras* - the municipal centre of each municipality in which the decision to formally implement SNI was made. Additionally, we exclude the localities with more than 10 000 inhabitants, which accounts for 56 of the total number of observations. After these restrictions, we are left with a dataset of 5 675 localities meet these criteria and the observations account for a population of roughly 1.5 million inhabitants, representing 41% of the total population in Oaxaca.

Table 1 summarises some of the variables in these localities in 2010. As can be observed in the table, about half of the population spoke an indigenous language and about 64% of the population lived in a household with someone who identifies as indigenous. The level of illiteracy was 26% and 48% of the adult population had not finished a basic education. About a third of the population lived in a home with a dirt floor and roughly a fourth do not own any household utilities. Since we do not have access to other reliable income measures, the variable of not owning utilities will be used as a proxy for poverty. The variable is the share of the population that reported not owning a TV, telephone, computer, car or fridge in 2010.

In terms of the variables that we will use as outcome variables later in our analysis, we note that 21% of the households had a female as head, and the female labor force participation was 17%. The average number of children per woman was 3.18.

Table 1: Summary statistics for Oaxaca 2010

	Mean	SD	Min	Max	Obs.
Avg. population	273.04	434.10	5.00	9771.00	5675
Avg. no. of HH	64.36	107.90	2.00	2579.00	5675
Avg. HH size	4.33	0.91	1.67	16.00	5675
Married population	0.55	0.09	0.00	1.00	5675
Share of women	0.51	0.05	0.25	0.78	5675
Speaks an indigenous language	0.53	0.41	0.00	1.00	5675
Share indigenous HH	0.64	0.40	0.00	1.00	5675
Adult illiteracy	0.26	0.15	0.00	1.00	5675
Illiteracy	0.26	0.15	0.00	1.00	5628
Share of Catholics	0.81	0.23	0.00	1.00	5675
Share of 0 - 14 yo	0.35	0.09	0.00	0.65	5675
Share of 15 - 64 yo	0.56	0.08	0.00	1.00	5675
Share of 65 or older	0.09	0.07	0.00	1.00	5675
Share of dirt floor	0.35	0.26	0.00	1.00	5675
Economically active population share	0.31	0.10	0.00	0.89	5675
Share w/o basic education	0.48	0.16	0.00	1.00	5628
Share w/o household utilities.	0.26	0.23	0.00	1.00	5675
Female HH head	0.21	0.12	0.00	0.83	5675
Female Labour Force Participation	0.16	0.16	0.00	1.00	5675
Avg. of children per woman	3.20	0.78	0.13	8.60	5675

4.3 Choice of outcome variables

There are many ways in which women's empowerment could be quantitatively assessed. Measurements of empowerment has been used in literature span over a wide array of dimensions and include women's control over income, women's freedom of movement, commitment to educating daughters, control over sexual relations, control over decisions regarding fertility, knowledge of political systems and self-esteem (Malhotra et al., 2002). Most of these outcomes are arguably best measured with household-survey data. Ideally, the surveys would be best constructed if accompanied with fieldwork that could give an understanding of the specific setting. Consequently, measuring women's empowerment perfectly is a costly and complicated process. For the purpose of this thesis, we have sought to find a simpler and more parsimonious route.

We exploit the high level of detail in the 2010 Census and the extensive mapping of women in these, rarely studied, rural areas. We identify three variables that we argue are associated with women's empowerment. These variables include female labor force

participation, the share of female-headed households and monolingualism. While a change in these variables could both be a reason for and a consequence of changes in women's empowerment, we argue that the implementation of the SNI reform - with its reinforcing of norms and its lowering of female political participation - offers exogenous variation to the process in which these mechanisms interact, all else equal⁴. We describe the motivation behind our choice of outcome variables below:

Women's labour force participation is arguably the most important outcome to study for the purpose of this paper. As previous research suggests, SNI dictates gender roles linked to labour in the household and the community. It is a commonly used indicators for studying gender inequality and women's empowerment, as it affects gender gaps in income and in turn, men and women's intra-household bargaining power. While it could be straightforward to think that women who earn a living are more empowered than those who do not, this notion is somewhat problematic, as women might prefer not working. For the sake of evaluating empowerment, it is thus important to assess whether a woman's labour supply decisions are linked to her own will, or constrained by gender norms and/or decisions made by others. However, many empirical studies have found a positive relationship between women's intra-household bargaining-power and labour force participation, and the causal chain seems to go in both directions.

In Oaxaca, labour force participation could imply two things for women's empowerment. On the one hand, given that women want to work and make an income for themselves, a greater labour supply of women could be interpreted as a sign of women's empowerment. On the other hand, it might not be the case that Oaxacan women *want* to work more than they do, as married women account for the overwhelming share of the household's collective labour. Extending Oaxacan women's labour force participation could also imply costs on their well-being, leisure and engagement in community politics. As found by Worthen (2015), some women in SNI prefer *not* having the right to political participation, as they worry that this would imply greater involvement in unpaid community labour. Therefore, we deem that any increases in women's labour force participation should be met with a more equal distribution of household labour, in order for it to be deemed as an outcome of empowerment.

⁴We discuss the exogeneity in the implementation of SNI in the coming section

Our second choice of outcome variable is the share of **female-headed households** within each locality. This variable is recorded by INEGI through interviews with household members in all of Mexico, and could therefore be seen as a subjective measure of household control. If SNI perpetuates gender roles that subjugate women, we would expect a lower number of female-headed households in the community.

Lastly, we investigate **monolingualism**, i.e. the share of the indigenous population who are monolingual, who do not speak Spanish and who are above the age of three. While this share has decreased from a national average of 50% in the 1940s to less than 12% in 2020, there are still over one million people in Mexico who are "monolingual. As the state with the highest rate of speakers of indigenous languages, Oaxaca is one of the states with the highest prevalence of monolingualism. In our dataset, which is restricted according to the description above, 15% of the women who speak an indigenous language do not speak Spanish. The equivalent share for men is 10%. Speaking the official language is an important form of empowerment, as it enables women to get a formal education, to move from the community and to take political power.

Despite these not giving an extensive picture of the lives of women within the Oaxacan community, we argue that, given data availability, this choice of outcome variables is most fitted for the purpose of this paper.

5 Empirical Strategy

The fact that the implementation of SNI was not randomly assigned in Oaxaca's 570 municipalities is a fundamental concern to take into account when investigating the effects of the 1995 reform. Municipalities that implemented the governance system could have differed systematically from those that did not (Recondo and Gallegos, 2007). Other modernisation variables are likely to correlate with the governance form and thus, simultaneously, have an impact on trends in development. Based on the Census data presented in the section above, we conclude that there are indeed differences between the localities with different forms of governance in Oaxaca. Table 2 thus supports this suspicion and shows significant differences between the municipalities that did and those that did not implement the system in Oaxaca in terms of demographic, socioeconomic and cultural aspects.

Table 2: T-test, SNI vs NGL

	NGL	SNI	Difference
Avg. population	330	227	102***
Avg. no. of HH	80	52	28***
Avg. HH size	4.24	4.40	-0.16***
Married population	0.55	0.55	0.00
Share of women	0.51	0.52	-0.01***
Share speaking ind. lang.	0.42	0.61	-0.19***
Indigenous homes	0.52	0.73	-0.20***
Analfabetism	0.25	0.28	-0.03***
Share of catholics	0.81	0.81	-0.00
Share of 0 - 14 yo	0.34	0.35	-0.01***
Share of 15 - 64 yo	0.57	0.55	0.02***
Share of 65 or older	0.08	0.10	-0.01***
Share of dirt floor	0.35	0.34	0.00
Share of econ. active	0.32	0.29	0.03***
Share, male HH heads	0.79	0.79	-0.00
Observations	3145	2530	

For this reason, there is a risk of selection bias when comparing these two groups of localities. The issue of selection bias can be approached by different strategies, including

instrumental variables, difference-in-differences and matching methods (Magaloni et al., 2019).

