

Economic Opportunities for Indigenous Peoples in Latin America

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Economic Opportunities for Indigenous Peoples in Latin America in Guatemala

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Economic Opportunities for Indigenous Peoples in Guatemala[⌘]

Maria Victoria Fazio

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Abstract

This study analyzes the economic opportunities available to indigenous peoples in comparison to the non-indigenous in Guatemala with special focus on the role of social networks in shaping the patterns of employment and other economic outcomes among indigenous peoples. More specifically, the analysis emphasizes on the assessment of the role of social networks on the possibilities to find a job, and on economic decisions such as migration and employment selection between different occupations. It also provides policy implications from the analysis.

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EXECUTIVE SUMMARY

This study analyzes the economic opportunities available to indigenous peoples in comparison to the non-indigenous in Guatemala and investigates the role of social networks in shaping the patterns of employment and other economic outcomes among indigenous peoples. More specifically, the analysis focuses on the assessment of the role of social capital –one of the main assets of disadvantaged groups- on the possibilities to find a job, and on economic decisions such as migration and employment selection between different activities and occupations.

Motivation

Indigenous Guatemalans have been historically excluded from opportunities of accessing crucial assets for development such as land, labor and education. The historical exclusionary pattern of development that affected indigenous peoples and the consequent fragmentation of the Guatemalan society were recognized in the Peace Accords (1995, 1996) that were aimed at overcoming hundreds of years of political, territorial and economic dominance over indigenous peoples. These historical and many other factors documented in the literature have combined to create an extremely disadvantaged situation for indigenous Guatemalans. Indigenous peoples continue to have low endowments of human capital, and limited access to basic services, land, credit and markets.

Among disadvantaged groups with few prospects for accessing opportunities the social networks appear to provide a main asset or capital to overcome adverse situations. (e.g. Woolcock et al, 2000). Concerning indigenous peoples the role of social networks can become particularly relevant, given the strong attachment to community values embraced in the culture that Indigenous Guatemalans have managed to uphold throughout the exclusionary process of development.

Although the social networks can help disadvantaged groups to overcome the lack of opportunities (e.g. by facilitating the acquisition of jobs), sociologists also emphasize that social interactions among disadvantaged groups can inhibit upward mobility in the community. (Granovetter, 1985). For instance, suppose a context of fragmentation where most indigenous peoples who face lack of opportunities and information to access certain activities or occupations interact mainly with indigenous peoples already employed in agriculture, or other low-paid activities/occupations in order to get a job. The interactions within people in this group can lead to transmit the same pattern of occupations, and in turn, to reproduce the disadvantaged occupational pattern inhibiting upward mobility across sectors and occupations in the community.

On the contrary, at the same time, the interactions within a community can help to develop new strategies to overcome the lack of opportunities by disseminating successful initiatives to generate income (e.g. the development of non traditional crops for exports in the agriculture sector) among the social network.

Objectives

The empirical study of the role of social networks as one of the factors that could shape a series of economic outcomes/decisions for indigenous individuals is the main focus of the report. More precisely, this study has the following objectives: i) to present a comparison of the income generating activities of indigenous and non-indigenous; ii) to analyze how indigenous and non indigenous find jobs with an emphasis on the role of social networks in determining the probabilities of finding a job; and iii) to explore the role of social networks in explaining the economic outcomes/decisions such as migration, employment in different activities (e.g. agriculture, handicrafts) and occupations (e.g. waged, self-employed), and the decisions on children school attendance and work.

Data sources

Household surveys and census data provide information to compare demographics and living and employment conditions between indigenous and non-indigenous. However, these sources were not designed to enable the analysis of the details of the specific organization of social and economic lives of indigenous peoples, which differ considerably from the lives of the non-indigenous. Therefore, the study of the social and economic organization of indigenous peoples needs to be complemented by specific case studies. Since the main purpose is to explore the economic opportunities of indigenous peoples in comparison to that of non-indigenous, this study relies mainly on household survey data. We used three data sources: the *Encuesta Nacional de Condiciones de Vida* (ENCOVI, 2000)¹, the *Censo Nacional de Poblacion y Habitacion* (2002), and the *Encuesta Nacional de Empleo e Ingresos* (ENEI, 2004).

Main Findings from the Report

Part II first highlights the heterogeneous ethnic composition of the country. In the *Accord on Identity and Rights of Indigenous peoples* of March 1995 Guatemala was declared to be a multilingual, multicultural, and multiethnic nation. The indigenous population comprises 41 percent of the Guatemalan population of 11.2 million, concentrated mainly in rural and poor areas.² About 70 percent of indigenous peoples live in rural areas and particularly in the west and northern regions.

Part II also summarizes historical factors that greatly shaped the disadvantaged situation of indigenous peoples over time. Since the Spanish invasion in 1524, indigenous peoples have been a segregated part of the Guatemalan population. Their opportunities were constrained by feudal regimes, expropriation of land, and exclusion for hundreds of years.

The lack of opportunities to generate income inevitably manifests itself in poor living conditions. **Part II** highlights that the last available poverty figures for 2000 rank Guatemala among the poorest countries in the Latin America and the Caribbean region. The incidence of poverty is considerably higher among the indigenous than among the non-indigenous. About three-quarters of indigenous peoples live in poverty conditions. While indigenous peoples represent 41 percent of the Guatemalan population, they account for 58 percent of the poor. In the case of two particular indigenous groups, the Mam and the Q'eqchi, almost the entire population in the group is poor. These groups are concentrated in the northwest and northern rural areas of the country. The incidence of poverty is also particularly high among the indigenous groups that speak only an indigenous language.

Inequality between ethnic groups is a pervasive feature of Guatemalan society. Indigenous peoples account for less than one-quarter of total income and consumption, while they contribute largely to the production in the traditional sectors of the economy.

In **Part III**, we describe the income sources and income-generating activities of indigenous and non-indigenous peoples in both rural and urban areas. The section begins by showing that the composition of the average income of the non-indigenous is more diversified than the income of the indigenous peoples, who depend mostly on labor sources of income and tend to work in the lowest-paid occupations. More specifically, agriculture provides the main source of income for indigenous Guatemalans. For instance, in rural areas, 50 percent of indigenous household income comes from agricultural activities compared with 35.4 percent of non-indigenous' household income.

¹ The next ENCOVI will not be released until the end of 2006.

² Source: *Censo Nacional de Poblacion y Habitacion* (2002), based on the definition of indigenous by self-identification of the respondent. The ENCOVI (2000) also estimates 41 percent of the total population to be indigenous. Instead, using the primary language definition, the percentage of indigenous would be 31 percent.

The increasing number of migrants to other countries (50,000 people migrate to the United States every year) reflects the lack of employment opportunities in Guatemala³. This fact is not registered in the unemployment level, which is low, but is implicit in the high levels of underemployed workers (16.5 percent in 2004), who try to cope with unemployment by accepting jobs for which they are overqualified or on a part-time basis.⁴ The counterpart of the migration in search for opportunities is the increasing reliance on remittances as a source of income. We summarize the evidence on remittances in Box 3.

There are several differences in the patterns of employment between indigenous and non-indigenous Guatemalans. Indigenous peoples are typically employed in lower-paid and informal jobs. They are more likely to be daily or unpaid workers, to be self-employed, to have more than one occupation, and to be working in agriculture and handicraft production⁵. In contrast, the non-indigenous are far more likely to be employed in salaried jobs, to work in larger firms, and to participate in the formal sector and in the public sector.

Although much of the differences in incomes and employment opportunities between the indigenous and non-indigenous populations in Guatemala can be explained by differences in their backgrounds and in their endowments of physical and human capital, there is still evidence of discrimination against indigenous Guatemalans.

According to a survey on Perceptions about Discrimination in Guatemala carried out in 2005, about 77 percent of indigenous and 83 percent of non-indigenous consider that finding a job is easier for the non-indigenous than for the indigenous. (Vox Latina-Prensa Libre, 2005 and PNUD, 2005). In **Part IV** we investigate the methods used for finding employment opportunities by indigenous and non indigenous workers in Guatemala. In particular, we compare the propensity of indigenous and non indigenous to find jobs through contacts from social networks and other more formal methods. The analysis also allows exploring differences in the job finding methods of other specific groups, such as rural and urban inhabitants, workers in different types of occupations, and workers with different levels of education.

As will be shown in this section, social contacts (or social networking) appear to be the most effective channel for finding opportunities among job seekers in Guatemala. About 37 percent of workers report having found their occupation through relatives and/or friends. However, social networks could play a dual role. On the one hand it is positive that they facilitate access to jobs. On the other hand, there are several caveats identified in the literature regarding the extended use of this method for finding a job. Basically, since the use of social contacts is associated with facilitating low paid and unskilled jobs, in this sense it can lead to the reproduction of more of these jobs among disadvantaged groups. That is, the social interactions within disadvantaged groups that have to rely basically on social contacts to get a job may end up leading to the replication of the same pattern of occupations over time.

The results show that indigenous peoples are almost 7 percent more likely to find a job using social contacts than the non-indigenous, controlling for differences in other characteristics between indigenous and non-indigenous. In contrast, the non-indigenous have a slightly higher probability of finding a job using formal methods. However, it is interesting to note that these probabilities for the indigenous and non-indigenous depend on where they live. In rural areas, indigenous peoples are 14 percent more likely to find a job through social contacts than the non-indigenous, while the non-indigenous have a higher probability of

³ Source: IOM, 2005.

⁴ Source: ENEI, 2004.

⁵ The GDP in Guatemala is dominated by agricultural activities, which account for one-quarter of the economic activities in the country. The economy is still predominantly based on traditional exports of coffee and sugar; despite there have been successful strategies that promoted Non-Traditional Agricultural Exports (NTAE) such as broccoli, snow peas, cauliflower and berries. Guatemala derives economic advantage in selected NTAE crops from an abundance of small-farm family labor and diversified microclimates for producing high quality counter seasonal crops. Indigenous peoples contribute significantly to the national economy in the production of goods, especially in agriculture. They have been and still are the country's main source of agricultural labor.

finding a job through formal channels. Conversely, in urban areas, non-indigenous peoples have higher probabilities to find a job through social contacts than indigenous peoples, while, interestingly, indigenous peoples are more likely to find jobs through formal channels. The fact that formal job search channels are being used in urban areas suggests that there is space for intermediation services in urban labor markets to help indigenous job seekers to obtain higher-quality jobs.

It is also important to highlight that when analyzing samples with different education levels, the indigenous peoples appear to be more likely to find jobs through social contacts than the non-indigenous only among the least educated, while among the most educated, the non-indigenous are the ones who have higher chances of finding a job with social contacts. Also, the indigenous are more likely to find informal jobs through the contacts from social networks than the non-indigenous in rural (11.7 percent) and urban areas (1.6 percent).

The ENEI (2004) allows the distinction between getting help from contacting relatives and help from friends/politicians in searching for employment. These two categories may be considered as analogous to the “bonding” social capital and “bridging” social capital concepts, since they refer to different degrees of strength of ties or links with people in the networks. The analysis reveals that the indigenous tend to use the help from relatives (bonding social capital) more than the non-indigenous. In contrast, the non-indigenous are more likely to use the contacts from friends/politicians (bridging social capital).

Although social contacts increase the chances of finding a job for all job seekers and of having a smooth transition from unemployment, these mechanisms may reduce the opportunities for diversifying activities out of low quality jobs and unskilled employment among social networks in disadvantaged groups.

In **Part V** we further investigate the role played by social networks (or peer pressure) in individual decisions of indigenous peoples related to migration, employment in different activities and occupations. We used data from the 2002 census to study the role played by social networks in the economic decisions of rural and urban inhabitants and separately for indigenous peoples in both of those areas.

The social network effects among the indigenous peoples were found principally for agriculture (with negative sign), handicrafts (positive), and self-employment (positive) activities. That is, the social networks composed of indigenous peoples working in agriculture appear to decrease the propensity that other indigenous living in the same locality will engage in the same activity, possibly due to congestion. On the other hand, social networks of indigenous working in the production of handicrafts tend to encourage the participation of indigenous in the same activity. It is positive that social networks are encouraging indigenous households to diversifying their income-generating activities beyond agriculture. Unfortunately, there is no evidence that social networks among indigenous are promoting the employment of more indigenous peoples in better-paid or higher-skilled occupations, beyond handicraft production. This is related to a result of our analysis of job finding methods, in which social contacts among indigenous tended to match the job seeker with informal and unskilled jobs rather than skilled jobs.

Regarding household decisions about whether children attend school or work, social networks among indigenous peoples are not encouraging school attendance. Nevertheless, it is noteworthy that they tend to discourage child labor.

We replicated the previous analysis including new models accounting for interactions between the social networks and public services (water, sanitary services and electricity), and education. This allows examining how the strength of the network effect varies with access to basic services. We found that the access to public services can be relevant in providing complementarities with social networks for developing strategies to increase opportunities. For instance, the access to services like electricity was found as a factor that may reinforce the role of social networks on the decision to move to off-farm activities (i.e. handicrafts) among indigenous peoples

Overall, the empirical analysis on social networks suggests that on average the networks (that may be capturing both participants of an organization or simply individuals in community) do not facilitate employment in non-traditional sectors. Moreover, the methods for finding a job among them are associated with informal and unskilled occupations.

However, at the same time, there are specific cases that we are not able to capture from census data and which show that there are examples of bridging social capital among indigenous peoples. This social capital is evidenced in the form of regional and national indigenous civil society and non-governmental organizations that contribute to the development within traditional sectors of economic activity (i.e. agriculture and handicrafts). Their activities help indigenous peoples seeking access to land, credit, markets, employment and recognition of their rights. **Part V** also shows these examples.

In **Part VI**, we look at social protection policies and ongoing government strategies aimed at promoting the social development of indigenous peoples. There are many challenges for improving social protection in Guatemala. Only recently, a decade after the Peace Accords were signed, there have been public strategies intended to design inclusive policies for indigenous peoples.

In devising policies aimed at improving the economic opportunities and the welfare of indigenous peoples, policy makers need to involve indigenous peoples in the design of social policies. Part VII presents implications for public policies from the analysis. The right to participate has been historically denied to the indigenous population and has been a root cause of their lack of opportunities. Therefore, it is central for the government to coordinate and cooperate with local organizations from civil society that have strong connections with social networks in the indigenous community. The public policies can contribute to empower the social network in order to build more bridging capital by exposing disadvantaged communities to models of strategies for development.

Another crucial part of the strategy should be to expand access to basic services and markets by increasing public investment in infrastructure such as roads and water and sewerage systems. Public investment in infrastructure can also generate more and better jobs and, at the same time contribute to building the capacity of workers, and to the diversification of economic activities in rural areas.⁶

Public intervention should also contribute to provide technical assistance to micro-entrepreneurs in the agricultural sector. With the help of civil society organizations with knowledge of the sector, policymakers should ensure that indigenous peoples are given expert advice about their comparative advantages for production, on the best types of goods to produce (for instance, non-traditional products), production plans, commercialization strategies, access to markets, and competitive prices. It is of central importance also to offer mechanisms to increase access to titled land, credit, and physical capital.

Moreover, public labor intermediation services can contribute in increasing the number and quality of the labor market opportunities available to indigenous peoples in urban areas.

Programs should also be oriented to contribute to fill the minimum instructional gaps of adult population. The *Chile Califica* program is an example of a strategy designed to strengthen the link between what is taught in the latter years of secondary schools and what the labor market demands.

It is necessary to continue to expand the coverage of bilingual education for the indigenous with contents adequate to local necessities. Like in the PRONADE program, schools should continue to promote the participation of parents and local communities in order to build the capacity of the whole community to address educational disadvantages in a collaborative way.

⁶ The spatial analysis of rural economic growth potential done by the World Bank (2005) has identified the specific regions in which there are advantages and disadvantages for rural economic growth. These types of tools could be used for targeting development policies for rural areas.

The implementation of all strategies for increasing opportunities and reduce poverty requires improving mechanisms for collecting, as periodically as possible, qualitative and quantitative information on the living conditions of indigenous peoples.

There seems to be a growing concern regarding the design of inclusive social policies in Guatemala. Policymakers face the major challenge of designing culturally appropriate strategies for indigenous peoples, while ensuring that they are included as integral parts of the strategy for the country as a whole.

I - INTRODUCTION

Indigenous Guatemalans managed to sustain the essence of their culture, community values, and norms in a historical process in which they were excluded from access to opportunities. This pattern of exclusion of indigenous peoples and the consequent fragmentation of the Guatemalan society were recognized in the Peace Accords (1995, 1996) that were aimed at overcoming hundreds of years of political, territorial, and economic dominance over indigenous peoples.⁷

Past policies greatly contributed to preventing the indigenous from the opportunities of accessing crucial assets for development such as land, labor and education. These historical and other factors have combined to create an extremely disadvantaged situation for indigenous peoples. For instance, about 70 percent of indigenous peoples live in rural areas and many of them in very isolated communities, without access to basic services. Even the indigenous groups who migrated to urban areas also tend to live in segregated areas. Indigenous peoples continue to have low endowments of human capital, and limited access to basic services, land, credit and markets.

In these limited scope for accessing crucial assets for human development it is very difficult for them to engage in economic activities that are different from the typical activities developed by their family and communities, which leads to further inhibit upward mobility across generations. Also, the strong commitment to tradition, community values and land -beyond strict economic rationality- embraced by indigenous cultures contributes to the intergenerational transmission of activities.

