Information, Female Empowerment and Governance in Oaxaca, Mexico

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Abstract

Development requires the empowerment of women. In this paper we present a survey experiment that measures the effect of information on attitudes about women in local government in Mexico. Taking advantage of a multicultural institutional arrangement in the state of Oaxaca, which allows indigenous communities to use traditional non-partisan methods for the election of mayors, we explore the perceptions about female participation and access to office. Against the multicultural critique, we find no conclusive differences indicating discrimination of women. We explore the effect that information about female mayors who already govern some municipalities in the state has on respondent perceptions about women in government. We find that contextual information increases the likelihood of accepting women in government. We also find a stronger effect when respondents have been recipients of the conditional cash transfer program Oportunidades. We interpret participation in Oportunidades as a variable that relates to the fast changing role of women in indigenous communities, although the effect in municipalities governed by traditional rules is half of that observed in municipalities governed by political parties. Compared to men, women who receive the conditional transfer program more than double their likelihood of accepting female mayors, when provided with truthful information of how many women already govern in their state.

1 Introduction

Eufrosina Cruz, a Zapotec Indian woman, wanted to become municipal president of Santa María Quiegolani, a municipality in Oaxaca governed by "usos y costumbres", the traditional community decision methods allowed by the State Constitution, instead of political parties, to elect local governments in that state. Initially allowed to participate in the election by

the local bosses and authorities, her votes were nullified and destroyed on the grounds that the traditions of the community prohibited women from becoming municipal presidents, and because, according to the person in charge of counting the votes "women were created to serve men, to cook and to take care of children, but not to govern", and because having a woman governing went against the "history and tradition" of the municipality[1].

This became a poignant case against the validation of the institution of "usos y costumbres" as a form of government that purportedly discriminates women, and specifically hinders their right to be elected. Ms. Cruz suffered the indifference first of the local electoral authorities, and then of the local Congress of Oaxaca. Eventually, the National Commission of Human Rights (CNDH in Spanish) recognized the violation of her rights and issued a recommendation to the Oaxacan government, which in turn modified the local constitution to prevent, at least nominally, these situations from being repeated in the future.

Offering more systematic evidence from a survey carried out in 2004, Danielson and Eisenstadt (2009) have shown that "usos y costumbres" institutions in Oaxaca reduced opportunities for female electoral participation compared to municipalities in the same state governed by mayors nominated through political parties.

A common perception among scholars and policy-makers in Mexico is that "usos y costumbres" in Oaxaca are not an example of direct local democracy in action, but rather of a mechanism through which political elites (*caciques*) have become entrenched and vast numbers of citizens, particularly women, have been disenfranchised (Benton, 2006; Cleary, 2005; Eisenstadt, 2007; Danielson and Eisenstadt, 2009; Recondo, 2008). A methodological problem with relating women disempowerment to indigenous governance practices, which are in turn an alleged expression of their culture, is that most analyses suffer from various forms of selection bias. Often the comparison of indigenous and non-indigenous communities and their governance fails to distinguish between factors attributable to poverty from those related to political institutions. Moreover, framing the disempowerment of indigenous women as a consequence of their governance structures is turning a blind eye to the widespread denigration of women at all socioeconomic levels in Mexico. Violence and relegation of women is a generalized condition in Mexico. Moreover, pointing out indigenous forms of governance (like Usos) as a primary cause of discrimination of indigenous women fails to assess the dynamic adaptation of political institutions, even so-called traditional ones, to the realities of social change and the changing roles of women in Mexican society. Furthermore, the vibrant debate in political philosophy between multiculturalism and feminism stresses the need for a careful analysis of the scope and limits of liberalism, culture, identity and the opinions of women -and men- if one is to understand the interaction between the preservation of distinct

[1]See http://www.cronica.com.mx/nota.php?id_nota=339385. http://www.milenio.com/node/199829

ethnic and cultural identities and the empowerment of women.

In this paper we present evidence from a survey carried out in Oaxaca in the summer of 2009 that suggests that, at least in terms of the specific measures we use, there is no clear relationship between multicultural arrangements and women disempowerment in the domain of elections in Oaxaca. We designed a survey to measure the actual participation of women in community assemblies and in the system of communal duties ("cargos"), including selection into positions in the municipal government; and to capture opinions about whether women should be allowed into positions of power in the community. We also designed an embedded experiment to assess the role of information about women's changing role and ascension to power in some municipalities in Oaxaca in attitudes towards the empowerment of women.

Our findings suggest that political institutions and practices in indigenous communities are capable of adaptation to the larger national environment, and that they are sensitive to policy. In particular, field interviews with indigenous women and men on Oaxaca that were done after the survey was collected, as well as econometric findings from individual level data, suggests that conditional cash transfers to women within the federal program Oportunidades, appear to have gradually transformed power and gender relations within indigenous communities in Oaxaca. Women are increasingly participating in "community cargos" thanks, in part, to their participation as representatives of Oportunidades in their communities. For example, they become commissioners (vocals) in their communities within the Oportunidades structure in charge of the health or education components of the program. They also participate in meetings on reproductive health and hygiene which are designed as a way to disseminate information, and thus have created conditions through which information regarding the role of women in the community can be processed better, allowing for their empowerment.

Development requires the empowerment of women. As noted by Amartya Sen (1999), women take some of the most consequential decisions that may improve human well-being. Some of these relate to investment in children welfare and the education of the next generation, and they require a minimal base of access and control of economic and financial resources, that is, gender equity (UN, 2009). Recent research in India has suggested that women as policy makers are more likely to emphasize public good provision when they are empowered to make decisions as political leaders (Pande, 2003), and that women elected as leaders under reservation policy in India invest more in public goods more closely linked to women concerns, such as water or roads (Chattopadhyay and Duflo, 2004: 1440). A mainstream position argues that in so-called "traditional" societies women are often relegated to lower status in decision-making and frequently subjected to their husbands and fathers.

In a controversial essay political philosopher Susan Okin (1999) famously argued that

the rise of multiculturalism with its emphasis in respecting the values of non-Western traditional societies and their hierarchical structures was bad for women. As women have become empowered throughout the developing world concerns are often voiced regarding the risks of breaking the social capital and fabric of communities that have successfully managed to solve questions of political order and social stability for centuries, keeping women relegated. Research in India, for example, has shown that when women become more prominent politically, even when their representation may be artificially created through quotas, empowerment effects are permanent (Bhavnani, 2009).

In the specific case of Mexico, the conditional cash transfer program known as Oportunidades has adopted a gender sensitive approach that attempts to empower women by transferring the monetary support directly to mothers, in order to grant them true access and control of household resources. In exchange for receiving the transfers, families must engage in activities related mainly with nutrition, health, education. For example, transfers are conditioned on regular assistance to health services for parents and children, and to school for children. Women must also attend meetings where various aspects of nutrition, health and education are discussed.

Our field research in the state of Oaxaca in Mexico provided anecdotal evidence suggesting that these meetings provide information useful for women's self-perception. In this paper we explore how the perceptions on the political role of women can be enhanced through information, and the demonstration effect that female empowerment may have in Oaxaca. If women are more prone to producing public goods in office, and if their access to office is mediated by their levels of information, then understanding empowerment through the dissemination of information should be fruitful to understand a component of the provision of public goods. We also explore whether information has a stronger effect on communities governed by traditional rules instead or political parties.

