

# Collective Remittances and the *3x1 Program* in Mexico: Local Labor Market Effects

Karina Córdova\*

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## Abstract

Collective remittances are those sent by migrants' associations and used for investment in social and productive projects in their hometowns. A unique program in Mexico, *3x1 Para Migrantes*, aims to multiply the benefits of this kind of social capital: government funds are matched with collective remittances and invested in community projects. I propose a potential effect of the program: the amenities and job opportunities generated by these projects can alter local labor markets, making people more likely to stay and work in the municipality instead of migrating. Using panel data from the evaluation of this program and from the Mexican Family Life Survey, I study the effect of collective remittances on the probability of wanting to migrate, being employed and in the labor force, and on the amount of hours worked of men and women in 2002 and 2005 in Mexico. Results from these estimations show that, in general, collective remittances, measured as the per capita investment through the *3x1 Program*, have a positive, albeit modest, impact on the employment and labor force participation of men and women in Mexican municipalities that participate in the program, but no effect on the preferences to migrate, at least in the short run. Collective remittances, however, may have ambiguous effects depending on the type of projects executed.

Key words: collective remittances, labor markets, local development, migration decisions.

JEL codes: F24, J21, O15.

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\*First Draft: December 2008. Comments and suggestions are welcome: cordovak@email.arizona.edu

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# 1 Introduction

Migration and remittances have a very important role in the Mexican economy. In 2010, the number of Mexicans working or looking for a job in the US accounted for 16.4 percent of the economically active population in Mexico.<sup>1</sup> These migrants send money back home in such a way that family remittances account for about 2.05 percent of the GDP in 2010 (6.24 percent of the total income in the current account),<sup>2</sup> which makes remittances the second most important source of income, just after oil. The importance of family remittances led the Mexican government to take actions to facilitate the process to remit and decrease its costs.

A large number of Mexican migrants living in the US create clubs and associations that send money to support community projects in their Mexican hometowns.<sup>3</sup> Increases in these *collective remittances* and the important projects carried out in different municipalities motivated the participation of the Mexican government. The result was *3x1 Para Migrantes*, an innovative program in which the government collaborates with migrant networks in order to encourage the use of remittances to improve living conditions in Mexican towns. Most studies of collective remittances so far focus on the structure of the migrants' networks, their organization structure, and some evaluations about the role of the *3x1* program as a tool for provision of public goods and democratic participation in disadvantaged regions.<sup>4</sup> In contrast, the effect of this program on the Mexican labor market is the object of study in this paper.

The term *collective migrant* refers to “higher level and relatively permanent migrant organizations which function on a binational basis fostering both social and cultural solidarity between Mexicans and their hometown constituency with mutual social, political and economic benefits” [Delgado and Rodríguez (2001), p.747]. Consequently, the idea of *collective remittances* implies “a joint fund that migrants associations use to finance community projects [...], leading the migrants to lobby at different government levels in order to execute community works that his-

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<sup>1</sup>Own calculations with data from the National Institute of Geography, Statistics and Information (INEGI), for Mexico; and the Current Population Survey for the United States.

<sup>2</sup>Although the importance of family remittances remains, remittances from Mexican immigrants living in the US significantly reduced after 2008, due to the financial crisis in the US. Family remittances decreased from a historical maximum of USD\$26 billion in 2007, to USD\$21 billion in 2010, slowing recovering since then (Banco de Mexico, 2013).

<sup>3</sup>I refer to these as migrant clubs or networks, but they are also commonly known as Hometown Associations (HTAs).

<sup>4</sup>See for example: Duquette-Rury (2010), Aparicio and Meseguer (2011, 2012), Delgado and Rodríguez (2001), Fox and Bada (2008), Fernández et al (2006), and Moctezuma (2005).

torically have been ignored, and stimulating the evaluation of public policy and accountability practices” [Moctezuma and Pérez (2006), p. 125, own translation].<sup>5</sup> In Mexico, these collective remittances have constantly increased over the last 30 years, in such a way that migrants clubs started to gain political influence in their hometowns in Mexico. At an early stage these collective remittances were mostly directed to social and religious activities. More recently, they have been focused on activities related to generation and improvement of health and educational services, urban infrastructure, access to electricity, scholarships funds and productive projects in rural areas.

The increasing amount of collective remittances in the last years attracted the attention of local governments during the decade of 1990, leading to the creation of mutual funds designed to create bigger community projects. The Mexican state of Zacatecas was the first of its type. A program called *Uno por Uno* (One for One) was created in 1992, in which municipal governments matched funds with the collective remittances received by the community in order to finance projects in the region. The political influence of these migrants clubs grew quickly, and the state government started to participate in this program as well, known by then as *Dos por Uno* (Two for One). In 2002, the National Ministry of Social Development, SEDESOL, incorporated this program as part of the National Development Plan of President Fox’s administration. Since then, this strategy is known as *Programa 3x1 para Migrantes*, or Three for One Matching Funds Program For Migrants, indicating that the amount of collective remittances is matched with a similar amount of money from the municipal, state and federal levels of government, under the condition that the money has to be invested in community projects.

The rules of operation in this program are straightforward since there is no prior selection from the government to participate in it. The interest to participate must come from the community and the migrants’ club, and they have to apply for funds to the municipal government first and then for the state and federal funds through SEDESOL. These three local actors (community, migrants and municipal government) decide the terms of implementation of the project through a designated committee. Since municipalities self-select to join the program, it might be the case that those that participate are more likely to have more resources and initial infrastructure to organize and start projects, although the Mexican government is seeking to

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<sup>5</sup>Although these definitions are based on the Mexican migration experiences, important examples of collective remittances in different host and home countries are more common now (see Schüttler (2008) for a discussion of evidence from Mexico, Morocco, and the Philippines. See Burgess (2012) for a comparison of collective remittances in Mexico and El Salvador).

increase participation in more marginalized communities as a way to help development in poor areas.<sup>6</sup>

In 2003, the second year of the program's operation, migrants' clubs invested USD\$8.9 million in their hometowns. These collective remittances almost doubled in 2006 when migrants contributed to the *3x1 Program* with USD\$16.9 million. The states in which migrants' hometown associations contributed the most are the ones with a stronger tradition of migration (Zacatecas, Jalisco, Michoacan), where migrants are historically more organized. However, the *3x1 Program* has incentivized the creation of new migrants' associations: according to the data available in the directory of organizations registered in the Institute of Mexicans Living Abroad, 65 percent of the 2,309 hometown associations listed were created between 2006-2013 (IME, 2013).<sup>7</sup> Despite this continuous increase in the participation and collaboration of organized migrants, collective remittances invested through the *3x1 Program* are still less than 1 percent of family remittances sent to Mexico.<sup>8</sup> In terms of federal transfers to municipalities, collective remittances represented less than 5 percent of the total amount of the transfers made from the federal government to municipalities via funds for social infrastructure and municipality's strengthening.<sup>9</sup> Nevertheless, the scope of the projects funded through collective remittances can be larger thanks to the matching nature of the *3x1 Program*.

There are numerous studies that focus on the effect of remittances that migrants send to their families in their communities of origin. Remittances, as a source of higher income, may have positive effects on consumption and investment decisions. They may relax the current budget constraint of the migrants family or may be the only way to overcome credit constraints for important investment decisions that require a considerable amount of money. In this sense, remittances can have an important role for the economic development of the home countries. On the other hand, some studies show that family remittances may have negative effects on the number of hours worked by the members of the household who receive remittances. Others find

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<sup>6</sup>A detailed history of the development of the program can be found in Fernández (2006). See Aparicio and Meseguer (2012) for a nice short summary of the implementation of this program.

<sup>7</sup>It is worth noting that the organizations voluntarily register themselves in this list, so it is possible that more organizations exist but opt not to be registered.

<sup>8</sup>Collective remittances represented 0.059 percent of family remittances in 2003, and 0.065 percent in 2006.

<sup>9</sup>In Zacatecas, the state with higher inflows of remittances, collective remittances represented 5 percent of the total amount received in 2006 from the Fondo de Aportaciones para la Infraestructura Social Municipal and Fondo de Aportaciones para el Fortalecimiento de los Municipios. In Veracruz and Hidalgo, the states with the smaller levels of collective remittances, they represented 0.01 and 0.16 percent of the transfers from these funds, respectively.

that the positive effect of remittances is not big enough to counteract the influence of migration incentives for kids, who reduce their schooling attendance in order to migrate.<sup>10</sup> Regarding the effect of migration and family remittances on labor supply at the home country, different studies show ambiguous results.<sup>11</sup>

Collective remittances are possible when migrants' networks exist. Networks are usually defined by geographic or social criteria (for example, if migrants come from the same hometown, or if they are from the same religious group). Migrants' networks facilitate migration. They provide information to potential migrants, they are a safety net in the host country to those who migrate for the first time, and they may even help to finance the trip to leave the home country. Networks incentivize migration through these channels, leading to a consequent reduction in the local labor supply.<sup>12</sup>

Nevertheless, the effect of migrants' networks on labor markets may be quite different through other channels when considering the use of collective remittances for local investment. When a municipality is receiving collective remittances that are invested in productive projects, this may lead to the improvement of economic conditions in the community with the added effect that makes it more appealing to stay in the municipality and get a job there, as an alternative to migrate. Then we may see a reduction in the levels of migration in the municipality and therefore some effects in the labor market, either in the number of jobs available, or decisions on the number of hours worked.

The impact of migrants' associations through collective remittances on local labor markets, to my knowledge, has been not analyzed yet, basically due to the lack of data. However, in the Mexican experience, availability of data is possible thanks to the records of the *3x1 Program* from a previous qualitative evaluation. I match this municipality-level database with individual and household-level data from the Mexican Family Life Survey (MxFLS) in order to get information about socioeconomic characteristics, employment status, family remittances and migration experiences. I focus this study on the labor market for men and women of age 25

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<sup>10</sup>For family remittances and labor supply in Mexico, see Airola (2008), Amuedo-Dorantes and Pozo (2006) and Hanson (2007). For remittances and their impact on the generation of family businesses or microenterprises, see Woodruff (2007) and Woodruff and Zenteno (2001). For migration incentives, remittances and children schooling attendance see McKenzie and Rapoport (2006).

<sup>11</sup>Cfr. Hanson (2007), and Amuedo-Dorantes and Pozo (2006), which also have divergences due to the methodology used. See Görlich et al (2007), for an analysis of the effect of remittances on labor supply, housework and schooling in households with at least one migrant, with information from Moldova.

<sup>12</sup>See Koola and Ozden (2008) who studied labor supply of households with migrant members, taking into account the network effect measured by religious attachment in India.

and older, given that most adults at this stage are less likely to be enrolled in school, and more likely to participate in the labor force. Since the period of study of this program is short and for years when the program was starting, it is more probable to expect a quick response, if any, from those who have a more active presence in the labor market, at least in the short run.

Some issues arise in this analysis, though. Given the nature of the *3x1 Program*, municipalities self-select in order to participate. Labor force participation, even controlling for individual and household characteristics, might imply problems of endogeneity. Different specifications and the use of a rich panel database in this case are useful for overcoming these concerns. Taking this into account, I find that collective remittances through participation in the *3x1 Program* have an ambiguous impact on the labor market in the municipalities with projects financed by these funds. The total per capita amount invested in municipality projects through the *3x1 Program* has a positive effect on the probability of being employed and participating in the labor force, but no effect in the desire to migrate. Additionally, while men and women respond similarly to the investments and projects executed in their communities by the program, they show slightly different patterns that are also affected by age. For example, when the municipality invests collective remittances in urbanization projects, women and older men are more likely to be employed, while younger men are not, but both younger men and women are more likely to be willing to move out of their town. Meanwhile, the opposite happens for the older group. Municipalities also seem to benefit more from investments in schools and sports facilities. These increase the probability of being employed for all groups, and slightly reduce the willingness to move out for younger men and women. While overall these results are modest, this is a first step taken on a better understanding on how collective remittances from migrants' associations can strengthen social capital in a way that can be useful as a potential tool for local development.

## **2 Potential Effects of Collective Remittances on Local Labor Markets**

The *3x1 Program* matches funds from the municipal, state and federal governments to the amount of collective remittances provided by the migrants association in a given municipality. The projects financed by this program must yield a benefit for the community. There are 21 different types of projects carried out since the implementation of the program. I classify these projects in four categories: those related to urbanization of a municipality, projects directed to health and social infrastructure, those for schools and sports facilities and projects focused

on the improvement of production and productivity (see Table A.1 in the Appendix for the complete classification). The nature of each project and the amount invested in it may affect the local labor market through two channels: decreasing the incentives to migrate and increasing the labor demand. Each channel implies different hypotheses I test with the available data.