In a recent paper, Magaloni et al. (2019) investigates the impact of the governance form on the provision of public goods using a geographical Regression Discontinuity Design (RDD). Given that the decision of implementing SNI in the municipality was taken in the largest city of each municipality, the smaller localities in the outskirts of the municipality were "assigned" a form of governance in 1995, regardless of their preferences. This could therefore be regarded as a source of exogenous variation. Additionally, Magaloni notes that the socioeconomic and cultural characteristics of localities closely located to each other, but on opposite sides of borders determining governance structure, do not differ significantly. She supports this claim with robustness checks and findings from qualitative fieldwork.

Since the localities are similar, a treatment and a control group of the policy change could be constructed by restricting the sample to localities closely located to the border. This empirical strategy is more robust than other methods that have been used to investigate the effect of SNI, such as propensity score matching and Ordinary Least Squares Regression (Magaloni et al., 2019). Furthermore, the geographical RDD does not rely on the critical parallel trend assumption needed for a difference in differences approach to hold. For these reasons, we have chosen a similar strategy to Magaloni et al. (2019). This section will present the framework for an RDD, explain the geographic method that we will apply, and account for the method's limitations and the threats to its validity.

5.1 The Regression Discontinuity Framework

The RDD was first used by Thistlethwaite and Campbell (1960) and is today a common method to estimate program effects in a wide array of economic contexts (Lee and Lemieux, 2010). The RDD is arguably one of the most credible and internally valid non-experimental research designs in observational studies (Cattaneo et al., 2019). Cook et al. (2008) has shown that the RDD method "produced generally the same causal estimates as experiments" but has the advantage of being less costly and less time-consuming than the gold standard of evaluation studies: the randomised controlled trial.

The RDD can be used when a treatment assignment depends on whether an observable

variable exceeds a certain cutoff point. It is based on the notion that the assignment of treatment within a certain distance from the cutoff could be regarded as random. Given that this holds, observations on either side of the cutoff should not differ in terms of unobservable characteristics. This allows for the possibility to estimate the local average treatment effect.

Necessary elements of an RDD thus include a unit of analysis, a running variable, a treatment, a cutoff and an outcome. The running variable must be constructed in such a way that the treatment for the different units of analysis differs on each side of a specific cutoff.

There are two versions of the RDD: fuzzy and sharp. A fuzzy RD leads to an instrumental-variable-type setup and exploits discontinuities in the probability of being treated, while the sharp RDD is based on a scenario when all units above a certain threshold receive treatment.

The RDD produces a local average treatment effect. Compared with other non-experimental analyses with higher external validity, RDD offers a relatively high internal validity Imbens and Lemieux (2008)

5.2 The geographical RDD

For this paper, we will use a geographic RDD as described in Lee and Lemieux (2010) and as used by Magaloni et al. (2019). The geographical RDD is similar to the standard RDD but applied spatially with latitude and longitude as controls.

The method has been used in other settings to investigate the impact of state-level laws (e.g. Pence (2006)). In our case, the unit of analysis will be localities and the running variable will be the distance from the locality to the municipality border, positive for the localities located in an SNI-municipality. The cutoff will be 0, and the treatment will be to have implemented the SNI reform in 1995. The outcome will be our chosen variables (female labour force participation, female head of household and monolingualism).

Given that the probability of receiving treatment is 1 on the SNI-side of the border, we will use a sharp RDD. The sharp RDD is represented by the following equation:

$$D_i = \begin{cases} 1, & \text{if } x_i > x_0 \\ 0, & \text{if } x_i \leq x_0 \end{cases} \quad (5.1)$$

where x_0 is the known threshold (in this case 0). This set-up results in a deterministic function of x_i , since once we know x_i we will also know D_i (Angrist and Pischke, 2008). The variable D_i is therefore a dummy indicating if the locality is in an SNI municipality and will be used in the following function:

$$Y_i = \alpha + \beta * D_i + f(r_i) + D_i * g(r_i) + \gamma S_i + \epsilon_i \quad (5.2)$$

where α is an intercept, β is the coefficient of interest, r_i is the distance from the border. The functions $f()$ and $g()$ are allowed to be polynomial or linear functions of the running variable. S_i is a two-dimension control variable accounting for longitude and latitude and ϵ_i is the error term. Y_i is the outcome variable chosen for women's empowerment.

We follow the strategy suggested by Magaloni et al. (2019) and include the covariates latitude and longitude in our regression as controls.

5.3 Detailed approach

One simple way, in line with the view of RDD as a local randomisation, would be to take the difference of the means between the two control groups within a specific range of the threshold. However, there is a risk of bias when not accounting for the observations that lie close to each other as being more similar. To reduce this bias, it is recommended to use a nonparametric strategy, such as a local linear regression. A local linear regression could be described as a form of regression analysis in which the predictor does not take a predetermined role, but is constructed according to information about the data (Jacob et al., 2012). This way, both the slope and the intercept can differ on each side of the cutoff. This approach is more robust and less sensitive to outliers than other RDD approaches (Cattaneo et al., 2019).

For these purposes, we use the Stata package RDROBUST⁵ to estimate the causal effects of SNI-implementation. The package allows for three important calibrations: the specification of bandwidth, the polynomial order of the functions on each side of the cutoff and the Kernel, deciding the weighing procedure.

The bandwidth specifies within which range the observations used in the model are located from the border. The choice of bandwidth is a trade-off between the precision of the estimates and potential bias, and it is central for the results of the RDD analysis. For fully nonparametric approaches, the optimal bandwidth should be chosen based on data-driven rules Angrist and Pischke (2008). The RD robust package calculates the optimal bandwidth through the use of a mean squared error minimising (MSE) method, which is the basis for most conventional optimal bandwidth-calculations Jacob et al. (2012). However, there is no clear criterion for how small the range from the cutoff should be, which has led to several other recommended calculations on how to measure optimal bandwidths when using an RDD (e.g. Imbens and Kalyanaraman, 2012).

Table 3 shows the different bandwidths and the associated differences in means between our treatment and control groups, along with asterisks if the differences are statistically significant. The localities in municipalities with different governance system start differing significantly when located further than 2 000 meters from the border. For localities situated further away than 2 000 meters away, both the variable for not speaking Spanish and the proxy-variable for poverty (measured through "without any utilities") differ at a significant level of 1% (for further details, see A3.2) and A3.3 in appendix).

The optimum bandwidth in our original dataset is broader than our balanced range. We believe that differences in income could bias the results, and therefore restrict the dataset to include only observations lying within 2 000 meters of the border. Following this, we apply the optimal bandwidth calculation and also test for other bandwidths within our balanced range. Similar to Magaloni et al. (2019), we use 500 meter intervals for testing estimations with different bandwidths.

The optimal bandwidths for the estimations in this thesis are chosen based on the data-driven rules calculated in the RDROBUST-package. As shown in Appendix B, we test for different optimal bandwidth calculations and conclude that these do not result in

⁵Complete information about the package can be found here

significantly different p-values or estimations. Therefore, the optimal bandwidths in our results are based on the standard method of the RD package.

Table 3: Difference in Means per Bandwidth (NGL-SNI)

	500 m	1 000 m	1500 m	2 000 m	Unrestricted
Avg. population	5.26	5.92	14.37	45.60*	102.20***
Avg. no. of HH	-0.73	-1.38	2.74	10.13	27.80***
Avg. HH size	0.07	0.04	0.03	0.05	-0.16***
Share of catholics	-0.00	0.00	0.01	-0.00	-0.00
Not speaking spanish	0.03	0.03	0.02**	0.03***	-0.03***
Share of women	-0.00	-0.00	-0.00	-0.00	-0.01***
Share of 0 - 14 yo	-0.01	-0.01	-0.01	-0.01	-0.01***
Share of 15 - 64 yo	-0.01	0.00	0.00	0.00	0.02***
Share of 65 or older	0.02**	0.01	0.01	0.01	-0.01***
Share of indigenou g	0.04	0.02	-0.01	-0.01	-0.19***
Share of married	0.00	0.00	0.00	-0.00	0.01***
Share with no util.	-0.01	-0.02	-0.03*	-0.02*	-0.10***
Share of econ. act e	-0.01	-0.01	-0.01	-0.00	0.03***
Avg. children per n	-0.02	-0.02	0.02	-0.03	-0.25***

Significance levels are indicated as * 0.10 ** 0.05 *** 0.01.