The structure of this paper is as follows. Section 2 presents an overview of the multicultural character of Oaxaca, by providing some descriptive data on the ethnic composition of its municipalities. We also discuss the opposition between multiculturalism and feminism, with some of the critiques emerging from a vibrant debate in political theory. Section 3 presents data regarding ethnicity and perceptions of women emerging from a 2009 survey we carried out in Oaxaca. The survey was designed with the specific goal of reducing selection biases that have characterized most previous research, making sure that comparisons between places ruled by usos y costumbres are made with appropriate counterfactuals. Section 4 elaborates on the notion of empowerment, its relationship with information, and how Oportunidades addresses these issues. Section 5 presents the results of a survey experiment designed to gauge informational effects on perceptions about women in government. Section 6 discusses

these findings and presents some concluding remarks.

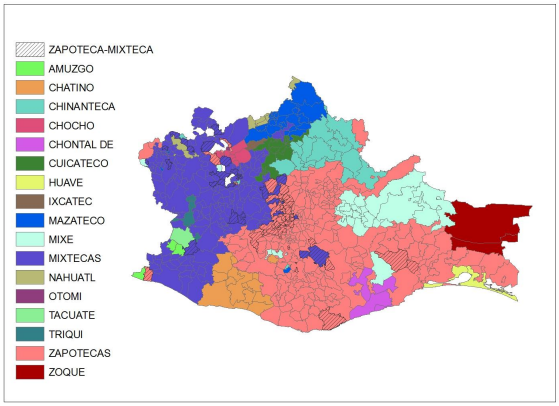
2 Communities, multiculturalism and women

Oaxaca presents an extremely rich cultural landscape. It is the state with most municipalities (570) in Mexico. Oaxaca is extremely poor: according to the 2005 census, the state has 3.4% of the country's population, but produces 1.5% of the national GDP. More than half of its population (53%) lives in rural areas, while the national average is 24% (INEGI, 2010). According to the 2008 CONEVAL's multidimensional poverty measures, 29 percent of the inhabitants of Oaxaca lived under extreme poverty lacking sufficient nutrition, 56 percent had no access to health services and 48 percent suffered deficiencies in their dwellings such as lacking drinking water, sewerage or electricity.

In 1990, Oaxaca became the first state to recognize its multicultural composition, and the right of indigenous people to determine their rules of governance. Communities were allowed to choose between electing their mayors through the traditional indigenous ways, called Usos y costumbres (Usos hereafter) and political parties like the rest of the country. In 1995 and 1997, the local electoral regulation was changed to recognize formally the right of the indigenous communities to select their municipal authorities through Usos. Out of the 570 municipalities, 418 are governed by these traditional ways.

There are more than 15 indigenous groups in Oaxaca. The following figure presents the geographical distribution of ethnic groups in the state, as classified by their linguistic use:

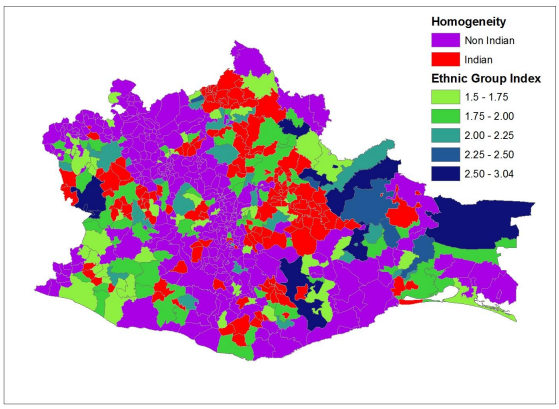
Figure 1: Ethnic groups in Oaxaca



The largest regions correspond to the Zapotec and Mixtec groups. Other large groups include Chatino, Zoque, Mixe and Chinanteco. Nevertheless, in spite of cultural pluralism, the communities themselves are not fragmented, but rather homogeneous. Figure 2 shows a

modified Herfindahl-Hirschman Index of ethnic concentration, and shows that ethnic groups within a given municipality tend to be dominated by only one linguistic group:

Figure 2: Ethnic fractionalization in Oaxaca



Localities are highly fragmented in many places of the country, but in Oaxaca most municipalities are characterized by having a core central community (called the cabecera, which is in fact the place where the majority lives and the locus of local government) and a number of smaller, usually rural and often remote localities usually referred to as agencias in Oaxaca. Some authors (e.g. Fox and Aranda, 1996; Díaz-Cayeros and Castañeda, 2004) argue that there is a structural bias against agencias when it comes to budget and political power; population, political power, and goods and services are usually concentrated in the cabecera, and thus it is known as cabecera bias. The following figure shows the demographic fragmentation (measured as Herfindahl-Hirschman index, as in the above ethnicity figure) of localities in Oaxaca; higher values on the horizontal axis mean more concentration of population in the cabecera:

Figure 3: Fragmentation of Localities in Oaxaca

The left hump in the distribution suggests that Oaxaca has a large number of indigenous groups which are not highly fragmented either in ethnic terms or territorial dispersion. But towards the right side of the graph above the population is widely fragmented between cabeceras and agencies, even when belonging to the same ethnic group. Hence, the survey that we discussed below was designed to capture differences between the rules used in the Oaxacan municipalities for the selection of mayors (Usos vs. Parties) and the type of locality involved (Cabecera vs. Agencia).

What is the status of women in Oaxaca, and how does it relate to these dimensions of heterogeneity? How do perceptions of female participation and access to office vary across these dimensions? Before presenting our survey and data, it is relevant here to lay out certain elements of the debate between multiculturalism and feminism. Particularly, we seek to highlight the central concern of some feminists regarding the (negative) effects that traditional roles within the community have on women, and some critiques to this view.

In the debate between multiculturalism and liberalism Kymlicka (1995) argued for the recognition of group rights within liberal societies. These group rights are meant to conserve certain fundamental identity traits linked to culture. The centrality of culture as a source of self-respect and meaning for individuals make it imperative that certain traits of minority cultures are protected from discrimination by the majority. Examples of this range from allowing Muslims to take some minutes off from work in non-Muslim societies, to constituting special governance areas in post-colonial countries, to family issues like polygamy.

The feminist critique to this view about multiculturalism is that the cultural differences that are a source of identity and a sense of self-respect are also the source of power relations

between genders: culture is also the source for patriarchalism, which is expressed for example in sexual and marriage rules biased against women, or in social tolerance of violence, rape and even murder, against women.

Okin (1999) claimed that there is an inherent tension between multiculturalism and feminism because women in liberal societies are guaranteed the same legal rights and freedoms as men. Western liberal cultures have taken significative steps to solve the traditional power inequalities between men and women, and the institutional setting reflects these changes. More traditional societies have not, and are therefore more likely to engage in practices against women that are, from a moral and historical standpoint, inadmissible in a liberal society, which upholds individual rights and autonomy at its core.

She agrees with Kymlicka that no group that is considered illiberal should be granted special rights. Okin's critique turns attention to the fact that power relations (or abuse) within the household is almost impossible to detect unless women take action (e.g. call the police), and so abusive practices towards women can remain hidden in the household. This feminist critique is also directed towards the neoclassic economic view of the household as a unitary decision-making entity, an approach that is blind to gender power relationships (Kabeer, 1999). Conditional transfers programs such as Oportunidades, central in this paper, are a policy expression of this critique.

Nevertheless, there have been dissenting voices from within feminism and multiculturalism. A first set of critiques argue that feminism, and liberalism in general, can be interpreted as a system of values which is historically determined, and exporting its practices and values into different cultures is condescending because it leaves minority women without any real choice except liberal feminism[2].