## 2.1 Channel 1: Labor Demand

The *3x1 Program* may increase labor demand in two ways. First, projects need workers to be carried out, so the program itself generates employment opportunities the moment the program is implemented. Second, once finished, the projects themselves may be a new source of employment in the municipality, especially since an important number of projects have the objective of improving production or productivity. Either way, collective remittances that finance productive projects in municipalities may increase the demand for labor and reduce unemployment. If we consider a labor market in which there would not be a clear-market equilibrium, as would be the case in an economy like Mexico, in the short run we have sticky wages above the equilibrium wage and the effect of collective remittances in the labor demand will only affect the levels of employment, but not the current wages.<sup>13,14</sup> Figure 1 represents this situation, where we observe a positive shift of the labor demand. This is the first hypothesis to test empirically:

*H<sub>0</sub><sup>1</sup>: Collective remittances, through the projects financed by the 3x1 Program, increase the probability of being employed.*

Another potential effect is that demand for labor increases in such a way that we may see

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<sup>13</sup>One may think that the availability of new job opportunities would attract people who are currently out of the labor market so this would increase the labor force participation. However, since I am assuming that wages are sticky, this shift in labor demand does not alter wages. If people out of the labor force do not want to work because their reservation wage is higher than the market wage, the availability of jobs is not going to alter their decision to stay out of the labor force. Nevertheless, we may expect an effect on the labor force participation once we consider how collective remittances invested in productive projects may affect the incentives to migrate (see section 2.2).

<sup>14</sup>Data from the National Survey on Occupation and Employment (ENOE) reports unemployment rates of 2.52 (men) and 3.49 (women) percent in 2002, and 3.43 (men) and 3.64 (women) percent in 2005. If we consider those individuals unemployed and those out of the labor force but willing to work divided by the population older than 14 years old, these adjusted unemployment rates are 5.48 and 7.67 percent for men and women respectively in 2002, and 6.63 and 9.39 percent for men and women respectively in 2005 (own calculations using available data from INEGI).

changes in the number of hours worked in a given frame of time. There are different causes that make this scenario to happen. One possibility is to have an excess of labor demand. In this case previously unemployed people would get a job but those already employed may have incentives (or may be pushed) to work more hours. Another possibility is that some workers may be underemployed or that there are some constraints in the labor market that made not possible for them to work their desired number of hours.<sup>15</sup> If the program, through the projects it finances, allows these constraints to disappear, those underemployed people may work more hours once the program is implemented in their municipality. In any of these two potential cases we can expect an increase in the number of hours worked. A first exploration of this idea would be developed in section 4. Next sub-section discusses an alternative channel by which collective remittances can affect these indicators.

## 2.2 Channel 2: Incentives to Migrate

Collective remittances are invested in community projects that are means to improve social and productive infrastructure. As a consequence of these improvements, there is an increase in the amenities available at the municipality. It could also be the case that there are more job opportunities, as discussed above. The municipality is now a more attractive place, so there is a reduction in the incentives to migrate. Potential migrants may consider postponing their leaving or even feel discouraged to migrate at all. If more people are staying in the municipality, this implies more people are available to work there: local labor supply increases in the short run. Additionally, the new opportunities might encourage some of those individuals out of the labor force to look for a job again, so labor supply might increase, even if there is no change in migration patterns.

Since one category of the projects financed by collective remittances includes improvement and construction of school facilities, we may think that for some people the improved access to education would lead them to leave the labor force in order to continue their studies. However, given that I focus my analysis on people over the age of 24, it is not probable that they will be interested in coming back to school. Moreover, as long as the individuals from this sample are more likely to have children and/or being the head of a household, it is more attractive for them to stay in their municipality if there are important improvements in education for their

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<sup>15</sup>The underemployment rate (total underemployed population divided by the total amount of employed people) are 6.83 (men) and 4.66 (women) percent in 2002, and 8.45 and 5.94 percent for men and women respectively in 2005 (own calculations using data from INEGI).



children.

Therefore, we may expect that collective remittances decrease the incentives to migrate and thus increases labor force participation. These are the last two hypotheses I test.

$H_0^2$ : *Collective remittances, through the projects financed by the 3x1 Program, make it more attractive to stay in their hometowns and decrease the desire to migrate.*

$H_0^3$ : *Collective remittances, through the projects financed by the 3x1 Program, incentivize more people to look for a job, either because they decide to stay in their hometowns or because they are encouraged by new opportunities and amenities, increasing the probability of participating in the labor force.*

Figure 2 depicts the positive shift of the labor supply as a consequence of the effects summarized in hypotheses 2 and 3.

Overall, I expect these projects to increase job opportunities (either because people are needed to carry out these projects or because once the projects are done they are a new source of employment), and to increase the amenities in the community (since an important part of these projects are related with the improvement of roads and schools, access to electricity, and construction of parks). Therefore, at the end, these projects increase the labor demand, more jobs are now available, there are fewer incentives to migrate and more people are willing to participate in the labor force. The effect on the probability of unemployment in this sense is ambiguous: community projects may generate more jobs and thus increase the probability of employment, but the decrease in the incentives to migrate implies that more people staying in the community makes competition for a job harder. Both the supply and demand curves are likely to shift simultaneously. Which effect is higher at the end is an empirical question. This situation is illustrated in Figure 3. The next sections present the data and the strategies to identify these mechanisms.

## 3 Data and Descriptive Statistics

### 3.1 Data Sources

Data about collective remittances were obtained from the 2006 evaluation<sup>16</sup> of the program *3x1 para Migrantes*, implemented by SEDESOL, the Mexican Ministry for Social Development. This database contains information for all the projects financed by collective remittances and government funds in 18 states and 735 municipalities between 2002 and 2006, including total amount invested in each project, and the nature of the project, say, urbanization (bring access to electricity, redesign of streets), improvement of schools and sports facilities, health and social infrastructure (support for hospitals/clinics, social assistance, community services, renovation of historical sites) and projects related to improvement of productivity (purchase of farm machinery, tools, connection of rural roads to freeways, irrigation systems, etc). I complement this information with data for states and municipalities. Gross Domestic Product (GDP) at the state level was obtained from INEGI, the National Institute of Statistics, Geography and Information. The index of marginalization<sup>17</sup> at the municipal level was provided by CONAPO, the National Council of Population. Electoral data to estimate political preferences by municipality was obtained from IFE, the Federal Electoral Institute.

Data at the individual and household level come from the Mexican Family Life Survey (MxFLS), a longitudinal database whose baseline is from 2002 and its second wave information was collected in 2005. The baseline includes 35,667 individuals in 8,440 households from 136 municipalities and 16 states in rural and urban Mexico. The second wave tracked the same individuals and households three years later and included all the new-born babies and new members added to the household during that period of time. The sample of interest for this study takes into account only the original households with their original members from the 2002 baseline, present in both 2002 and 2005 with complete information. This leaves us with 32,386 individuals in 7,570 households. The final working sample is restricted to those adults over the age of 24 in 2002 who were present in both years 2002 and 2005. When I restrict the analysis

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<sup>16</sup>The objectives of the 2006 evaluation were to examine the program's design, the coverage, operation and basic results of the programs' execution, but not an analysis at the micro level the way I am proposing here.

<sup>17</sup>The Index of Marginalization considers the percentage of illiterate population older than 15 years old, the percentage of population older than 15 years without elementary school, percentage of population living in dwellings without toilet, without electricity, without access to water, with some level of overcrowding, with floor of earth, in localities with less than 5,000 inhabitants, and the percentage of employed population living on an income lower than the equivalent of twice the minimum wage.

to only those municipalities that participated in the *3x1 Program*, the final working database contains 5,620 individuals from 2,866 households.

The use of the MxFLS data allows us to have a detailed picture of individual and household characteristics which are helpful for the empirical strategies followed to test the hypotheses discussed above. MxFLS gives us rich information about age, education, ethnicity (if the individual speaks an indigenous language), employment history, preferences to migrate, and migration experience. Related to households, there is enough information to generate important control variables, including the number of members in the household (household size), value of assets, non-labor income, access to formal credit and savings institutions (as a measure of financial constraints), migration experience in the household, family remittances, and economic and health shocks.<sup>18</sup> MxFLS data is merged at the municipality level with data from the *3x1 Program* and the rest of municipality and state-level variables.

### 3.2 Descriptive Statistics

Collective remittances had existed for years before the program *3x1 para Migrantes*, and the Mexican state of Zacatecas is the paradigmatic example of the organization of migrants clubs for the development of their hometowns. Also, Zacatecas is the state with the highest value in the index of migration intensity.<sup>19</sup> Although this state is not included in the MxFLS sample, we still have Michoacan, which is classified as the state with the second highest value in the index of migration intensity, and Jalisco, the state with the second highest volume of collective remittances invested through the program. Table 1 shows the distribution of Mexican states and municipalities that participate in the *3x1 Program*: 27.5 percent of the municipalities in Mexico (in 26 out of 32 states) had at least one project financed with collective remittances during the period 2002-2005. With respect to the sample of interest, 38.24 percent of the municipalities present in the MxFLS sample participated in the *3x1 Program* during this period of time.

Taking into account the cumulative number of projects in the program during the whole

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<sup>18</sup>Shocks in MxFLS are reported at the household level, and they can be either the death of a household member, illness or serious accident that required hospitalization of any household member, unemployment or business failure of any household member, home or business loss due to any natural disaster, total loss of crops or loss, and robbery or death of livestock.

<sup>19</sup>Index of Migration Intensity includes information from the National Census, taking into account the percentage of households who received remittances, the percentage of households with emigrants living in the US during 1995-2000, percentage of households with circular migrants during 1995-2000, and the percentage of households with migrants who came back from the US during 1995-2000.

period 2002-2005, these 52 municipalities in the MxFLS sample participated in the program with a total of 351 projects, with one municipality from Nuevo Leon registering 111 projects in 2002.<sup>20</sup> The projects financed by collective remittances through the program *3x1 para Migrantes* are distributed in small rural villages of less than 2,500 inhabitants (49 percent) and urban areas (51 percent). The average amount invested per municipality by collective remittances through the program was USD\$120,760 in 2002 and USD\$245,250 in 2003-2005.<sup>21</sup>

International migration to the US is a common experience for an important share of Mexican households. Table 2 shows this information at the household and the individual level in municipalities according to their participation in the *3x1 Program*. Note that there is a clear, stronger migration and remittances experience in those households that live in participant municipalities. Of the 4,704 households in the MxFLS sample in communities that do not participate in the *3x1 Program*, 38.8 percent had at least one relative living in the US in 2002 and 2005. For households in participating communities the percentage is 60.4 and 56.2 for 2002 and 2005, respectively. Around 0.7-2.6 percent of the non-participant households had a current member of the household with a previous migration experience, either short term (more than 1 month, but less than 12 months) or long term (stayed in the US for more than one year, but returned to his/her hometown back in Mexico). These numbers are higher for households in municipalities that are beneficiaries of the program, ranging from 0.9 to 5.2 percent. The percentage of households that receive remittances is almost double in participant municipalities in both years, and they also receive a higher amount of such transfers, which represent more than a quarter of their labor income and around a half of their non-labor income.

Men and women of age 25 and older also show a slightly higher prevalence of migration experiences when they live in participant municipalities. Regardless of their origin, more men than women are willing to migrate. Men and women living in non-participant municipalities are more likely to express a desire to migrate out of the municipality and of them, around 8 and 12 percent (as opposed to 16 and 21 percent in participant municipalities) want to go to another country (mostly the US), and those who would leave the country will do so in order to get a job. We can see this fact as an indicator of how international migration is related with employment decisions.

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<sup>20</sup>See table A2 in the Appendix for the total amount of projects for each year, and the accumulated number of projects over all the period 2002-2005.

<sup>21</sup>see Table A3 in the Appendix for the average amount invested by type of project.

## 4 Empirical Strategy

In this section I propose different specifications in order to test the hypotheses posited in section 2, and then I discuss some issues concerning potential sources of endogeneity and how to deal with them in this context and with the available data.

The first concern about these data is the nature of the *3x1 Program* that implies, by design, a characteristic of self-selection. The municipalities organize with the local migrants' networks to propose a project and an agreement of how to execute it and then ask for the government's collaboration. If those municipalities participate because they have better social capital that makes it easier to organize and plan these projects, or if people in those communities are more entrepreneurial, the effect of the collective remittances through the *3x1 Program* would be over-estimated. An increase in the employment opportunities or a higher number of amenities due to the program may be driven by those particular characteristics of the municipality and not only due to the investment made with the collective remittances.

The analysis by Aparicio and Meseguer (2012) shows that in fact there is self selection bias in the sample of municipalities that participate in the *3x1 Program*. Poor municipalities are more likely to participate, but the amount of money invested is negatively correlated with the index of poverty. Similarly, the level of migration intensity and the population size are good predictors of program participation. There are also some partisan effects: those states and municipalities ruled by an authority from the National Action Party, PAN (the political party of the federal government from 2000 to 2012), have a higher probability of participation in the *3x1 Program*, although they do not usually get more money nor carry out more projects.