Among disadvantaged groups with few prospects for accessing opportunities the social networks appear to provide a main asset or capital to overcome adverse situations. (e.g. Woolcock et al, 2000). Among indigenous peoples the role of social networks can become particularly relevant, given the strong attachment to community values embraced in the culture that indigenous Guatemalans have managed to uphold throughout the exclusionary process.

Although the social networks can help disadvantaged groups to overcome the lack of opportunities (e.g. by facilitating the acquisition of jobs), sociologists also emphasize that social interactions among disadvantaged groups can inhibit upward mobility in the community. (Granovetter, 1985).

For instance, suppose a context of fragmentation where most indigenous peoples who face lack of opportunities and information to access certain activities or occupations interact mainly with indigenous peoples already employed in agriculture, or other low-paid activities/occupations in order to get a job. The interactions within people in this group can lead to transmit the same pattern of occupations, and in turn, to reproduce the disadvantaged occupational pattern inhibiting upward mobility across sectors and occupations in the community.

⁷ The Peace Accords aimed to formally end the civil war and to reverse the pattern of social exclusion of indigenous peoples. The main two accords were the *Accord on the Identity and Rights of Indigenous peoples*, and the *Socioeconomic and Agrarian Issues Accord*. The first one signed in March 1995 recognized that the identities of the indigenous peoples are fundamental to the construction of national unity and declared Guatemala as a multicultural, multilingual and multiethnic nation. The accord included various provisions to overcome the historical exclusion and exploitation suffered by indigenous peoples. The second one signed in 1996 aimed at establishing an overall development agenda with stronger social orientation.

On the contrary, the interactions within a community can help to develop new strategies to overcome the lack of opportunities by disseminating strategies to generate income (e.g. the development of non traditional crops for exports in the agriculture sector) among the social network.

Box 1: Data Sources for this Report

Household surveys and census data provide information to compare demographics and living and employment conditions between indigenous and non indigenous. However, these sources were not designed to enable the analysis of the details of the organization of social and economic lives of indigenous peoples, which differ considerably from the lives of the non-indigenous. Therefore, the study of the social and economic organization of indigenous peoples needs to be complemented by specific case studies. Since the main purpose is to explore the economic opportunities of indigenous peoples in comparison to the non-indigenous, this study relies mainly on household survey data. We used three data sources: the Encuesta Nacional de Condiciones de Vida (ENCOVI, 2000)⁸, the Censo Nacional de Poblacion y Habitacion (2002), and the Encuesta Nacional de Empleo e Ingresos (ENEI, 2004).

The ENCOVI (2000) is the latest household survey available in Guatemala that allows analysts to measure living standards. It is the source from which the National Statistical Bureau (INE) calculates official poverty rates based on per capita consumption. It contains information on ethnicity as defined by self-identification and primary language. The ENCOVI (2000) has already been intensively analyzed in previous documents related to the study of poverty in Guatemala such as World Bank (2004a) and the evolution in terms of human development of indigenous Guatemalans during the 90s such as Hall and Patrinos (2006). Unfortunately, the next ENCOVI will not be released until the end of 2006.

The database of the *Censo Nacional de Poblacion y Habitacion* (2002) also contains information on housing conditions, education, and employment and on the language and self-identification definitions of ethnicity. We used these data source to estimate representative measures of social networks at the local level.

The ENEI (2004) is the most recent labor force survey that includes several indicators of employment and income conditions in Guatemala. We used these data in a central part of our analysis to investigate to how economic opportunities become available to indigenous as opposed to non-indigenous peoples.

There are many research questions related to the economic opportunities of indigenous peoples. This study investigates the economic opportunities available to indigenous Guatemalans in the labor market with a special focus on the role of social networks as one of the factors that could shape a series of employment and economic outcomes/decisions for indigenous individuals. More precisely, this study has the following objectives: i) to present a comparison of the income generating activities of indigenous and non-indigenous; ii) to analyze how indigenous and non indigenous find a job with emphasis on the role of social networks in determining the probabilities to find a job; and iii) to look at the role played by social networks in explaining the economic outcomes/decisions such as migration, employment in different activities (e.g. agriculture, handicrafts) and occupations (e.g. waged, self-employed), and the decisions on children school attendance and work.

⁸ The next ENCOVI will not be released until the end of 2006.

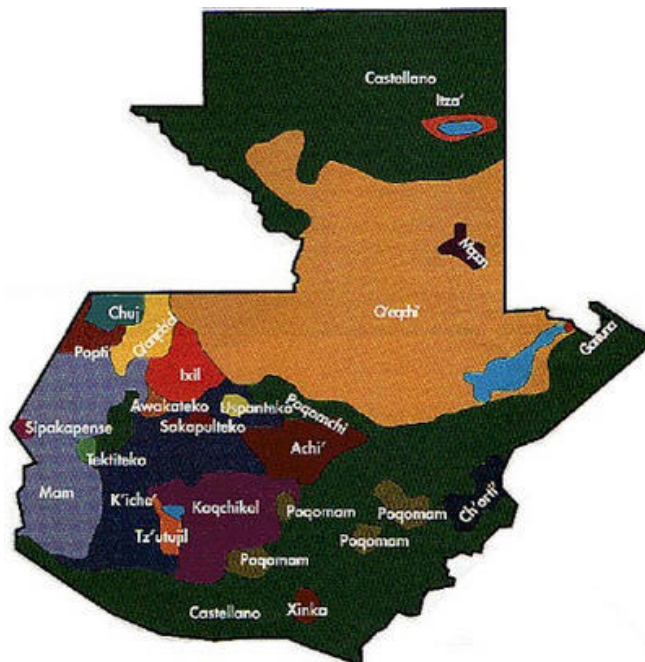
This paper is organized as follows. Part II portrays the ethnic composition of the country, highlighting some evidence about the living conditions of indigenous peoples and the factors that explain their situation. In Part III, we describe the income-generating activities of indigenous and non-indigenous peoples in both rural and urban areas. Part IV investigates how indigenous and non-indigenous peoples find their job opportunities, with particular emphasis on the role of social networks in the probability of finding employment. In Part V, we provide empirical evidence of the role played by social networks (or peer pressure) in the economic decision-making of indigenous peoples. In Part VI, we look at social protection policies and ongoing government strategies aimed at promoting the social development of indigenous peoples. Finally, in Part VII, we make some concluding remarks about our analysis and make some recommendations for building participatory strategies for improving the welfare of indigenous peoples.

II - GUATEMALAN INDIGENOUS GROUPS AND THEIR LIVING CONDITIONS

In the *Accord on Identity and Rights of Indigenous peoples* of March 1995 Guatemala declared itself to be a multilingual, multicultural, and multiethnic nation. The indigenous population comprises 41 percent of the Guatemalan population of 11.2 million and is mainly concentrated in rural and poor areas.⁹ Among all speakers of indigenous languages, about 26 percent speak only an indigenous language. Within the indigenous population, there are 22 Mayan groups - *Kiché, Kaqchikel, Mam* and *Qeqchi* (these last four being the most populous), *Mopam, Akateko, Awakateko, Chorti, Chuj, Poqoman, Poqomchi, Popti, Qanjobal, Sakapulteko, Sipakapense, Tektiteko, Tzu'tujil, Uspanteko, Achi, Chorti, Chuj, Ixil, and Itza* - and two non-Mayan groups - the *Garifuna* and the *Xinca*. Their geographical distribution is such that it is possible to identify those municipalities where a particular ethnic group predominates.

The indigenous population lives predominantly in rural areas (about 70 percent) and particularly in the west and northern regions. The *Kaqchiquel*, the *Poqomam* and the *Tzu'tujil* are the closest to Guatemala City. Figure 1 shows the geographical distribution of the speakers of indigenous languages in Guatemala.

Figure 1: Linguistic Map of Guatemala



Source: *Comisión de Oficialización de los Idiomas Indígenas de Guatemala* (1998).

⁹ Source: *Censo Nacional de Poblacion y Habitacion* (2002), based on the definition of indigenous by self-identification of the respondent. The ENCOVI (2000) also estimates 41 percent of the total population to be indigenous. Instead, using the primary language definition, the percentage of indigenous would be 31 percent.

THE MAIN CHARACTERISTICS OF INDIGENOUS ETHNIC GROUPS

The indigenous population in Guatemala is heterogeneous, with each ethnic group identifying with a unique language, culture, and social organization. Yet they all share similar basic principles that attach great importance to the community over the individuals, to the family as main social institution, to culture, religion, and traditions, and to natural resources (especially land).

Indigenous peoples have their own social, institutional, and economic organization that are different from those predominant among the non-indigenous. For instance, as opposed to the state legislation, indigenous legislation has a different concept of property rights based on communal property. In some cases, indigenous peoples follow the norms of indigenous legislation and in others they pursue the norms in state legislation. The particular system of values embedded in indigenous cultures influences the dynamic of their economy. Many indigenous workers do not seek to accumulate wealth but rather simply aim to earn or produce enough to survive, especially in agriculture. Moreover, there is no conflict between an individual's interests and the collective interest in this tradition. For instance, workers do not simply seek to receive monetary compensation for their work; rather they also attach a special importance to the social cooperation involved in that work. These basic principles have shaped a way of life that has endured over centuries, with occasional adjustments in accordance with history and geography.¹⁰

Box 2: Historical Facts of Exclusion against indigenous peoples

Since the Spanish invasion in 1524, indigenous peoples have been a segregated part of the Guatemalan population. Their opportunities were constrained by feudal regimes, expropriation of land, and exclusion for hundreds of years. During the colonial period, the Ladinos minority established their dominance by imposing various forms of political, economic, and religious control on the indigenous peoples. Notwithstanding this imposition, indigenous peoples managed to construct their own system of social organization and established their own social norms, institutions, and customs. However, during the liberal regime in the 19th century, the indigenous lost most of their rights, their labor was exploited, they were excluded from education policies, their land was expropriated and they were consequently moved out to a less productive land. Between 1945 and 1954, indigenous peoples began to be included in national education policies, which recognized the importance of ethnic diversity in education system.

In 1960, there was a revolt of army officers against corruption that led to a civil war that lasted until 1996. In the first wave of the conflict, the dispute involved only the non-indigenous, but from 1970 onwards, the social tension became widespread and the indigenous began to participate actively in the civil war. The response of the military regime reached genocidal proportions in 1980s, especially for indigenous peoples.

The series of peace accords signed between 1995 and 1996 were aimed not only at formally ending the civil war but also at reversing the historically exclusionary pattern of development, setting several provisions for public action.

Sources: See Davis (1988), Jonas (2000), and World Bank (2004a).

Indigenous peoples who migrated to urban areas keep the values of their culture and traditions, albeit in their own segregated areas. In urban areas, they have more opportunities to access higher education,

¹⁰ For a complete description of the profile of values, norms, and social and economic organization of indigenous peoples, there are several studies based on results from case studies and on historical and anthropological research. For instance, see Tovar (2001) and Mendoza (1999).

markets and basic services, and to diversify their economic activities out of agriculture. However, they find difficulties in finding jobs in the labor markets given their low levels of education, and therefore tend to start own businesses in a small scale (mostly for subsistence) as self-employed (Bastos et al, 1998).

HISTORICAL PATTERNS OF EXCLUSION AGAINST INDIGENOUS GUATEMALANS

The lack of economic opportunities available to the indigenous and evidence of severe poverty among indigenous peoples are an inevitable result of historical patterns of exclusion in Guatemala. Box 2 summarizes these patterns and shows how important they were in influencing the high levels of poverty among indigenous peoples.

POVERTY AND LIVING CONDITIONS AMONG THE INDIGENOUS AND NON-INDIGENOUS

The lack of opportunities to generate income inevitably manifests itself in poor living conditions.¹¹ The last available poverty figures for 2000 rank Guatemala among the poorest countries in the Latin America and the Caribbean region. Poverty in Guatemala is predominantly rural; over 8 out of 10 poor individuals live in rural areas.

The incidence of poverty is considerably higher among the indigenous than among the non-indigenous. About three-quarters of indigenous peoples live in poverty conditions. While indigenous peoples represent 41 percent of the Guatemalan population, they account for 58 percent of the poor. In the case of two particular indigenous groups, the Mam and the Q'eqchi, almost their entire populations are poor. These groups are concentrated in the northwest and northern rural areas of the country. Poverty incidence is also particularly high among the indigenous groups that speak only an indigenous language.

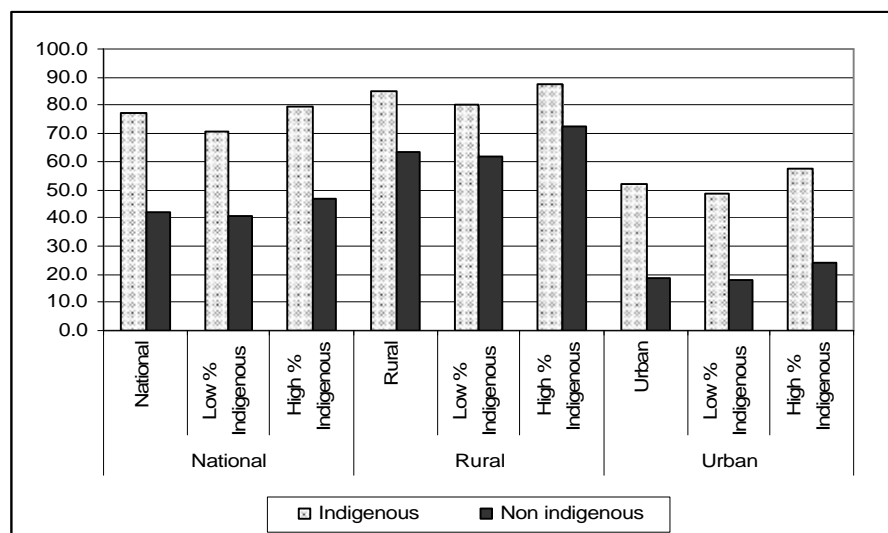
Dividing rural and urban areas by levels of concentration of indigenous populations, we found that both poverty rates among indigenous and non-indigenous are always higher in areas with high percentages of indigenous population (see Figure 2). This suggests that living conditions are poorer for both indigenous and non-indigenous residents of areas with larger indigenous populations. The difference in poverty rates between the indigenous and the non-indigenous is larger in urban areas, suggesting a more unequal pattern of living conditions in urban areas between the indigenous and non-indigenous.¹²

Inequality between ethnic groups is a pervasive feature of Guatemalan society. Indigenous peoples account for less than one-quarter of total income and consumption. In contrast, economic and political resources remain concentrated among the economic elite of the non-indigenous population (World Bank, 2004a).

¹¹ For an exhaustive analysis of poverty in Guatemala, see the last poverty assessment in World Bank (2004), which includes an enormous amount of evidence using the last household survey available in the country - ENCOVI (2000). Also, for a specific analysis on poverty and human development conditions of indigenous peoples during the 1990s, see Hall and Patrinos (2006), which uses the same survey and presents a temporal comparison of the living conditions of indigenous and non-indigenous between 1989 and 2000. It would be interesting to replicate their analysis and the one presented in this paper to trace temporal patterns when the ENCOVI (2006) becomes available.

¹² We defined two levels of indigenous concentration in rural and urban departments – low and high. Rural and urban areas in each department were considered to have low indigenous concentration if less than 50 percent of the population were indigenous, while “high” was defined for areas with more than 50 percent of the population being indigenous. To ensure that our results were representative, we calculated these percentages using the census data from 2002.

Figure 2: Poverty Rates among the Indigenous and Non-indigenous in Areas with Low and High Concentration of Indigenous Population



Source: Based on ENCOVI (2000) and Censo Nacional de Población y Habitación (2002).

During the period from 1950 to the early 2000s, Guatemala experienced economic growth averaging 3.9 percent.¹³ However, the growing economy did not generate enough low-skilled jobs. In addition, many sectors did not grow fast enough to yield new employment opportunities for the poor (World Bank, 2004a). The extent to which growth can increase the opportunities available to the poor, including most of the indigenous population, depends not only on its pace but also on its pattern. In other words, it depends on how economic policy promotes and favors the sectors in which most of the poor and indigenous participate. The current Guatemalan government expects that the CAFTA (Central America Free Trade Agreement) will foster growth and job creation (between 20,000 to 60,000 new jobs).¹⁴

QUALITATIVE POVERTY

A qualitative study (QPES)¹⁵ presented in the last World Bank poverty assessment showed that, although some indigenous peoples refer to non-monetary concepts of well being, in general indigenous communities also regard poverty as being related to a lack of sufficient material goods and work to satisfy their basic needs.

According to this study, income, livelihoods, and opportunities are the top concerns of Guatemalan households. Collecting information on people’s perceptions is crucial in any analysis of the demographic differences that lead to discrimination and self-exclusion. Asking subjective questions about a person’s

¹³ The economic growth between 2000 and 2005 averaged 2.7 percent. From Labor Ministry web page. Source: www.mintrabajo.gob.gt

¹⁴ Source: www.mintrabajo.gob.gt

¹⁵ QPES: Quality Poverty and Exclusion Study, 2002. It gathered perceptions of well being from 10 rural villages.

poverty status also establishes the minimum level of income with which indigenous and non-indigenous peoples can cover the basic needs of their households.

ACCESS TO BASIC SERVICES

Access to basic services is fundamental for improving living conditions and complementing strategies of income generation.