Restricting the bandwidth to include fewer localities is not ideal for the internal validity of the RDD since it reduces the statistical power of the results. However, in order to account for the potential bias, we argue that the observations must be balanced in terms of observable characteristics. Additionally, the choice of bandwidth also depends on context, and keele2015geographic states that the MSE calculations can be too large to include in a geographical RDD. The bandwidths we use are similar to those studied by Magaloni et al. (2019).

A possibility with the RDROBUST package is to include a polynomial estimation for the observations lying on each side of the cutoff. As explained, we will conduct our main estimation using a linear fit, but in line with e.g. porter2003estimation, we will estimate an additional regression with a quadratic fit as a test of sensitivity.

The choice of the Kernel determines the weighting procedure for observations close to the cutoff. We use a triangular Kernel to estimate our results, as opposed to a uniform fit that weights all the observations equally. This is done since we believe that localities closely located to each other share more characteristics, and since it is suggested by Cattaneo et al. (2019). Triangular Kernel is also used in Magaloni et al. (2019).

5.4 Assumptions and limitations

One instrumental reason behind the recent increase of research based on RDD is the recognition that the method requires mild assumptions compared with other non-experimental approaches (Hahn et al., 2001). According to Lee and Lemieux (2010), the assumptions required for an RDD are also less arbitrary than those used in other identification strategies and easier to test. However, as for any method, there are still assumptions needed in order for the estimations to be valid. Particularly, the geographical RDD poses additional issues that we need to assess. In the following paragraphs, we will present and discuss these assumptions and issues.

A fundamental assumption of the standard RDD, and of all its applications, is that of continuity in the covariates. If the observations closely located to the threshold differ "discontinuously" in indicators that could affect the outcome, this assumption does not hold. In that case, the RDD estimate should not be regarded as a causal effect. This assumption of no discontinuous jumps in identified covariates will be tested in the result section as a validity check for our RDD estimations.

Another standard RDD assumption is that there should be no sorting around the cutoff, since that would imply a possibility of manipulating the treatment assignment. If the assignment of treatment is not "as good as random", it could result in a bias in the groups of treatment and control.

In terms of a geographic application of the RDD, this assumption is not likely to hold in most settings, which is problematised by Keele and Titiunik (2015). Keele means that for geographic RDD, where the units of analysis are individuals who reside in the area, we could expect that people can select their place of residence based on the boundary. The ability of people to sort around this boundary, therefore, needs to be thoroughly evaluated.

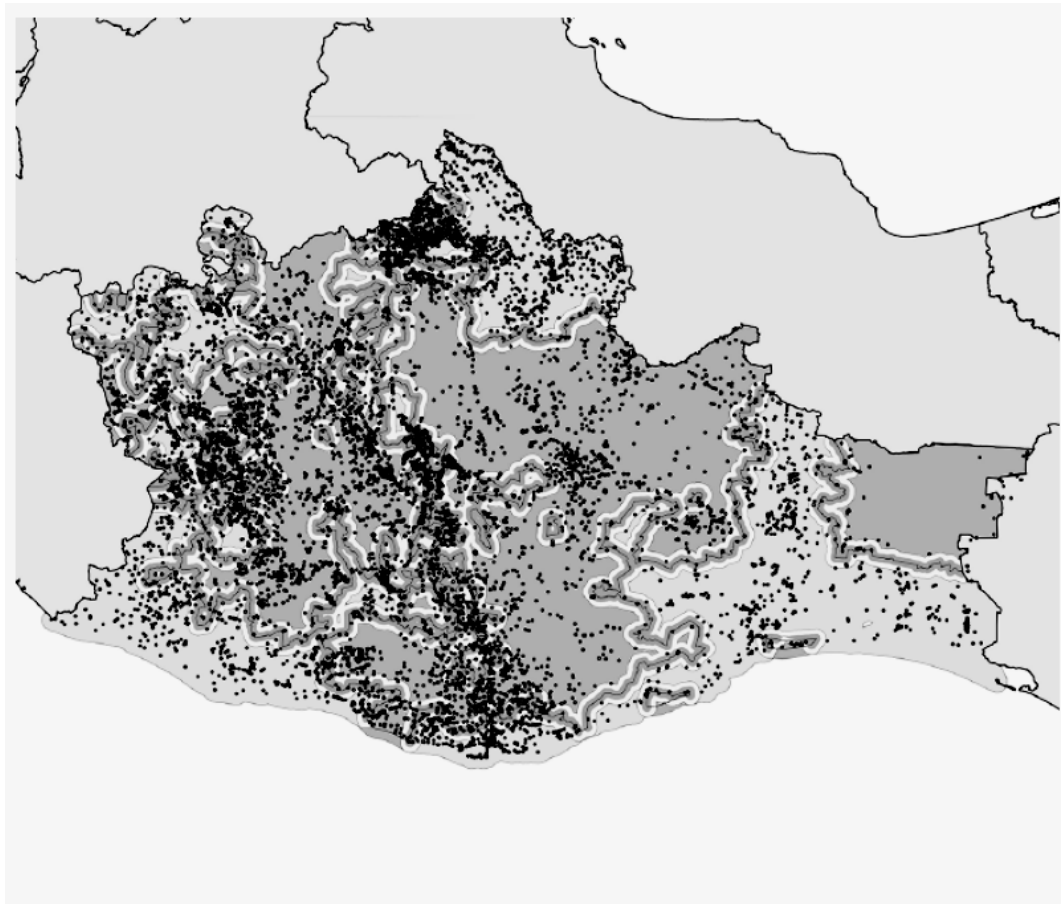
As Magaloni et al. (2019) states, arguing for sorting not occurring is "not just a matter of finding a statistically balanced set of variables characterising the "treated" and "control" groups of villages, but also about knowing something regarding the way in which settlement patterns in Oaxaca have historically come about". This requires qualitative fieldwork, which Magaloni has conducted. She argues that the possibilities of moving are scarce

within these specific communities since there are stringent requirements to buy and sell land in Southern Mexico. These rules are consequences both of the formal legal system, but also stem from informal community rules that tie land-owning to broader civic engagement (Magaloni et al., 2019).

Despite concluding that sorting is not likely to occur, the question of whether localities located in different municipalities are truly similar (and thus comparable) remains. The location of boundaries could be based on underlying factors in terms of geographical, ethnic or political constraints, which in turn could confound the outcome variables. Lee and Lemieux (2010) addresses this issue by stating that the selection of which boundaries could be included and not "could quickly turn into more of an art than a science", and does not give any uniform advice on how the problem best should be handled.