Participation in this program is not randomized. Moreover, the previous conclusions by Aparicio and Meseguer (2012) give us some sources of selectivity bias. I have two potential ways to treat this problem. First, given this source of endogeneity, it is not possible to do an extensive margin analysis, that is, I cannot consider the whole MxFLS sample of 136 municipalities if I cannot control first for the self-selection problem. Therefore, I restrict my study to the 52 municipalities that participated in the *3x1 Program* during 2002-2005 with at least one project carried out during that period. My restricted intensive margin analysis will focus on the effect of the collective remittances on the labor market in those municipalities that participate in the program. Second, thanks to the availability of longitudinal data, both from the MxFLS and the *3x1 Program*, it is possible to control for those time invariant non-observable characteristics in the municipalities of interest. For the time variant observable characteristics, I include a

group of variables at the state and municipality level that are correlated to the self-selection to participate: the state GDP's growth rate, the municipal index of marginalization (extreme poverty), and two variables of political preference in the municipality.<sup>22</sup>

At the household and individual level there are some other sources of endogeneity as well. The use of the panel data and estimations with fixed effects allows me to avoid potential problems of omitted variables and a potential spurious correlation between dependent and independent variables. The MxFLS database has important and detailed information that makes it possible to have a rich set of control variables in order to have a better understanding of the mechanism in which the collective remittances may affect the labor market.

Several causes may be linked to the decision to participate in the labor force and to the employment status of adult men and women in a household. My assumption here is that including the more detailed set of control variables and the use of fixed effects estimations with panel data would be enough to isolate the effect of collective remittances on the dependent variables of interest. For example, previous studies document the effect of family remittances on the probability of being employed and on the labor supply measured on hours worked in a given period of time; therefore, I include a variable that accounts for the total amount of family remittances received in the household in the last 12 months. I also include dummy variables that indicate if the household have relatives currently living in the US and if the household has current members with previous experience of migration. I take these variables as proxies of a potential migrants' network available to the members of that particular household. According to Koola and Özden (2008), networks influence migration and young men are unemployed because they are waiting for the opportunity to emigrate while looking for a job outside their state of origin.

Control variables at the household level include data related to the household size, its non-labor income, the value of its assets, a dummy that indicates if the household faces financial constraints (that is, if the household does not have savings or access to credit in formal institutions), and a set of dummy variables to indicate if someone in the household had to work extra hours, find an extra job, start to work, start or sell a family business or leave school as

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<sup>22</sup>The political preference is given by a dummy variable that takes a value of 1 if an opposition party won two out of three federal elections (president, senator, representative) in a given year in the municipality. The two opposition parties are PAN and PRD, considering that PRI used to have the majority of votes for over 70 years until the democratic transition in 2000. MxFLS municipalities participating in the *3x1 Program* were more likely to vote for PRI in the federal elections of 2000, but by 2006 their vote favored PAN candidates.

a measure to overcome health and economic shocks faced by the household in the last 5 years (last 3 years in the case of the sample from 2005). All these variables may be a reason for any change in the individual's labor supply or their participation in the labor force.

Finally, at the individual level, I include variables that control for the age, previous migration experiences (for less than a year and for more than one year in the US), and a dummy variable with a value of one if the individual had thinking about moving out of his municipality.

For the sample of women I also add a variable that indicates how many children under the age of 15 she takes care of. I argue that this is a more relevant variable than the number of pregnancies she had had, or than the number of alive children (regardless of age) that still live with her in the household. Given the composition of Mexican households, where multiple families can share the same dwelling and multiple generations interact, child care duties can be distributed among several women in the house, allowing the flexibility of going into the labor force. It is common to see a household where the grandmother or the aunts take care of other woman's children. Additionally, while women's labor force participation decisions are of a more complicated nature than men's, since they take into account fertility decisions, here I am just proposing a reduced form model approach in which, all other things equal, there is an external endogenous shock that could make it more attractive for women to join the labor force. Collective remittances and their investment in a given community are independent of women's fertility decisions and marital status, so there is no reason to expect an endogeneity problem here. For any other characteristics that are non-observable (like preferences or entrepreneurship), these are captured in the fixed effects of the model below.

The following are the empirical specifications for each of the hypotheses to be tested.

$H_0^1$ : *Collective remittances, through the projects financed by the 3x1 Program, increase the probability of being employed.*

I take advantage of the panel data I have in order to control for time invariant unobservable characteristics from the individual, household and municipality level. I estimate a Linear Probability Model with fixed effects in order to analyze the effect of collective remittances on the probability of being employed during 2002-2005.

$$Employed_{ihmt} = \alpha_i + IT'_{ihmt}\beta + HT'_{hmt}\gamma + CR'_{mt}\delta_1 + M'_m t\delta_2 + \epsilon_{ihmt} \quad \dots(1)$$

$$i = 1, \dots, N; \quad h = 1, \dots, H; \quad m = 1, \dots, 52; \quad t = 2002, 2005$$

The dependent variable is a dummy that takes the value of one if the individual was employed in the week of reference (the week before the interview took place) and a value of zero otherwise (either if the individual was unemployed or out of the labor force).  $IT$  is a vector of individual time-varying variables (age, dummy variable for desire to move out of the municipality, a dummy variable to indicate if he is the current head of the household, and dummy variables for previous migration experience; for women it also includes a variable indicating number of children she takes care of).  $HT$  is a vector with household time-varying characteristics: household size, non-labor income, value of assets, family remittances, a set of dummies that indicates if they have relatives currently living in the US and if they have current members with previous migration experiences, and a set of dummies for financial constraints and actions taken to overcome the presence of health and economic shocks in the household. The variables related to collective remittances are contained in vector  $CR$ , they are at the municipality level and are time-varying. This vector either includes four variables indicating the per capita amount invested by collective remittances and funds from the *3x1 Program* by type of project carried out in the municipality (urbanization, social and health infrastructure, school and sports facilities, and improvement of production and productivity), or contains the total per capita amount invested in the municipality only (depending on the specification). Finally, vector  $M$  includes time-varying variables at the municipality and state-level. These are the index of marginalization (extreme poverty index) and the variables of political preference, both at the municipality level, and the state's GDP growth rate for the previous year in order to account for any business cycle effect.

$H_0^2$ : *Collective remittances, through the projects financed by the 3x1 Program, make it more attractive to stay in their hometowns and decrease the desire to migrate.*

Here I follow a similar approach to that for equation (1). I use a Linear Probability Model with fixed effects using the panel data. The dependent variable is a dummy that takes a value of one if the individual would like to move out of the municipality. This specification would allow us to have an idea if the collective remittances and the projects financed by the *3x1 Program* have an effect on the preferences to migrate. Again, the set of variables are the same, plus the inclusion of the variable for household's total labor income, since migration is a costly decision that requires certain level of wealth in order to cover the costs involved. It is also worth noting that this willingness to migrate refers to leaving the municipality and either go to a new



destination in Mexico or in the US.

$$WantsToMigrate_{ihmt} = \alpha_i + IT'_{ihmt}\beta + HT'_{hmt}\gamma + CR'_{mt}\delta_1 + M'_m t\delta_2 + \epsilon_{ihmt} \quad \dots(2)$$

$$i = 1, \dots, N; \quad h = 1, \dots, H; \quad m = 1, \dots, 52; \quad t = 2002, 2005$$

$H_0^3$ : *Collective remittances, through the projects financed by the 3x1 Program, incentivize more people to look for a job, either because they decide to stay in their hometowns or because they are encouraged by new opportunities and amenities, increasing the probability of participating in the labor force.*

This specification is an alternative way to test if collective remittances and their projects make it more appealing to stay in the municipality and incorporate into the labor force. The dependent variable is a binary variable with a value of one if the individual is currently employed or looking for a job and a value of zero if he is out of the labor force. The independent variables are the same as those listed for equation (1). As before, I estimate a Linear Probability Model with fixed effects.

$$BeingInLaborForce_{ihmt} = \alpha_i + IT'_{ihmt}\beta_1 + HT'_{hmt}\gamma + CR'_{mt}\delta_1 + M'_m t\delta_2 + \epsilon_{ihmt} \quad \dots(3)$$

$$i = 1, \dots, N; \quad h = 1, \dots, H; \quad m = 1, \dots, 52; \quad t = 2002, 2005$$

As suggested in section 2.1, there may be an indirect effect of collective remittances on the number of hours worked by individual. An initial attempt to analyze if there is some empirical evidence for this fact is to apply a Heckman two-step estimation procedure that allows us to control for the selectivity of being employed. Unfortunately, due to the technical difficulties related to this kind of estimation with panel data, in this case I split my database in two cross-section samples, one for 2002 and one for 2005 in order to carry out the Heckman procedure. I propose a reduced form model for the labor supply decision, as in Hanson (2007). This implies the following pair of estimations:

$$Employed_{ihm} = \alpha + I'_{ihm}\beta + H'_{hm}\gamma + CR'_m\delta_1 + M'_m\delta_2 + \epsilon_{ihm} \quad \dots(3.a)$$

$$\{L^s_{ihm} \mid (employed = 1)\} = \alpha + I'_{ihm}\beta + H'_{hm}\gamma + CR'_m\delta_1 + M'_m\delta_2 + \{u_{ihm} \mid (employed = 1)\} \quad \dots(3.b)$$

$$i = 1, \dots, N; \quad h = 1, \dots, H; \quad m = 1, \dots, 52$$

These vectors include the same set of variables as in equation (1), with some exceptions for the equation (3.b): I exclude those dummy variables that indicate if the household has relatives in the US and if it has members with past migration experience, and I include a dummy equal to one if the individual has a secondary job, and a variable of the individuals wage rate. The dependent variable in equation (3.a) is defined in the same way as for equation (1). The dependent variable in equation (3.b) is the number of hours worked by the individual in the past week related to the date of interview during the survey. I estimate this set of equations for men and women in two different age cohorts.

Estimations of this proposed model, however, yield statistically insignificant values for the Inverse Mills Ratio (IMR) calculated through results from equation (3.a) and included in equation (3.b). This implies that there is not selectivity bias for being employed in this sample.<sup>23</sup> This is, to some extent, a natural characteristic of the fact that this sample is restricted to individuals in their productive age who are likely to be employed (see Table 3 below). Even though women are less likely to participate in the labor force, once they do it, they are virtually all employed, facing even less unemployment than men. Therefore, in this case the use of the Heckman two-step estimation would be inefficient and would lead to inconsistent results.

Without selectivity bias I consider a censored regression model (TOBIT) instead in order to analyze the effect of collective remittances on the number of weekly hours worked for those individuals who worked a positive number of hours during the period of study.

$$Hours^*_{ihmt} = \alpha + IT'_{ihmt}\beta + HT'_{hmt}\gamma + CR'_{mt}\delta_1 + M'_m t\delta_2 + u_i + \epsilon_{ihmt} \quad \dots(4)$$

$$Hours_{ihmt} = 0 \quad \text{if} \quad Hours^*_{ihmt} \leq 0$$

$$Hours_{ihmt} = Hours^*_{ihmt} \quad \text{if} \quad Hours^*_{ihmt} > 0$$

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<sup>23</sup>The only exception was for the sample of older women (over the age of 45) in 2002, for which the IMR was negative and statistically significant, but this does not happen for the estimation of the year 2005. Despite a lower labor force participation rate, once they are economically active they are very likely to be employed (see Table 3); therefore, I decided to include them in the rest of the estimations following a censored regression model.

Variables in the vectors are the same as described before, with the exemption that here I excluded those dummies related to relatives living in the US and those indicators of household members with migration experience. I also control for the fact that the individual have a secondary job, so the estimates are neater.

Finally, in order to test my initial assumption of sticky wages, I estimate the effect of collective remittances through the *3x1 Program* on the hourly nominal wage rate perceived for those employed. I use a TOBIT model with random effect as well. The hourly wage rate was calculated using the monthly earnings divided by the number of hours worked in an average month (Table A4 shows a basic distribution of these calculated nominal wage rates).

$$\begin{aligned}
 Wage_{ihmt}^* &= \alpha + IT'_{ihmt}\beta + CR'_{mt}\delta_1 + M'_m t\delta_2 + u_i + \epsilon_{ihmt} && \dots(5) \\
 Wage_{ihmt} &= 0 && \text{if } Wage_{ihmt}^* \leq 0 \\
 Wage_{ihmt} &= Wage_{ihmt}^* && \text{if } Wage_{ihmt}^* > 0
 \end{aligned}$$

I do not include household variables here. Individual time varying characteristics (vector *IT*) refer to the years of experience<sup>24</sup> and the square of the years of experience, a dummy indicating if the individual has a second job and dummies for the job category of the individual (either if he/she is a farmer, a farm worker, a worker in non-agricultural business, a worker in an agricultural business or a employer/owner of a business; the excluded category is to be self-employed).