Although coverage of indigenous peoples has increased since the Peace Accords, there are still large disparities in the distribution of services between the indigenous and non-indigenous, especially in urban areas. In urban areas, the largest differences in coverage are in access to sewerage and telephone service, while in rural areas, the main difference between the indigenous and non-indigenous is in access to electricity. The overall coverage of basic services is higher in areas with higher shares of indigenous population.

Table 1: Access to Basic Services by Levels of Concentration of Indigenous Population

Access to	INDIGENOUS				NON-INDIGENOUS			
	RURAL		URBAN		RURAL		URBAN	
	Concentration of Indigenous		Concentration of Indigenous		Concentration of Indigenous		Concentration of Indigenous	
	Low	High	Low	High	Low	High	Low	High
Water	45.8	56.4	75.2	83.1	55.0	44.2	90.4	95.8
Electricity	43.7	52.1	84.9	87.9	65.6	65.8	96.3	96.2
Sewerage	2.2	7.7	59.9	69.5	12.6	10.4	79.5	93.0
Telephone	1.5	1.5	10.0	14.8	5.3	2.2	43.3	43.8
Cell phone	3.4	1.4	6.6	4.4	4.8	1.6	22.7	23.3

Source: Based on ENCOVI (2000).

ACCESS TO LAND

The problem of land tenure in Guatemala dates back to colonial times during the 16th century and intensified during the liberal regime and the expansion of the coffee industry between the late 19th and early 20th centuries. Over time the non-indigenous forced the indigenous inhabitants, who had their land in communal property, to move from the south to the northeast of the Altiplano, a less productive land. The indigenous that stayed were employed in the coffee industry in poor labor conditions. This resulted in large tracts of land and, therefore, economic power being concentrated in the hands of just a few non-indigenous landowners, leaving much of the rest of Guatemalan land to be divided up into very small parcels for subsistence cultivation. In the last two decades, the percentage of landless rural inhabitants increased from 22 percent to 33 percent. According to the last agricultural census, *Censo Nacional Agropecuario* (2003), the parcels of land owned by the non-indigenous are 24 times larger on average than those owned by the indigenous, which is the same ratio that prevailed in 1950 (see Adams, 2002). This increasing concentration of land tenure is clearly one of the main determinants of the disadvantages faced by rural indigenous peoples. The land holdings of the indigenous tend to be untitled, which makes them useless as collateral. They also tend to be geographically isolated and of poor quality.

ACCESS TO ROADS

In rural areas, access to roads appears to be a significant determinant of access to markets and institutions such as banks and post offices and, therefore, to opportunities. For example, travel times for rural

households with no access to paved roads are almost doubled compared to rural households who have access. About 13 percent of Guatemalan households in 2000 had no access to paved roads and this figure was even higher - 20 percent - in the northern regions. The isolation is also higher among the poorest and among the indigenous than among the non-indigenous. The lack of access to roads also dramatically constrains access to key welfare services like health and education.

III - INCOME-GENERATING STRATEGIES OF THE INDIGENOUS AND NON-INDIGENOUS IN RURAL AND URBAN AREAS

In this section, we identify and compare the income-generating strategies, occupational patterns, and labor conditions of indigenous and non-indigenous workers. All tables distinguish between rural and urban areas, given the strong disparities in living conditions between these two areas.

Table 2 describes the composition of household per capita income by different labor and non-labor sources for indigenous and non-indigenous households in rural and urban areas. In general, the income sources of indigenous households are less diversified than those of non-indigenous households, especially in rural areas.

Within both rural and urban areas, the household income of indigenous peoples includes a higher share of labor income (as opposed to, for example, interest, rents, pensions, private remittances, and public transfers) than the household income of the non-indigenous. Among these labor sources, indigenous households receive on average a higher share of their income from agricultural activities than the non-indigenous. In rural areas, 50 percent of indigenous household income comes from agricultural activities compared with 35.4 percent of non-indigenous' household income. Compared to the indigenous, the non-indigenous households receive higher proportions of their income from salaries.

Within non-labor income, non-indigenous households receive higher shares of income from capital sources (interests, dividends, rents), retirement pensions and private and public transfers than indigenous households in both rural and urban areas.

Remittances represent a higher share of household income in rural areas than in urban areas. It is documented that remittances have been increasing in importance as a source of income in Guatemala in recent years (see Box 3).

Table 2: Components of Household per Capita Income

Components of per capita income	INDIGENOUS		NON-INDIGENOUS	
	RURAL	URBAN	RURAL	URBAN
LABOR INCOME	93.1	91.5	90.8	87.8
Agricultural	49.2	10.7	35.4	3.5
Waged	17.7	6.3	16.8	1.3
Self-employed	28.0	4.1	17.2	0.4
Employer	3.5	0.3	1.3	1.7
Non-agricultural	43.9	80.8	55.4	84.3
Waged	24.5	49.0	33.1	54.9
Self-employed	14.9	25.2	16.4	19.7
Employer	4.5	6.6	6.0	9.7
NON-LABOR INCOME	6.9	8.5	9.2	12.2
Capital	0.1	1.5	0.6	3.5
Retirement Pensions	0.3	1.4	1.3	2.2
Remittances	5.0	3.3	4.9	3.4
Transfers	1.5	2.4	2.4	3.0
Total	100.0	100.0	100.0	100.0

Source: Based on ENCOVI (2000).

OCCUPATIONAL PATTERNS OF THE INDIGENOUS AND NON-INDIGENOUS

Indigenous peoples tend to depend more on labor as income source than the non-indigenous. In this subsection, we describe the main occupations, sectors of employment, and conditions of work of indigenous and non-indigenous.

Box 3: Recent Evidence on Remittances in Guatemala

The number of Guatemalans leaving their country in search of opportunities has grown considerably in recent years. Consequently, remittances sent home by these Guatemalans living overseas have become an increasingly important source of household income in both rural and urban households. The last Survey on Remittances and Microenterprises (2005) reported that 1.1 million Guatemalans live abroad and send remittances to about 3.7 million individuals in Guatemala - one-quarter of the country's population. The impact of these transfers on the overall functioning of the national economy is already evident (IOM, 2005). The total flow of remittances during 2005 was expected to be US\$2,998 million. The share of remittances as a proportion of GDP has grown from 6.8 percent in 2002 to 9.5 percent in 2005. Unlike other sources of financing – which are scarce for some groups, especially the indigenous – remittances do not imply any future financial obligations. According to the Survey on Remittances and Microenterprises (2005), the remittances are used by the recipients for three main purposes: to meet their basic needs, to improve their housing conditions, and to invest in productive and commercial activities. Most of the recipients work in commerce and agriculture and live in rural areas (57 percent). About 24 percent of the individuals receiving remittances are indigenous and 76 percent are non-indigenous. This represents 20 percent of total indigenous population and 42 percent of the non-indigenous population. The departments that receive the greatest amount of remittances are Guatemala (21 percent), San Marcos (9.6 percent), Huehuetenango (9.1 percent), and Quetzaltenango (6.6 percent). These last three departments share a border with Mexico.

Source: IOM (2005). "Survey on Remittances and Microenterprises, 2005." *Working notebooks on Migration* (21).

Indigenous workers are likely to be employed in less-qualified and lower-paid activities than the non-indigenous. More specifically, both in rural and urban areas, the indigenous are more likely to be self-employed, unpaid workers, or daily workers than the non-indigenous. The indigenous self-employed are mainly subsistence independent workers and typically lack physical capital.

Unpaid work is particularly common among indigenous peoples. About 31 percent of the indigenous labor force in rural areas and 16 percent in urban areas are unpaid workers. This type of job is common among indigenous households in rural areas.

Table 3: Occupational Patterns of the Indigenous and Non-indigenous

	INDIGENOUS		NON INDIGENOUS	
	RURAL	URBAN	RURAL	URBAN
	%	%	%	%
Waged	36.0	48.9	46.6	65.2
In public sector	1.4	5.0	2.8	9.9
In private sector	13.3	28.0	25.2	46.9
Small firm	6.9	11.5	9.3	12.6
Large firm	6.4	16.5	15.9	34.3
Jornalero	19.4	10.8	15.5	3.5
Domestic	1.9	5.0	3.1	4.9
Self employed	30.4	30.2	27.0	19.7
Owner/employer	2.5	4.5	3.7	7.1
Unpaid worker	31.1	16.4	22.7	8.1
Total	100.0	100.0	100.0	100.0

Source: Based on ENCOVI (2000).

OCCUPATIONAL PATTERNS BY SECTORS

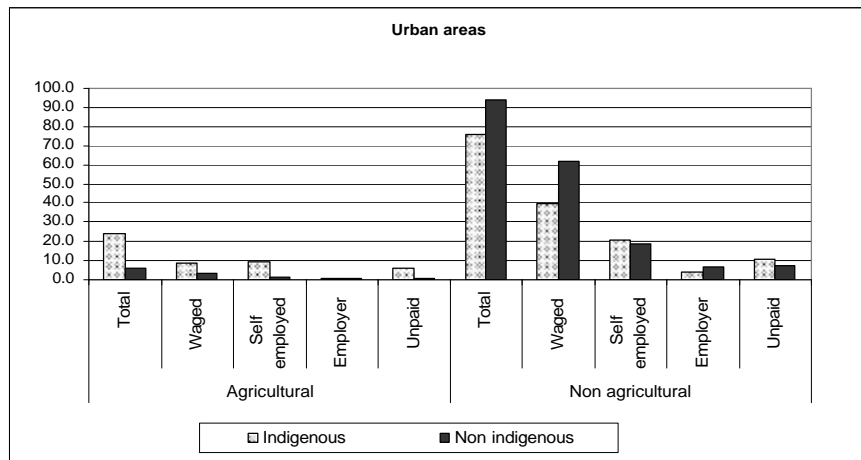
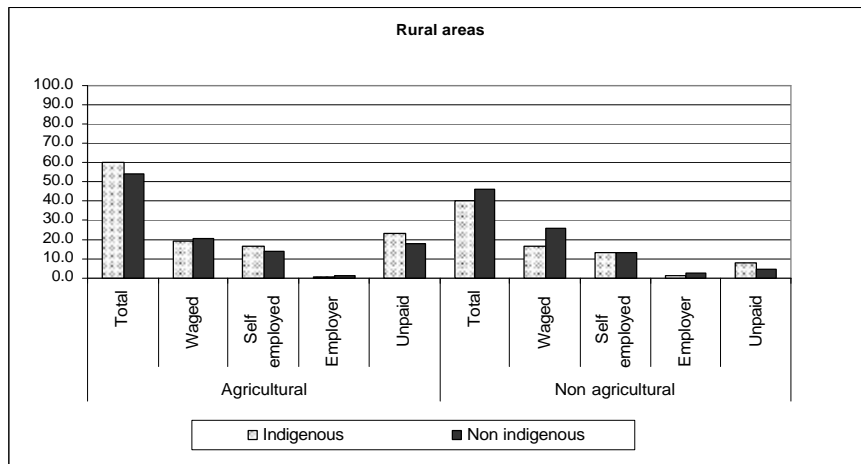
In rural areas, indigenous peoples are more likely to participate in agricultural activities than the non-indigenous (60 percent versus 54 percent); though agricultural work among indigenous peoples dropped more quickly during the 90s than did agricultural work among the non-indigenous (Shapiro, 2006). Within the agricultural sector, figure 3 also shows that the indigenous and non-indigenous participate in similar proportions as waged and self-employed workers, although the percentage of unpaid workers is higher among the indigenous.¹⁶ Within the non-agricultural sector, the proportion of waged workers is higher among the non-indigenous.

The percentage of the indigenous working in agricultural activities is even high in urban areas. (25 percent) As in rural areas, non-indigenous peoples are more likely to engage in non-agricultural activities than the indigenous in urban areas (90 percent versus 75 percent). The percentage of waged workers in that sector is 1.5 times higher among the non-indigenous than the indigenous.

Tables 4 and 5 present the distribution of waged workers and self-employed workers across the different sectors. Among non-agricultural activities, indigenous peoples in different occupations are mostly concentrated in manufacturing and commerce both in rural and urban areas. Non-indigenous workers are also concentrated in those two activities but are more diversified across service sectors, especially in urban areas.

¹⁶ Subsistence agriculture is more common among indigenous. The traditional agricultural indigenous entrepreneurs face a series of difficulties in generating income from their production. The most common problems are: scarce diversification of products, high dependency on intermediaries that offer low prices for their production, lack of physical capital, and constraints in access to credit, among others.

Figure 3: Percentage of the Indigenous and Non-indigenous Workers by Sector and Occupational Categories



Source: Based on ENCOVI (2000).

Table 4: Distribution of Waged and Self-employed Workers among Economic Sectors in Rural Areas

Sector	RURAL			
	INDIGENOUS		NON-INDIGENOUS	
	Waged	Self-employed	Waged	Self-employed
Main Occupation	%	%	%	%
Agriculture	52.8	55.8	44.6	51.6
Non-agricultural	47.2	44.2	55.4	48.4
Mining	0.1	0.5	0.2	0.2
Manufacturing	12.0	19.5	8.8	9.1
Electricity, gas, and water	0.2	0.1	0.6	
Construction	11.9	0.9	11.6	3.5
Commerce	10.0	20.3	9.5	29.4
Transportation	1.3	0.6	4.4	1.2
Financial services	0.6	0.1	2.2	0.8
Public administration	0.8		4.1	0.0
Education	2.6		1.7	0.1
Health and social services	7.8	2.2	12.1	4.3
Other			0.1	
Total	100.0	100.0	100.0	100.0

Source: Based on ENCOVI (2000).

Table 5: Distribution of Waged and Self-employed Workers among Economic Sectors in Urban Areas

Sector	URBAN			
	INDIGENOUS		NON-INDIGENOUS	
	Waged	Self-employed	Waged	Self-employed
Main Occupation	%	%	%	%
Agriculture	18.3	30.5	5.3	5.9
Non-agricultural	81.7	69.5	94.8	94.1
Mining	0.1		0.0	
Manufacturing	17.9	19.0	20.0	17.2
Electricity, gas and water	0.2		0.7	0.5
Construction	9.8	1.7	6.0	5.0
Commerce	17.8	37.9	20.8	48.1
Transportation	2.7	1.2	4.1	3.0
Financial services	1.8	1.4	7.5	2.7
Public administration	4.6		5.1	1.1
Education	7.6	0.5	8.7	0.6
Health and social services	18.8	7.9	21.5	15.9
Other	0.5		0.4	0.1
Total	100.0	100.0	100.0	100.0

Source: Based on ENCOVI (2000).

Box 4: Main Economic Activities in Guatemala

Guatemala's economy is scarcely diverse. Its GDP is dominated by agricultural activities, which account for one-quarter of the economic activities in the country. The harvesting of crops employs large inputs of seasonal labor. The economy is still predominantly based on traditional exports of coffee and sugar; despite there have been successful strategies that promoted Non-Traditional Agricultural Exports (NTAE) such as broccoli, snow peas, cauliflower and berries. Guatemala derives economic advantage in selected NTAE crops from an abundance of small-farm family labor and diversified microclimates for producing high quality counter seasonal crops.¹⁷ Traditionally, subsistence agriculture is dominated by the production of corn and black beans. Among non agricultural activities, *Maquila* (free trade assembly and re-export zones), mining, energy, and commerce have grown fairly rapidly during the 1990s. Tourism also strengthened after the Peace Accords and is now one of the main sources of foreign exchange together with remittances, though its development depends largely on political stability and security.

Indigenous peoples contribute significantly to the national economy in the production of goods, especially in agriculture. They have been and still are the country's main source of agricultural labor (World Bank, 2004a).

So far, we can see that the composition of the indigenous labor force is different from that of the non-indigenous labor force in terms of the type of occupations and sectors in which they work. Indigenous workers are more likely to be concentrated in less advantaged occupational categories – as unpaid workers, daily workers, or self-employed. They are also likely to be principally concentrated in two sectors – agricultural and manufacturing (mainly handicrafts).

ANALYSIS OF LABOR CONDITIONS

Figure 4 and Table 6 present the percentage of indigenous and non-indigenous workers in different labor conditions. These conditions include whether the person works in the informal versus the formal sector, the number of jobs that each person holds simultaneously, the percentage of people working in public versus the private sector, the percentage in full-time or part-time activities, and the proportion with a permanent employment among the two groups being studied.

The proportion of informal workers is higher among the indigenous and among people living in rural areas. The definition of the informal sector used here is the one used in official estimates in Guatemala. A worker is considered to work in the informal sector if he or she works in a small firm and does not contribute to social security (the IGSS)¹⁸.

Indigenous peoples are more likely than non-indigenous workers to hold two jobs simultaneously in both rural and urban areas. More generally, the proportion of people holding two jobs is also higher in rural areas.

The non-indigenous are more likely to work in the public sector than the indigenous, especially in urban areas. The participation of indigenous peoples in public administration has been increasing after the Peace Accords.