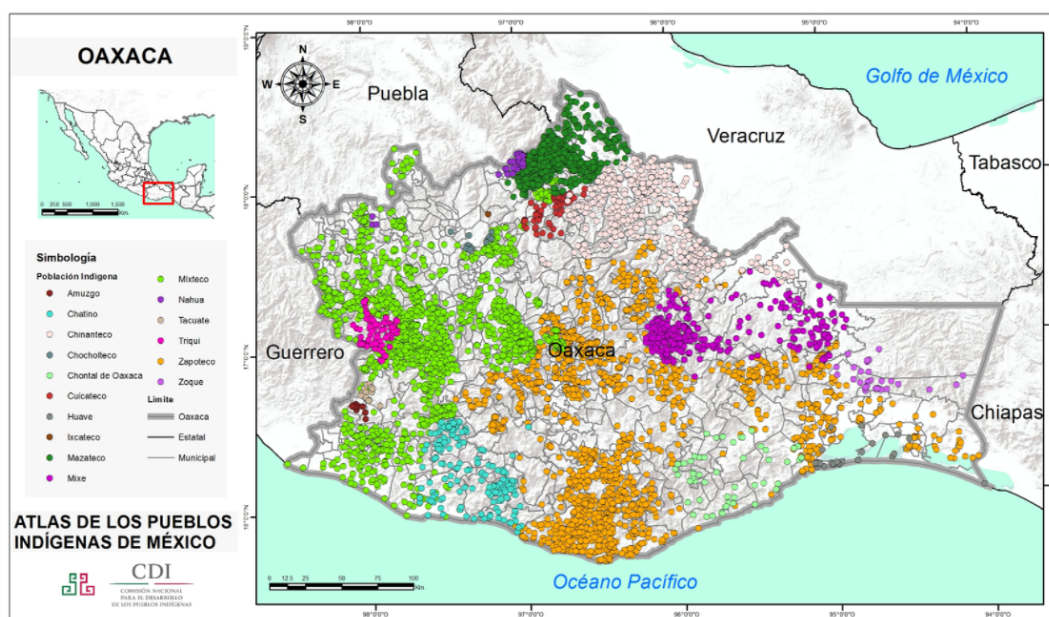
Magaloni addresses this issue by closely examining observable characteristics, mainly through the use of the detailed census dataset provided by INEGI and concludes that there are no substantial differences. She also examines the voting patterns in the localities to investigate potential political constraint, which would lead to biased results. Her investigation of these patterns shows no significant differences between the municipal borders (see Appendix C for further details).

We investigate this issue further by examining the geographic distribution of ethnolinguistic groups in Oaxaca, based on INEGI's catalogue of indigenous languages, and how they correspond to the boundaries of SNI municipalities. We find no clear evidence of the municipal boundaries dictating SNI-status being drawn in accordance with ethnic divisions. This indicates that the decision to implement SNI was not determined by the specific indigenous culture of each municipality. SNI governance is concentrated to the middle of the state, and less common close to the coast, we do not see a systematic change depending on the ethnic group. 5.1 shows the distribution of municipalities according to governance regimes, and the location of ethnic groups is illustrated in figure 5.2.

Figure 5.1: Map of SNI and NGL division

SNI

municipalities visualised in dark grey. Black points mark the location of Oaxacan localities. Adapted from Magaloni et al. (2019)

Figure 5.2: Map of Ethno-linguistic groups

Map of the ethno-linguistic divisions in Oaxaca, created by "INPI" (2015)

6 Results

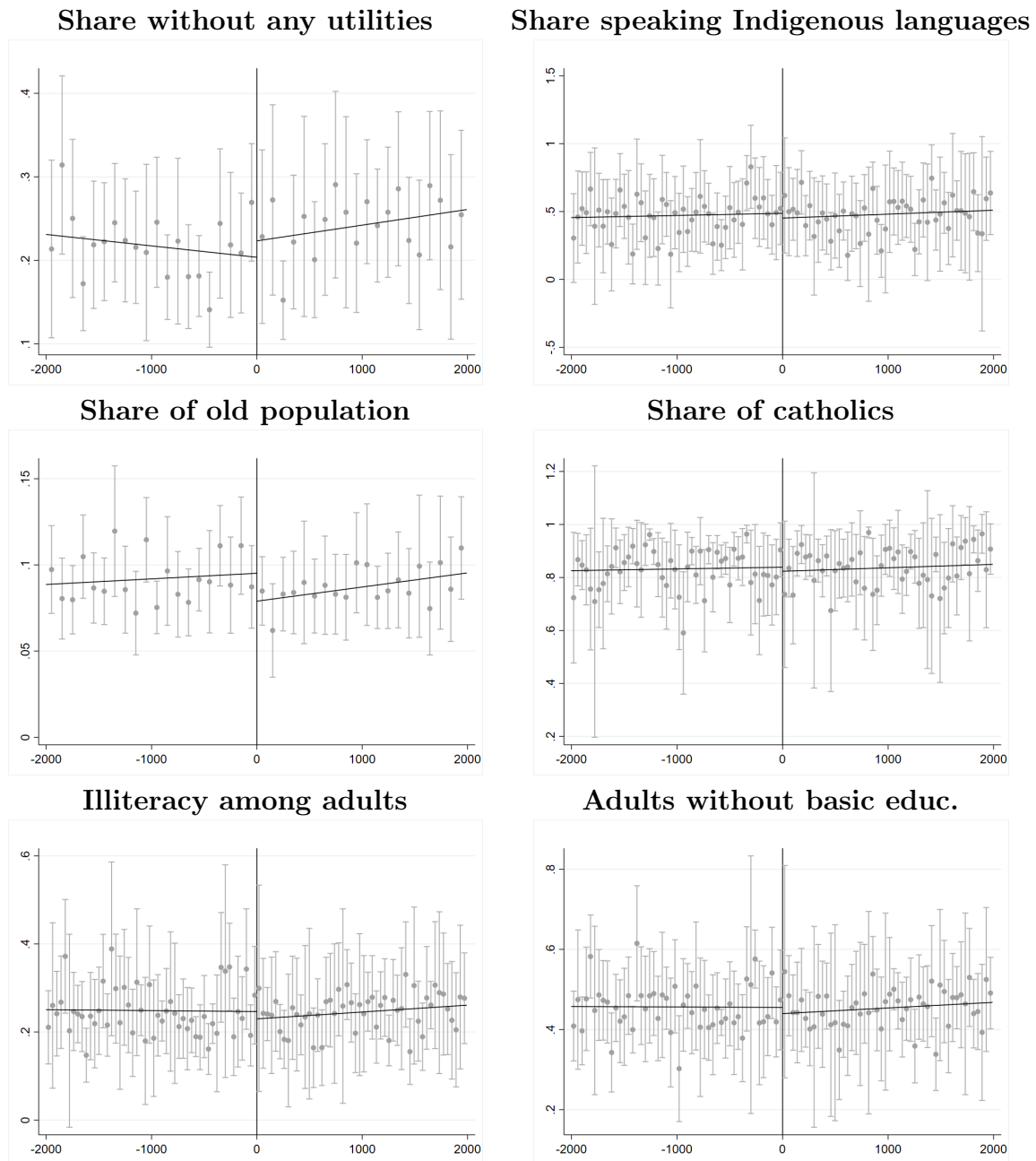
This section presents the results of our study. The first subsection examines the robustness of the choice of method through validating the assumption of no discontinuous jumps in the covariates. The second section presents the main results of our statistical analysis. We show estimations based on five different choices of bandwidth and also present the result from different specifications, in order to investigate whether the analysis is sensitive for the inclusion of squared controls. As a sensitivity analysis, we allow for the estimation at each side of the cutoff to be quadratic. Additionally, we present a lowess graph in order to visualise the differences between the localities, taking the size of the localities into account.

6.1 Test of Validity

We follow the recommendation of Imbens and Lemieux (2008) and perform a graphical analysis to test whether there is a discontinuity in any of the covariates that could impact on our chosen outcome variables. The covariates we have chosen to present are indicators of socio-economic status and demographic factors that we deem could have an impact on women's empowerment. We use our proxy for income, indigenous population, share of old population and share of catholics. To evaluate the continuity of the covariates, we have used a similar estimation strategy as in our main specification, and plotted the covariates with a local RDD using a linear fit. As can be observed below, there are no indicators of any jumps of discontinuity in the chosen covariates. We include more variables in the appendix, but - unsurprisingly given the balance shown in the previous section - do not find any indications of discontinuities.

Figure A2.1 shows the averages and the 95% confidence intervals for the covariates located within 2 000 meters of the SNI municipality border. The number of bins on each side is 50. SNI municipalitites are coded as positive numbers.

We do not observe any significant jumps between the localities in terms of the observed variables. We notice a slight difference in variable for share of old population which is not observed in the other variables, but given the confidence intervals we do not consider this to be an issue.