A second line of critique focuses on what some see as a static, unchanging and possibly paternalistic conception of the "other" cultures -those which Western (or Westernized) liberal feminists try to equalize with their own. Volpp (2001) criticizes the opposition between feminism and multiculturalism on the ground that it is rooted in the idea of Western women as liberated and secular; this, she argues, is "product of discursive self-representation, which contrasts Western women's enlightenment with the suffering of the 'Third World woman"'.

Another concern in her argument is that "culture and claims to cultural identity are always contested within the communities", which echoes Tamir's (1999) concern of a paternalistic bias in the liberal assumption that our culture can withstand and adapt to change, while

[2]For example, Al-Hibri (1999) argues that secular feminist claims about what constitutes acceptable cultural practices can easily become patriarchal (i.e. abusive) if they become blind to the meaning of religious values which may be *chosen* freely by women. Related to this critique, Parekh (1999) claims that a fundamental question is how women themselves perceive their situations, and criticizes the Western practice of using the (Marxist) label 'false consciousness' to describe any act in which a woman chooses to follow the gender roles of her community.

"their" cultures cannot. Others see culture as a dynamic bargaining process wherein roles and responsibilities are assigned (Honig, 1999).

We agree that culture is a non-monolithic set of values and practices, which are set to be contested within the communities, and that non-Western cultures are complex and subject to change. This implies that some aspects of culture will hinder women's choice, while others will actually enhance their agency and choice. Moreover, non-Western cultures do not exist in isolation, but in continuous interaction with influences from outside the community.

If culture is in itself not the problem, then governments can devise policy to modify practices and perceptions within these communities in the short run. If the answer to female disempowerment is culture in itself, then a multicultural arrangement is part of the problem and women in these communities have no choice within their cultural identity. But if we think of culture as a changing phenomenon, which can be politically contested from within the community, and which can be modified through policy, then we can start having a true dialog with these communities -and women.

From an empirical standpoint, Danielson and Eisenstadt (2009) focus on the effect of multiculturalism on women participation in Oaxaca, Mexico. They present evidence from a 2004 survey (similar to our own) that suggests to them that multiculturalism is bad for women because participation rates are lower for women in municipalities governed by Usos.

For example, according to 42% of respondents in their survey, women do not participate in local elections in municipalities governed by Usos, whereas 15% in parties have the same opinion. Using perceptions of women's voting as a depentend variable, their models suggest that, ceteris paribus, residents of Usos municipalities are .26 points less likely to perceive that women participate in local elections (Danielson and Eisenstadt, 2009: 166). When ignoring those municipalities where women are officially excluded from voting, this effect goes down to 0.18, an important decrease which nevertheless remains high.

Other variables that were consistently significant with positive effects for perception of women participation include the percentage of the population that lives in a female-headed household and the percentage of population born in the locality. Migration was not significant in any of the models. In two out of three of them, marginalization was not significant, and speaking an indigenous language was significant and negative.

Danielson and Eisenstadt are careful to introduce a caveat into their conclusions. They also find that women participate at high rates in inclusive municipalities governed by Usos, and so they see a potential for harmonious gender relationships conditional on increased gender equality. They seem to suggest that the inclusiveness in Usos has a very high impact on gender relationships.

Their work is relevant to our own because it allows us to gauge any temporal differences

for the population of Oaxaca -which concentrates a high proportion of municipalities governed by Usos in the whole country. Even though they find evidence that suggests gendered participation patterns in municipalities governed by Usos, their evidence leaves open the possibility for change, and reflects a notion of culture as a dynamic, internally contested phenomenon that will be central to our argument below. Our claim here is that policy tools that have explicitly included gender sensitive elements -such as Oportunidades- should have a strong impact on perceptions about women in politics. The next section presents the results of our survey. They generally suggest that the story presented by Danielson and Eisenstadt has changed over the course of the last five years. The last section hypothesizes that this change in perceptions towards women can be partially explained by Oportunidades.

3 Survey design and results

We designed and collected a stratified random sample of 600 questionnaires of men and women over 18 years old in rural and semi-rural areas in Oaxaca. [3]The stratification divided Oaxacan municipalities according to the size of their cabecera and their governance institutions. Although a conventional classification from Mexico's statistical agency, INEGI often defines communities as rural or urban according to a threshold of 2500 inhabitants, the peculiarities of Oaxaca and the nature of communities dictated the type of stratification we designed.

Strata were established for rural municipalities with less than 2500 inhabitants in the cabecera, regardless of the overall size of the municipality; semi-rural municipalities with between 2500 and 5000 inhabitants; and urban municipalities, which were not included in the survey. This coverage in the study was established in order to enable inferences about governance conditions in territories that could meaningfully be thought of as single units. It therefore excluded both the largest metropolitan areas as well as mid-size cities. On the governance dimension, strata were established depending on whether municipal governments were elected trough political parties or through the use of customary law (usos y costumbres). The classification used comes from the Instituto Electoral Estatal de Oaxaca which established in 2009 that 418 municipalities were governed through usos y costumbres. This

[3] The questionnaire was deisgned by Diaz-Cayeros and Magaloni. Ruiz Euler coordinated the qualitative filedwork. The sample was designed by Díaz-Cayeros and Vidal Romero at ITAM in Mexico City. The fieldwork was carried out by Opina S.A. de C.V., a private firm with ample experience in survey research in Mexico. Funding for the survey was provided by Magaloni, with funds from the School of Sciences and Humanities at Stanford University; the field work was funded jointly by a grant from the University of California Office of the President (UCOP) to the Center for U.S.-Mexican Studies and Stanford University.

joint stratification by size and governance yields the following design, where the entries in each cell are the number of municipalities falling under each category and the parenthesis indicates the aggregate population of each cell.

Table 1: Survey design (3 strata)

Cabecera Size	Parties	Usos
Rural (pop<2500)	63 (243,915)	371 (890,864)
Semi-rural (2500<pop<5000)	27 (192,713)	36 (217,207)
Urban (>5000)*	62 (1,827,586)	11 (134,536)

This design means that there is an oversampling of rural localities and municipalities governed by usos y costumbres, but we designed the sample in this way to ensure the possibility of making inferences regarding those places where much of the rural poverty and many serious governance problems are found.

Figure 4: Municipalities governed by Usos and Parties

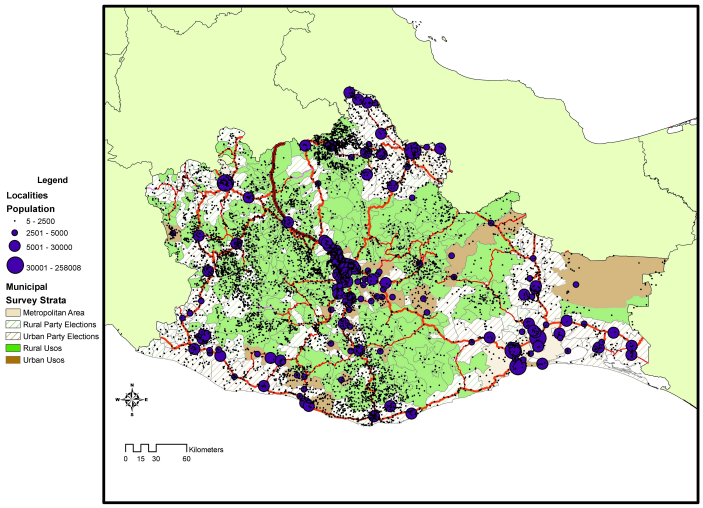


Figure 4 shows the municipalities in Oaxaca that are governed through Usos y Costumbres. For the selection of individual municipalities we used the mapping of the Federal Electoral Institute that divides the territories into tracts comprising 750 voters. Each of this so-called "secciones electorales" are equally likely in terms of their probability of being chosen, hence providing a very reliable sample frame for the kind of rural areas where the

survey was carried out. Around half of the sample points fell into cabeceras while the rest in smaller localities called agencias. 16 questionnaires were collected in the cabeceras and 8 in the other localities. These numbers were chosen by calculating the power of the tests across governance structures and localities that we planned to make, using the Optimal Design software (Spybrook et al., 2008). Sixty was too expensive due to dispersion of sample; forty yielded insufficient inference power. The final distribution of surveys in Usos/Parties and Cabeceras/Agencias in the sample is as follows:

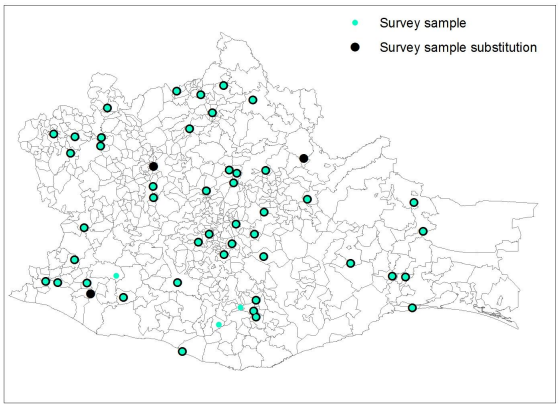
Table 2: Respondents by type of government and whether in Cabecera or Agencia

	Cabecera	Agencia
Usos	37%	5%
Parties	24%	33%

n=600

The dispersion of the sample is a consequence of taking a more rural approach. The survey was collected in August 2009. Two survey teams had 4 routes. Permissions were obtained from municipal presidents to enter the communities. There were three additional locations of partidos that added 32 more questionnaires, but are not included in this analysis. Figure 5 below shows the location of the 48 polling points indicating the substituted points. Some adjustments were made to the survey in the field: 7 polling points were repeated with a corrected version of the questionnaire, and there were 4 substitutions from the original polling points (substitutions were random, instead of geographic proximity):

Figure 5: Survey sample points



In addition to the survey, in-depth qualitative work was done as a follow up in a selected number of polling points in the central valley region close to Oaxaca City to acquire a richer description of the data.

In the three following subsections we present descriptives about ethnicity and attitudes towards women in Oaxaca. Since our two broad dimensions of analysis are municipalities governed by Usos/Parties, and Cabeceras/Agencias, we present the data segmented by these dimensions plus gender.

3.1 Ethnicity

This section presents descriptive data on ethnic identity in Oaxaca as reported in our survey. As stated above, Oaxaca is a state with a highly complex and diverse ethnic composition, with over 13 indigenous groups. In our survey, 72% of respondents report identifying as indigenous. The following table segments the answers by the dimensions stated above:

Table 3: Do you consider yourself indigenous or not? (n=584)

	Usos	Parties
Yes	78%	67%
No	22%	33%

	Cabecera	Agencias
Yes	75%	67%
No	25%	33%

	Men	Women
Yes	73%	70%
No	27%	30%

If we segment this answer by Usos/Parties we see that, as expected, more people living under Usos identify as indigenous than those living in municipalities where political parties are the vehicle to access power. In addition when segmenting by Cabecera/Agencias, we see that 75% of the people living in Cabeceras identify as indigenous, and the rest do not. Difference in proportions tests show that the difference between men and women is not statistically significant. Thus, people living under Usos are more likely to consider themselves indigenous, and people living in Cabeceras too, but there is no difference in identity by gender. When segmenting by age groups, the highest affirmative response comes from the youngest people: 81% of respondents between 18 and 21 years old answered they considered themselves indigenous, followed by 74% of people over 60, and 70-71% people between 22 and 59. There is no clear linear relationship when segmenting by age, but somewhat unexpectedly younger people are those with more indigenous identity.

Identity is a problematic concept (see e.g. Chandra, 2006), but a recurring cultural marker identified in the literature is language. Respondents who answered yes to the previous question were asked whether they speak an indigenous language, of which 59% do. This percentage can be compared to the 72% of people who consider themselves indigenous. This mismatch between identity and language points out that language is an important, but incomplete, cultural marker related to identity: some indigenous individuals do not speak any indigenous language.

The following table segments the results for this question by the usual categories:

Table 4: Do you speak any indigenous language? (n=470)

	Usos	Parties
Yes	68%	51%
No	32%	49%

	Cabecera	Agencias
Yes	60%	57%
No	40%	43%

	Men	Women
Yes	62%	56%
No	38%	44%

People who speak indigenous languages are more concentrated in municipalities governed by Usos, and more men than women speak one. The difference between Cabecera and Agencia is not statistically significant, suggesting that whether people speak an indigenous language or not is not related to this dimension. But whether people speak or not an indigenous language is related, not surprisingly, with whether their parents speak one. The following table shows the distribution of answers between the previous question and whether the respondent's parents speak (or spoke) an indigenous language too:

Table 5: And do your parents speak an indigenous language? (n=589)

		Parents speak	
		Yes	No
Respondent speaks	Yes	53%	5%
	No	14%	28%

The upper left cell shows the percentage of respondents who continue to speak an indige-

nous language, probably because they learnt it at home: at least half of the population still preserves the language. The lower right cell shows the percentage of people for which an indigenous language has been absent for at least two generations. The remaining cells provide some insight into recent shifts in linguistic identity. The upper right cell shows that about 5% of the population has learned the language outside the household, and can be thought of as an increase in the pool of people who preserve an indigenous language outside the household. This may be because of other relatives like grandparents, or through indigenous schooling or other governmental programs to preserve language diversity. Finally, the lower left cell shows that 14% of the people have lost the language in the current generation.

3.2 Attitudes toward women

Although we are unable at this point to show official data on the propensity of women to take part in municipal governments in Oaxaca, our data shows that only 15% of the people reported knowing a woman in government, whether as a municipal president or as a member of the *cabildo* (town council). Although these type of questions involve remembrance about facts and are thus questionable proxies about facts (see e.g. Deaton, 1997), they point to a situation where women have not had widespread access to local offices.

Table 6: Do you personally know a woman in office? (n=597)

	Usos	Parties
Yes	17%	13%
No	83%	87%

	Cabecera	Agencias
Yes	17%	12%
No	83%	88%

	Men	Women
Yes	15%	14%
No	85%	86%

People from municipalities governed by Usos, or who live in the Cabecera recall more women in government that people in municipalities governed by parties or in Agencias. When dividing by Usos and Parties, we get a similar distribution of answers, but with a slight increase in affirmative answers in Usos (17%) and a slight decrease in Parties (13%). A difference in proportions test shows a statistically significant difference between these two

groups at an $\alpha = .10$ level[4]. People in Usos' regimes perceive a higher participation of women in government.

When we divide this answer by Cabecera and Agencias we get a similar pattern: 17% of respondents in Cabeceras recall knowing women in government, whereas 12% of respondents in Agencias; again, a difference in proportions test confirms a statistically significant difference between these two figures, suggesting that people in Cabeceras tend to recall (or observe) more women in government than the more remote (and usually more rural) people in the Agencias. Finally, the answer to this item doesn't seem to be related to gender: differences in the answers between men and women show no statistical significance.