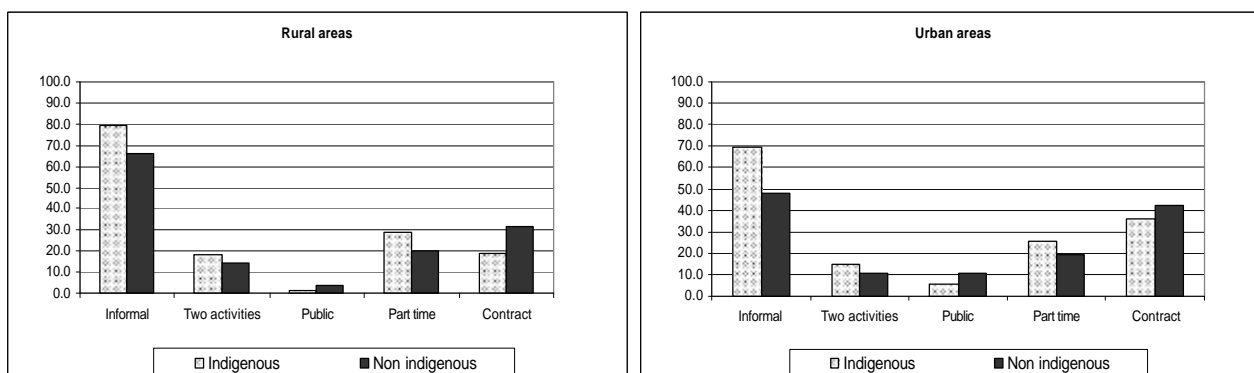
¹⁷ For an analysis of a case study of Non Traditional Agriculture Exports (NTAE) among Kaqchikel farmers in the Central Guatemalan Highlands, see Hamilton et al. (2003).

¹⁸ IGSS: Guatemalan Institute of Social Security. Small firms were defined as firms with less than 6 employees.

Table 6 also shows that the proportion of workers with a full-time job is higher among the non-indigenous than the indigenous in both rural and urban areas.¹⁹

The percentage of workers who have an employment contract is lower among the indigenous and the rural population. Only 18 percent of rural indigenous workers and 36 percent of urban indigenous workers have a contract, while 32 percent of the rural and 42 percent of the urban non-indigenous have one. The differences in labor conditions by ethnicity examined here are also evidenced when the analysis is repeated by occupational category.

Figure 4: Labor Conditions of Indigenous and Non-indigenous Workers



Source: Based on ENCOVI (2000).

Table 6: Labor Conditions of Indigenous and Non-indigenous Workers

Characteristics	INDIGENOUS		NON INDIGENOUS	
	RURAL	URBAN	RURAL	URBAN
	%	%	%	%
Informal	79.2	69.4	66.0	47.6
Formal	20.8	30.6	34.0	52.4
One activity	82.0	85.1	85.6	89.2
Two activities	18.0	14.9	14.4	10.8
Public	1.4	5.4	3.6	10.8
Private	98.6	94.6	96.4	89.2
Full time	70.8	74.3	79.7	80.8
Part time	29.2	25.7	20.3	19.2
Contract	18.6	36.2	31.7	42.3
Permanent	62.0	72.7	69.4	80.7
Temporary	38.0	27.3	30.6	19.3
No contract	81.4	63.8	68.3	57.7

Source: Based on ENCOVI (2000).

¹⁹ Full-time work was defined as being more than 30 hours per week.

To summarize, compared with the non-indigenous population in rural and urban areas, higher proportions of indigenous workers:

- Work in the informal sector
- Hold two jobs simultaneously
- Work in the private sector
- Work part-time
- Have no employment contract or only a temporary contract.

The sectors and occupations in which indigenous peoples tend to work are those in which the incidence of poverty is extremely high. The households in which the highest income-earner works in agriculture have significantly lower consumption levels (and hence are more likely to be poor) than those depending on work in other sectors (construction, commerce, transport or services). Likewise, those households in which the highest income-earner has a blue collar or domestic servant job have significantly lower consumption levels than those in other types of jobs. (World Bank, 2004a).

DEMOGRAPHICS AND BACKGROUND CHARACTERISTICS OF THE LABOR FORCE BY ETHNICITY, AREA, AND OCCUPATION

Table 7 explores the differences in demographics and household characteristics between indigenous and non-indigenous waged and self-employed workers.

Across these occupational categories and areas, in general the mean age of the indigenous labor force is two years lower than that of non-indigenous workers. Also, the average age of the labor force in urban areas is higher than in rural areas. In general, the group of self-employed workers is younger than the group of waged.

The participation of women in the labor market is moderate (44%) and constrained by discrimination against them.²⁰ In rural areas the group of waged workers is composed principally of males (80%). The shares of women working as waged and self-employed increases in urban areas and is higher among the non-indigenous than among the indigenous. Non-indigenous workers have more years of education than indigenous workers in both urban and rural areas (the average gap is three years in urban areas and two years in rural areas).

There is not much difference in terms of hours of work between indigenous and non-indigenous in urban areas, whereas in rural areas, the non-indigenous spend an average of four hours per week more at their main occupation than indigenous workers.

The percentage of workers living in households that are beneficiaries of at least one welfare program is higher in urban than rural areas and is highest among indigenous peoples in waged activities.

There are a higher proportion of people who have migrated in the last five years in urban areas than in rural areas. The percentage of migrants is higher for waged and self-employed indigenous workers than for their

²⁰ The study of the opportunities of women in Guatemala exceeds the scope of this study and deserves a complete specific analysis.

non-indigenous counterparts. Finally, the level of household per capita consumption of the non-indigenous workers in all categories and areas is two times higher than the household per capita consumption of non-indigenous workers.

Table 7: Characteristics of Indigenous and Non-indigenous Waged and Self-employed Workers

Characteristics	RURAL		URBAN	
	Waged	Self-Employed	Waged	Self-Employed
Age				
Indigenous	31.4	26.6	37.2	30.4
Non-indigenous	33.8	28.4	38.4	31.8
Male				
Indigenous	79.0%	62.0%	64.0%	56.0%
Non-indigenous	80.0%	66.0%	60.0%	45.0%
Years of education				
Indigenous	2.7	1.4	5.0	3.0
Non-indigenous	4.2	2.5	8.2	5.9
Hours of work				
Indigenous	46.5	39.5	50.4	41.6
Non-indigenous	51.2	44.2	50.8	44.8
Participation in welfare programs				
Indigenous	4.1%	0.8%	6.1%	1.6%
Non-indigenous	3.0%	1.1%	3.6%	1.4%
Migration in last 5 years				
Indigenous	5.9%	4.1%	11.6%	4.7%
Non-indigenous	2.2%	1.7%	8.2%	2.3%
Av. PC consumption				
Indigenous	262.5	537.4	546.7	362.6
Non-indigenous	409.9	1050.7	979.4	610.2

Note: Per capita consumption is expressed in Quetzales of 2000 and deflated by regional prices

Source: Based on ENCOVI (2000)

When classifying workers in terms of their levels of education, we found that almost all indigenous workers in rural areas are low skilled (97 percent). The percentage is similarly high among rural non-indigenous workers (92 percent). There is a higher share of high-skilled workers in urban areas than in rural areas, especially among the non-indigenous population.

Table 8: Composition of the Indigenous and Non-indigenous Labor Force by Levels of Education

Characteristics	INDIGENOUS		NON INDIGENOUS	
	RURAL	URBAN	RURAL	URBAN
	%	%	%	%
Low-skilled	97.0	84.2	92.3	57.9
Mid-skilled	2.4	12.6	6.6	29.0
High-skilled	0.6	3.3	1.1	13.1

Source: Based on ENCOVI (2000).

Even when controlling for education and individuals' characteristics, we also found that indigenous peoples are still more likely to be engaged in self-employment, unpaid work, and agricultural activities than the non-indigenous. In rural areas, the differences in the income-generating strategies between indigenous and non-indigenous peoples are less pronounced than in urban areas.

Regarding wage differentials between the indigenous and non-indigenous, Shapiro (2006) used the same data from ENCOVI (2000) to analyze to what extent these differentials are due to observable factors such as human capital accumulation and demographic differences as opposed to discrimination against indigenous peoples. He found that discrimination accounted for almost one-half of the earnings differential between indigenous and non-indigenous workers. The rest of the differential was due to gaps in human capital endowments and returns to schooling. In relation to the earning differentials and returns to schooling Patrinos (1997) highlights that dividing the sample of indigenous peoples in the different indigenous ethnic groups produces widely different results in terms of returns to schooling of ethnic groups. For instance, the indigenous Mam appear to have very similar results to the non-indigenous, followed by the Kakchiquel and the Q'eqchi. In contrast, the Kich'es receive very low returns.

Many other factors have led to these differences in the type of labor market opportunities available to the indigenous and non-indigenous, including historical, political, and cultural factors (such as different values attributed to land and community).

In the next section, we continue our analysis by presenting new evidence on how indigenous and non-indigenous workers find their job opportunities. We particularly concentrate on the role of social networks in channeling job opportunities.

IV - HOW DO THE INDIGENOUS AND NON-INDIGENOUS HAVE HIGHER CHANCES OF FINDING THEIR JOB OPPORTUNITIES?

According to a survey on Perceptions about Discrimination in Guatemala carried out in 2005, about 77 percent of indigenous and 83 percent of non-indigenous coincide that finding a job is easier for the non-indigenous than for the indigenous. (Vox Latina-Prensa Libre, 2005 and PNUD, 2005). In this section we investigate the methods used for finding employment opportunities by indigenous and non indigenous workers in Guatemala. In particular, we compare the propensity of indigenous and non indigenous to finding jobs with contacts from social networks and other more formal methods. The analysis also allows exploring differences in the job finding methods of other specific groups, such as rural and urban inhabitants, workers in different types of occupations, and workers with different levels of education.²¹

Job opportunities can become available through various channels, including social contacts from networks (relatives or friends) and formal applications (i.e. CV submission or job competitions) depending on the type of position. It is also possible that certain demographic groups (with different age, gender or ethnic characteristics) cannot take advantage of certain channels within the same type of jobs due to discrimination. For instance, relying on social contacts to get a job can be the consequence of having faced barriers in access through other channels.

As will be shown in this section, social contacts (or social networking) appear to be the most effective channel for finding opportunities among job seekers in Guatemala. This method has been also found as the most frequent in research for other countries.²² However, they could play a dual role. On one side it is positive that they facilitate access to jobs. On the other side, there are several caveats identified in the literature regarding the extended use of this method:

i) First, the use of social contacts is likely to facilitate the creation of more informal jobs since this method is associated with informal, low-paid, and unskilled jobs. In the case of unskilled jobs, social contacts is effective for employers in differentiating among applicants with similar observable characteristics and productivity potential (Wahba et al, 2005 and Antoninis, 2006); ii) second, as Holzer (1987, 1988) argues, informal methods may allow race to become more important in hiring, and so detrimental to minorities' chances of gaining employment; iii) there is evidence that workers who use social contacts to get their jobs tend to have lower levels of satisfaction with their type of work than workers who acquire their jobs by other means (Dockery et al, 2003).

Therefore, social networks within disadvantaged groups (with difficulties in terms of the probability of working, expected earnings and occupational attainment) that have to rely on social contacts to get a job may end up hindering opportunities for upward mobility. This could be particularly the case given the fragmentation of the Guatemalan society between different ethnic and language groups, in which it is expected that the group of social contacts in the case of the indigenous (non-indigenous) is primarily composed of indigenous (non-indigenous). It can be further assumed that the employment opportunities that social contacts such as relatives and friends help to provide are likely to be related with the occupation of these referees. For instance, a friend working in handicrafts is likely to provide references for engaging in

²¹ This section is based on data from the National Employment and Income Survey (ENEI, 2004). The use of this survey allows studying the question of how employed people have found their jobs, which is rarely found in household surveys. In general in household surveys is more common to find the question on job search methods put just to the unemployed.

²² See, for instance, Granovetter (1974), Corcoran et al (1980), Topa (2001), and Wahba (2004).

the same sector. Therefore, if these two assumptions hold, it is expected that the referees that help the indigenous (non-indigenous) in finding a job would help in getting the jobs that are more typical among the indigenous (non-indigenous). In this sense, the pattern of occupations of indigenous peoples and non-indigenous could be reproduced over time through the social networks. For example, if the indigenous worker referring the job seeker to a position had managed to find a job after being discriminated from other positions, then as Mazza (2005) points, the social contact channel can reinforce and perpetuate the effect of the discriminatory practices in the labor market against certain groups, by transmitting the same occupation to the refereed job seeker.

These interactions within indigenous (non-indigenous) groups would be an example of what has been denominated “bonding social capital”. Social capital refers to the norms and networks that enable people to act collectively (Woolcock and Narayan, 2000). The bonding dimension of social capital refers to a social capital that is exclusive or inward looking, just for the closest ties in a network (i.e. relatives). In this sense, this dimension of social capital refers to a tendency in the networks to reinforce exclusive identities and homogeneous groups. The poor, for example, may have an intensive stock of bonding capital that they can leverage to “get by” (Woolcock and Narayan, 2000). Also among indigenous peoples the social capital tends to be “bonding” through communal support and recognition of traditional ethnic identities, cultural values, and religious and spiritual beliefs.

In contrast, the bridging dimension of social capital refers to a more inclusive, or outward-looking concept of social capital that may encompass people across different social divides and networks (e.g. Putnam, 2000). The poor usually lack this type of social capital that the non-poor deploy to “get ahead”. (Woolcock and Narayan, 2000).

The ENEI (2004) allows the distinction between getting help from contacting relatives and help from friends/politicians. These two categories of contacts may be considered as analogous to the “bonding” social capital and “bridging” social capital concepts, since they refer to different degrees of strength of ties or links with people in the networks. Following Granovetter (1973) relatives can be considered strong ties or links with higher intimacy, and therefore they are links that can be associated with the more exclusive notion of bonding capital. Whereas friends and acquaintances/politicians can be considered weak ties (links with less cohesion to the groups) but that they give the possibility to “bridge” to more networks. According to Granovetter (1973), this type of contact/tie is indispensable for integration into a community and for creating individuals’ opportunities. In this section the different social networks will be analyzed as a method for finding job opportunities, in Section V we analyze in more depth the effect of social networks on economic decisions.

All the previous considerations were related to the social networking channel of finding jobs. What about other job finding methods? We will describe which groups of job seekers are more likely to find jobs with formal channels also. It is expected that these job finding methods are more likely to be the channels reported among workers in more formal and better-paid jobs. But they can also be the way to find jobs for people with fewer contacts working in the same field, like migrants, with lower chances of having contacts.

Public intermediation services are an intervention intended to match job seekers with labor demand. When effectively implemented, employment intermediation services can contribute to the decline of unemployment and underemployment, can guarantee equality of opportunities in access to employment and information, and can reduce discrimination.²³

²³ For intermediation services in LAC, see Mazza (2005).

The more channels are available to a job seeker, the higher the probability of matching his/her skills with a position. Given the relative disadvantage of indigenous peoples in terms of opportunities to access higher-quality jobs (after controlling for other characteristics), what methods are they likely to use to find a job compared with those used by the non-indigenous?

This section investigates the probabilities of indigenous and non-indigenous job-seekers to finding jobs through different methods, conditional on the type of jobs, education, area of residence, and other factors. In doing so, we will also identify the factors that determine the probability of finding jobs through social contacts as opposed to more formal methods in Guatemala.

DESCRIPTIVE ANALYSIS OF JOB FINDING METHODS IN GUATEMALA

The lack of employment opportunities in Guatemala is reflected in the increasing number of migrants to other countries (50,000 people migrate to the United States every year)²⁴ and the country's high underemployment levels. According to data from ENEI (2004), 16.5 percent of the employed are underemployed. These workers would like to have the opportunity to work more hours, and would accept to have either a second or a new job. Furthermore, every year, about 100,000 Guatemalan 18-year-olds enter the labor market, discontinuing human capital accumulation from higher levels of education.²⁵ These new job applicants face the difficult task of differentiating themselves from others with similar education and experience in searching for a job.

Job-seekers use two main methods for finding a job: (i) references from social contacts (relatives and/or friends) and (ii) formal methods (submitting a CV, and competing against other candidates). Self-employment can be an alternative when these two mechanisms of finding a job are not successful, especially for more disadvantaged groups.

The use of references from social contacts is the most common strategy for finding a job in Guatemala. About 37 percent of workers report having found their occupation through relatives and/or friends.

There are differences between ethnic groups regarding the methods they tend to use to find jobs. There are several questions related to these differences between indigenous and non-indigenous. First, how frequent is the use of social contacts (formal methods) among the indigenous as opposed to among the non-indigenous in order to find jobs? Second, within the social contact method, which type of contact is used most frequently by each group- family or friends? The type of job (and the earnings) that job seekers find through their friends may be different than those found through their relatives. The pool of contacts accessible through a person's friends is likely to be larger than the pool of their relatives, which might make for a better match between the job seeker and his or her ultimate position. The pool of friends is also expected to have more similar skills than the pool of relatives, which may further improve the match.

Table 9 and Figure 5 show the different methods used by indigenous and non-indigenous workers between 15 and 65 years old to find their current job.²⁶ Social contacts through relatives and friends (or politicians) are the most frequent channels used by both the indigenous and non-indigenous to find a job. About 35 percent of the indigenous reported having found employment through contacts of relatives and friends, while 38 percent of the non-indigenous reported using this method. However, there is a difference between the two ethnic groups in terms of the type of contact that they used in acquiring their jobs. Indigenous

²⁴ OIM, 2005.

²⁵ Note "Hasta mil personas compiten por un empleo", in Labor Ministry web page: www.mintrabajo.gob.gt.