Figure 6.1: Covariate Discontinuity

6.2 Main Results

Following the robustness check of our method presented above, we will now proceed to the main results. Below, we present the output from the estimations of a local linear estimation for the effect of SNI using longitude and latitude as controls. We present SNI's effect on indicators that we argue are related to women's empowerment, namely female labour force participation, the share of female head of households and monolingualism.

Our results suggest that the implementation of the SNI reform did not have any adverse effect on women's empowerment. We find significant positive effects of SNI on female labor force participation within these communities. The sensitivity analyses estimates roughly similar results and do not differ from the p-values of the linear regression. We will comment the results in further details below the respective subsections.

6.2.1 Female Labour Force Participation

The results for the estimation of the SNI effect on female labor force participation show a positive and significant effect at a 5% significance level, both with a conventional and a robust estimation. The estimations are shown in table 4 and the sensitivity analysis shows similar estimations in table 5.

Given that the average female labor force participation in our dataset is 16%, as presented in the summary, this effect of approximately 6 percentage points is considerably large. There seems to be a substitution effect associated with these results, as we find that men in SNI localities are less likely to be economically active compared to those in NGL localities.

Table 4: RDD estimates, FLFP Outcomes

	Opt. BW	Large	Medium	Low	V. Low
SNI effect	0.07** (0.03)	0.07*** (0.02)	0.07*** (0.02)	0.07*** (0.03)	0.07** (0.04)
Bandwidth	785	2000	1500	1000	500
Effective observations	447.00	1070.00	830.00	557.00	269.00
Robust SE	0.04	0.03	0.03	0.04	0.05
Robust p-value	0.04	0.02	0.02	0.06	0.54
Conventional p-value	0.01	0.00	0.00	0.01	0.04

Standard errors in parentheses

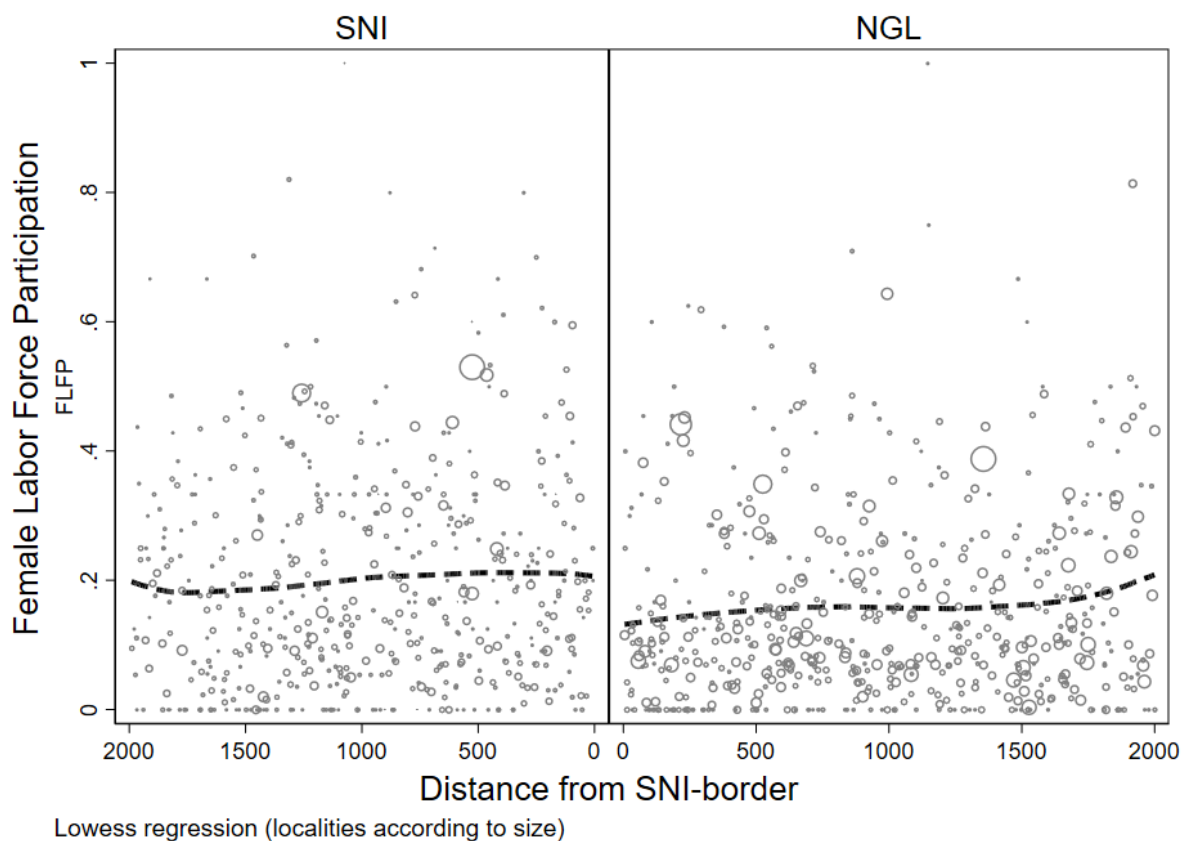
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: RDD estimates, FLFP Outcomes, Sensitivity Analysis

	Opt. BW	Large	Medium	Low	V. Low
SNI effect	0.06 (0.04)	0.07** (0.03)	0.08** (0.03)	0.07* (0.04)	0.03 (0.05)
Bandwidth	700	2000	1500	1000	500
Effective observations	397.00	1070.00	830.00	557.00	269.00
Robust SE	0.05	0.04	0.04	0.05	0.06
Robust p-value	0.30	0.04	0.11	0.32	0.53
Conventional p-value	0.18	0.02	0.02	0.06	0.55
Polynomial	2	2	2	2	2

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 6.2: Female Labour Force Participation Along Governance Discontinuity

6.2.2 Head of Household

The estimation of the effect of SNI on the share of female household heads indicate a slight positive effect of the reform, and estimates a significant effect on a 5% significance level for the optimal bandwidth. As shown in table 6, this effect is estimated to be between 2 and 6 percentage points. However, these coefficients are not significant on a 5% level.

The sensitivity analysis gives similar p-values and the coefficient estimates do not differ significantly.

Table 6: RDD estimates, Head of Household Outcomes

	Optimal BW	Large	Medium	Low	V. Low
SNI effect	0.06** (0.03)	0.02 (0.02)	0.02 (0.02)	0.03 (0.02)	0.06** (0.03)
Bandwidth	466	2000	1500	1000	500
Effective observations	252.00	1070.00	830.00	557.00	269.00
Robust SE	0.03	0.02	0.03	0.03	0.04
Robust p-value	0.05	0.27	0.13	0.03	0.33
Conventional p-value	0.05	0.14	0.23	0.18	0.04