For each equation proposed, there are two specifications executed. One has the total per capita investment in the community as the explanatory variable, while the other includes the per capita investment by type of project executed. All these models are estimated for the whole sample of men and women living in a municipality with at least one project financed with collective remittances and the *3x1 Program* funding, present in both waves (2002 and 2005) with complete information at the individual and household level. However, different cohorts of the population may have different characteristics that make them react differently to the variables that affect the decision to work or to participate in the labor force. For example, it is more likely that young men are employed or looking for a job, compared to older men who may be retired

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<sup>24</sup>The MxFLS panel data allow me to build the actual number of years of experience. For those individuals without reported age at the first job (or the year in which they got their first job) I calculate the potential experiences following the traditional Mincerian approach: *age - schooling years - 6*.

or working fewer hours. Younger women might be more limited to work if they have many little children under her care, while older women might have some flexibility to enter the labor force if the opportunity arrives. In a similar way, most of the people who tend to migrate in order to get a better job are in their 20s and 40s, whereas older individuals who migrate may do so if they want to reunite with family members who live out of their municipalities. Table 3 shows some evidence for these differences by age cohort for those men living in municipalities included in the MxFLS sample that participated in the *3x1 Program*. Therefore, I also split my sample in two cohorts: men and women of ages 25-45, and men and women over the age of 45 years, in order to have more detailed evidence of the effect of collective remittances on the dependent variables.

## 5 Results

The independent variable of interest is the amount of money invested in the municipality through the *3x1 Program*, measured at the per capita level. I recurrently refer to this as the effect of collective remittances through the *3x1 Program* as well, because participation in the program is only possible when there are collective remittances and coordination with migrants networks occurs in the municipality.<sup>25</sup>

Table 4 presents the summary of the main results from the estimation of equations 1-3. The first row of each panel shows the effect of collective remittances through the *3x1 Program* measured as the total investment per capita. In Panel A, the coefficients of collective remittances for both men and women, regardless of age cohort, are positive. This means that the more is invested in the community through collective remittances and the *3x1 Program*, the more likely adults are employed. This is statistically significant for all the groups, with the exception of younger men. In contrast, the coefficients in the first row of Panel B show that the more is invested through the program, there is a slight increase in the probability of reporting a desire to migrate out of the municipality, but the opposite happens for the group of older women. Since none of these coefficients is statistically significant we can conclude that the overall effect of collective remittances on the preferences to migrate is null for the period of study, so we cannot conclude if people are more willing to stay or leave their community. Nonetheless, in Panel C of

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<sup>25</sup>In fact, collective remittances account for one quarter of the total amount of the funds invested in community projects through the *3x1 Program*. The other three quarters correspond to the contributions of the municipal, state and federal levels of government.

Table 4 we observe that for men and women of both age cohorts, the probability of participating in the labor force slightly increases with the investment through collective remittances and this is statistically significant for all groups but the younger men.

Without concluding evidence regarding a potential change in the preferences to migrate, the increase in the labor force participation might be due to a change in the perception on the local labor markets that encourages more people to join the labor force. Moreover, judging by the magnitude of the estimators, for older women the increase in the probability of being employed is slightly bigger than the increase in the probability of being in the labor force, suggesting that those who wanted to work were able to find a job. The opposite, however, occurs for younger women and older men. Overall we can say that the more invested in a municipality through collective remittances, there is a positive effect on the probability of participation in the labor force, and on the probability of being employed, but this effect is null in the preferences to migrate.

Looking at investment by type of project can provide a better idea of where the collective remittances have a larger impact. Investment in different projects have diverse effects on the labor outcomes of the two cohorts by gender. The last four categories in each panel of Table 4 list the four types of projects executed in participant municipalities. Investment in urbanization projects increases the probability of being employed and in the labor force but the coefficient is statistically significant for older women only. However, contrary to the proposed hypothesis, for both younger men and women, those investments have a positive and statistically significant effect on their probability of being willing to migrate. This is surprising because one might think that such improvements in the access to public services would make a municipality more enjoyable.<sup>26</sup> Social and health infrastructure have a negative effect on labor outcomes, but the coefficient is only statistically significant for older men, who are 1.1 percentage points less likely to be employed when a municipality invests more in this kind of projects through collective remittances.

Larger investment in schools and sports facilities in municipalities that participate in the *3x1 Program* have a positive effect on the probability of participating in the labor force and being employed for both younger and older men. Men are more likely to be both working and looking for jobs: younger men are 1.4 percent more likely to be part of the labor force

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<sup>26</sup>A possible explanation could be the fact that in communities where migration is very common, the “prestige” migrants gain when contributing to their municipality through collective remittances invested in very visible projects attracts more young people to migrate and gain this prestige as well.

and 1.7 percent more likely to be employed, while older men are 1.8 percentage points more likely to be in the labor force and 1.9 percent more likely to have a job. This suggests that when municipalities invest their collective remittances in these projects, they might experience a reduction in unemployment despite the increase in the labor supply. Moreover, younger women are 1.5 percent points less likely to be willing to migrate when these investments happen. All this together might be evidence to support the hypothesis that improvement in amenities make it more attractive to stay in the community for parents with young children who can potentially benefit from these projects. An analysis of those municipalities who executed projects related to schools and sports facilities shows that they are more populated and have more children under the age of 15 than those who invest in other types of projects. Finally, investment in projects to improve production and productivity has ambiguous results, affecting men's labor outcomes negatively and women's outcomes positively, but none of these results are statistically significant.

It is important to note that the fact that certain types of project increase job opportunities does not necessarily mean that the jobs generated are directly related to the project in question. For example, the construction or renovation of public spaces (like a church or a plaza) that might not sound like a source of jobs besides those of the construction workers, can bring some women to open a small business to provide affordable meals to the workers. The fixing of a street, or the construction of a school, can bring more potential consumers to an area previously isolated, so a household can decide to open a convenience store to satisfy a expected future demand for goods. In a similar way, the fact that the probability of being employed might be negatively affected by an specific project might not be because of the nature of the project itself, but for other causes related to those projects.

Table 5 Panel A shows the results from the censored regression estimations in order to analyze the effect of collective remittances on the labor supply measured by the number of hours worked in a given week of reference. The first row shows a contrasting result compared to the findings in Table 4 Panel A: although women are more likely to be employed when they live in a municipality where there are higher investments through collective remittances, they also work less hours during the week, and this result is statistically significant. Men experience a slight increase in their weekly hours worked, but this is not statistically significant.

When we look at the effect of collective remittances by the type of project executed, we see that women are the most affected when they live in municipalities that participated in the *3x1 Program* with investment in urbanization projects, reducing their working hours regardless of

their age cohort. Older women also increase their labor supply in terms of hours worked when the projects imply improvements in production and productivity. The fact that women might be more likely to be employed but at the same time working less hours, might suggest that, in the best case scenario, their increasing participation in the labor force might be incentivized by some flexibility that allows them to work less hours according to their needs or preferences. Alternatively, this might just indicate that women are have greater proclivity to face conditions of underemployment.

Younger men work more hours a week only when they live in municipalities that invested in projects related to schools and sports facilities. In general, however, employment status for younger men seems to not be significantly affected by investments by collective remittances. If most individuals were already employed, it is not very probable that the availability of new jobs would change their previous employment status, although it may be the case that if they change their previous job to a new one offered through the programs projects, they do change their occupation. For example, they may switch from being a farmer to be a blue-collar worker, or from working in the family business to work for a construction company that carries out the projects in the municipalities.

Finally, Table 5 Panel B shows the results for the estimation of the effect of projects financed by collective remittances on wages. This is also an indirect way to test my initial hypothesis of sticky wages. As expected, the total per capita amount invested in participant municipalities does not have any statistically significant effect on the hourly wage rate for any of the samples. So in general we can say that the assumption of sticky wages is reasonable. Nevertheless, when analyzing the amount invested by type of project, empirical evidence is ambiguous to support this wage assumption: urbanization projects have a positive and statistically significant effect on wages, and projects related to the improvement of schools and sports facilities have a negative impact on the wage rate, but these results only apply for the sample of both younger men and women. Contrasting these effects with those in Panel A, it seems that when wage rate increases, the weekly hours worked decreases in participant municipalities with investments in urbanization projects, while the opposite occurs for those living in municipalities with investment in schools and sports facilities.

We can summarize the results from Tables 4 and 5 in the following statements:

1. Investment of the total per capita amount of collective remittances and government funds from the *3x1 Program* have a positive and statistically significant effect on the probability

of being employed and on the probability of participating in the labor force, but its effect is null on the desire to move out of the municipality.

2. If projects financed by collective remittances do not decrease the incentives to migrate, the increase in the probability of being in the labor force is explained by other causes. Most likely, those who were out of the labor force might have become encouraged again to go back to look for a job given the new economic conditions in the municipality.
3. Since the probability of being employed increases with collective remittances we can accept hypothesis  $H_0^1$ . This fact, together with the lack of evidence to support that more people wish to stay in the municipality, suggest that at least in the short run municipalities experience an increase in the labor demand. Since the labor force participation also increased with collective remittances, there was a decrease in the local unemployment levels. For older men and younger women, the increase in labor supply was slightly higher than the increase in labor demand, so although unemployment decreased, there was still a small level of unemployment. The opposite happens for older women and younger men (although for men is not statistically significant): the increase in labor demand was slightly higher than the increase in labor supply, with an unambiguous decrease in unemployment.
4. Different project types may have a different impact in labor outcomes. Urbanization projects incentivize labor force participation and increase the probability of being employed for older women, while increasing the desire to migrate for younger men and women, and reducing the weekly number of hours worked for women. Investment in social and health infrastructure reduces the probability of being employed for older men. Projects related to productivity and production increase the number of working hours of older women. Investment in schools and infrastructure increases the labor force participation and probability of being employed of younger and older men, and reduces the desire to migrate for younger women.

These implications should be taken with caution. Despite some positive findings, these impacts are still of small magnitude. It is possible that since the period of study is very short (the first three years since the program's implementation), some of these projects need some time to "mature" in order to reach their full potential. Moreover, since different types of projects can have contrasting effects by age/gender group, when a municipality executes more than one kind of investment, it could be possible that the final net effect would be a negative impact of



collective remittances on the probability of being employed or in the labor force, or even no effect at all.

## 6 Conclusions

The importance of collective remittances has been increasing over time, although just until recently has gained more attention among scholars and policy makers. Current research has focused on the positive impact of this kind of remittances on the empowerment of civil society, the promotion of transparency and accountability practices, and development in local economies through social participation. However, quantitative analysis of this phenomenon has been very limited due to the lack of data that accounts for the amount of collective remittances and the uses a community makes of that money.

In this paper I study a unique Mexican program, *3x1 para Migrantes*, whose evaluation contains data from the years 2002-2006 that allows me not only to track the amount of collective remittances that a municipality can receive, but also to identify the use of the remittances received. I propose three channels through which collective remittances could affect supply and demand in local labor markets, along with potential effects on hours worked and wage rates. Collective remittances, through the projects financed by the *3x1 Program*, increase the probability of being employed, make it more attractive to stay in the municipality, decreasing the desire to migrate and therefore increasing the probability of participation in the labor force.

Availability of data is a necessary but not a sufficient condition to perform a good analysis of the effects of a program. Self-selection problems inherent to the design of the *3x1 Program* makes it difficult to isolate the impact of collective remittances on the labor market variables. Sample restrictions, inclusion of control variables, and use of fixed effects estimations were part of my empirical strategy in order to overcome those issues. I limit my analysis to labor outcomes for adult men and women at the intensive margin (only municipalities that participated with at least one project funded with collective remittances), and study two sub-populations by age. Rich longitudinal data from the Mexican Family Life Survey 2002 and 2005 allow me to include fixed effects to control for unobserved time invariant characteristics, and for observable variables that may affect the labor force participation and the labor supply (economic shocks, household and dwelling characteristics, local economy variables).

Results for the empirical estimations of the linear probability model show that the per capita amount of collective remittances and government funds from the *3x1 Program* have a positive

and statistically significant effect on the probability of being employed and on the probability of participating in the labor force, but there is no effect on the desire to move out of the municipality. This suggests that at least in the short run municipalities experience an increase in the labor supply (more individuals in the labor force) and in the labor demand (since the probability of being employed increased). In that case, we should be able to see a decrease in the local unemployment levels.

The analysis of the impact of collective remittances on labor outcomes by type of project funded shows that those municipalities that invested in school and sports infrastructure have the most significant effect on local labor markets for younger men and women. Younger men are more likely to participate in the labor force, to be employed and to work more hours, while women are less likely to be willing to move out of the municipality. This could bring some evidence that investment in education has an effect besides the direct impact on human capital as a potential positive externality on the labor market. This result might be linked to an additional effect of improved amenities on the decision to stay in the community: parents might decide to stay and let their kids attend school in the renovated facilities.

These effects might look modest, but it is important to keep in mind that 2002-2005 is a short period of time. Three years might not be enough time to allow these projects to “mature” or develop enough to see changes in local labor markets that can affect migration patterns significantly. Nevertheless, considering that despite the relatively small amount that collective remittances contribute to a municipality (in comparison to other public investments, and family remittances), it is remarkable that there are some clear positive effects of these transfers. This exercise shows that despite its limitations, migration and remittances can be a powerful tool to improve living conditions in the migrants’ home countries.