²⁶ The analysis is based on 7,584 indigenous workers (expanded to 1.33 million) and 13,847 non-indigenous (expanded to 2.35 million) between 15 and 65 years old who answered the question about how they got their jobs.

peoples seem to be more likely to use the help of their relatives (20 percent versus 15 percent) than the non-indigenous, while the non-indigenous reported relatively more the help from friends and politicians. We will follow up on this evidence controlling for other factors.

Formal methods appear relatively more frequent among the non-indigenous than among the indigenous (15 percent versus 8 percent).

The second most frequently used channel for finding employment is to build own businesses (usually referred to as self-employment). The fact that this strategy is used so frequently may reflect a lack of opportunities for finding waged employment (either in the formal or informal sector). The self-employment strategy is used in similar proportions by both the indigenous and non-indigenous.

There are almost no reports of people finding a job through intermediation services provided by the Labor Ministry. Although we expected this method to be used less than other strategies for finding jobs, its absolute incidence is almost zero. In fact, the Ministry's labor fairs do not seem to be effective enough to assist and overcome the unemployment problem in the country, while there is increasing need for a global public policy of labor intermediation.²⁷ This suggests there is space for increasing the incidence of intermediation policies in trying to reduce underemployment by improving the matching of labor supply with demand in Guatemala.

There are two other channels more frequently reported by the indigenous as a means to find an occupation. Indigenous appear to be more likely to have inherited land or business than non-indigenous (16 percent vs. 8 percent). Moreover, among indigenous there is a higher proportion of workers employed directly by their parents.

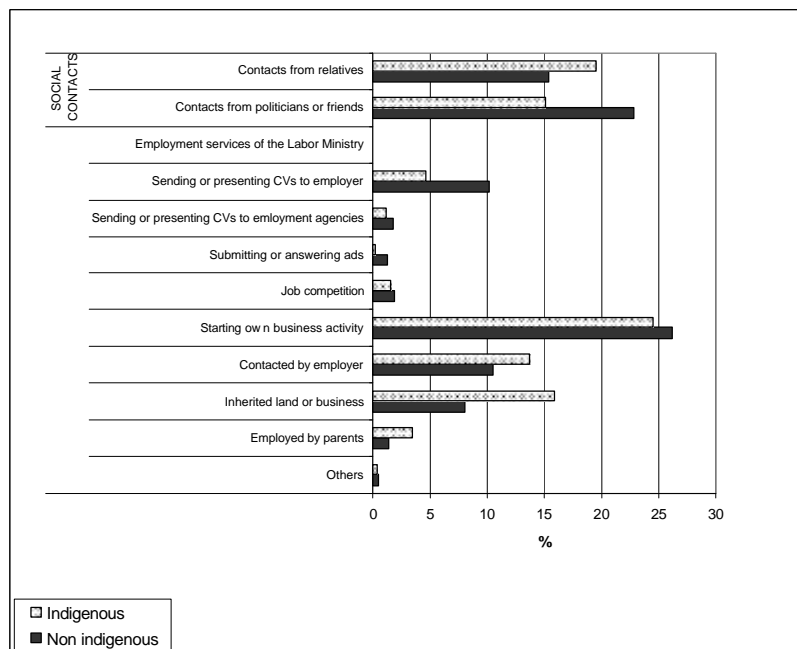
Table 9: How Indigenous and Non-indigenous Workers find their Jobs

Job-finding methods	Indigenous	Non-indigenous
Social contacts	34.6	38.3
Through relatives	19.6	15.4
Through friends (or politicians)	15.1	22.9
Using the employment services of the Labor Ministry	0.02	0.04
Formal methods	7.3	13.9
Sending or presenting CVs to employer	4.6	10.2
Sending or presenting CVs to employment agencies	1.2	1.8
Job competition	1.5	1.9
Submitting or answering ads	0.2	1.3
Starting own business activity	24.5	26.2
Contacted by employer	13.7	10.5
Inherited land or business	15.9	8.0
Employed by parents	3.5	1.3
Others	0.4	0.5
Total	100.0	100.0

Source: Based on ENEI (2004).

²⁷ Note "Políticas de Empleo" on the Labor Ministry web page: www.mintrabajo.gob.gt

Figure 5: How Indigenous and Non-indigenous Workers find their Jobs



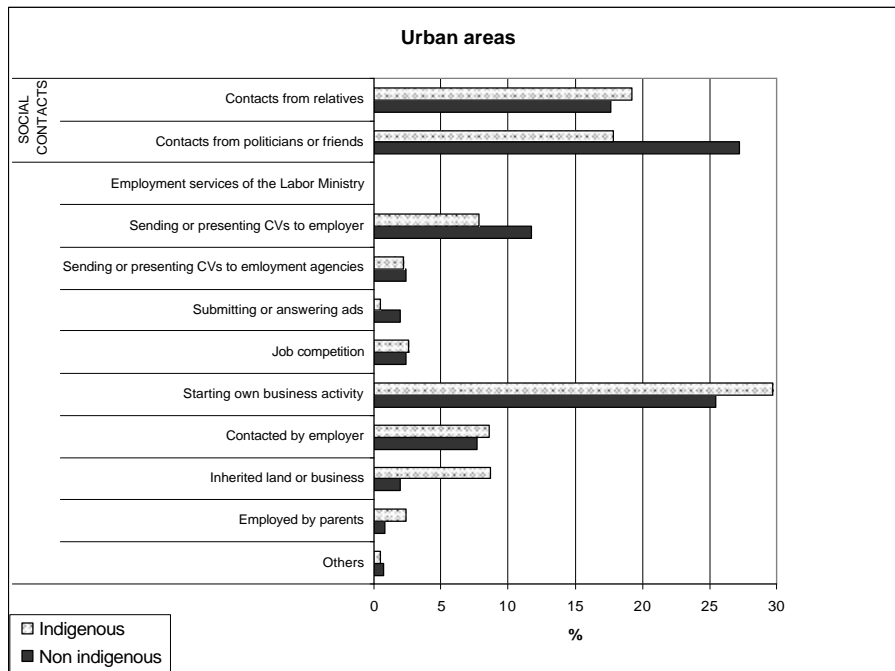
Source: Based on ENEI (2004).

Given that the types of jobs that can be found vary greatly between rural and urban areas, it is not surprising that there are also differences in the use of job finding methods between those areas as well. For instance, finding a job through friends and politicians is more common in urban areas, while doing so through relatives appears more frequent in rural areas. As expected, the use of formal methods is more typical in urban than in rural areas, while the inheritance of land (or businesses) is more frequent in rural areas. Figure 6 also illustrates the differences between indigenous and non-indigenous workers by area of residence. Some of the differences between the ethnic groups found at the national level become even larger when analyzing separately urban and rural areas. For instance, in rural areas indigenous peoples appear to be far more likely than non-indigenous to seek help from their relatives in finding a job. On the other hand, in urban areas, the non-indigenous are expected to rely more on help from friends and politicians than the indigenous.

Table 9 shows that the non indigenous have higher chances to start own businesses than the indigenous in order to have an occupation. However, this result is not evidenced both in rural and urban areas. While in rural areas the non-indigenous seem to be more likely than the indigenous to start their own businesses, in urban areas, the indigenous appear to have higher chances of being self-employed than the non-indigenous.

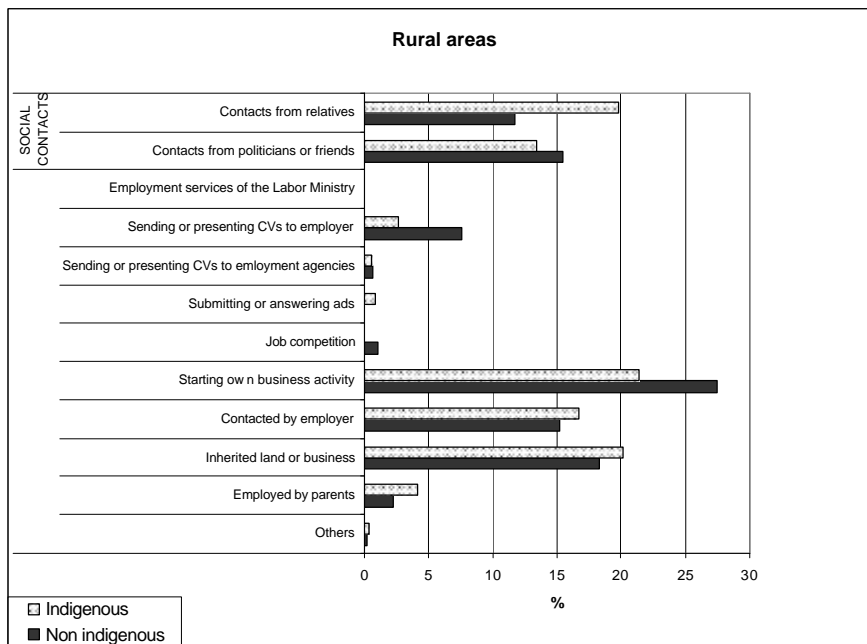
The use of formal methods (by submitting CVs and competing for jobs) is more frequent among non-indigenous in both urban and rural areas, although the difference becomes smaller in urban areas. The disparity between indigenous and non indigenous in the percentage of reports of inheritance of land (or business) is higher in urban areas.

Figure 6: How Indigenous and Non-indigenous Workers find their Jobs in Rural and Urban Areas



Source: Based on ENEI (2004).

Figure 6b: How Indigenous and Non-indigenous Workers find their Jobs in Rural and Urban Areas (cont.)



Source: Based on ENEI (2004).

JOB-FINDING METHODS BY CHARACTERISTICS OF THE LABOR FORCE

Table 10 lists a series of demographic, education, and employment characteristics of workers, and presents the proportion of workers with these characteristics who found a job with: (i) help from their relatives, (ii) help from their friends (or politicians), (iii) help from both relatives and friends, and (iv) using formal methods.

We divided the indigenous group into seven ethnic groups, including the most populous Mayan groups, (Kich'e, Kaqchikel, Mam, and Q'eqchi), the two non-Mayan smaller groups (Garifuna and Xinca), and a group of other Mayans in order to consider differences among indigenous groups.

It is found that all of these indigenous groups are more likely to use social contacts than formal methods to find a job. Mayans tend to use help from their relatives, while the Xinca and Garifuna use almost only help from friends. The Q'eqchi group, which is mostly concentrated in rural areas, presents the highest percentages of workers reporting the help from relatives.

In urban areas, as anticipated in Figure 7, the percentages of workers who found a job with social contacts from friends and using formal methods are 10 percentage points higher than in rural areas. The youngest age group seems to be the most likely to use social contacts. More than 50 percent of the workers aged between 15 and 24 got their jobs with help from social contacts (divided almost equally between friends and relatives).

From Table 10 it can be said that there is more use of both social contacts and formal channels to more educated workers than to the less educated, who are thus more likely to be self-employed. About 50 percent of workers with a complete primary education, 70 percent of workers with a complete secondary education and some years of college, and 50 percent of workers who completed college used either social contacts or formal channels. However, among workers who did not finish primary school, the percentage falls to 36 percent.

Whether a worker finds a job with formal methods or social contacts is certainly associated with his/her level of education. More educated workers –over secondary complete- appear to be more likely to have found their job through formal methods. There is a noticeable jump in the use of formal methods and a decline in use of social contacts between workers with an incomplete secondary education to those with a complete secondary education. For instance, only 16 percent of workers with an incomplete secondary education had found a job using formal methods, while almost 35 percent of workers who completed secondary school had found a job by submitting their CVs or through a competitive process.

Sixty-four percent of salaried workers in the private sector got their jobs through social contacts. Contacts in this case are principally friends (or politicians). In contrast, among the public sector workers, 57 percent reported using formal methods in finding their position.

Very low percentages of agricultural and informal workers found a job through formal channels, while only about one-fourth of these workers in the sample relied on social contacts. Thus, both agricultural and informal workers seem to be more likely to start their own business as self-employed.

So far, the previous analysis have shown there are differences in the kinds of mechanisms used to find jobs by indigenous and non-indigenous peoples, as well as between people with different education levels and occupations. For instance, indigenous peoples tend to use contacts made through relatives more than the non-indigenous, especially in rural areas, while the non-indigenous use contacts made through friends and formal methods more frequently than indigenous peoples.²⁸

²⁸ This evidence is also found in qualitative work on the organization of work among indigenous families.

Table 10: Proportion of Workers who found a Job with Different Methods by Characteristics of Workers

Characteristics of workers	Percentage with the listed characteristic who found a job with each method			
	Contacts through relatives a)	Contacts through friends b)	Total social contacts c)=a)+b)	Formal methods d)
Indigenous ethnic group				
Kiché	19.4	15.4	34.7	6.4
Kaqchiquel	18.1	16.9	35.0	7.9
Mam	11.0	12.3	23.3	9.7
Q'eqchi	22.0	15.5	37.5	7.2
Garífuna	1.2	45.5	46.7	19.6
Xinca	7.9	12.5	20.3	4.9
Others	26.2	13.8	40.0	6.0
Area				
Rural	15.6	14.5	30.1	6.8
Urban	18.0	24.9	42.9	15.6
Age				
Age: 15-24	26.9	24.6	51.5	11.0
Age: 25-40	14.7	20.4	35.0	14.6
Age: 41-65	11.7	16.3	28.0	8.2
Level of education				
Primary incomplete	15.9	15.0	30.9	5.5
Primary complete	18.6	26.6	45.2	9.6
Secondary incomplete	21.4	26.5	47.9	15.9
Secondary complete	13.4	23.2	36.5	34.7
College incomplete	12.8	25.9	38.7	34.7
College complete	9.9	22.7	32.5	28.8
Illiterate	17.8	22.2	40.0	13.6
Occupation/sector				
Private waged workers	25.2	38.8	64.0	21.2
Public waged workers	9.5	26.3	35.7	57.1
Daily workers	21.1	22.3	43.4	9.0
Domestic servants	33.0	32.5	65.5	3.6
Agricultural workers	14.7	11.7	26.4	5.2
Informal workers	15.0	12.6	27.5	2.2

Source: Based on ENEI (2004).

Besides the identification with an ethnic group, there are other characteristics that differ between indigenous and non-indigenous workers that can explain the differences in the use of job finding methods, including education, type of job, and area of residence. For instance, since indigenous peoples tend to have fewer years of education than the non-indigenous, the fact that the indigenous use contacts made through relatives and the non-indigenous use formal methods may be correlated with education differences between these two groups of the population.

The next section, which analyzes the conditional probabilities of finding a job using different methods, will clarify whether the differences in the use of channels between the indigenous and non-indigenous can be attributed strictly to ethnic characteristics or rather to differences in other factors.

DETERMINANTS OF THE PROBABILITY OF FINDING A JOB THROUGH SOCIAL CONTACTS AND THROUGH FORMAL METHODS

In this section we analyze the factors that influence the probability of getting a job through: (i) social contacts and (ii) formal methods. We explore both probabilities separately so we can easily visualize the determinants of each propensity.

The main questions that we analyzed were as follows. Conditioning on demographic, education, labor, and other characteristics, which ethnic groups are more likely to get their jobs through social contacts? And which ethnic groups are more likely to get their jobs through formal methods?

The analysis is based on two models of the probability of finding a job with the help of social contacts and of the probability of finding a job with formal methods. In order to investigate differences between ethnic groups in these probabilities, conditioning on other factors, the models were run for:

- All the indigenous peoples as one group relative to the non-indigenous
- Specific indigenous groups relative to the non-indigenous.

We estimated these models separately for the whole country and then for rural and urban areas. Some estimates were also divided into specific groups of workers as follows: all waged workers, private employees, public employees, informal workers, and workers classified according to three different levels of education. We did this in order to be able to assess the differences between indigenous and non-indigenous peoples within specific groups of workers and levels of education.

PROBABILITY OF FINDING A JOB THROUGH SOCIAL CONTACTS

Description of the Econometric Model. The dependent variable in the case of the probability of finding a job through social contacts was defined as 1 for workers who have found a job through social contacts and 0 for workers who have used another method. More specifically, other methods include: formal methods, starting own businesses, receiving land or business from parents, submitting or answering newspaper ads, using the intermediation services of the Ministry of Labor, and others. The definitions of the variables included in the models of this section are summarized in Annex Table 1.1. As was mentioned previously, these models were estimated at the national level as well as for rural and urban areas separately.

Analysis of the results. Which factors positively impact the probability of finding a job through social contacts? Which ethnic groups are more likely to find jobs using these methods? Table 11 summarizes the marginal effects of just the ethnicity variables on the probability of finding a job through social contacts for all workers between the ages of 15 and 65. For instance, the first, third,

and fifth columns in Table 11 show the results for all indigenous groups relative to the non-indigenous at the national level and for rural and urban areas respectively. The results for the other factors are analyzed separately, and their coefficients are shown in Annex Table A.1.2.

At the national level, these results show that indigenous peoples are almost 7 percent more likely to find a job through social contacts than the non-indigenous, after controlling for demographics, educational, and labor characteristics. This was found for most of the indigenous groups in the analysis although there are some groups that are less likely to find jobs through social contacts than the non-indigenous (i.e. *Mam* and *Xinca*).

Remarkably, we found that this result for the indigenous peoples at the national level is confirmed only for rural areas but is reversed in urban areas. In rural areas, indigenous groups have 14 percent higher chances of finding jobs through social contacts than the non-indigenous. Conversely, in urban areas, non-indigenous workers generally have a higher probability (3.5%) of getting a job through social networking than the indigenous groups. This finding brings up the question of which method the indigenous are more likely to use than non-indigenous in urban areas, given that they are less likely to get a job through social contacts in these areas. This will be assessed in the next model for the conditional probability of finding a job using formal methods.