A separate but related question asks respondents directly whether they know or not a woman who is municipal president. The distribution of answers is the following:

Table 7: Do you know if in this municipality a woman has ever been elected as municipal president? (n=238)

	Usos	Parties
Yes	38%	14%
No	62%	86%

	Cabecera	Agencias
Yes	38%	2%
No	62%	98%

	Men	Women
Yes	28%	29%
No	72%	71%

This question is perhaps more accurate in measuring perception of access to women to the highest municipal office. The first question, because it asks whether the respondent personally knows a woman in office might be an indicator of political networks within the communities, while this second question measures specifically knowledge about women in office. The data suggests that people in Usos know almost three times more women as municipal presidents than do people in municipalities governed by political parties. But the strongest difference is between people living in Cabecera and Agencias: 38% vs. 2%, respectively. The latter two differences are statistically significant, but there is no difference when segmenting per gender.

If we focus only on those municipalities governed by Usos but segment by Cabecera / Agencia, we get that 47% of respondents in the Cabeceras recall knowing a woman

[4]As are all statistical tests in this paper unless otherwise noted.

in this office, versus only 3% in Agencias. Within municipalities governed by Usos, the Cabecera/Agencia dimension has a very strong effect. And if we focus on those respondents who live in Cabeceras, and compare their answers segmenting by Usos we get that 47% of respondents in Usos and 21% in parties know women in government[5]. This evidence suggests that there is no bias, with this measurement, against women in Usos, and that a more relevant dimension might be Cabecera/Agencia, rather than whether they are governed by Usos or not.

Regarding the participation of women in assemblies, an overwhelming majority of respondents said women are actually allowed in municipal assemblies: 90% of the people said they were able to participate, and 10% that they don't. Segmenting by Usos, Cabecera and gender we get the following:

Table 8: Do women here assist or not to assemblies? (n=399)

	Usos	Parties
Yes	87%	91%
No	13%	9%

	Cabecera	Agencias
Yes	89%	91%
No	11%	9%

	Men	Women
Yes	91%	89%
No	9%	11%

The only positive answer statistically different corresponds to respondents segmented by Usos/Parties: 4% more people in the latter report that women assist to assemblies. Segmenting by gender and cabecera do not present any statistically significant difference in proportions. Governance rules seem to be a relevant dimension for this question, but we have a small effect.

Given that women actually assist to assemblies (which is the overwhelming perception in Oaxaca) are there any gender differences in the actual relative importance of votes within those assemblies? That is, once that women assist, do they merely delegate their vote and authority to a man or do they personally engage in the process of voting? We gauge this with a question that asks whether women can vote on their own, whether they discuss with their husbands but the man votes, or whether they cannot vote. The overwhelming majority

[5]We don't have enough data to compare the answers for people in Agencias.

of respondents (97%) report that women can vote on their own, and only 3% report the remaining answers. The following table segments the answers into the three usual categories:

Table 9: Can women vote on their own, through their husbands, or they cannot? (n=355)

	Usos	Parties
Own	97%	97%
Husband	2.5%	2%
Cannot	0.5%	1%

	Cabecera	Agencias
Own	97%	96%
Husband	2%	4%
Cannot	1%	0%

	Men	Women
Own	97%	97%
Husband	3%	2%
Cannot	0%	1%

When comparing exclusively the option in which women have no restraint to vote (i.e. Own) none of the differences are statistically significant, by any segment.

Municipalities governed by Usos in Oaxaca (and also elsewhere in rural Mexico) rely heavily on community service to develop areas such as road and school maintenance, construction services for the community, policing, organizing the religious and civic festivities or taking part in the municipal government. This community service, called *servicio* lasts some time between one and three years, and is a widespread practice in Oaxaca: 75% of respondents reported having done servicio themselves or someone they know. When segmenting the answer by age, we see a downward trend in people who have done servicio in the younger age groups; also, respondents between 18 and 21 years old are the ones with the highest perception that servicio is an abusive practice. These two facts suggest that this traditional way of doing things is beginning to loose support among the youth. The reasons lie outside the scope of this paper, but it might be related to the fact that there seems to be an age cleavage in the appreciation and fulfillment of servicio.

In terms of gender, there is the perception that women have in general an equal chance to participate by themselves (that is, without the intermediation of her husband) doing servicio. Our data show that 74% of respondents think that women have the ability to participate in a servicio, but a still high 26% thinks they don't. There is no statistical difference in these proportions when segmenting by gender.

Respondents in municipalities governed by both Usos and political parties were asked what types of public tasks (*cargos*) women perform in the community. When we disaggregate the types of cargos women hold in the communities we find some evidence that women are confined to gendered roles when performing servicio. The following table presents the percentage of affirmative answers for five different response categories, which have been classified from an open-ended question with up to three mentions:

Table 10: What type of cargos do women perform here in the community?

	Usos	Parties
Official	20%	31%
Education and Health	25%	22%
Other	5%	7%

	Cabecera	Agencias
Official	25%	30%
Education and Health	23%	30%
Other	4%	10%

	Men	Women
Official	30%	24%
Education and Health	25%	25%
Other	7%	7%

The category "Official" includes municipal president, other municipal government posts and their replacements, police, president of the office for child development and assorted committees. This is the category with the most mentions, but an important caveat is in place. The mentions for the highest official posts are few; most of the mentions in this category are related with minor roles in government, with replacements for other higher level posts, and with members of various committees. Inferring from this data that women actually have a good chance of accessing high level local offices is misleading.

When segmenting the data by Usos and Parties we see that those respondents in municipalities governed by Usos have the perception that women hold less "Official" posts. This difference, and all others, are statistically significant. All responses are higher for municipalities governed by parties, except for cargos related to health, and the program Oportunidades.

When segmenting the responses between Cabecera and Agencias we see that all responses are higher in Agencias, suggesting that the overall perception about women involvement in

cargos is higher than in Cabeceras. All differences are significant except for cargos related to education.

Finally, when segmenting by gender we see a very similar distribution of the answers between men and women, except for the category 'Official'. Men perceive that 30% of women involved in cargos are related to official activities, whereas only 24% of women do. This is the only statistically significant difference in the previous table.

We have presented descriptive statistics for various dimensions of the relationship of women to public life in Oaxaca: political networks, women in government, participation of women, whether they delegate their vote to men, and the type of cargos they hold within their communities.

Our evidence does not support the idea that women in municipalities governed by Usos have a more negative stand than other women governed by political parties when it comes to becoming a municipal president. Although we cannot at this point show official data regarding the latter question, our survey data suggests that the cleavage between municipal Cabeceras and their Agencias seems more relevant to the question whether people know a woman or not in the presidency of their municipality, rather than being governed by Usos. Regarding participation, we do see that people in municipalities governed by Usos perceive slightly lower participation of women in assemblies (4%), but there is no difference in the perception that women delegate their votes to their husbands when segmenting by either Usos/Parties, nor Cabeceras/Agencias, nor gender.

The next section addresses the notion of empowerment and its relationship to information. This discussion is aimed at justifying the pertinence of our survey experiment, which gauges the effect of additional information on perceptions on women in government. As we hope will be clear by the end of the next section, the ability to process new information plays a fundamental role for empowerment because it points out the ability, albeit only discursively, to update beliefs about alternative states of the world: one in which women exercise political power.

4 Empowerment and Information

The empowerment of socially neglected groups, and of women in particular, has been on the agenda of policy-makers, researchers and activists for at least three decades already. Nevertheless, the conceptual and methodological difficulties of knowing what exactly constitutes empowerment -and thus how to measure it- still pervade. In this section we define and restrict our usage of the word empowerment. This will allow us to define precisely how our usage of the word relates to our empirical measure, which will in turn be helpful in defining

the meaning and scope of the results presented here.