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## 7 Main Figures and Tables

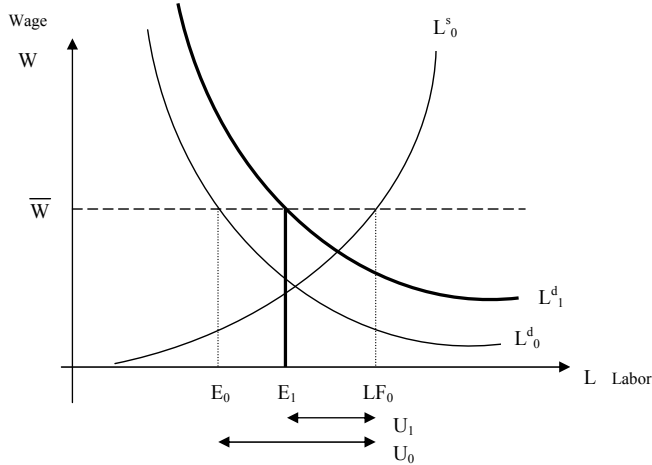


Figure 1: Municipality projects financed by collective remittances need people to carry out the works related to the projects. Once finished, these projects may be a new source of jobs. This implies a positive shock in the labor demand (from  $L^d_0$  to  $L^d_1$ ). Employment increases, from  $E_0$  to  $E_1$  (unemployment reduces, from  $U_0$  to  $U_1$ ).

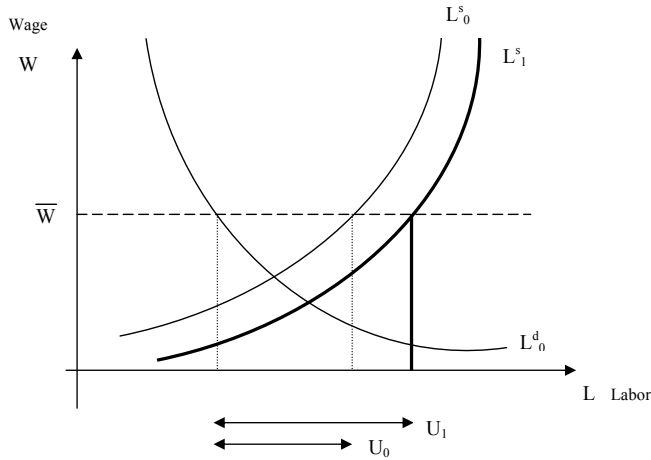


Figure 2: New social and productive infrastructure due to the projects financed by collective remittances increases opportunities and amenities in the municipality, making it more attractive to stay, switching the labor supply (from  $L^s_0$  to  $L^s_1$ ). The reduction in incentives to migrate increases the number of men looking for a job in the municipality. Other things equal, an increase in the labor supply may lead to higher unemployment,  $U_0$  to  $U_1$ ).

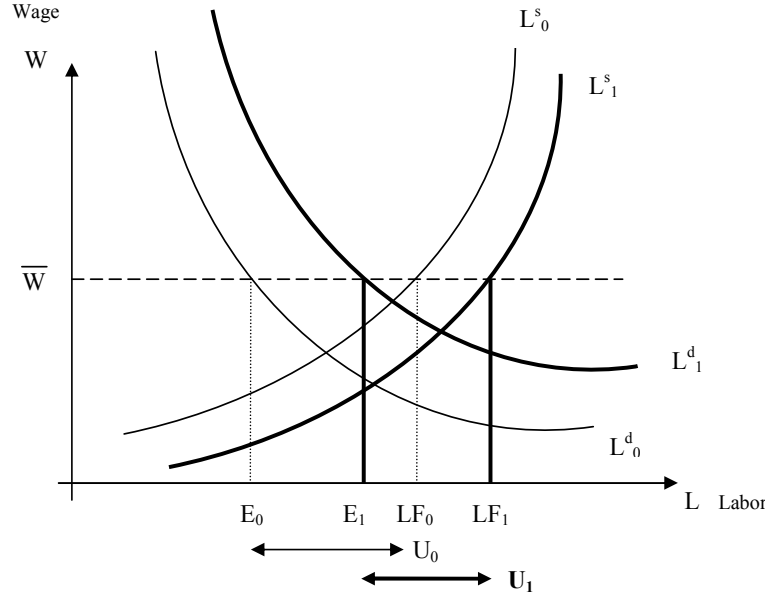


Figure 3: Projects financed by collective remittances through the *3x1 Program* may affect demand and supply of labor simultaneously. The final effect is ambiguous: it depends on the interaction between both forces in the labor market.

Table 1: States, Municipalities and Households that participate in Program *3x1 para Migrantes*

	States		Municipalities		Households
	All Mexico	MxFLS Sample	All Mexico	MxFLS Sample	MxFLS Sample
All	32	16	2457	136	8440
With Collective Remittances in 2002	19	8	239	27	1942
	(59.38%)	(50.00%)	(9.73%)	(19.85%)	(23.00%)
With Collective Remittances in 2005	26	9	449	27	1475
	(81.25%)	(56.25%)	(18.24%)	(19.85%)	(17.48%)
With Collective Remittances in 2002-2005	26	11	677	52	3178
	(81.25%)	(68.75%)	(27.55%)	(38.24%)	(37.65%)

Source: Database from the 2006 Evaluation of Program 3x1 para Migrantes, SEDESOL; Mexican Family Life Survey, 2002 and 2005. Own calculations



Table 2: Migration and Remittances Descriptive Statistics of Individuals and Households, 2002 and 2005

	In MxFLS sample but NOT in <i>3x1 Program</i>		In MxFLS sample AND in <i>3x1 Program</i>	
	2002	2005	2002	2005
<b>HOUSEHOLDS</b>				
<i>Migration</i>				
With a relative currently living in US	38.80%	38.92%	60.43%	56.21%
With current members who lived in US for >1 year	2.61%	0.62%	5.20%	0.91%
With current members who lived in US for <1 year	1.40%	0.77%	3.00%	2.51%
<i>Remittances</i>				
Receiving remittances	7.80%	6.29%	15.32%	11.30%
<i>Of those who received</i>				
Avg Remittances last 12 months (MXP)	\$4,975.68	\$8,444.83	\$9,857.70	\$9,793.16
(Standard Deviation)	(\$12,602.03)	(\$14,583.83)	(\$59,023.98)	(\$18,377.91)
As % of Total Annual Labor Income	16.35%	20.79%	39.16%	26.83%
As % of Total Annual Non-Labor Income	39.98%	73.39%	50.79%	51.79%
Observations	4704	4704	2866	2866
<b>MEN</b>				
With migration experience for >1 year	1.59%	0.23%	3.95%	0.61%
With migration experience for <1 year	0.53%	0.37%	1.84%	1.26%
Who wish to move out of their municipality	12.50%	9.33%	7.82%	5.83%
To another country	1.52%	0.95%	1.69%	0.96%
To get a (better) job	1.46%	0.88%	1.57%	0.84%
Observations	4328	4328	2609	2609
<b>WOMEN</b>				
With migration experience for >1 year	0.69%	0.14%	1.03%	0.13%
With migration experience for <1 year	0.57%	0.28%	0.86%	0.96%
Who wish to move out of their municipality	11.70%	9.26%	8.97%	6.68%
To another country	1.36%	0.73%	1.86%	1.13%
To get a (better) job	0.98%	0.57%	1.10%	0.73%
Observations	4923	4923	3011	3011
Source: MxFLS 2002 and 2005. Own calculations				

Table 3: Individual Characteristics of Men and Women living in a MxFLS Municipality participating in *3x1 Program* during 2002-2005, by age

	2002		2005	
	[25,45] years old	[46,...] years old	[28,48] years old	[49,...] years old
<b>MEN</b>				
Average Age	34.9	60.1	38.1	63.2
% Participating in Labor Force	95.8%	75.3%	95.2%	67.6%
% Employed	93.2%	74.6%	92.6%	64.9%
Avg No# Hours Worked (weekly)	46.5	43.4	46.4	42.2
% Wish to Migrate	11.9%	4.4%	8.5%	3.3%
Observations	1147	1089	1147	1089
<b>WOMEN</b>				
Average Age	34.6	59.7	37.8	62.8
% Participating in Labor Force	37.2%	22.1%	38.4%	19.7%
% Employed	36.4%	22.1%	37.9%	19.5%
Avg # Hours Worked (weekly)	35.7	34.4	37.4	33.8
% Wish to Migrate	12.6%	4.9%	9.5%	3.4%
Observations	1548	1165	1548	1165

Source: MxFLS 2002 and 2005; 2006 Evaluation of Program 3x1 para Migrantes, SEDESOL. Own calculations

Table 4: Effect of Collective Remittances on Employment and Migration in Municipalities that participate in the *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Panel A. Probability of Being Employed</b>								
Total per-capita amount invested in the Municipality	0.132		<b>0.264</b>		<b>0.228</b>		<b>0.373</b>	
	(1.50)		<b>(2.85)***</b>		<b>(2.26)**</b>		<b>(4.87)***</b>	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-0.002		0.295		0.048		<b>0.444</b>
		(0.01)		(1.51)		(0.21)		<b>(2.51)**</b>
Social and Health Infrastructure		-0.514		-0.701		<b>-1.097</b>		-0.776
		(1.17)		(1.40)		<b>(1.67)*</b>		(1.49)
Improve Schools and Sports Facilities		<b>1.712</b>		0.700		<b>1.923</b>		0.512
		<b>(2.18)**</b>		(0.75)		<b>(1.74)*</b>		(0.60)
Improve Production and Productivity		-0.057		0.022		-0.174		0.181
		(0.19)		(0.07)		(0.52)		(0.59)
<b>Panel B. Desire to Migrate</b>								
Total per-capita amount invested in the Municipality	0.064		0.053		0.059		-0.049	
	(0.61)		(0.67)		(1.08)		(1.08)	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		<b>0.314</b>		<b>0.344</b>		-0.058		-0.077
		<b>(1.66)*</b>		<b>(2.07)**</b>		(0.46)		(0.73)
Social and Health Infrastructure		-0.488		-0.242		0.198		-0.011
		(0.93)		(0.56)		(0.56)		(0.03)
Improve Schools and Sports Facilities		-0.915		<b>-1.503</b>		0.672		0.141
		(0.97)		<b>(1.89)*</b>		(1.12)		(0.28)
Improve Production and Productivity		-0.293		0.182		0.005		-0.199
		(0.81)		(0.62)		(0.03)		(1.09)
<b>Panel C. Probability of Participation in Labor Force</b>								
Total per-capita amount invested in the Municipality	0.112		<b>0.276</b>		<b>0.262</b>		<b>0.372</b>	
	(1.57)		<b>(2.96)***</b>		<b>(2.67)***</b>		<b>(4.84)***</b>	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-0.056		0.314		0.060		<b>0.444</b>
		(0.44)		(1.60)		(0.27)		<b>(2.50)**</b>
Social and Health Infrastructure		0.054		-0.643		-0.546		-0.775
		(0.15)		(1.28)		(0.86)		(1.48)
Improve Schools and Sports Facilities		<b>1.396</b>		0.650		<b>1.782</b>		0.506
		<b>(2.22)**</b>		(0.69)		<b>(1.66)*</b>		(0.60)
Improve Production and Productivity		-0.050		0.031		0.060		0.183
		(0.21)		(0.09)		(0.18)		(0.59)
# Observations	1147	1147	1548	1548	1089	1089	1165	1165

Linear Probability Model with Fixed Effects. Estimations include controls for household, individual and municipality characteristics. Per capita amount invested by 3x1 Program is expressed in thousands of MXP. Dependent dummy variables: *Probability of being employed*: takes a value of one if the individual was employed the week previous to the MxFLS interview, and zero if unemployed or out of the labor force. *Desire to migrate*: takes a value of one if the individual would like to move out of the municipality he is currently living in. *Probability of participating in labor force*: takes a value of one if the individual was employed or looking for a job in the week previous to the MxFLS interview, and zero if out of the labor force (retired or not looking for a job). Absolute value of t-statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 5: Effect of Collective Remittances on the Weekly Number of Hours Worked and Hourly Wage Rate in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A. Dependent Variable: Number of Hours Worked Weekly</i>								
Total per-capita amount invested in the Municipality	1.953		<b>-8.218</b>		4.652		<b>-14.354</b>	
	(0.51)		<b>(2.28)**</b>		(1.38)		<b>(3.38)***</b>	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-7.879		<b>-20.349</b>		8.878		<b>-24.837</b>
		(1.28)		<b>(2.20)**</b>		(1.06)		<b>(1.95)*</b>
Social and Health Infrastructure		32.296		32.292		-1.659		-0.055
		(1.57)		(1.14)		(0.06)		(0.00)
Improve Schools and Sports Facilities		<b>76.693</b>		63.670		-14.976		52.918
		<b>(1.93)*</b>		(1.14)		(0.29)		(0.69)
Improve Production and Productivity		-16.867		-33.381		-18.023		<b>54.819</b>
		(1.03)		(1.09)		(1.23)		<b>(1.69)*</b>
<i>Panel B. Dependent Variable: Hourly Wage Rate</i>								
Total per-capita amount invested in the Municipality	21.443		1.800		15.823		2.669	
	(1.29)		(0.15)		(0.58)		(0.23)	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		<b>75.151</b>		<b>84.479</b>		92.462		-12.840
		<b>(2.85)***</b>		<b>(2.70)***</b>		(1.44)		(0.35)
Social and Health Infrastructure		-36.039		-0.412		138.591		-170.350
		(0.39)		(0.00)		(0.65)		(0.91)
Improve Schools and Sports Facilities		<b>-407.843</b>		<b>-553.638</b>		-537.288		137.056
		<b>(2.31)**</b>		<b>(2.85)***</b>		(1.31)		(0.62)
Improve Production and Productivity		-88.813		-22.253		-83.181		55.448
		(1.11)		(0.20)		(0.65)		(0.46)
# Observations		1117		748		870		340