The empirical analysis confirms that, after controlling for a set of characteristics, there are still differences between ethnic groups in the probabilities of finding jobs through social contacts.

Table 11: The Probability of finding a Job through Social Contacts (Results for Ethnicity Variables)

Dependent variable: Social contacts=1, 0 other	All		Rural		Urban	
Indigenous (Indigenous=1, 0=Non-indigenous)	0.068 (107.98)**		0.14 (181.34)**		-0.035 (35.98)**	
Kiche		0.052 (52.81)**		0.102 (83.58)**		0.006 (3.68)**
Kaqchiquel		0.003 (2.33)*		0.075 (46.02)**		-0.065 (44.23)**
Mam		-0.039 (28.97)**		0.029 (19.55)**		-0.139 (52.62)**
Q'eqchi		0.182 (150.62)**		0.302 (214.58)**		-0.082 (35.79)**
Garifuna		-0.002 -0.32		-0.008 -1.11		-0.006 -0.82
Xinca		-0.023 (2.90)**		0.063 (5.84)**		0.127 (11.27)**
Other Mayans		0.157 (135.14)**		0.239 (169.82)**		0.043 (21.87)**

Note: Marginal effects, z statistics in parentheses.

Source: Based on ENEI (2004).

We considered it was interesting to ask further a series of questions related to the previous analysis. For instance, it is interesting analyze the differences between indigenous and non-indigenous workers in a specific occupation or within a specific level of education. Moreover, we thought it would be informative to separate the probabilities of getting jobs with the help of social contacts made through relatives from those acquired with the help of social contacts made through friends and politicians. The descriptive analysis has shown that the non-indigenous rely more on contacts made through friends and politicians than the indigenous. The use of one or the other type of contact may also mean that they acquire different kinds of jobs.

ANALYSIS WITHIN SPECIFIC TYPES OF JOBS AND LEVELS OF EDUCATION

In order to analyze whether the differences in the probability of finding a job through social contacts hold within specific occupations and levels of education, we ran the previous model separately for waged workers, private sector employees, public sector employees, informal sector workers, and workers with three different levels of education. Table 12 summarizes the results.

Box 5: Factors that Influence the Probability of Getting a Job through Social Contacts

Other than ethnicity, we found that the factors that influence the probability of acquiring a job through social contacts are:

- *Gender:* Men are more likely to be employed through help of friends and relatives in rural areas. Women in urban areas are more likely to be employed through this method.
- *Age:* The youngest job seekers (15-25) are more likely to get a job through social contacts than older age groups.
- *Education:* The least educated among the labor force (those with an incomplete or complete primary education) are more likely to be recruited through social contacts than those with more years of education.
- *Occupational category:* Private sector employees, daily workers and domestic servants are more likely to get job opportunities through social contacts than public sector employees.
- *Sector of occupation:* Informal sector workers are more likely to acquire their jobs through social networking than formal sector workers.
- *Area of residence:* Workers in urban areas are more likely to find jobs through social contacts than those in rural areas.

These results are shown in full in Annex 1, Table A.1.2.

ANALYSIS WITHIN SPECIFIC TYPES OF JOBS AND LEVELS OF EDUCATION

In order to analyze whether the differences in the probability of finding a job through social contacts hold within specific occupations and levels of education, we ran the previous model separately for waged workers, private sector employees, public sector employees, informal sector workers, and workers with three different levels of education. Table 12 summarizes the results.

From our analysis of waged workers, we find that indigenous peoples have a higher chance of finding a job through social contacts than the non-indigenous, among salaried employees. As it was mentioned before, the differentials that we encountered when analyzing different geographic areas are remarkable. In rural areas, social contacts are more likely to be effective for indigenous peoples than for non-indigenous in finding jobs as employees in the private sector. Whereas, in urban areas, social contacts are less likely to be effective for the indigenous peoples.

Within the public sector employees, the indigenous are less likely in both urban and rural areas to find a job through social contacts than the non-indigenous.

Table 12: The Probability of finding a Job through Social Contacts by Types of Waged Work (Results for Ethnicity Variables)

Dependent variable:		Waged Workers		
Social contacts=1, 0=other		All	Rural	Urban
Indigenous		0.022	0.11	-0.058
(Indigenous=1, 0=Non-indigenous)		(25.92)**	(86.32)**	(48.59)**
Waged in Private sector				
		All	Rural	Urban
Indigenous		-0.001	0.136	-0.081
(Indigenous=1, 0=Non-indigenous)		-0.93	(72.14)**	(56.16)**
Waged in Public sector				
		All	Rural	Urban
Indigenous		-0.113	-0.224	-0.119
(Indigenous=1, 0=Non-indigenous)		(39.20)**	(33.16)**	(36.12)**

Note: Marginal effects, z statistics in parentheses.

Source: Based on ENEI (2004).

Among workers in the informal sector, indigenous peoples are more likely to find a job through social contacts than the non-indigenous in both rural and urban areas (11 percent more likely in rural areas and 1.6 percent more likely in urban areas).

Table 13: The Probability of Finding a Job through Social Contacts for Informal Workers (Results for Ethnicity Variables)

Dependent variable:		Workers in Informal Sector		
Social contacts=1, 0=other		All	Rural	Urban
Indigenous		0.084	0.117	0.016
(Indigenous=1, 0=Non-indigenous)		(126.20)**	(152.95)**	(13.99)**

* Marginal effects, z statistics in parentheses. Source: Based on ENEI (2004).

Table 14 presents the results of our analysis of the methods used to find a job by people with a similar level of education but with different ethnic backgrounds, and other demographic and job characteristics. Among

the workers with education between incomplete primary and incomplete secondary education, the indigenous generally have a higher probability of finding a job through social contacts. On the other hand, among more-educated workers, the non-indigenous are more likely to get a job through social contacts. There are fewer workers with high levels of education among the indigenous than among the non-indigenous. While 25 percent of non-indigenous workers in urban areas aged between 15 and 65 years old have a secondary or higher level of education, only 10 percent of the indigenous in the same sample achieved that level of education. The non-indigenous seem to have a larger pool of contacts with the same level of education, which, therefore, makes it easier for them to find a job through social contacts.

Table 14: The Probability of Finding a Job through Social Contacts by Levels of Education (Results for Ethnicity Variables)

Dependent variable: Social contacts=1, 0=other	Education Level: Less than Primary		
	All	Rural	Urban
Indigenous (Indigenous=1, 0=Non-indigenous)	0.109 (149.85)**	0.139 (170.32)**	0.024 (17.28)**
	Education Level: Primary and Less than Secondary		
	All	Rural	Urban
Indigenous (Indigenous=1, 0=Non-indigenous)	0.013 (10.21)**	0.15 (75.78)**	-0.08 (49.07)**
	Education Level: Secondary and Higher		
	All	Rural	Urban
Indigenous (Indigenous=1, 0=Non-indigenous)	-0.11 (53.50)**	-0.283 (56.71)**	-0.074 (31.70)**

Marginal effects, z statistics in parentheses.

Source: Based on ENEI (2004).

SOCIAL CONTACTS: HELP FROM RELATIVES VERSUS HELP FROM FRIENDS

It was shown that the indigenous peoples tend to report more the help from relatives than non indigenous; while non indigenous tend to use more the contacts from friends/politicians. Different social contacts may lead to different job positions and earning scales for workers. The skills of someone seeking a job are more likely to be similar to the friends' than to the relatives' specialization and skills. Therefore, friends are more likely to provide help leading to a better match with the position. In contrast, the help from relatives tends to be associated with jobs that may not match with the person's skills, or tend to be, in general, jobs of lower quality (See Granovetter (1973) for implications on the role of different social ties).

The ENEI (2004) allows the distinction between getting help from relatives and help from friends/politicians. These two categories may be considered as analogous to the "bonding" social capital and "bridging" social capital concepts frequently encountered in the social capital literature (e.g. Woolcock and Narayan, 2000). We therefore tested the question of which ethnic groups are more likely to find a job with help from relatives and which with help from friends, conditional on the set of factors used in the models shown above. The analysis reveals that the indigenous tend to use more the help from relatives (bonding social capital) than the non-indigenous in all areas. In contrast, the non-indigenous tend to use

more the contacts from friends and politicians (bridging social capital). Thus, the form of social networks and the nature of social interactions among the indigenous peoples suggest that the bonding social capital predominates among indigenous peoples, while bridging social capital is more likely to occur among the non-indigenous and more advantaged groups (the most educated). Only in rural areas, there is evidence that the indigenous have higher chances of finding a job with help from friends than the non-indigenous. In contrast, the non-indigenous appear to be more likely to find a job with the help of contacts through friends in urban areas.

Table 15: The Probability of Finding a Job through Contacts of Relatives (Results for Ethnicity Variables)

Dependent variable: Contacts from relatives=1, 0 other	All		Rural		Urban	
Indigenous	0.062		0.094		0.013	
	(142.47)**		(169.95)**		(20.18)**	
Kiche		0.062		0.08		0.047
		(88.13)**		(86.52)**		(43.77)**
Kaqchiquel		0.026		0.059		-0.007
		(34.54)**		(50.24)**		(6.67)**
Mam		-0.017		0.021		-0.081
		(18.89)**		(19.77)**		(48.81)**
Q'eqchi		0.124		0.186		-0.008
		(136.26)**		(170.93)**		(4.92)**
Garifuna		-0.133		-0.145		-0.141
		(29.62)**		(29.67)**		(28.46)**
Xinca		-0.028		0.006		0.025
		(4.97)**		-0.75		(3.14)**
Other Mayans		0.151		0.195		0.081
		(172.64)**		(178.22)**		(57.27)**

Marginal effects, z statistics in parentheses.

Source: Based on ENEI (2004).

GROUPS WITH A HIGHER PROBABILITY OF FINDING A JOB THROUGH SOCIAL CONTACTS

Our analysis so far has suggested which groups are more likely to rely on social contacts as a means to find a job. Confirming evidence from other developing countries, we found that job candidates that have the least education, are the youngest, have the lowest level of skills, and who work in the informal sector are most likely to find a job using social contacts. We also found that indigenous peoples have, generally and specifically in rural areas, a higher probability of finding a job through social contacts than the non-indigenous, after controlling for differences in other characteristics between these two groups. In urban areas, the non-indigenous are more likely to find a job through social contacts.

Table 16: The Probability of Finding a Job through Contacts of Friends or Politicians (Results for Ethnicity Variables)

Dependent variable:						
Contacts from friends=1, 0 other	All		Rural		Urban	
Indigenous	-0.009		0.017		-0.046	
	(20.79)**		(37.20)**		(62.51)**	
Kiche		-0.016		0.008		-0.049
		(24.27)**		(11.03)**		(41.12)**
Kaqchiquel		-0.021		0.005		-0.049
		(28.40)**		(5.56)**		(43.97)**
Mam		-0.02		-0.003		-0.03
		(21.79)**		(3.18)**		(14.34)**
Q'eqchi		0.041		0.084		-0.058
		(44.41)**		(90.22)**		(33.17)**
Garifuna		0.15		0.165		
		(27.82)**		(26.82)**		
Xinca		0.00		0.046		
		-0.02		(5.44)**		
Others		-0.02		0.005		-0.049
		(24.79)**		(6.34)**		(32.32)**

Marginal effects. z statistics in parentheses.

Source: Based on ENEI (2004).

Within jobs in unskilled occupational categories and in the informal sector (which are the less likely to be fulfilled through formal channels), indigenous peoples also generally have a higher probability of finding jobs through social contacts.

Regarding the type of social contacts, indigenous peoples are more likely to receive help from relatives than non indigenous in both rural and urban areas. While the non-indigenous are more likely to find a job with help from friends only in urban areas.

Table 17: Groups with the Highest Probabilities of Finding a Job through Social Contacts

<p>Indigenous (especially: Kiche, Kaqchikel, Q'eqchi and other Mayans)</p> <p>In rural areas: indigenous</p> <p>In urban areas: non-indigenous</p> <p>Women in rural areas</p> <p>Men in urban areas</p> <p>Youngest (15-25)</p> <p>Less educated : with primary or less</p> <p>The private sector employees, daily workers and domestic servants</p> <p>Informal sector workers</p> <p>Agricultural workers</p> <p>People living in urban areas</p> <p>Within waged workers:</p> <p>Indigenous</p> <p>Within waged in private sector:</p> <p>Non-indigenous</p> <p>Within waged in public sector:</p> <p>Non-indigenous</p> <p>Within informal workers</p> <p>Indigenous</p> <p>Within less educated</p> <p>Indigenous</p> <p>Within more educated:</p> <p>Non-indigenous</p>

PROBABILITY OF FINDING A JOB THROUGH FORMAL METHODS

In most of the groups analyzed, indigenous peoples are more likely to find a job with the help of social contacts than the non-indigenous, so the indigenous are probably less likely to use formal methods. Since social contacts and formal methods are not the only options for finding a job, we thought it would be interesting to try to verify this assumption. We analyzed the conditional probability of finding a job with formal methods based on a model with the same explanatory variables as above, and where the dependent variable is 1 if the job was acquired through formal methods and 0 otherwise.

Table 18 presents the results for workers between the ages of 15 and 65 years old, both at the national level and separately for rural and urban areas. At the national level, we found that indigenous groups are less likely to get their jobs through formal methods than the non-indigenous. When we looked at specific ethnic groups, we found that four out of seven of them are less likely than non-indigenous to get their jobs using formal methods.

In rural areas, we found also that indigenous groups are less likely to get their jobs through formal methods than the non-indigenous. However, in urban areas, the probability of indigenous workers finding their jobs through formal methods is higher than for the non-indigenous.

Table 18: The Probability of Finding a Job through Formal Methods (Results for Ethnicity Variables)

Dependent variable: Formal methods=1, 0 other	All		Rural		Urban	
Indigenous	-0.001		-0.017		0.035	
(Indigenous=1, 0=Non-indigenous)	(2.44)*		(83.62)**		(75.48)**	
Kiche		-0.009		-0.016		0.023
		(25.97)**		(67.91)**		(27.70)**
Kaqchiquel		-0.004		-0.02		0.032
		(11.06)**		(71.79)**		(43.75)**
Mam		0.032		0.008		0.04
		(54.75)**		(23.55)**		(26.98)**
Q'eqchi		0.007		-0.017		0.131
		(15.32)**		(65.84)**		(89.21)**
Garifuna		0.008		0.017		
		(3.68)**		(5.50)**		
Xinca		-0.022		0.027		-0.047
		(7.87)**		(6.01)**		(11.74)**
Others		-0.009		-0.011		0.012
		(21.90)**		(41.20)**		(12.22)**

Marginal effects. z statistics in parentheses.

Source:Based on ENEI (2004).

This is an interesting finding with important implications for policies on rural and urban areas. The relatively higher use of formal methods for finding jobs by the indigenous than the non-indigenous in the urban areas suggests there is room to target indigenous peoples with formal intermediation services.

Box 6: Factors that Increase the Probability of Getting a Job through Formal Methods

Gender: In rural areas, men are more likely to be employed through formal methods, while in urban areas women are more likely to be employed through formal methods.

Age: Workers in the age group from 25 to 65 are more likely to get a job through formal methods than the youngest.

Education: More educated workers are more likely to get their jobs through social contacts.

Category of occupation: Workers in the public sector are more likely to get their jobs through formal channels.

Sector of occupation: Workers in the formal sector positions are more likely to get their jobs through formal channels than those in the informal sector.

Non-agricultural: Non-agricultural workers are more likely to get their jobs through formal channels than agricultural workers.

Area of residence: Workers from rural areas are more likely to find jobs through formal channels than those in urban areas.

These regression results are shown in Annex Table 1.3.

GROUPS WITH THE HIGHEST PROBABILITIES OF FINDING A JOB THROUGH FORMAL METHODS

Table 19 summarizes our empirical findings about which population groups have higher propensities to finding jobs through formal methods.

Table 19: Groups with the Highest Probabilities of Finding a Job through Formal Methods

Non-indigenous
In rural areas: non-indigenous
In urban areas: indigenous (all except the Xinca – small population)
Women in urban areas
Men in rural areas
From 25 to 65
More educated: with secondary or more
The public sector employees
Formal sector workers
Non-agricultural workers
People living in rural areas

In this section we have found that indigenous peoples are more likely to find a job using social contacts than non-indigenous peoples. This is also the case for the less educated compared with the better educated and in getting unskilled and informal jobs. In contrast, non-indigenous peoples have a higher probability of finding a job using formal methods. Formal methods appear also more effective for the more educated and in getting formal jobs.

However, it is interesting to note that these probabilities for the indigenous and non-indigenous depend on where they live. In rural areas, indigenous peoples are more likely to find a job through social contacts than the non-indigenous, while the non-indigenous have a higher probability of finding a job through formal channels.

Conversely, in urban areas, non-indigenous peoples are more likely to find a job through social contacts than indigenous peoples, while, interestingly, indigenous peoples are more likely to find jobs through formal channels.

It is also important to highlight that when analyzing samples with different education levels, the indigenous peoples appear more likely to find jobs through social contacts than the non-indigenous only among the least educated, while among the most educated, the indigenous are less likely to find a job with social contacts. Also, the indigenous have higher chances of finding informal jobs through the contacts from social networks than the non-indigenous.