Standard errors in parentheses

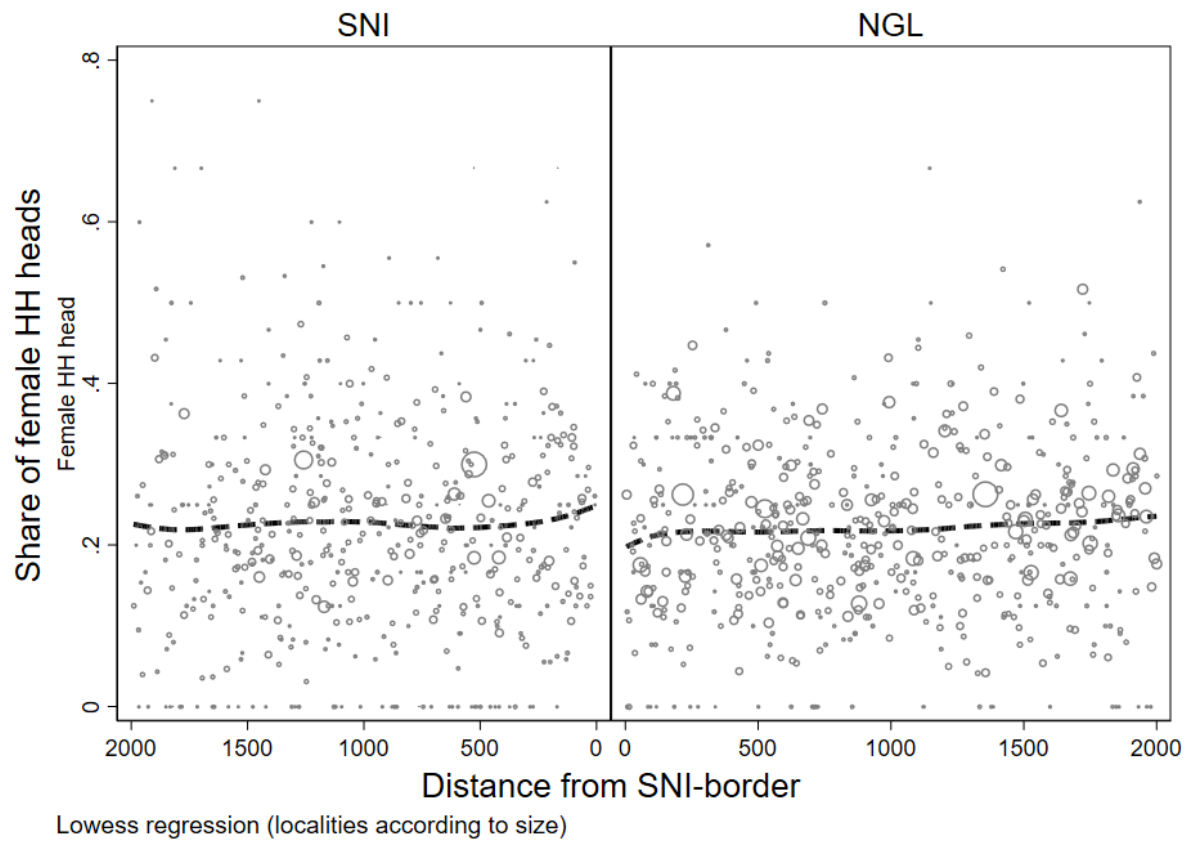
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: RDD estimates, Head of Household Outcomes, Sensitivity Analysis

	Opt. BW	Large	Medium	Low	V. Low
SNI effect	0.07** (0.03)	0.03 (0.02)	0.04 (0.03)	0.06** (0.03)	0.04 (0.04)
Bandwidth	861	2000	1500	1000	500
Effective observations	481.00	1070.00	830.00	557.00	269.00
Robust SE	0.03	0.03	0.03	0.04	0.05
Robust p-value	0.03	0.08	0.03	0.09	0.44
Conventional p-value	0.03	0.27	0.13	0.03	0.33
Polynomial	2	2	2	2	2

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 6.3: Share of Female HH Heads Along Governance Discontinuity

6.2.3 Monolingualism

In terms of monolingualism, we notice consistently negative estimations of the SNI effect. These estimates are however not significant in any of our specifications.

Table 8: RDD estimates, monolingualism Outcomes

	Opt. BW	Large	Medium	Low	V. Low
SNI effect	-0.04 (0.05)	-0.02 (0.03)	-0.03 (0.03)	-0.04 (0.04)	-0.03 (0.06)
Bandwidth	668	2000	1500	1000	500
Effective observations	359.00	1015.00	788.00	530.00	253.00
Robust SE	0.06	0.04	0.05	0.06	0.08
Robust p-value	0.50	0.30	0.36	0.53	0.89
Conventional p-value	0.43	0.37	0.30	0.33	0.65

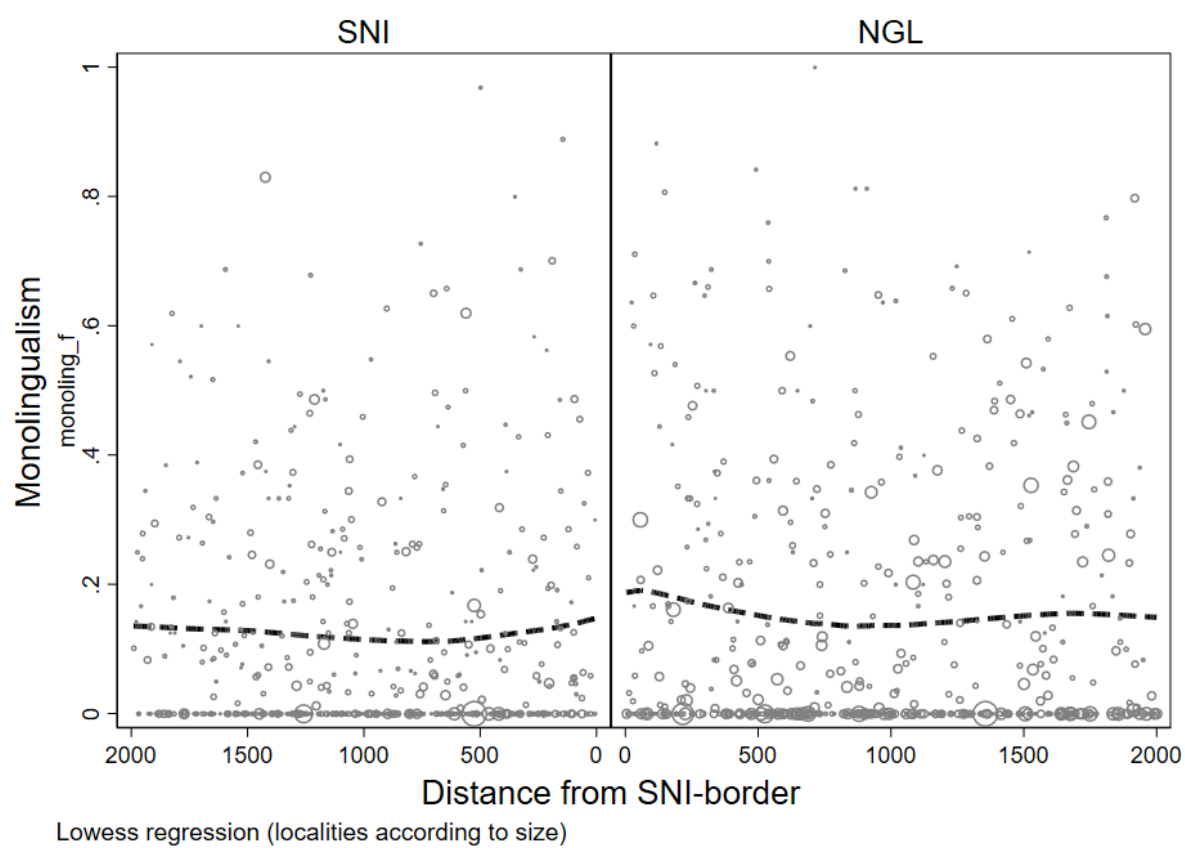
Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ **Table 9:** RDD estimates, Monolingualism Outcomes, Sensitivity Analysis

	Opt. BW	Large	Medium	Low	V. Low
SNI effect	-0.01 (0.06)	-0.03 (0.04)	-0.02 (0.04)	-0.02 (0.05)	0.03 (0.07)
Bandwidth	935	2000	1500	1000	500
Effective observations	502.00	1015.00	788.00	530.00	253.00
Robust SE	0.06	0.05	0.06	0.07	0.10
Robust p-value	0.91	0.73	0.84	0.76	0.71
Conventional p-value	0.85	0.44	0.64	0.74	0.71
Polynomial	2	2	2	2	2

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 6.4: Monolingualism Along Governance Discontinuity

7 Discussion

7.1 Implications of the Results

This paper finds suggestive evidence of SNI improving measures of women’s empowerment. Women in SNI municipalities participate in the labour force to a larger extent and are more likely to be head of household than women residing in municipalities governed by the formal state legal system. We do not find any convincing evidence of SNI having impacts on indigenous women’s monolingualism.