TOBIT Model with Random Effects. Estimations include controls for household, individual and municipality characteristics. Per capita amount invested by 3x1 Program is expressed in thousands of MXP. Absolute value of z statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

## Appendix A

Table A1: Classification of Projects Financed with Collective Remittances through Program *3x1 Para Migrantes*

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### Urbanization

Access to electricity

Access to drinking water

Sewer system

Sidewalks and trimmings, Renovation and redesign of public parks and gardens

Asphalt and pavement on streets

### Health and Social Infrastructure

Improvement/Renovation of dwellings

Infrastructure for hospitals

Clinics and Health centers

Community services, Social assistance, Community Development

Improvement/Renovation of Historical and cultural sites

Environmental preservation/Ecological projects

### Schools and Sports Facilities/Infrastructure

Improvement/Construction of schools

Improvement/Construction of sports facilities (either in the municipality in general or in specific schools)

### Production and Productivity Improvement

Support to/Promotion of Trade

Support to/Promotion of Agriculture, Fishing and Aquaculture (Production and Productivity)

Development of irrigation systems

Protection of rivers and streams

Infrastructure for agricultural production (specifically related to livestock)

Roads in rural areas

Connection of rural roads to freeways

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Source: 2006 Evaluation of Program 3x1 para Migrantes, SEDESOL.

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Table A2: Municipalities in MxFLS That Participate in *Program 3x1 para Migrantes* with Projects financed with Collective Remittances

	2002	2005*	2002-2005
# of Projects	# Municipalities	# Municipalities	Total # of Projects
0	109	97	0
1	15	14	29
2	5	5	20
3	–	2	6
4	1	5	24
5	1	4	25
6	1	–	6
7	–	3	21
8	–	1	8
9	1	2	27
10	–	1	10
12	1	–	12
15	1	1	30
22	–	1	22
111	1	–	111
TOTAL	136	136	351

\*This includes all the projects carried out from 2003 to 2005. Source: Database from the 2006 Evaluation of Program 3x1 para Migrantes, SEDESOL. Own calculations.

Table A3: Number of MxFLS municipalities participating in the *3x1 Program* and Average Amount Invested (US Dollars), by Type of Project

	2002		2003-2005	
	# Municipalities	Avg Amount Invested	# Municipalities	Avg Amount Invested
Total	27	\$120,755.95	27	\$245,250.26
Urbanization	15	\$112,547.05	27	\$189,966.91
Social and Health Infrastructure	7	\$99,081.70	16	\$112,898.66
School and Sports Facilities	8	\$99,810.75	10	\$51,898.66
Productivity and Production Improvement	3	\$26,711.48	10	\$211,026.89

Source: Database from the 2006 Evaluation of Program 3x1 para Migrantes, SEDESOL. Own calculations.

Table A4: Changes in Employment and Wage Rates 2002-2005 for Men and Women in Municipalities Participating in the *3x1 Program*, by Age

	Men		Women	
	[25,45] years old	[46,...] years old	[25,45] years old	[46,...] years old
Employed in 2002	93.2%	74.6%	36.4%	22.1%
Employed in 2005	92.6%	64.9%	37.9%	19.5%
Employed in 2002 and 2005	87.6%	58.2%	25.7%	12%
Observations	1147	1089	1548	1165
Of those employed in 02-05:				
Decreased wage	32.5%	30.8%	27.6%	35%
Same wage	6.47%	14.4%	4.8%	9.3%
Increased wage	61%	54.9%	67.6%	55.7%
Observations	1005	634	398	140

Source: Source: MxFLS 2002 and 2005. Own calculations.

Table A5: Effect of Collective Remittances on the Probability of Being Employed in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total per-capita amount invested in the Municipality	0.132 (1.50)		0.264 (2.85)***		0.228 (2.26)**		0.373 (4.87)***	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-0.002 (0.01)		0.295 (1.51)		0.048 (0.21)		0.444 (2.51)**
Social and Health Infrastructure		-0.514 (1.17)		-0.701 (1.40)		-1.097 (1.67)*		-0.776 (1.49)
Improve Schools and Sports Facilities		1.712 (2.18)**		0.700 (0.75)		1.923 (1.74)*		0.512 (0.60)
Improve Production and Productivity		-0.057 (0.19)		0.022 (0.07)		-0.174 (0.52)		0.181 (0.59)
<i>Household Remittances and Migration Experience</i>								
HH has relatives currently living in the US	-0.011 (0.69)	-0.013 (0.76)	0.008 (0.39)	0.010 (0.47)	0.030 (1.10)	0.029 (1.10)	0.004 (0.18)	0.003 (0.13)
HH has current member(s) who spent >1 yr in US	-0.048 (0.81)	-0.052 (0.87)	-0.012 (0.23)	-0.012 (0.22)	0.107 (1.32)	0.122 (1.51)	-0.010 (0.18)	-0.007 (0.13)
HH has current member(s) who spent <1 yr in US	0.147 (2.02)**	0.146 (2.00)**	-0.004 (0.07)	-0.003 (0.05)	-0.028 (0.38)	-0.028 (0.38)	0.048 (0.68)	0.044 (0.62)
HH Remittances (thousands MXP)	0.001 (0.98)	0.001 (0.90)	-0.000 (0.28)	-0.000 (0.44)	0.000 (0.24)	-0.000 (0.06)	0.001 (0.68)	0.001 (0.52)
<i>Individual Characteristics, Migration Preferences and Experience</i>								
Age	0.014 (1.66)*	0.012 (1.34)	0.003 (0.24)	-0.0001 (0.01)	-0.022 (1.70)*	-0.027 (1.98)**	-0.014 (1.23)	-0.018 (1.56)
Individual is head of HH	-0.030 (0.49)	-0.025 (0.42)	0.051 (0.55)	0.050 (0.54)	0.112 (0.65)	0.108 (0.63)	0.137 (2.32)**	0.142 (2.40)**
Total # children under 15y.o. under her care			-0.039 (3.47)***	-0.039 (3.45)***			-0.032 (1.72)*	-0.030 (1.62)
Indiv would like to leave their current municipality	0.020 (0.81)	0.020 (0.80)	0.041 (1.37)	0.041 (1.37)	-0.048 (0.84)	-0.050 (0.88)	-0.028 (0.55)	-0.029 (0.57)
Individual spent >1 yr living in US	0.091 (1.27)	0.093 (1.29)	0.107 (1.02)	0.100 (0.95)	-0.135 (1.25)	-0.153 (1.42)	0.042 (0.25)	0.046 (0.28)
Individual spent <1 yr living in US	-0.246 (2.77)***	-0.237 (2.67)***	-0.061 (0.38)	-0.059 (0.37)	-0.044 (0.38)	-0.044 (0.38)	-0.027 (0.28)	-0.015 (0.15)
<i>Household Socioeconomic Characteristics</i>								
HH size	-0.010 (1.10)	-0.009 (1.06)	0.015 (1.23)	0.015 (1.26)	-0.003 (0.22)	-0.003 (0.18)	-0.011 (0.92)	-0.011 (0.89)
Total value of assets	-2.53x10 <sup>-7</sup> (0.18)	-2.67x10 <sup>-7</sup> (0.19)	-1.68x10 <sup>-7</sup> (0.07)	-1.50x10 <sup>-7</sup> (0.06)	-2.04x10 <sup>-7</sup> (0.31)	-2.04x10 <sup>-7</sup> (0.31)	-2.95x10 <sup>-7</sup> (0.52)	-3.06x10 <sup>-7</sup> (0.54)
Total non labor income	1.71x10 <sup>-9</sup> (0.21)	4.59x10 <sup>-9</sup> (0.54)	2.14x10 <sup>-8</sup> (2.07)**	2.12x10 <sup>-8</sup> (2.03)**	2.67x10 <sup>-8</sup> (2.28)**	2.92x10 <sup>-8</sup> (2.43)**	1.78x10 <sup>-8</sup> (1.63)	1.69x10 <sup>-8</sup> (1.51)

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Table A5 – Continued

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HH has financial constraints (i.e. no credit, no savings)	-0.003 (0.20)	-0.003 (0.16)	-0.032 (1.60)	-0.030 (1.53)	-0.023 (0.90)	-0.022 (0.89)	-0.044 (2.02)**	-0.041 (1.92)*
<i>Actions taken due to shock: Someone in HH had to ...</i>								
Work overtime	-0.021 (0.45)	-0.025 (0.53)	0.088 (1.46)	0.081 (1.35)	0.043 (0.67)	0.034 (0.53)	0.107 (1.71)*	0.103 (1.65)*
Start to work	0.008 (0.15)	0.012 (0.23)	0.099 (1.51)	0.101 (1.54)	-0.030 (0.33)	-0.032 (0.37)	0.074 (1.04)	0.069 (0.97)
Start/sell family business	-0.017 (0.08)	-0.012 (0.05)	0.420 (1.75)*	0.429 (1.79)*	0.389 (1.61)	0.381 (1.59)	0.253 (1.53)	0.254 (1.54)
Get an extra job	-0.010 (0.11)	-0.018 (0.19)	-0.299 (2.48)**	-0.298 (2.47)**	-0.093 (0.64)	-0.097 (0.67)	0.036 (0.23)	0.039 (0.26)
Left school	0.035 (0.26)	0.035 (0.26)	-0.042 (0.17)	-0.037 (0.15)	-0.115 (0.42)	-0.118 (0.43)	-0.084 (0.40)	-0.084 (0.40)
<i>Municipality and State Characteristics</i>								
Municipality's Index of Marginalization	0.014 (0.12)	0.040 (0.34)	-0.235 (1.63)	-0.196 (1.34)	-0.042 (0.20)	0.024 (0.11)	-0.117 (0.58)	-0.062 (0.31)
Municipality has preference for PAN	-0.036 (1.87)*	-0.032 (1.62)	-0.014 (0.56)	-0.007 (0.28)	0.006 (0.22)	0.019 (0.63)	0.007 (0.29)	0.019 (0.73)
Municipality has preference for PRD	-0.071 (1.76)*	-0.063 (1.54)	-0.057 (1.15)	-0.046 (0.93)	-0.070 (1.21)	-0.053 (0.91)	0.042 (0.88)	0.054 (1.14)
State's GDP Growth Rate Previous Year	-0.896 (1.66)*	-0.664 (1.21)	0.234 (0.36)	0.475 (0.71)	-0.419 (0.53)	0.009 (0.01)	0.037 (0.05)	0.344 (0.49)
Constant	0.544 (1.72)*	0.656 (2.06)**	0.046 (0.12)	0.166 (0.43)	1.967 (2.40)**	2.257 (2.72)***	0.984 (1.43)	1.258 (1.80)*
# Observations	1147	1147	1548	1548	1089	1089	1165	1165
R-squared	0.02	0.03	0.03	0.04	0.06	0.07	0.05	0.05