Although social contacts increase the chances for all job seekers of finding a job and of having a smooth transition from unemployment, these mechanisms may reduce the opportunities for diversifying activities out of low quality jobs and unskilled employment among social networks in disadvantaged groups.

V - THE ROLE OF SOCIAL NETWORKS IN THE ECONOMIC DECISIONS OF THE INDIGENOUS PEOPLES

The social capital embedded in the collective actions of social networks is pointed as one of the main assets that the poor, segregated and disadvantaged groups have in order to be in a stronger position to confront poverty and vulnerability (e.g. Woolcock et al, 2000). The study of the role of social networks in shaping individuals' economic behavior and economic opportunities becomes thus particularly relevant among the indigenous peoples who are traditionally influenced by the community values in their culture.

In the previous section, we investigated the propensity of different groups (i.e. indigenous, non-indigenous, males, females, youth, etc) to find a job through social networks. We showed that social networking is one of the most important strategies for both the indigenous and the non-indigenous in finding jobs. However, the employment opportunities that are commonly found with social contacts are informal and unskilled jobs, especially in the case of indigenous peoples.²⁹ Therefore, social networks typically may play a dual role in finding job opportunities for indigenous peoples. On the positive side, they contribute to generate opportunities in the labor market. On the other side, the networks may undermine prospects of upward mobility over time among disadvantaged and segregated groups in which the social capital is “bonding” or inward-looking, by reproducing the same occupational pattern of the peers.³⁰

In this section, we assess the role of social networks among peers in specific localities and who speak the same language in determining different outcomes in terms of migration, occupational choices, and household decisions about children's school attendance and labor.

It is particularly useful to analyze the effects of social networks on disadvantaged communities, since, as sociologists emphasize, the social interactions among disadvantaged groups can inhibit upward mobility in the community. For example, if a group of disadvantaged families decide to pull their children out of school and put them to work, then this may put peer pressure on other families to do the same, thus creating a negative spillover effect by increasing the student dropout rate.³¹ Conversely, social networks can also reinforce behavior that is in the best long-term economic interests of these groups examples. Therefore, the role played by social networks in the economic decision-making of their peers is relevant to the design of social development policies for indigenous peoples. The fact that indigenous communities (defined as those who speak one or more of the 24 indigenous languages in Guatemala) are concentrated in clusters in specific geographical areas means that it is likely that such social networks exist within these isolated communities of neighbors speaking the same language.

We used data from the 2002 census to study the role played by social networks in the economic decisions of rural and urban inhabitants and separately for indigenous peoples in both of those areas. Census data is the only source that allowed us to analyze interactions at the locality level.³² However, analysis with censuses is limited by the short number of variables from the census. We therefore studied the following economic decisions: (i) migration of family members to other countries; (ii) the decision to begin working in different

²⁹ Recall that among the least educated and informal workers indigenous peoples are more likely to find a job with social contacts, while among the most educated, the non-indigenous are more likely to find a job through social contacts.

³⁰ In that case we supposed that the social contacts of indigenous peoples were likely to be also indigenous (especially the relatives), but the survey did not allow to have much information on the specific ethnic background of the social contact.

³¹ Another example is the transmission of information on welfare programs, which can reproduce dependence on social protection among the community influenced by the network. Unfortunately, the data source needed to measure social networks (Censo Nacional de Población y Habitación, 2002) did not include any questions on participation in welfare programs.

³² Censo Nacional de Poblacion y Habitacion, 2002.

occupations and sectors such as agricultural activities, waged employment, self-employment, unpaid employment, handicraft activities, high and medium-skilled jobs, and sales and services; and (iii) other family choices such as the decision about whether to keep children in school and whether to put them to work.

We recognized that the empirical approach cannot completely measure the effects of complex social interactions. Nevertheless, it can contribute to distinguish network effects from any unobserved differences between individuals, areas, and ethnic groups.

Box 7: Accounting for Social Networks in Empirical Analysis

Social networks can affect individual behavior through two important channels - information and norms. The information channel relates to the role of externalities. That is, how a person's knowledge depends on the behavior and knowledge of others (Topa, 2001; Montgomery, 1991; Winters et al, 1995; and Munshi and Rosenzweig, 2003). The social norm channel emphasizes how a person's preferences themselves depend on the behavior of others, either directly by affecting their tastes or indirectly via social pressure (Lindbeck, 1997).

It is expected that individuals interact mainly with their peers who speak the same language. Therefore, individuals living in an area where most people speak the same language will have a wide range of contacts. Following Bertrand et al (2000), we used the fraction of the population in the household's village that spoke the same language as the household as a measure of the "quantity" of the network.

The contacts from the same language group with high participation in an economic activity (e.g. working in handicraft activities) are likely to influence on the individual decisions to participate in the same activity. In the framework of our empirical analysis of economic decisions, we defined the social network by a variable constructed as the interaction of the quantity and the quality of the network.

SOCIAL NETWORK variable = Quantity measure x Quality measure

= (Density of language group L in area j) x (Participation in one activity among language group L in area j)

For instance, the quantity and quality components of the social network variable can be measured as:

$$\text{Quantity measure} = CA_{L,j} = \frac{N_{L,j}}{N_j}$$

This represents the "contact availability" of people in language group L living in area j. It is defined as the number of people speaking Language L in area j divided by the total population of area j.

$$\text{Quality measure} = P_{L,j}$$

P reflects the participation in a specific activity of individuals speaking L in area j.

These are general definitions of the components of the social network variable. More specifically, following Bertrand et al (2000) the social network variable was defined as:

$$SN_{L,j} = \ln(CA_{L,j}) \times (\bar{P}_L - \bar{P}) = \ln \left(\frac{\frac{N_{L,j}}{N_j}}{\frac{N_L}{TP}} \right) \times (\bar{P}_L - \bar{P})$$

$CA_{L,j}$ is the contact availability measure, defined as the number of people in language group L living in area j, in this case divided by the share of people speaking language L out of the total population in the country (TP).

The term $(\bar{P}_L - \bar{P})$ represents the difference between the average proportion of people participating in certain activities in language group L (for example, people who decide to participate in agriculture or handicrafts or who decide to migrate) and the average proportion participating in the country as a whole. This definition contributes to the interpretation of the effect. For more technical details see Bertrand et al.(2000).

ANALYSIS OF THE RESULTS ON SOCIAL NETWORK EFFECTS

Annex Table 2.1 summarizes the specification of the estimated models. We defined social networks for 21 Mayan languages in the census and for the Xinca, the Garifuna, and the Spanish-speakers at the level of the locality, which was the smallest populated area identified in the census. We ran the linear probability models separately for male and female adults aged between 20 and 65 years old living in rural areas and in urban areas and for male and female children aged between 5 and 19 years old in the same areas. Since the larger Spanish sample might be dominating the results at the national level, we repeated the estimations for the same age group and areas for indigenous peoples only.

The results for the social network effects are summarized in Tables 20 to 23. The social network effect -as it was defined for each decision - represents the incidence of a group of language-speakers from a specific locality participating in a specific activity on the probability that each individual from the same language group and locality will decide to participate in the same activity. For instance, in the case of a decision to participate in agricultural activities, the social network effect would represent how the group of people from the same locality and language group who participate in agricultural activities affect the decision of a particular individual from the same community to work in the agricultural sector.

Table 20: Social Network Effects on Individual Economic Decisions in Rural Areas (Adults 20 to 65)

RURAL								
Social Network	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		T		T		t		T
Migration								
Social Network	-0.016	-1.0	-0.027	-1.3	0.013	0.4	-0.010	-0.2
Agriculture								
Social Network	-0.027	-4.6	-0.047	-4.6	0.013	1.2	0.001	0.1
Waged								
Social Network	0.022	1.9	0.023	0.9	0.048	2.1	-0.011	-0.2
Self-employed								
Social Network	0.129	6.6	0.123	4.1	0.068	1.8	0.092	1.6
Unpaid worker								
Social Network	-0.016	-1.5	-0.011	-0.6	-0.017	-0.7	-0.027	-0.8
High-skilled professionals								
Social Network	-0.081	-3.2	0.018	0.2	-0.099	-2.2	-0.007	0.0
Medium-skilled professionals								
Social Network	0.004	0.2	-0.130	-1.4	0.102	2.3	0.002	0.0
Sales and services								
Social Network	-0.098	-4.2	-0.182	-4.1	-0.021	-0.4	-0.109	-1.0
Handicrafts								
Social Network	0.009	0.6	0.045	2.3	0.067	2.4	0.056	1.3

Source: Based on Censo Nacional de Poblacion y Habitación (2002)

Table 21: Social Network Effects on Individual Economic Decisions in Rural Areas (Children 5 to 19)

RURAL								
School attendance	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		T		t		t		t
Social Network	0.057	2.7	0.0017	0.0	0.103	5.1	0.016	0.4
Work	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		T		t		t		t
Social Network	-0.030	-0.8	-0.046	-0.7	0.033	1.2	-0.054	-1.1

Source: Based on Censo Nacional de Poblacion y Habitación (2002)

Table 22: Social Network Effects on Individual Economic Decisions in Urban Areas (Adults 20 to 65)

URBAN								
Social Network	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		T		t		t		t
Migration								
Social Network	0.051	3.9	0.040	1.7	0.101	4.9	0.054	1.4
Agriculture								
Social Network	-0.033	-7.6	-0.018	-2.2	0.006	1.2	0.001	0.1
Waged								
Social Network	0.017	1.5	-0.015	-0.7	0.038	2.5	-0.016	-0.6
Self-employed								
Social Network	0.100	6.9	0.038	1.8	0.035	1.9	-0.056	-1.6
Unpaid worker								
Social Network	0.006	0.8	0.002	0.1	0.026	2.1	0.003	0.1
High-skilled professionals								
Social Network	-0.078	-2.7	-0.316	-2.7	-0.069	-1.7	-0.121	-1.0
Medium-skilled professionals								
Social Network	0.063	2.2	0.023	0.5	0.052	1.1	-0.012	-0.2
Sales and services								
Social Network	-0.135	-5.4	-0.066	-1.6	-0.047	-1.2	-0.056	-0.8
Handicraft								
Social Network	0.056	4.47	0.024	1.1	0.072	5.18	0.064	2.43

Source: Based on Censo Nacional de Poblacion y Habitación (2002)

Table 23: Social Network Effects on Individual Economic Decisions in Urban Areas (Children 5 to 19)

URBAN								
School attendance	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		t		t		t		t
Social Network	-0.075	-3.8	-0.0976	-3.0	-0.084	-4.2	-0.087	-2.7
Work	MALES				FEMALES			
	ALL		INDIGENOUS		ALL		INDIGENOUS	
		t		t		t		t
Social Network	-0.059	-2.4	0.0474	1.2	-0.292	-11.9	-0.077	-2.0

Source: Based on Censo Nacional de Poblacion y Habitación (2002)

The estimates in Tables 20- 23 suggest that social networks do affect individual decisions both for all language groups and among the indigenous sample. In particular, we found significant effects for more groups (i.e. the samples of males, females, indigenous males, and indigenous females) in the following activities:

- Self-employment
- Agriculture
- Handicrafts
- Waged activities
- Sales and services
- Children's school attendance
- Child labor

In rural areas, social networks have incidence for more groups in:

- Agriculture
- Waged activities
- Self employment
- Sales and services

In urban areas, social networks have incidence for more groups in:

- Migration
- Children's school attendance
- Child labor.

It is interesting to highlight that there were no variations in the signs of the social network effect between the total sample and the sample that included only indigenous peoples.

The main activities in which we found evidence of social network effects among indigenous language groups are:

- Agricultural (both in rural and urban areas for males, negative sign)
- Handicraft (for males in rural and for females in urban areas, positive sign)
- Self-employment (both in rural and urban areas, just for males, positive sign),
- Sales and services (only in rural areas for males, negative sign)
- High-skilled professional jobs (only in urban areas for males, negative sign)
- Children's school attendance (only in urban areas, negative sign)
- Child labor (only in urban areas, negative sign).³³

³³ It is possible, though not very likely, that the negative effects found for individual decisions are the result of intra-household effects related to diversification of activities, since we included family members as part of our definition of

For indigenous females, we found only one social network effect, which was that in urban areas social networks increase the likelihood that women will choose to engage in handicraft activities.

The strongest evidence of social network effects among the indigenous peoples were found for agriculture (negative), handicrafts (positive), and self-employment (positive). Social networks appear to discourage indigenous peoples from engaging in agricultural activities, thus generating more participation in non-farm economic activities and encouraging the diversification of household economic activities. However, we also found that social interactions make indigenous peoples more likely to engage in the production of handicrafts as opposed to a broader range of non-farm productive activities. Consistent with this finding, social networks also appear to be increasing the probability of indigenous peoples becoming self-employed. Unfortunately, there is no evidence that social networks influence indigenous peoples to enter higher-skilled occupations.

This evidence has a connection with our analysis of job-finding methods, in which we found that social contacts facilitate employment in informal and unskilled jobs rather than occupations in the formal sector. Also, the indigenous were found to be less likely to find a high-skilled job through social contacts than the non-indigenous.

This is a first attempt to measure the effects of social networks on economic decisions made by indigenous peoples in Guatemala. We were able to distinguish the effects due to social networks from those due to other factors in most of the samples. We found that social network effects influence individual decision-making among indigenous peoples and in which activities these effects are likely to operate. The results also suggest differences in the effects of social networks in rural and urban areas. Finally, it is noteworthy that there are almost no social network effects on the decisions indigenous women in rural areas, except in the case of participation in handicraft activities in rural areas.

The interaction of social capital with other assets and services³⁴

We replicated the previous analysis including new models accounting for interactions between the social networks and public services (water, sanitary services and electricity), and education. This allows examining how the strength of the network effect varies with access to basic services.

With that purpose we estimated the models on economic decisions separately for each interaction and for males and females in urban and rural areas. Since the relationship between social capital and other assets varies across the different economic decisions and samples, it becomes difficult to describe a clear general pattern. However, we can highlight some evidence found for the typical activities among indigenous peoples.

Regarding the probability of working in the handicrafts sector in rural areas, the effect of the social network is reinforced when individuals have access to electricity service alone (or simultaneous access to water, sanitation services and electricity)³⁵. Thus, it appears that there are complementarities between social networks and access to public services, at least in the handicraft sector. Besides, there are complementarities between the effect of social networks and the accumulation of years of education. The more educated indigenous are more likely to participate in handicrafts in rural areas due to the social network effect.

a social network. This possibility can be explored as an extension by excluding household members from the social network variable.

³⁴ The results can be provided upon request.

³⁵ In contrast, being connected to water reduces the likelihood of participating in handicrafts and it also reduces the positive effect of the social network on the probability of working in this activity.

In contrast, a detailed analysis of how the strength of the social network effect varies with access to the same public services in other occupations revealed that this finding cannot be generalized to more than just handicrafts.

Access to same public services in rural areas of Guatemala, tends to weaken the strength of the social network effect in the decision to be self-employed, suggesting that public services act as a substitute for social networks (or vice versa). This suggests that being connected to these services substitutes the effect of the social networks, and therefore the indigenous peoples with access to these services are less likely to work as self-employed due to the social network effect. Furthermore, the accumulation of years of education also influences negatively the positive effect of the social networks on the probability of engaging in self-employment. Concerning the decision to participate in agriculture in rural areas, the public services appear as complements of the agricultural activity and substitutes of social network effect (which is negative in this case) on the decision to engage in agricultural activities.

Examples of bridging social capital among indigenous peoples

The empirical analysis on social networks in the previous sections suggests that on average the networks (that may be capturing both participants of an organization or simply individuals in community) do not facilitate employment in non- traditional sectors

Moreover, the methods for finding job among them are associated with informal and unskilled occupations. Therefore, the results can lead to conclude that the social capital among indigenous peoples tends to be inward looking or bonding and may not link to activities beyond the network.

However, at the same time, there are specific cases that we are not able to capture from census or household survey data and which show that there are examples of bridging social capital among indigenous peoples. This social capital is evidenced in the form of regional and national indigenous civil society and non-governmental organizations that contribute to the development within traditional sectors of economic activity (i.e. agriculture and handicrafts). Their activities help indigenous peoples seeking access to land, credit, markets, employment and recognition of their rights.

For instance, there is an organization called CONIC (the National Indigenous and Campesino Coordinating Committee) which has played an important role in highlighting the need for the national government to address problems of unequal land tenure in Guatemala and has sought both national and international support to respond to the increasing amount of landless persons, most of whom are indigenous, that live in rural areas of the country.

It is estimated that there are over 80,000 members of CONIC in 14 of the 22 departments of Guatemala and that 95 percent of these CONIC members are persons of indigenous background. Along with a group of other NGOs concerned about land tenure, human rights and poverty issues in Guatemala, CONIC has also produced an Agrarian Platform one of whose purposes is to provide local rural and indigenous communities with more access to infrastructure, training, credit, market information, and appropriate technology for both men and women, as well as to promote family business enterprises based on food security and diversified agriculture.

Box 8: Examples of bridging social capital among indigenous communities

Manos Campesinos is an organization formed in 1997 in Quetzaltenango which joined 7 coffee cooperatives and over 1000 farmers, and that provides technical assistance to small-scale indigenous farmers to increase their opportunities in terms of access to markets, quantity of production and received prices for harvests. Today, the organization also provides technical support to coffee producers to diversify their products, convert to organic production, improve the administration of their cooperatives, and promote more participation by rural and indigenous women.