Kabeer (1999) discusses thoroughly the concept and the literature that had tried to define and measure women empowerment. From a conceptual perspective, she points out that the central element in the notion empowerment is "power", which can in turn be related to the idea of having *choice*. To be disempowered means then to be denied choice, and empowerment is the *process* by which choice is made available. Empowerment thus implies the notion of change from a situation in which an individual or a group has no choice, to one in which it has.

Nevertheless, in order for the concept of choice to be meaningful in the analysis of power, it requires a number of qualifications about its conditions, its consequences, and its transformatory significance.

For there to be choice, alternatives to the current state of affairs must be available, in reality or at least at a discursive level. In this sense, Kabeer's analysis parallels Sen's notion that a constitutive part of development is the removal of substantial unfreedoms, which leave people with little or no choice or opportunity to exercise their reasoned agency (Sen, 1999: xii). This is, in Kabeer's analysis too, the main linkage between poverty and disempowerment.

There is also a link between social norms and disempowerment[6]. Whether women have or not the ability to choose among various options is not in itself enough to grant real choice. The available options must be independent of the conditions that originate and reinforce women's marginalized status.

For example, in the extreme case of female genital mutilation, widespread across countries like Sudan, Mali, Guinea, and some countries in the Arabian Peninsula, genital mutilation is a convention aimed at signaling within the marriage market that a woman is fit for it. Women, or more properly, girls whose clitoris (and in some cases the whole vulva) is not mutilated and can thus experience sexual pleasure, are disregarded by the men and other women in communities, making them unlikely to get married, which imposes very high individual costs. Mothers thus voluntarily engage in mutilation to avoid elevated individual costs for their daughters in the future (Mackie, 1996).

This relates to Kabeer's argument to the extent that social norms do not only operate through constraints on the actual number and importance of available choices; they also operate on the actual preferences and values of women -and men- and are able to shape choices not by limiting the number of available options, but by aligning the feasible choices with the conditions and situations that disempower women to begin with. In this sense,

[6] We use here Bicchieri's (2006) definition of social norms as shared beliefs about expected behaviour, and the corresponding sanction to deviations thereof.

the notion of choice becomes paradoxical because choices outside the social norm become prohibitively costly.

A second qualification to the notion of choice are its consequences. Not all choices in our lives are equally relevant. The choice of how many children to have is allegedly more relevant to a woman's life than the choice of running or not for office, and the latter is not as important as whether what type of music she likes. There is an inherent hierarchy in the choices we make, and so when analyzing choice we must bear in mind the strategic relevance of a choice for a woman's life.

The third qualification, central to our research, is the transformatory significance of choices women make, which distinguishes between choices that are able to change the status quo, and those which merely reproduce it. This qualification is closely related to the previous one, but is analytically distinct in that it focuses not at the individual level, but at the potential for collective transformation that the decision of women might have.

This transformatory approach to choices requires women (and men) to move from an uncritical acceptance of the status quo to a critical perspective about why things are how they are: "(The) availability of alternatives at the discursive level, of being able to have chosen differently or at least *being able to imagine such a possibility*, is thus crucial to the emergence of a critical consciousness, to the process by which people move from position of unquestioning acceptance of the social order to a critical, and perhaps transformatory, perspective on it" (Kabeer, 1999: 9. Emphasis is ours).

The centrality of a discursive possibility of alternative social equilibria has also been discussed in the context of female genital mutilation. Mackie (1996) analyzes the parallels between this practice and the Chinese practice of footbinding. What started as an elite practice in early dynasties eventually piped down to the general population, and became a self-enforced equilibrium in which women whose feet where not deformed were not able to marry, because it had become an accepted belief about chastity and other valued attributes. This practice was widespread and lasted for a thousand years, but was overturned in a generation. It is equivalent to female genital mutilation in that they both are nearly universal where practiced and they control sexual access to females, ensure they chastity and fidelity, and are transmitted mainly by women themselves.

Mackie argues, using Schelling's idea of conventions as solutions to repeated coordination problems, that there were four basic elements that contributed to such a rapid overturning of a harmful social equilibrium (what he calls a self-enforcing belief trap): the first one was the dissemination among the Chinese population, mainly because of contact with the Western world, that there were parts of the globe where women did not bind their feet, and that China was being ridiculed elsewhere; second, there were social entrepreneurs who had very strong

preferences against footbinding, who were willing to accept the initial costs of not following the convention; third, they were organized in groups that assured a marriage market for people that deviated from the norm; and finally, with marginal increments to these groups, a critical mass was formed (a tipping point) that allowed families with marginal preferences over footbinding to decide not to do it, thus increasing that critical mass, and so on.

Relevant for our own work is the argument, both in Kabeer and Mackie, that information about different equilibria is an essential precondition to a) question the social order and b) overcome the current inferior equilibrium. Women disempowerment can be understood as an inferior equilibrium that translates gender differences into gender inequalities, having negative effects on women's personal development, and on the important economic choices they perform, both inside and outside the household.

Information about different, possible states of the world is thus essential to be able to at least imagine a different social equilibrium, in which women have access and control of more resources, both in the private sphere of the household, *and in the public sphere*. The possibility of imagining these alternative scenarios is in turn mediated by the ability to absorb new information provided by different channels, thus updating beliefs and creating the basic precondition which, we have argued, lies at the center of both the notion of empowerment and the process of overcoming inferior social equilibria.

In the next section we assess the impact of new information on the perceptions about women in government. Specifically, we present results of a survey experiment in which respondents were randomly assigned factual information about women as municipal presidents in other municipalities of Oaxaca. If the discursive possibility of alternative social orders is a necessary condition for empowerment, then the ability to process information about these alternative social orders should be a central concern. Our experiment focuses on the effect of information about superior social equilibria (one in which women have actual access to political power) on perceptions about women's achievements outside their prescribed gender roles in the community.

We have restricted our use of the word empowerment to a process of acquiring real or perceived choices, and we have argued that a central component of empowerment is the ability of people to update beliefs with new information. Our survey experiment deals with this very basic element of empowerment: it included an embedded experiment to gauge the effect that additional information has on the perception that women should be allowed to be municipal presidents. The next section describes the experiment, and presents our main results.

5 Experimental treatment and compliance

Survey experiments are powerful tools to explore causal mechanisms because they combine the internal validity of experimental designs and the external validity of surveys (Transue et al., 2009). In its basic form, the researcher randomly assigns a treatment to two or more different sets of questionnaires. This treatment can come in the form of different wording or ordering of the questions; it is considered experimental because treatment in the survey is randomly assigned.

In political science, survey experiments have been applied to reduce social desirability when asking about sensitive topics; how or whether priming affects the measurement of attitudes and opinions, or for purely methodological purposes (Gaines et al., 2007).

Although cause and effect can be isolated easier than with non-experimental procedures, a potential problem with survey experiments is that the order of the experiments might affect the observed results in other experiments or questions in the same survey. According to Transue et al. (2009: 2), experimental treatment spillover effects can occur when a previous treatment influences a subsequent survey question or experiment. If the treatment in one question affects responses further down the survey, two potential problems may arise. The first one is *mean bias*, in which previous experimental treatments affect the initial attitude of a subsequent question -either part of an experiment or not. Even if the starting attitudinal point is shifted, this does not necessarily involve inference problems.