The implication of these results is ambiguous. Firstly, the increases in women’s labour supply can be seen as a form of empowerment through its positive effect on women’s bargaining power as their income increases. However, these results could also imply an additional burden for the women in question if they still bear the primary responsibility for household duties and child-rearing. While, according to our statistical analysis, female labour force participation increases due to SNI, measures of monolingualism remain constant regardless of governance type. While this does not necessarily tell us anything regarding men’s contribution to household work, qualitative research by Karver et al. (2016) suggests that men are generally absent from these duties.

An interesting fact is that the effect of SNI on female labour force participation is highly similar to that of the effect on the share of female-headed households. This could indicate that the increases in labour supply is due to women deciding to work, given that these women should pose larger decision-making power within their households.

Based on qualitative research on Oaxaca, we hypothesised that the implementation of SNI would reinforce gender norms and that its discriminatory practices of excluding women from the political arena could have disempowering effects on women’s role in society. As a way of measuring this mechanism, we argued that the status within the household could indicate women’s bargaining power and that monolingualism would capture an effect of women not partaking in society. In our statistical analysis, we do not see indications of this measurement of women’s empowerment to be affected negatively. Rather, SNI seems to possibly have reduced the share of women speaking only an indigenous language. We find that these results contradict the prediction of multicultural critics. They imply

that women in SNI communities are part of the community to the same extent - if not more - as women in municipalities governed by the formal state legal system. A possible explanation for the increase in Spanish-speaking indigenous women could be the significant increase in labour force participation discussed above, since learning Spanish is a common consequence of working.

These results call for a discussion regarding the critique of multiculturalism from feminists such as Okin (1999). In one regard, Okin's assertion that "multiculturalism is bad for women" applies to the SNI context, given the importance of universal suffrage - both as a fundamental civil right and as a symbol for all peoples' worth. However, given that women seem to be similarly empowered, and perhaps less so, in localities governed according to Western liberal principles, we question the universality in Okin (1999) claim that liberalism is inherently good for women. As fieldwork by Magaloni et al. (2019) and Diaz-Cayeros et al. (2014) points out, SNI municipalities are generally more responsive to policy demands of secluded, rural communities, and government politics in NGL are to a larger extent clientelistic and corrupt. According to our results, assimilation into the Western liberal majority culture is not necessarily a clear-cut solution to any gender inequalities found within minority cultures.

Based on our results, we argue for a "third-way", as discussed by Eisenstadt (2013): indigenous autonomy and multicultural accommodation is an integral part of all pluralistic democracies that respect the self-determination of minority cultures, but only insofar as it respects globally agreed upon rules regarding basic civil rights and democracy. Therefore, we find the Mexican Federal Government's strategy of intervening in SNI communities' gender-discriminatory electoral practices following 2015 to be necessary and sound.

7.2 Limitations

Measuring the effects of a political reform on women's empowerment based on Census data is not an easy task, and the results of this paper involving several caveats.

The main concern with our strategy is the choice of outcome variables. While we believe that labour supply, the ability to speak Spanish and to have control over the household all relate to the empowerment process, our results do not necessarily provide any proof that these occur due to the empowerment process as theorised by the likes of Kabeer

(1999) and Agarwal (1997). Ideally, we would have liked to assess direct measures of men and women's influence over household bargaining, to determine whether our identified outcomes are based on women's own decisions. Instead, we triangulate based on our knowledge of the Oaxacan context.

Secondly, while we find assuring indications of localities being both balanced in a long list of observables and without any indications of sorting of population groups alongside the borders, we cannot rule out the risk of selection bias in the choice to implement SNI. Fieldwork from Magaloni et al. (2019) strengthens the assumption that the small localities took the implementation of formal SNI as given, but we were not able to evaluate the credibility of this statement. We have conducted an interview with the "Dirección General de Oaxaca" (10th of March, 2021) and Angel Morales Gutierrez, who has studied the practices of SNI (28th of March, 2021). These interviews affirmed Magaloni et al. (2019)'s description, but stated that since the municipalities differ a lot in terms of size and composition - it is difficult to make a universal claim on how the decision of implementing SNI was taken.

An additional caveat is that we assume that the effects that we see are solely due to SNI. It is possible that other changes in municipal law have led to the effect that we observe in our results. We are not aware of any changes in the state's constitution⁶ that could have impacted municipalities differently, but we cannot claim with certainty that no other exists. Some government programs, such as the extensive PROGRESA/Oportunidades program, could have impacted SNI and GNL municipalities differently based on the assumption of SNI municipalities being less corrupt and more efficient in providing public goods. There is thus a risk of underlying, external factors behind the identified effects. We suggest that this should be thoroughly investigated in future research.

Since the research aim of this thesis is context specific, and since the dataset is restricted to indigenous, small localities close to the border of an SNI-municipality, the external validity for this study is low. However, we claim that the results hold in terms of internal validity, following the reasoning in the empirical strategy section.

To further test the robustness of our results, we had two tests in mind. We tried performing our main estimations for localities located alongside Oaxaca's state border and created a

⁶Oaxaca's state constitution, updated in 2019, with all revisions from 1922 can be found here

control group from municipalities in states that did not allow for the SNI practice in 1995. However, these localities were largely unbalanced in a number of essential variables, such as the number of indigenous peoples, economic development and religion. In addition, the estimates were largely underpowered due to a lack of effective observations. We also considered performing placebo tests using data before 1995. However, available data was insufficient for the sake of conducting analyses of socioeconomic gender disparities.

8 Conclusion

In this thesis, we have examined whether Sistema Normativo Indígena - an extensive recognition of indigenous peoples' right to self-governance - has had any effects on the empowerment of women.

We argued that this study aim is of importance for several reasons:

Firstly, politicians and scholars have since the rise of globalisation questioned whether multiculturalism is inherently bad for women. This theory poses that multiculturalism, in granting freedom to tradition, perpetuates gender discriminatory practices that subjugate women in their local community and family. At the same time, multiculturalism plays a crucial part in recognising all peoples' rights to self-determination. Oaxaca provides a context in which the supposed universality of multicultural critique can be put under empirical testing.

Secondly, while this study contributes to a scholarly debate on multiculturalism and women, it may also help guide policy in Mexico and Latin America, where similar practices of communal governance are common among indigenous communities across the region. The debate in Mexico has largely been based on qualitative studies and anecdotal evidence.

We wished to contribute to these literatures by exploiting the unique context of the municipal reform in 1995, when municipalities faced the choice of either changing to the SNI system, which allows for gender discriminatory practices in politics, or to keep governing through the national governance law that was the only legally recognised form of governance before 1995. Since this decision was taken by the main city of each municipality, the small and rural communities did not have the possibility to affect the outcome, but were instead *assigned* a governance system. By investigating the extensive Census data from 2010 for small and indigenous communities located closely to the municipal border, we find that these communities are similar in practically all observable characteristics. With additional data supporting the idea that the municipal borders do not follow any ethnic or political divisions, we argue for the use of a RDD to estimate the effect that the implementation of SNI had on outcomes of women's empowerment.

The results show that overall, SNI increases the likelihood of women being the head of

household and partaking in the labour force, while no effect was found on the indigenous women's monolingualism. Based on these results, we come to the conclusion that while recognition of self-determination could invoke gender discriminatory electoral practices, the recognition of these practices does not necessarily subjugate women in Oaxacan society more than the formal municipal institutions of Mexico.