Linear Probability Model with Fixed Effects. Dependent binary variable is the probability of being employed: takes a value of one if the individual was employed the week previous to the MxFLS interview, and zero if unemployed or out of the labor force. Per capita amount invested by 3x1 Program and household assets and income are expressed in thousands of MXP. Absolute value of t-statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table A6: Effect of Collective Remittances on the Probability of Wishing to Migrate in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total per-capita amount invested in the Municipality	0.064 (0.61)		0.053 (0.67)		0.059 (1.08)		-0.049 (1.08)	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		0.314 (1.66)*		0.344 (2.07)**		-0.058 (0.46)		-0.077 (0.73)
Social and Health Infrastructure		-0.488 (0.93)		-0.242 (0.56)		0.198 (0.56)		-0.011 (0.03)
Improve Schools and Sports Facilities		-0.915 (0.97)		-1.503 (1.89)*		0.672 (1.12)		0.141 (0.28)
Improve Production and Productivity		-0.293 (0.81)		0.182 (0.62)		0.005 (0.03)		-0.199 (1.09)
<i>Household Remittances and Migration Experience</i>								
HH has relatives currently living in the US	0.023 (1.17)	0.024 (1.21)	0.070 (3.85)***	0.072 (3.96)***	0.038 (2.63)***	0.038 (2.67)***	0.024 (1.87)*	0.024 (1.86)*
HH has current member(s) who spent >1 yr in US	0.151 (2.10)**	0.159 (2.21)**	0.072 (1.55)	0.069 (1.48)	-0.003 (0.08)	-0.001 (0.02)	0.076 (2.36)**	0.078 (2.41)**
HH has current member(s) who spent <1 yr in US	0.051 (0.59)	0.061 (0.70)	0.106 (2.05)**	0.106 (2.06)**	0.034 (0.86)	0.033 (0.82)	-0.050 (1.21)	-0.049 (1.18)
HH Remittances (thousands MXP)	0.001 (0.53)	0.001 (0.46)	0.000 (0.83)	0.000 (0.87)	0.000 (0.01)	-0.000 (0.05)	0.002 (3.20)***	0.002 (3.12)***
<i>Individual Characteristics, Migration Preferences and Experience</i>								
Age	0.007 (0.63)	0.007 (0.68)	-0.005 (0.60)	-0.004 (0.48)	0.001 (0.16)	0.001 (0.11)	-0.002 (0.35)	-0.002 (0.31)
Individual is head of HH	-0.037 (0.50)	-0.038 (0.52)	-0.178 (2.25)**	-0.176 (2.23)**	0.012 (0.13)	0.013 (0.14)	0.008 (0.24)	0.010 (0.27)
Total # children under 15y.o. under her care			-0.016 (1.71)*	-0.017 (1.80)*			0.008 (0.76)	0.008 (0.74)
Individual spent >1 yr living in US	-0.065 (0.76)	-0.078 (0.90)	0.104 (1.16)	0.106 (1.18)	0.068 (1.18)	0.063 (1.09)	-0.223 (2.24)**	-0.225 (2.26)**
Individual spent <1 yr living in US	0.088 (0.83)	0.082 (0.77)	0.016 (0.11)	0.028 (0.20)	-0.004 (0.06)	-0.004 (0.06)	0.048 (0.86)	0.049 (0.86)
<i>Household Socioeconomic Characteristics</i>								
HH size	0.003 (0.29)	0.004 (0.36)	-0.002 (0.20)	-0.001 (0.14)	-0.001 (0.18)	-0.001 (0.20)	-0.004 (0.61)	-0.004 (0.62)
Total value of assets	-2.13x10 <sup>-6</sup> (1.27)	2.08x10 <sup>-6</sup> (1.24)	-1.29x10 <sup>-6</sup> (0.65)	-1.25x10 <sup>-6</sup> (0.64)	1.36x10 <sup>-6</sup> (3.91)***	1.36x10 <sup>-6</sup> (3.90)***	-9.72x10 <sup>-8</sup> (0.29)	-9.38x10 <sup>-8</sup> (0.28)
Total non labor income	-5.43x10 <sup>-9</sup> (0.55)	-7.93x10 <sup>-9</sup> (0.79)	1.09x10 <sup>-8</sup> (1.24)	8.05x10 <sup>-9</sup> (0.90)	1.23x10 <sup>-8</sup> (1.96)*	1.38x10 <sup>-8</sup> (2.13)**	-1.56x10 <sup>-9</sup> (0.24)	-1.32x10 <sup>-9</sup> (0.20)
Total labor income	5.24x10 <sup>-7</sup> (0.72)	4.70x10 <sup>-7</sup> (0.65)	6.46x10 <sup>-7</sup> (2.14)**	6.40x10 <sup>-7</sup> (2.12)**	6.29x10 <sup>-7</sup> (1.47)	7.19x10 <sup>-7</sup> (1.52)	-5.57x10 <sup>-8</sup> (0.12)	-5.63x10 <sup>-8</sup> (0.12)

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Table A6 – Continued

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HH has financial constraints (i.e. no credit, no savings)	-0.028 (1.48)	-0.027 (1.41)	-0.037 (2.19)**	-0.036 (2.15)**	-0.015 (1.10)	-0.015 (1.08)	-0.013 (1.05)	-0.013 (1.02)
<i>Actions taken due to shock: Someone in HH had to...</i>								
Work overtime	0.107 (1.92)*	0.104 (1.86)*	0.114 (2.23)**	0.117 (2.28)**	0.008 (0.24)	0.009 (0.26)	-0.057 (1.53)	-0.057 (1.54)
Start to work	0.197 (3.18)***	0.192 (3.08)***	-0.001 (0.01)	-0.006 (0.11)	-0.032 (0.67)	-0.033 (0.70)	-0.030 (0.70)	-0.030 (0.71)
Start/sell family business	-0.163 (0.59)	-0.156 (0.56)	-0.026 (0.13)	-0.026 (0.13)	0.003 (0.02)	0.003 (0.02)	0.004 (0.04)	0.000 (0.00)
Get an extra job	0.021 (0.19)	0.030 (0.27)	0.115 (1.12)	0.120 (1.16)	-0.019 (0.24)	-0.020 (0.26)	0.003 (0.03)	0.003 (0.03)
Left school	-0.105 (0.64)	-0.099 (0.60)	0.198 (0.97)	0.198 (0.96)	-0.296 (1.98)**	-0.296 (1.99)**	-0.246 (1.96)*	-0.246 (1.96)*
<i>Municipality and State Characteristics</i>								
Municipality's Index of Marginalization	-0.056 (0.40)	-0.019 (0.14)	-0.095 (0.77)	-0.093 (0.75)	-0.167 (1.47)	-0.172 (1.48)	-0.076 (0.64)	-0.065 (0.54)
Municipality has preference for PAN	-0.054 (2.35)**	-0.050 (2.14)**	-0.031 (1.46)	-0.030 (1.42)	0.012 (0.78)	0.013 (0.80)	-0.001 (0.05)	-0.001 (0.04)
Municipality has preference for PRD	-0.080 (1.67)*	-0.066 (1.35)	-0.088 (2.10)**	-0.090 (2.13)**	0.020 (0.65)	0.021 (0.68)	0.017 (0.61)	0.019 (0.68)
State's GDP Growth Rate Previous Year	-0.774 (1.20)	-0.829 (1.26)	0.322 (0.58)	0.199 (0.35)	-0.231 (0.54)	-0.178 (0.41)	0.026 (0.06)	0.036 (0.09)
Constant	-0.136 (0.36)	-0.127 (0.33)	0.257 (0.80)	0.219 (0.67)	-0.190 (0.43)	-0.179 (0.40)	0.131 (0.32)	0.128 (0.31)
# Observations	1147	1147	1548	1548	1089	1089	1165	1165
R-squared	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.03

Linear Probability Model with Fixed Effects. Dependent binary variable is the probability of desire to migrate: takes a value of one if the individual would like to move out of the municipality he is currently living in. Per capita amount invested by 3x1 Program and household assets and income are expressed in thousands of MXP. Absolute value of t-statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table A7: Effect of Collective Remittances on the Probability of Participation  
in the Labor Force in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total per-capita amount invested in the Municipality	0.112 (1.57)		0.276 (2.96)***		0.262 (2.67)***		0.372 (4.84)***	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-0.056 (0.44)		0.314 (1.60)		0.060 (0.27)		0.444 (2.50)**
Social and Health Infrastructure		0.054 (0.15)		-0.643 (1.28)		-0.546 (0.86)		-0.775 (1.48)
Improve Schools and Sports Facilities		1.396 (2.22)**		0.650 (0.69)		1.782 (1.66)*		0.506 (0.60)
Improve Production and Productivity		-0.050 (0.21)		0.031 (0.09)		0.060 (0.18)		0.183 (0.59)
<i>Household Remittances and Migration Experience</i>								
HH has relatives currently living in the US	-0.009 (0.66)	-0.010 (0.74)	0.006 (0.27)	0.008 (0.35)	0.015 (0.58)	0.015 (0.59)	0.001 (0.05)	-0.000 (0.00)
HH has current member(s) who spent >1 yr in US	-0.052 (1.07)	-0.056 (1.15)	-0.012 (0.22)	-0.012 (0.22)	0.132 (1.69)*	0.141 (1.79)*	-0.008 (0.14)	-0.005 (0.09)
HH has current member(s) who spent <1 yr in US	0.044 (0.75)	0.039 (0.67)	-0.004 (0.06)	-0.002 (0.04)	-0.052 (0.73)	-0.053 (0.74)	0.048 (0.69)	0.045 (0.63)
HH Remittances (thousands MXP)	0.001 (0.89)	0.001 (0.86)	-0.000 (0.28)	-0.000 (0.44)	0.000 (0.14)	-0.000 (0.02)	0.001 (0.68)	0.001 (0.52)
<i>Individual Characteristics, Migration Preferences and Experience</i>								
Age	0.002 (0.35)	0.001 (0.17)	0.001 (0.09)	-0.002 (0.14)	-0.017 (1.32)	-0.020 (1.55)	-0.013 (1.17)	-0.017 (1.50)
Individual is head of HH	-0.017 (0.36)	-0.015 (0.32)	0.052 (0.56)	0.051 (0.54)	0.228 (1.37)	0.225 (1.36)	0.137 (2.31)**	0.141 (2.39)**
Total # children under 15y.o. under her care			-0.036 (3.20)***	-0.036 (3.18)***			-0.030 (1.63)	-0.029 (1.53)
Indiv would like to leave his current municipality	0.019 (0.96)	0.020 (0.99)	0.045 (1.49)	0.045 (1.48)	-0.058 (1.05)	-0.060 (1.08)	-0.027 (0.54)	-0.028 (0.56)
Individual spent >1 yr living in US	0.087 (1.50)	0.092 (1.59)	0.140 (1.33)	0.133 (1.27)	-0.138 (1.32)	-0.152 (1.45)	0.041 (0.25)	0.046 (0.27)
Individual spent <1 yr living in US	-0.167 (2.35)**	-0.157 (2.21)**	-0.062 (0.39)	-0.059 (0.36)	-0.064 (0.57)	-0.065 (0.58)	-0.027 (0.28)	-0.015 (0.15)
<i>Household Socioeconomic Characteristics</i>								
HH size	-0.008 (1.09)	-0.008 (1.06)	0.012 (0.96)	0.012 (1.00)	0.003 (0.20)	0.003 (0.22)	-0.009 (0.72)	-0.008 (0.68)
Total value of assets	-1.36x10 <sup>-7</sup> (0.12)	-1.67x10 <sup>-7</sup> (0.15)	-2.17x10 <sup>-7</sup> (0.09)	-1.99x10 <sup>-7</sup> (0.09)	-1.61x10 <sup>-7</sup> (0.25)	-1.64x10 <sup>-7</sup> (0.26)	2.94x10 <sup>-7</sup> (0.52)	3.05x10 <sup>-7</sup> (0.54)
Total non labor income	-8.45x10 <sup>-10</sup> (0.13)	1.66x10 <sup>-9</sup> (0.25)	2.11x10 <sup>-8</sup> (2.04)**	2.08x10 <sup>-8</sup> (1.99)**	3.03x10 <sup>-8</sup> (2.66)***	3.31x10 <sup>-8</sup> (2.83)***	1.87x10 <sup>-8</sup> (1.71)*	1.77x10 <sup>-8</sup> (1.59)

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Table A7 – Continued

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HH has financial constraints	0.008	0.008	-0.032	-0.031	-0.035	-0.035	-0.046	-0.044
(i.e. no credit and no savings)	(0.65)	(0.65)	(1.60)	(1.54)	(1.43)	(1.43)	(2.13)**	(2.03)**
<i>Actions taken due to shock: Someone in HH had to...</i>								
Work overtime	0.039	0.038	0.070	0.063	0.042	0.037	0.106	0.102
	(1.03)	(1.01)	(1.16)	(1.05)	(0.67)	(0.59)	(1.70)*	(1.63)
Start to work	-0.029	-0.024	0.117	0.119	0.016	0.014	0.104	0.099
	(0.71)	(0.57)	(1.78)*	(1.80)*	(0.19)	(0.16)	(1.45)	(1.38)
Start/sell family business	0.016	0.017	0.415	0.424	0.402	0.398	0.251	0.252
	(0.08)	(0.09)	(1.73)*	(1.76)*	(1.72)*	(1.70)*	(1.52)	(1.53)
Get an extra job	0.080	0.073	-0.300	-0.300	-0.090	-0.093	0.033	0.036
	(1.05)	(0.95)	(2.48)**	(2.48)**	(0.64)	(0.66)	(0.21)	(0.24)
Left the school	0.012	0.009	-0.038	-0.033	-0.121	-0.123	-0.092	-0.092
	(0.11)	(0.08)	(0.16)	(0.14)	(0.45)	(0.46)	(0.43)	(0.43)
<i>Municipality and State Characteristics</i>								
Municipality's Index of Marginalization	0.055	0.066	-0.238	-0.200	-0.061	-0.033	-0.128	-0.074
	(0.59)	(0.70)	(1.64)	(1.36)	(0.30)	(0.16)	(0.64)	(0.36)
Municipality has preference for PAN	-0.014	-0.013	-0.015	-0.008	0.006	0.015	0.006	0.018
	(0.87)	(0.83)	(0.59)	(0.33)	(0.22)	(0.53)	(0.25)	(0.69)
Municipality has preference for PRD	-0.040	-0.038	-0.054	-0.044	-0.052	-0.041	0.041	0.054
	(1.23)	(1.16)	(1.09)	(0.89)	(0.93)	(0.72)	(0.87)	(1.13)
State's GDP Growth Rate	-0.269	-0.139	0.314	0.539	-0.423	-0.087	0.020	0.325
Previous Year	(0.62)	(0.32)	(0.48)	(0.80)	(0.55)	(0.11)	(0.03)	(0.46)
Constant	0.988	1.038	0.117	0.230	1.512	1.728	0.929	1.203
	(3.91)***	(4.07)***	(0.31)	(0.60)	(1.89)*	(2.14)**	(1.35)	(1.72)*
# Observations	1147	1147	1548	1548	1089	1089	1165	1165
R-squared	0.02	0.03	0.03	0.04	0.05	0.06	0.05	0.05