The second type of bias, *inference bias,* occurs when previous experiments affect the sensitivity respondents have to subsequent treatments, in which case testing threats can alter the quality of our inferences, inducing type I or type II errors artificially. Transue et al. suggest that using experimental treatments for unrelated topics, and maximizing the spacing of experiments within the survey helps minimize these problems.

Our survey contained three embedded experiments. The one presented here was the first one, and so we cannot expect any spillover effects because there is no other experiment preceding the one presented here. Additionally, it was administered early in the survey and the topics for each experiment are different. Thus, we do not discuss here potential treatment spillover effects.

Our survey experiment measures the effect of information on perceptions of women in the municipal presidency. Questionnaires were randomly assigned to either group before going to the field. The question in which the treatment was administered measures agreement with women in municipal governments, specifically the presidency. The control and treatment questions read as follows:

Table 11: Survey experiment: Control and Treatment

Control

With which of the following phrases do you agree the most? (*Read Options*):
1) Only men should be municipal presidents.
2) Women should be able to serve as municipal presidents.
9) Dk/ NA (*Do Not Read*)

Treatment

In the state of Oaxaca 8 municipalities are governed by female municipal presidents, and in 124 municipalities there are women in the town council. With which of the following phrases do you agree the most? (*Read Options*):
1) Only men should be municipal presidents.
2) Women should be able to serve as municipal presidents.
9) Dk/ NA (*Do Not Read*)

Both questions measure attitudes towards women in the highest municipal office, and both have the exact same wording and answer categories, which were read to the respondents in both cases. They were also set in the exact same position of the questionnaires. All elements of the question (wording, response categories, procedure to ask, and position in the survey) are the same. The only difference is that the treatment version adds factual information before asking the respondent their attitudes about women in government.

It is important to note that the experiment does not measure the effect of wording or framing, because the treatment provides respondents with additional information, which is absent in the first version. This is what makes the first version a control, rather than a modified version of the treatment -it provides contextual information about women in local governments.

This question relates to the theoretical argument presented in last section in a number of ways. First, it gauges the effect that additional factual information about non-traditional roles of women has on the perceptions about women's access to public office. Second, the fact that it evokes attitudes about women exercising political power relates to a fundamental transformatory choice of women; recall that in Kabeer's framework, the transformatory significance of women's choices has to do with the effect that their choices have on the status quo. Running for office is a decision that (provided they win enough votes) gives women access and control over real political resources such as administrative authority and budget, and is therefore a decision that can have very real effects on the status quo through policy -for example, in the provision of public goods. Third, because it provides information about other municipalities in Oaxaca where women have actually accessed office, it creates in the respondent's mind the discursive possibility that, as we argued above, lies at the center of both empowerment and the modification of harmful social equilibria.

Randomization in the assignment of treatment minimizes the probability that characteristics of the experimental subjects are systematically distributed between control and treatment groups (Fisher, 1925, 1936; Cook and Campbell, 1979; Shadish et al., 2002; Kirk, 2009). Proper randomization provides researchers with two or more groups whose individuals have, on average, the same characteristics, and thus inference problems such as selection bias can be ruled out. When this doesn't happen, alternative statistical methods can be used, such as balanced score matching (Rosenbaum and Rubin, 1983).

In order for our experimental design to be valid we conducted difference in proportions tests (or difference in means tests where appropriate) between control and treatment groups, in all relevant variables, i.e. those factual variables such as gender, income, education, age, Usos vs. Parties, Cabecera vs. Agencia, receiving Oportunidades, etc. Where a variable had more than one category[7], difference in proportions tests were conducted for each and every subcategory.

None of the differences between these averages in both treatment and control groups were statistically significant, and an inspection of the kernel density of these comparisons showed a similar distribution of respondents in both groups. The only variables that were significantly different were income in the 6001-10000 range, and whether respondents had or not a refrigerator in the household. This means that, in general, randomization worked correctly, and that the treatment and control groups in our survey experiment comply with the requirements of the experimental design, except in the two variables mentioned.

When all variables between treatment and control groups are the same, researchers can reasonably expect that the differences in means observed in the relevant dependent variable is due to treatment. In our experiment, the two variables that did not comply must be included in the model to control for any systematic selection bias that might be affecting our results.

Our survey experiment finds evidence that the contextual information provided to the treatment groups increases the acceptance of women in municipal presidencies. The following figure presents the relevant difference in proportions test:

[7] For instance, income was segmented into 5 categories: <1500, 1501-3000, 3001-6000, 6001-10,000, >10,000 (figures in Mexican pesos).

Table 12: Average treatment effect in the survey experiment (n=588)

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

	Mean	Std. error	95% c.i.
Treatment	.93	.015	(.89,.95)
Control	.86	.019	(.83,.90)

Difference	-.062
$p(Z < z)$	**.007*** **

The average treatment effect of the additional information was a 6.2% increase in the probability of answering that women should be allowed to be municipal presidents for people that received the treatment, compared to those who didn't. To control for the variables for which there was no (experimental) compliance, we run the following model:

$$E(Y \mid x) = Intercept + Treatment + Income_4 + Refrigerator$$

where $Treatment$ is the dummy variable that captures the presence of additional information in the question about women in municipal presidencies, $Income_4$ is the first variable where we found no compliance (it is the fourth income category, from 6,000 to 10,000 pesos), and $Refrigerator$ the second variable with no-compliance (having a refrigerator or not). We also ran the model including all income variables except for the baseline (the highest income). The following table presents the results:

Table 13: OLS models to control for non-compliance in randomization. DV: Perceptions of women in municipal governments.

	Model 1	Model 2	Model 3
Treatment	**.062****	**.06****	**.059****
	(.025)	*(.025)*	*(.025)*
$Income_4$		.11	**.13***
		(.074)	*(.077)*
Refrigerator		.041	.037
		(.028)	*(.028)*
$Income_1$			.005
			(.034)
$Income_2$			.055
			(.036)
$Income_3$			.04
			(.042)
Constant	**.86*****	**.83*****	**.81*****
	(.017)	*(.025)*	*(.034)*
R^2	.008	.018	.024
Pseudo R^2	.016	.013	.014

Significance: * .1, ** .05, *** .01

Model 1 is the baseline, and it basically replicates the findings of the simpler difference in proportions test. Model 2 includes the two variables for which the averages between treatment and control were not equal, and Model 3 extends the previous one with all the other income options as factor (using the highest income as base). After controlling for those variables where randomization failed, we can see that all the values for the treatment are $\sim 6\%$[8]. This procedure was replicated for each of the following tests, yielding redundant results, and so they are omitted for clarity.

Women who received the treatment did on average think 7% more than the control, that women should be able to become municipal presidents, and this effect decreases to 5% among men:

[8]We chose OLS instead of logit because the results are more straightforward interpretable, and because the predicted values that violate the upper bound of 1 seem to us negligible in this case: in Models 2 and 3, only 1% of the predicted values (6 observations) equal 1.04. All the rest are between 0 and 1.