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Appendix

A Balance

A1 Balance tables from 1990

Table A1.1: T-test, All NGL and SNI, 1990

	NGL	SNI	Difference
Total population	318.84	308.86	9.98
Men	0.50	0.49	0.01***
Women	0.50	0.51	-0.01***
Avg HH size	5.44	5.28	0.16***
Tot no. of HH	60.03	60.50	-0.47
Fertility	0.24	0.26	-0.02***
Spanish Speaking	0.23	0.34	-0.10***
Share that can read	0.21	0.21	0.01***
Dirt floor	0.27	0.18	0.09***
Occupation share	0.24	0.23	0.00*
Economically active	0.24	0.24	0.00**
People per household	5.47	5.32	0.15***
Observations	4596	2583	

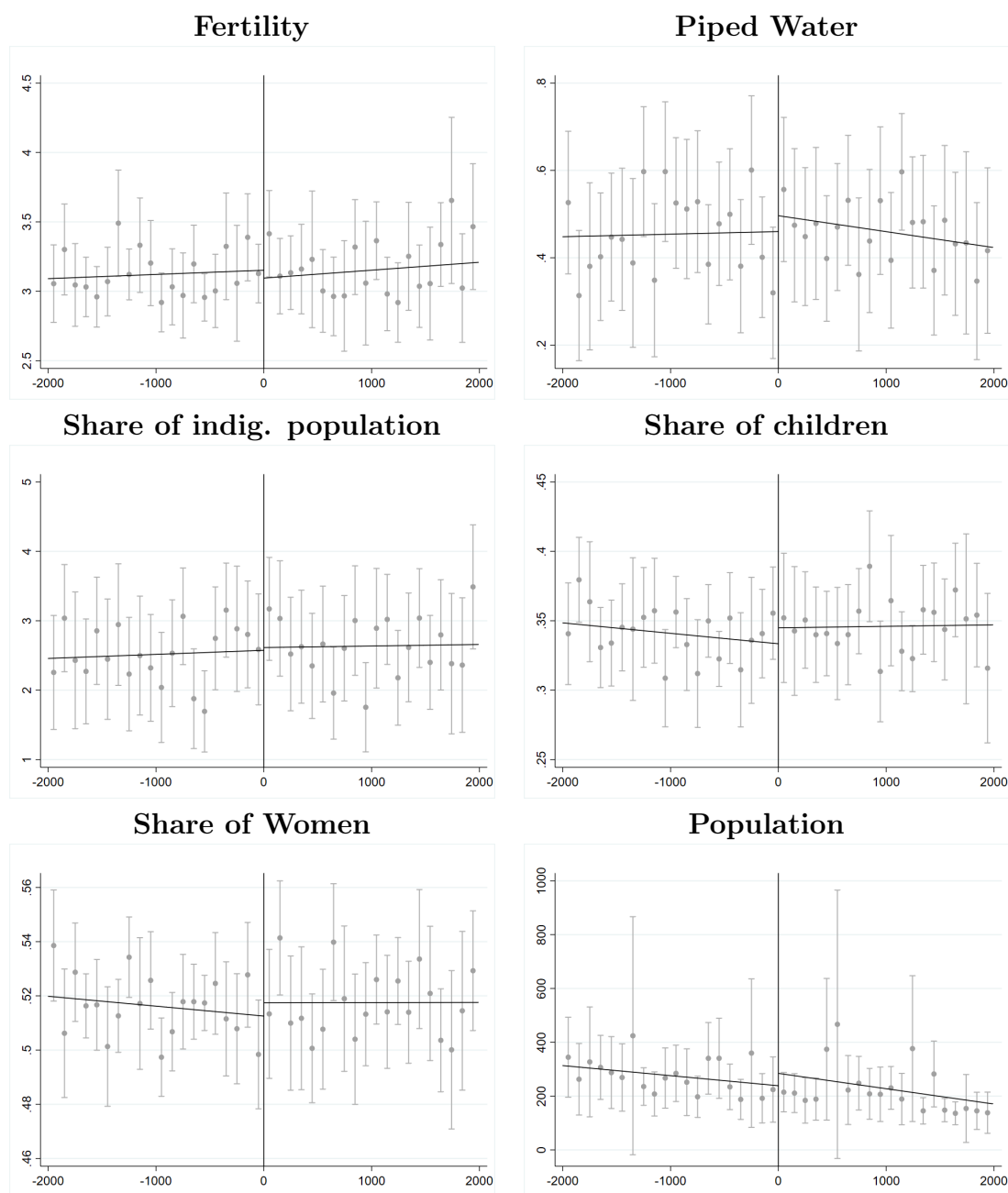
Source: INEGI (1990)

Table A1.2: T-test, NGL and SNI <2 000 m from border, 1990

	NGL	SNI	Difference
Total population	311.99	311.57	0.42
Men	0.50	0.49	0.00
Women	0.50	0.51	-0.00
Avg HH size	5.46	5.33	0.13**
Tot no. of HH	58.97	59.91	-0.94
Fertility	0.25	0.25	0.00
Spanish Speaking	0.22	0.24	-0.02
Share that can read	0.21	0.22	-0.00
Dirt floor	0.23	0.24	-0.02
Occupation share	0.22	0.23	-0.01
Economically Active	0.23	0.24	-0.01*
People per HH	5.48	5.35	0.12**
Observations	458	413	

A2 Graphical representation of balance

Figure A2.1: Discontinuity in additional variables



A3 Balance for Bandwidth $\geq 2\,000$ m

Table A3.1: Balance in 2 000 BW

	Party-system	SNI	Difference
Avg. population	274.43	228.83	45.60*
Avg. no. of HH	64.56	54.43	10.13
Avg. HH size	4.35	4.30	0.05
Share of catholics	0.83	0.84	-0.00
Not speaking spanish	0.10	0.08	0.03***
Share of women	0.52	0.52	-0.00
Share of 0 - 14 yo	0.34	0.35	-0.01
Share of 15 - 64 yo	0.56	0.56	0.00
Share of 65 or older	0.09	0.09	0.01
Speakers of indig. lang	0.47	0.48	-0.01
Share of married	0.39	0.40	-0.00
Share with no util.	0.22	0.24	-0.02*
Share of econ. active	0.31	0.31	-0.00
Avg. children per n	3.12	3.15	-0.03
Observations	563	507	

Table A3.2: Balance in 2 500 BW

	Party-system	SNI	Difference
Avg. population	275.67	232.30	43.37**
Avg. no. of HH	65.06	54.58	10.48*
Avg. HH size	4.32	4.35	-0.03
Share of catholics	0.83	0.84	-0.01
Not speaking spanish	0.11	0.08	0.02**
Share of women	0.52	0.52	0.00
Share of 0 - 14 yo	0.34	0.35	-0.01*
Share of 15 - 64 yo	0.57	0.56	0.01*
Share of 65 or older	0.09	0.09	0.00
Speakers of indig. lang	0.47	0.50	-0.03
Share of married	0.40	0.39	0.00
Share with no util.	0.21	0.25	-0.03***
Share of econ. active	0.31	0.31	-0.00
Avg. children per n	3.11	3.19	-0.09**
Observations	705	649	

Table A3.3: Balance in 5 000 BW

	Party-system	SNI	Difference
Avg. population	281.09	231.31	49.77***
Avg. no. of HH	66.37	53.56	12.81***
Avg. HH size	4.31	4.36	-0.05
Share of catholics	0.83	0.84	-0.01
Not speaking spanish	0.11	0.10	0.01
Share of 0 - 14 yo	0.34	0.35	-0.00
Share of 15 - 64 yo	0.56	0.55	0.01***
Share of 65 or older	0.09	0.10	-0.01**
Speakers of indig. lang .	0.46	0.55	-0.09***
Share with no util.	0.22	0.26	-0.04***
Economically active	0.31	0.30	0.01
Avg. children	3.10	3.24	-0.14***
Observations	1153	1351	

B Optimal Bandwidth, Robustness Check

Here, we present the estimates of our standard regression and the optimal bandwidth calculated through 4 different methods. For complete information and calculations, refer to Calonico et al. (2014)

Table A0.1: Test of different optimal BW

	Standard	MSETWO	CER-opt.	MSECOMB2
Effect on FLFP Estimate	0.07	0.07	0.07	0.07
<i>Robust p-value</i>	0.04	0.04	0.06	0.04
Effect on Share of Female HH	0.06	0.06	0.04	0.05
<i>Robust p-value</i>	0.05	0.03	0.16	0.05
Effect on Monolingualism	-0.03	-0.04	.002	-0.03
<i>Robust p-value</i>	0.50	0.45	0.34	0.45

C Online Appendix

Online appendix to Public Good Provision and Traditional Governance in Indigenous Communities in Oaxaca, Mexico can be found **here**.