Linear Probability Model with Fixed Effects. Dependent binary variable is the probability of participating in labor force: takes a value of one if the individual was employed or looking for a job in the week previous to the MxFLS interview, and zero if out of the labor force (retired or not looking for a job). Per capita amount invested by 3x1 Program and household assets and income are expressed in thousands of MXP. Absolute value of t-statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table A8: Effect of Collective Remittances on the Weekly Number of Hours  
Worked in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total per-capita amount invested in the Municipality	1.953 (0.51)		-8.218 (2.28)**		4.652 (1.38)		-14.354 (3.38)***	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		-7.879 (1.28)		-20.349 (2.20)**		8.878 (1.06)		-24.837 (1.95)*
Social and Health Infrastructure		32.296 (1.57)		32.292 (1.14)		-1.659 (0.06)		-0.055 (0.00)
Improve Schools and Sports Facilities		76.693 (1.93)*		63.670 (1.14)		-14.976 (0.29)		52.918 (0.69)
Improve Production and Productivity		-16.867 (1.03)		-33.381 (1.09)		-18.023 (1.23)		54.819 (1.69)*
<i>Individual Characteristics, Migration Preferences and Experience</i>								
Age	-0.129 (1.92)*	-0.127 (1.90)*	-0.185 (1.78)*	-0.184 (1.78)*	-0.188 (3.10)***	-0.188 (3.10)***	0.108 (0.85)	0.114 (0.88)
Individual is head of HH	2.839 (3.01)***	2.816 (2.99)***	2.249 (1.41)	2.277 (1.43)	1.481 (0.69)	1.573 (0.73)	2.611 (1.17)	2.247 (1.01)
Total # children under 15y.o. under her care			-2.125 (4.78)***	-2.067 (4.65)***			3.681 (2.58)***	3.615 (2.54)**
Individuals's wage	-0.042 (9.47)***	-0.041 (9.41)***	-0.069 (6.34)***	-0.068 (6.26)***	-0.027 (6.23)***	-0.027 (6.25)***	-0.093 (4.27)***	-0.094 (4.32)***
Individual has a secondary job	14.731 (9.83)***	14.584 (9.73)***	13.756 (5.33)***	13.753 (5.33)***	18.511 (8.58)***	18.432 (8.55)***	13.085 (2.71)***	13.306 (2.77)***
Indiv would like to leave his current municipality	0.263 (0.23)	0.283 (0.25)	-1.761 (1.15)	-1.752 (1.14)	2.304 (1.01)	2.282 (1.00)	2.453 (0.63)	2.451 (0.63)
Individual spent >1 yr living in US	1.657 (0.78)	1.816 (0.85)	6.080 (1.03)	6.098 (1.04)	-1.494 (0.43)	-1.451 (0.42)	4.783 (0.34)	4.558 (0.32)
Individual spent <1 yr living in US	-3.194 (1.24)	-2.872 (1.12)	-15.228 (1.23)	-15.463 (1.25)	-9.881 (2.41)**	-9.628 (2.34)**	-2.304 (0.30)	-1.454 (0.19)
<i>Household Socioeconomic Characteristics</i>								
HH size	0.236 (1.24)	0.229 (1.20)	-0.348 (1.06)	-0.339 (1.03)	0.172 (0.80)	0.178 (0.83)	-0.153 (0.31)	-0.058 (0.12)
HH Remittances (thousands MXP)	-0.160 (2.54)**	-0.157 (2.48)**	-0.003 (0.03)	0.002 (0.02)	-0.005 (0.34)	-0.007 (0.49)	-0.087 (0.57)	-0.081 (0.54)
Total value of assets	-0.00002 (0.28)	-0.00002 (0.31)	-0.00004 (0.39)	-0.00004 (0.43)	-6.97x10 <sup>-6</sup> (0.28)	-6.45x10 <sup>-6</sup> (0.26)	-0.00003 (1.19)	-0.00003 (1.24)
Total non labor income -1.92x10 <sup>-7</sup>	-1.77x10 <sup>-7</sup> (0.51)	-1.26x10 <sup>-6</sup> (0.47)	-1.31x10 <sup>-6</sup> (1.99)**	-5.67x10 <sup>-7</sup> (2.08)**	-5.80x10 <sup>-7</sup> (1.46)	-1.37x10 <sup>-6</sup> (1.49)	-1.32x10 <sup>-6</sup> (1.29)	
HH has financial constraints (i.e. no credit, no savings)	-0.645 (0.90)	-0.642 (0.89)	-1.281 (1.17)	-1.289 (1.18)	-1.376 (1.34)	-1.348 (1.32)	0.981 (0.49)	0.784 (0.40)

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Table A8 – Continued

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Actions taken due to shock: Someone in HH had to...</i>								
Work overtime	4.100 (1.74)*	4.125 (1.75)*	-1.383 (0.41)	-1.415 (0.42)	1.056 (0.39)	0.967 (0.36)	6.699 (1.08)	7.050 (1.14)
Start to work	-2.037 (0.77)	-2.014 (0.77)	-0.946 (0.28)	-0.947 (0.28)	2.573 (0.68)	2.538 (0.67)	-1.810 (0.24)	-1.658 (0.23)
Start/sell family business	-7.754 (0.70)	-7.611 (0.69)	-1.242 (0.09)	-1.186 (0.09)	-18.560 (2.08)**	-18.446 (2.07)**	-33.963 (2.88)***	-33.676 (2.87)***
Get an extra job	8.965 (1.89)*	8.745 (1.84)*	-4.591 (0.58)	-4.617 (0.59)	-1.938 (0.31)	-1.957 (0.31)	-0.444 (0.03)	-0.965 (0.07)
Left the school	1.373 (0.20)	1.351 (0.19)			-19.125 (1.10)	-19.015 (1.09)	1.039 (0.05)	0.720 (0.04)
<i>Municipality and State Characteristics</i>								
Municipality's Index of Marginalization	-2.730 (3.98)***	-2.540 (3.68)***	0.040 (0.04)	0.405 (0.37)	-1.935 (2.31)**	-1.879 (2.22)**	-3.178 (1.81)*	-3.291 (1.85)*
Municipality has preference for PAN	0.526 (0.66)	0.482 (0.61)	2.547 (1.99)**	2.481 (1.94)*	-0.232 (0.21)	-0.271 (0.25)	0.113 (0.05)	0.570 (0.25)
Municipality has preference for PRD	2.845 (2.05)**	2.280 (1.55)	0.433 (0.21)	-0.837 (0.37)	3.494 (2.02)**	3.782 (2.08)**	1.155 (0.37)	0.834 (0.26)
State's GDP Growth Rate	14.886	17.674	44.929	47.206	-14.941	-10.860	-5.447	-16.155
Previous Year	(1.18)	(1.39)	(2.30)**	(2.38)**	(0.88)	(0.63)	(0.15)	(0.45)
Constant	46.038 (17.56)***	46.137 (17.60)***	47.205 (10.94)***	47.470 (10.99)***	51.907 (11.28)***	51.786 (11.24)***	26.281 (3.07)***	25.691 (2.99)***
# Observations	1117	1117	748	748	870	870	340	340
TOBIT Model with Random Effects. Per capita amount invested by 3x1 Program is expressed in thousands of MXP. Absolute value of t-statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%								

Table A9: Effect of Collective Remittances on the Hourly Wage Rate in Municipalities that participate in *3x1 Program*

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total per-capita amount invested in the Municipality	21.443		1.800		15.823		2.669	
	(1.29)		(0.15)		(0.58)		(0.23)	
<i>Total per-capita amount invested in the Municipality, by Type of Project</i>								
Urbanization		75.151		84.479		92.462		-12.840
		(2.85)***		(2.70)***		(1.44)		(0.35)
Social and Health Infrastructure		-36.039		-0.412		138.591		-170.350
		(0.39)		(0.00)		(0.65)		(0.91)
Improve Schools and Sports Facilities		-407.843		-553.638		-537.288		137.056
		(2.31)**		(2.85)***		(1.31)		(0.62)
Improve Production and Productivity		-88.813		-22.253		-83.181		55.448
		(1.11)		(0.20)		(0.65)		(0.46)
<i>Individual Characteristics</i>								
Schooling years	2.286	2.293	2.772	2.731	4.424	4.369	0.813	0.858
	(4.42)***	(4.44)***	(4.83)***	(4.77)***	(3.69)***	(3.64)***	(1.00)	(1.07)
Years of experience	-2.329	-2.384	1.145	1.147	-0.865	-0.918	-0.937	-0.936
	(2.79)***	(2.86)***	(1.59)	(1.60)	(0.60)	(0.64)	(2.04)**	(2.04)**
Squared years of experience	0.055	0.055	-0.022	-0.021	0.011	0.012	0.009	0.008
	(2.74)***	(2.78)***	(1.11)	(1.07)	(0.72)	(0.74)	(1.38)	(1.32)
Individual is indigenous	0.401	0.935	0.730	1.394	7.313	8.407	15.735	14.451
	(0.05)	(0.12)	(0.08)	(0.14)	(0.50)	(0.56)	(1.66)*	(1.50)
Individual has a second job	9.332	9.223	13.058	13.300	55.142	55.090	18.652	18.212
	(1.41)	(1.39)	(1.48)	(1.51)	(3.32)***	(3.32)***	(1.45)	(1.42)
Individual is a farmer	-10.628	-11.476	-50.184	-53.355	-51.075	-52.519	-67.932	-67.121
	(1.45)	(1.57)	(2.23)**	(2.38)**	(4.22)***	(4.32)***	(2.27)**	(2.24)**
Individual is a farm worker	-153.296	-153.640	-138.153	-140.039	-297.339	-297.477	-104.229	-104.261
	(5.50)***	(5.54)***	(7.19)***	(7.27)***	(4.79)***	(4.80)***	(5.71)***	(5.71)***
Individual is a non-agricultural worker	7.491	7.355	-2.094	-2.483	-0.152	-0.593	13.315	14.171
	(1.66)*	(1.64)	(0.42)	(0.49)	(0.01)	(0.06)	(1.89)*	(2.01)**
Individual is an agricultural worker	3.160	2.567	-16.883	-17.626	-7.454	-7.563	-6.799	-6.228
	(0.53)	(0.43)	(1.43)	(1.50)	(0.55)	(0.56)	(0.41)	(0.38)
Individual is an employer/owns a business	42.576	43.696	-0.408	-1.301	-4.423	-4.794	5.528	6.085
	(5.69)***	(5.81)***	(0.05)	(0.17)	(0.26)	(0.29)	(0.60)	(0.66)
<i>Municipality and State Characteristics</i>								
Municipality's Index of Marginalization	-3.962	-3.579	-4.873	-6.185	-12.347	-12.535	-5.186	-4.321
	(1.25)	(1.12)	(1.35)	(1.70)*	(1.79)*	(1.79)*	(0.98)	(0.81)
Municipality has preference for PAN	1.057	1.322	-5.788	-5.933	3.974	2.662	9.580	11.300
	(0.30)	(0.37)	(1.32)	(1.36)	(0.46)	(0.31)	(1.47)	(1.71)*
Municipality has preference for PRD	3.244	6.163	3.297	5.292	26.828	25.486	6.085	7.745
	(0.54)	(0.95)	(0.47)	(0.67)	(2.04)**	(1.79)*	(0.66)	(0.81)

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Table A9 – Continued

	Cohort [25,45] years old				Cohort [46,...] years old			
	MEN		WOMEN		MEN		WOMEN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State's GDP Growth Rate Previous Year	148.454 (2.52)**	154.128 (2.60)***	101.953 (1.41)	86.020 (1.18)	552.660 (3.83)***	550.882 (3.76)***	-8.268 (0.08)	-1.855 (0.02)
Constant	2.182 (0.20)	3.577 (0.33)	-17.915 (2.22)**	-18.784 (2.33)**	-34.116 (0.98)	-31.797 (0.91)	9.354 (0.92)	9.527 (0.94)
# Observations	1117	1117	748	748	868	868	340	340

TOBIT Model with Random Effects. Dependent variable is the hourly nominal wage rate. For job categories, the excluded category is self-employed. Per capita amount invested by 3x1 Program is expressed in thousands of MXP. Absolute value of t-statistics in parentheses \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%