Table 14: Average treatment effect, by gender

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Women

	Mean	Std. error	95% c.i.
Treatment	.93	.021	(.89, .97)
Control	.86	.028	(.80, .91)

Difference	-.07
$p(Z < z)$	**.021****

Men

	Mean	Std. error	95% c.i.
Treatment	.92	.022	(.88, .97)
Control	.87	.028	(.82, .92)

Difference	-.05
$p(Z < z)$	**.075***

When we segment the treatment effect by Usos/Parties, we evidence that in municipalities governed by Usos the additional information does not have any effect, while it does in Parties:

Table 15: Average treatment effect, by Usos/Parties

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Usos

	Mean	Std. error	95% c.i.
Treatment	.92	.024	(.88, .97)
Control	.89	.026	(.84, .95)

Difference	-.03
$p(\|Z\| < \|z\|)$	.44

Parties

	Mean	Std. error	95% c.i.
Treatment	.93	.019	(.89, .97)
Control	.84	.028	(.78, .89)

Difference	-.09
$p(Z < z)$	**.005*** **

Furthermore, if we disaggregate by gender and Usos/Parties, we get very similar results for men and women in Parties, around 8-9%. The results for men and women in Usos are also similar to the extent they are non significant (and are therefore not presented here):

Table 16: Treatment effect in the survey experiment, by Usos and gender

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Women in Parties

	Mean	Std. error	95% c.i.
Treatment	.93	**.026**	(.88, .98)
Control	.84	**.04**	(.76, .92)
Difference	-.09		
$p(Z < z)$	**.029****		

Men in Parties

	Mean	Std. error	95% c.i.
Treatment	.92	.03	(.86, .98)
Control	.84	.04	(.76, .92)
Difference	-.08		
$p(Z < z)$	**.044****		

These results could suggest that multiculturalism is actually bad for women. We are cautious with this interpretation because segmentation by income within Usos/Parties could give additional insight on whether it is this variable, and its correlation with education, what could be driving the results. Unfortunately our data is not enough to do this, because we get very small number of observations.

Among respondents who have been assigned cargos inside the communities, we also find some results. People who have performed cargos are more prone, regardless of gender, to be sensitive to treatment:

Table 17: Treatment effect in the survey experiment, by *cargos* and gender

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Women Who Have Performed Cargos

	Mean	Std. error	95% c.i.
Treatment	.92	.033	(.85, .98)
Control	.78	.049	(.68, .87)
Difference	-.14		
$p(Z < z)$	**.011****		

Men Who Have Performed Cargos

	Mean	Std. error	95% c.i.
Treatment	.91	.032	(.85, .97)
Control	.82	.046	(.73, .91)
Difference	-.09		
$p(Z < z)$	**.042****		

A stronger effect of the contextual information provided in the treatment appears when we observe those respondents who receive Oportunidades:

Table 18: Treatment effect in the survey experiment, by Oportunidades

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Receive Oportunidades

	Mean	Std. error	95% c.i.
Treatment	.93	.022	(.88, .97)
Control	.81	.033	(.75, .88)
Difference	-.11		
$p(Z < z)$	**.0026*** **		

Does Not Receive Oportunidades

	Mean	Std. error	95% c.i.
Treatment	.93	.021	(.89, .97)
Control	.91	.023	(.86, .95)
Difference	-.02		
$p(\|Z\| < \|z\|)$	.55		

People who receive Oportunidades responded 11% more on average that women should be able to become municipal presidents. This difference is significant at the $\alpha = .05$ level. The central result of this section appears when we segment by gender additionally than by Oportunidades:

Table 19: Treatment effect in the survey experiment, by Oportunidades and gender

$$H_0 : p_c - p_t = 0$$
$$H_a : p_c - p_t < 0$$

Women that Receive Oportunidades (*n=133*)

	Mean	Std. error	95% c.i.
Treatment	.93	.032	(.87, .99)
Control	.78	.049	(.68, .87)

Difference	-.15
$p(Z < z)$	**.0059*** **

Men that Receive Oportunidades (*n=142*)

	Mean	Std. error	95% c.i.
Treatment	.92	.031	(.86, .98)
Control	.85	.044	(.77, .94)

Difference	-.07
$p(Z < z)$	**.096***

Oportunidades has a strong impact on the perception of women about women in government. Women who receive this conditional cash transfer are more sensitive to the contextual information provided with the treatment by an average of 11%, at an $\alpha < .01$. We tested for the average treatment effect on women who do not receive Oportunidades, and there was no significant difference. Men are more sensitive also, but on average only half of women: 7% at an $\alpha < .1$. We also tested for the average effect on men that do not receive Oportunidades, finding no statistically significant differences in the proportions.

This is in itself an encouraging result. Oportunidades seems to be priming both men and women for more receptivity to information about women's non-traditional roles in the communities. The fact that we cannot find any treatment effect when there is no Oportunidades, regardless of gender, suggests that information is being processed differently partially due to this governmental program. Additionally, that the effect of information is double among women than among men suggests that women are being targeted better than men. This could be because it is women who attend the meetings, and so it is reasonable to expect that the effect of the meeting will be stronger on them, but then they might transfer the information within the household, and so other members, namely men, would be exposed to this information but with a softer effect.

In sum, our evidence shows that the treatment increases positive perceptions of women in

municipal governments by 6%. When this is unpacked by gender, men account for a 5% and women for a 7%. Both sexes in municipalities governed by Usos present no difference in the response to treatment, but in Parties they increase acceptance of women in government also by 8-9%. Stronger effects are related to respondents having performed (or knowing someone who did) cargos in their localities: 14% more women on average thought that they should be allowed to be municipal presidents, compared to 9% of men (comparing both treatment groups with their respective control).

Oportunidades seems to be the single factor that generates the most variance in our study: people who receive it did responded positively to treatment on average by 11%, versus only 2% of respondents who do not receive it. This is a difference of 9% of the population in Oaxaca. When segmenting further by gender, we find that the contextual information in the treatment increased positive responses of women by 15%, and this halves when looking at men.

6 Conclusions

Our paper focused on two separate but related dimensions of women empowerment. We presented descriptive evidence about women's role in the community, their political networks, participation, whether they delegate their votes to men and the cargos they perform in the communities. In the dimensions we measure, and specifically in our data, we find no conclusive differences indicating discrimination of women. This could be interpreted in the sense of "multiculturalism is not bad for women", but we have argued that culture is not a static phenomenon. Because it is subject to change, and because it is subject to contestation within the communities, there are elements of culture (in this case, patriarchal elements) which can be modified.

In our case, the conditional cash transfer program Oportunidades was the single most important factor to explain variance in the response to our treatment. When segmenting the effects by gender, we found that women who received the transfers (along with the related meetings) answered 15% more that women should be able to be municipal presidents. This is strong effect when compared with men who are in the program (7%) and certainly when compared with women who do not receive it, for which the treatment had no effect.

We conclude that contextual information increases the likelihood of accepting women in government. We also find that the effect of information is stronger when respondents have been receiving Oportunidades. The information and activities disseminated with the program seem to be priming respondents in such a way that they process better the information provided with the treatment, facilitating updated beliefs with the new information. This

indicates to us that participation in Oportunidades relates to the fast changing role of women in indigenous communities, although the effect in municipalities governed by traditional rules is half of that observed in municipalities governed by political parties. Compared to men, women who receive the conditional transfer program more than double their likelihood of accepting female mayors, when provided with truthful information of how many women already govern in their state.

This result further suggests that policy can and does have an effect on certain cultural traits that could seem undesirable, at least from a liberal point of view. The fact that Oportunidades facilitates the acceptance of women (but also men) about women in government points out to the dynamic nature of culture, and the ability of policy to change, for whichever reason and its underlying system of values, those cultural traits that affect women.

Further analysis should be able to disentangle the effects of poverty on this issue. It is unclear if the discrimination against women we see in Oaxaca is an essential attribute of indigenous culture, or if it is observable more in indigenous cultures merely because they have been historically the poorest members of Mexican society since the Conquista.

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