With the aim of promoting and marketing the coffee while securing fair prices, the organization formed fair trade agreements with a number of international coffee purchasers, such as Starbucks.

The organization had positive effects for the farmers and their families. Unlike the coffee farmers who had to migrate to Mexico and US due to the unstable and low coffee prices, the farmers in these cooperatives were able to remain in their land. Moreover, *Manos Campesinos* reports that the increases in income have contributed to the school attendance of these families' children and for improving their health care.

*Among handicraft producers, the organization Mayan Hands is also an example of indigenous organizations, aimed at providing female indigenous artisans with quality raw materials and assisting them in developing products and colors which fit the international market. Established in 1989, "Mayan Hands" has been working with about 400 female indigenous artisans in eighteen different artisans groups in Guatemala and Chiapas, Mexico.

Through a series of fair trade contracts, the members of this organization can now count on a modest but regular income that, according to a report by the Global Exchange organization has enabled them to eat better, to send children to school, improve their homes and, in some cases, have small savings.

*Along the lines of "Mayan Hands", the organization called "Mayan Traditions" has worked for over 10 years with 5 groups of Mayan indigenous weavers in the highlands of Guatemala. The organization assists indigenous women in finding and tapping markets for their traditional handmade crafts and in educating consumers about indigenous peoples and their handicrafts. It also focuses upon improving the quality of life of the weavers and their families, by paying them a fair wage, helping them to find health care and education for their children, and providing herbal medicine and a scholarship program funded through donations.

Other examples of bridging social capital among indigenous peoples are the link of indigenous workers with organizations which provide indigenous farmers and artisans in traditional sectors with technical support and fair trade agreements. Box 8 highlights some of these initiatives.³⁶

The sense of bridging social capital among indigenous is also evidenced in the transnational links between associations of indigenous migrants to US and local indigenous communities. These transnational networks are key, not only in helping more people who migrate, but also in securing that benefits flow back to the communities of origin. In some cases these networks are also able to establish new dialogues with government agencies in the country of origin, as shown in the example of Mayan migrant associations from Guatemala (See box 9).

³⁶ For other lessons of indigenous development in Latin America, see World Bank (2004b).

These were examples of the role provided by social capital in the form of non-profit organizations to support and create new strategies for the development of indigenous communities. The next section describes the role of social protection in Guatemala.

Box 9: Indigenous Remittances, Migrant Networks and Home Town Associations

In the early 1980s, a group of Q'anjob'al Mayan migrants in Los Angeles, formed an organization called IXIM, with the assistance of a North American Catholic priest. The leaders of IXIM soon began to promote the solidarity and development of the Mayan migrant community, and to affirm its ethnic identity and cultural. IXIM also provided information, advice and assistance to new Mayan migrants on a number of issues including legal matters related to migration, worker's rights, health and education etc, and sought donations for communal projects in hometown communities. Following the example of IXIM, numerous other Mayan Migrant and Home Town Associations emerged in both Los Angeles and Indiantown, Florida throughout the 1980s and 1990s.

Source: Davis, 2006.

VI - SOCIAL PROTECTION IN GUATEMALA

Public spending on social protection (social assistance and social insurance) in Guatemala has been classified as low by international standards (Lindert et al., 2006). In 2002, it represented 1.8 percent of GDP, 12.4 percent of the total expenditures of the central government, and 25 percent of social spending. These low levels reflect the overall low level of the public finance base in Guatemala, which accounts for about 10.5 percent of GDP. Both this paper and World Bank (2004a) explain that Guatemala lacks a comprehensive social safety net. Instead it has numerous programs scattered across many different agencies, with shifting institutional responsibilities, duplications, and benefits that are often regressive. These programs include scholarships, food for work programs, various social assistance/service programs, school feeding programs, PRONADE (National Program for Self-managed Education), micro-credit, disaster-management, and a variety of subsidies (for land, housing, school transport, and electricity).

Both this paper and World Bank (2004a) also analyze the coverage and distributional incidence of the social assistance programs reported in ENCOVI (2000). The country's social assistance is regressive in absolute terms (meaning that the richest quintiles receive a larger percentage of total transfers) but progressive in relative terms (the transfers represent a larger share of the total consumption of the poorest quintiles).

The analysis of social assistance in Guatemala presented in the last World Bank poverty assessment World Bank (2004a) found that the percentage of indigenous and non-indigenous households covered by all of the country's social programs is fairly uniform. Regarding the absolute incidence of total social assistance, the non-indigenous receive a larger share of the total transfers. Nonetheless, this assistance is relatively more important to the indigenous, representing on average 4.8 percent of their total consumption compared with 2.5 percent of the consumption of the non-indigenous. The next wave of the ENCOVI survey in 2006 will contribute more up-to-date information on the current distribution of social assistance.

This evidence relates to those social programs that were already ongoing when the present government came into office. The new administration has outlined a new program called *Vamos Guatemala*. This is intended to foster economic development and social cohesion through a series of new programs in the government plan from 2004 to 2008. It is structured in three components called *Guate Solidaria*, *Guate Crece*, and *Guate Compite*.

Guate Solidaria has four main objectives: (i) to reduce malnutrition in specific municipalities; (ii) to target assistance to families in chronic poverty; (iii) to assist young people who drop out of school and do not find formal employment; and (iv) to ensure that the diversity of cultures and ethnic groups is reflected in social policy.

Guate Crece is aimed at increasing public and private investment in infrastructure improvements.

Guate Compite is intended to increase the productive capacity of the country and the promotion of exports and to improve the investment climate (European Commission, 2005).

The new administration has exhibited a growing understanding and compromise towards meeting the statements of the Peace Accords. For instance, in 2005 the SEGEPLAN³⁷ published a report outlining the specific strategies for increasing the participation of indigenous peoples in a rural economic development program (*Programa Desarrollo Economico desde lo Rural*) aimed at reducing poverty among in rural areas. In this sense the strategy is intended to design actions to overcome the general disbelief of indigenous communities in public policies, after years of being excluded of the global development strategy of the governments.

³⁷ Secretaria de Planificación y Programación de la Presidencia. "Contextual Framework and Strategy for the Participation of Indigenous peoples in the Rural Economic Development Program".

As noted above, civil society organizations and NGOs also have crucial roles to play in shaping and implementing strategies to increase opportunities of indigenous groups. Therefore, the government should ensure that it seeks input from and works in tandem with these groups to increase the success of its policies and programs. The next steps in this investigation will include a qualitative study of the cases in which civil society, cooperatives and indigenous organizations managed to build opportunities for community development.

VII - CONCLUDING REMARKS

As we have seen, there are many differences in the patterns of employment between indigenous and non-indigenous Guatemalans.

- Indigenous peoples are typically employed in lower-paid and lower-quality jobs. They are also more likely to be daily or unpaid workers, to be self-employed, to have more than one occupation, and to be working in agriculture and handicraft production.
- In contrast, the non-indigenous tend to be employed in salaried jobs, to work in larger firms, and to participate in the formal sector and in the public sector.
- In rural areas, the differences between the indigenous and the non-indigenous are more associated with the particular forms of organization of the indigenous economy (i.e. community orientation, emphasis on subsistence). Of course, the differences in endowments (i.e. of land or education) shaped by historical patterns of exclusion of indigenous peoples have also contributed greatly to their employment patterns and labor conditions.
- In urban areas, indigenous peoples are more likely to be migrants from rural areas and to devise their own self-employed income-generating strategies. The goal of these strategies tends to be limited to ensuring the subsistence of the household because any more ambitious strategy would require more physical and human capital. Nevertheless, indigenous peoples living in urban areas tend to have more opportunities to access higher levels of education and, thus, to increase their income-earning potential.
- Although much of the differences in incomes and employment opportunities between the indigenous and non-indigenous populations in Guatemala are due to differences in their backgrounds and in their endowments of physical and human capital, there is still evidence of discrimination against indigenous Guatemalans.

How do the indigenous and non-indigenous find their jobs?

- In general, the most effective ways for finding a job in Guatemala are, first, through social contacts (relatives and friends/politicians); second, starting one's own business/activity; third (and least likely), using formal methods (submitting a CV and competing with other applicants). Conditional on differences in occupational categories and education between the indigenous and non-indigenous, some methods appear to be more effective for the indigenous than for the non-indigenous (and vice versa).
- Overall, indigenous peoples are more likely to get their job opportunities with help from social contacts than the non-indigenous, while the non-indigenous are more likely to find a job through formal channels than the indigenous peoples. However, this evidence varies between rural and urban areas.
- In rural areas, as expected given the traditional forms of organization of rural work among indigenous, indigenous peoples are more likely to find a job through social contacts than the non-indigenous.
- In contrast, in urban areas, indigenous peoples are less likely to use social contacts and more likely to use formal methods than the non-indigenous.
- As opposed to the case of rural areas, in which the use of formal methods is less common, in urban areas indigenous peoples are likely to use formal methods in searching for a job. The relatively higher use of formal methods for finding a job by the indigenous in urban areas suggests that there is room for labor intermediation services to facilitate the match in the labor market by providing information on available jobs and services to both the job applicant and the employer. This type of service can also contribute to diminish discriminatory practices in labor markets against indigenous peoples.

- The indigenous are 6 percent more likely to find a job with help from their relatives (“bonding” capital) than the non-indigenous. In contrast, the non-indigenous have higher chances of finding a job with help from friends/politicians (“bridging” capital) than the indigenous.
- Indigenous peoples are more likely to use social contacts than the non-indigenous in acquiring less skilled and informal jobs.
- Within the most educated workers, indigenous peoples are less likely to use social contacts than the non-indigenous.
- Therefore, social contacts appear to be an effective way to find a job, especially among the unskilled and in the informal sector. However, the negative aspect of social networking as a way to ease job transitions in environments where the levels of skills and education does not change significantly over time is that they end up reproducing the current employment patterns, without contributing to impulse upward mobility.

The main activities in which there is evidence of a social network effect among indigenous groups are:

- Agriculture (both in rural and urban areas for males, negative sign)
- Handicrafts (for males in rural and for females in urban areas, positive sign)
- Self-employment (both in rural and urban areas, males only, positive sign),
- Sales and services (only in rural areas for males, negative sign)
- High-skilled work (only in urban areas for males, negative sign)
- Child school attendance and labor (only in urban areas, negative sign)
- The Social networks composed of indigenous peoples working in agriculture appear to decrease the propensity that other indigenous living in the same locality will engage in the same activity, possibly due to congestion. On the other hand, social networks of indigenous working in the production of handicrafts tend to encourage the participation of indigenous in the same activity. It is useful that social networks are encouraging indigenous households to diversifying their income-generating activities beyond agriculture. Unfortunately, there is no evidence that social networks are facilitating the employment of more indigenous peoples in higher-skilled occupations, beyond handicraft production. This is related to a result of our analysis of job finding methods, in which social contacts among indigenous tended to match the job seeker with informal and unskilled jobs rather than skilled jobs. On the contrary, we also found that even the most educated indigenous workers in urban areas were less likely to find a high skilled job through social contacts than the non-indigenous.
- Regarding household decisions about whether children attend school or work, social networks among indigenous peoples are not encouraging school attendance. Nevertheless, we found that they tend to discourage child labor.
- Concerning the relationship between social networks and access to basic services, we found that the access to public services can be relevant in providing complementarities with social networks for developing strategies to increase opportunities. For instance, the access to services like electricity was found as a factor that reinforces the role of social networks on the decision to move to off-farm activities (i.e. handicrafts) among indigenous peoples.
- The empirical analysis on social networks in the previous sections suggests that on average the networks (that may be capturing both participants of an organization or simply individuals in community) do not facilitate employment in non- traditional sectors. Moreover, the methods for finding job among them are associated with informal and unskilled occupations.

However, at the same time, there are specific cases that we are not able to capture from census data and which show that there are examples of bridging social capital among indigenous peoples. This social capital is evidenced in the form of regional and national indigenous civil society and non-governmental organizations that contribute to the development within traditional sectors of economic activity (i.e. agriculture and handicrafts). Their activities help indigenous peoples seeking access to land, credit, markets, employment and recognition of their rights.

- There are many challenges for improving social protection in Guatemala. First, social spending is considered low due to the low level of the public finance base. Also, most of the existing social assistance programs have not been designed as part of a comprehensive social safety net, which has led to the existence of numerous programs scattered across many different agencies, shifting institutional responsibilities, duplications of authority, and often regressive benefits. Only recently, a decade after the Peace Accords were signed, there have been public strategies intended to design inclusive policies for indigenous peoples. The public action will need to collaborate closely with local indigenous groups to ensure that the strategy succeeds in ensuring the participation of indigenous peoples in the process of identifying their specific needs. There are civil organizations with proven strategies for creating opportunities for indigenous peoples.

RECOMMENDATIONS FOR BUILDING PARTICIPATORY STRATEGIES FOR IMPROVING THE WELFARE OF INDIGENOUS PEOPLES

- **In devising a strategy aimed at improving the welfare of indigenous peoples, policy makers need to involve indigenous peoples themselves in the design of the strategy.** The right to participate has been historically denied to the indigenous population and has been a root cause of their lack of opportunities. It is fundamentally important for the strategy to understand their needs in the context of the specific characteristics of their culture and social norms as well as to recover the vanished confidence in public actions among indigenous. Therefore, it is central for the government to coordinate and cooperate with local organizations in civil society with strong connections with social networks in the indigenous community.
- **The role of social interactions in the form of indigenous organizations and communities should be strengthened in different ways.** For instance, implementing pilot programs that present examples to the networks of successful cases adopting new production strategies (i.e. such as cultivating non-traditional crops for exporting). This implementation may have large positive multiplier effects through the social networks and thus could help equalize opportunities for indigenous communities.

One important aspect related to the empowerment of the bridging dimension of the social capital of indigenous organizations is to build and improve the capacity of agency (i.e. the capacity of association and representation) of organizations by leadership training and by fostering communication regarding rights and public interventions with other organizations and the government. This process can help strengthening the capacity of the community to achieve sustainable livelihoods. The community capacity building is one of the main recommendations in Australian literature for improving the opportunities of indigenous peoples. For instance, a document of the Western Australian Department of Indigenous Affairs recommends also building the capacities of the government of engaging with the Indigenous community, in partnership approaches, to achieve agreed outcomes.

- **The access to basic services is crucial in providing complementarities for developing strategies to increase opportunities.** For instance, the access to services like electricity and education was found relevant in reinforcing the role of social networks on the decision to move to off-farm activities (i.e.

handicrafts) among indigenous peoples. Expanding the access to basic services and to paved roads is therefore fundamental both for social development and for economic production, especially in rural and isolated areas like the north. Public investment in infrastructure can also generate more and better jobs and, at the same time contribute to building the capacity of workers, and to the diversification of economic activities in rural areas (both directly and as a complement of social network effects). The spatial analysis of rural economic growth potential done by the World Bank (2005) has identified the specific regions in which there are advantages and disadvantages for rural economic growth. Tools like these could be used in targeting development policies for rural areas.

- **The strategy should also provide technical assistance to micro-entrepreneurs in the agricultural sector.** With the help of civil society organizations with knowledge of the sector, policymakers should ensure that indigenous peoples are given expert advice about their comparative advantages for production, on the best types of goods to produce (maybe non-traditional), production plans, commercialization strategies, access to markets, and competitive prices. These strategies are a way to address the lack of opportunities while accounting for the indigenous tradition of working with land. It is of central importance also to increase access to titled land, credit, and physical capital.
- **Public intermediation services can increase the number and quality of the labor market opportunities available to indigenous peoples.** We showed that indigenous workers in urban areas mainly use social contacts to find their jobs but they do also use formal methods. Interestingly, they are even more likely than non-indigenous to find a job through formal channels in urban areas. The fact that formal job search channels are being used in urban areas suggests that there is space for intermediation services in urban labor markets to help indigenous job seekers to obtain higher-quality jobs.
- One way in which intermediation services can assist job seekers is to match them with employers according to their skills. The intermediation services can also provide information on job openings, tailor job searching strategies to each job seeker, provide training in CV writing and advise on capacity-building. Given the large percentage of the indigenous who are self-employed, the agencies can also link them up with associations of workers with similar characteristics, which can provide technical assistance. There is a wide variety of intermediation mechanisms used in different countries that could inform the design and implementation of intermediation policies in Guatemala. The intermediation services should also be targeted specifically to two groups with major difficulties: youth and women in urban areas.
- As emphasized in the World Bank Flagship report on poverty reduction and growth (World Bank, 2006), interventions should also contribute to fill the minimum instructional gaps of adult population. The *Chile Califica* program is an example of a strategy designed to strengthen the link between what is taught in the latter years of secondary schools and what the labor market demands.
- The successful implementation of these strategies critically depends on creating more jobs in the economy and on reforming labor regulations.
- **It is necessary to continue to expand the coverage of bilingual education for the indigenous, and the communication to indigenous parents about the better prospects that will come from educating their children.** Like in the PRONADE program, schools should continue to promote the participation of parents and local communities in order to build the capacity of the whole community to address educational disadvantages in a collaborative way. Multi-grade schools have proven to be effective in supplying education in rural Guatemala. The recruitment of new teachers can serve both

the needs of increasing the supply of education and of creating new jobs. Distance education is a strategy that has been used successfully in El Salvador to target adults in rural areas.³⁸

- There are several successful strategies in developed countries with indigenous populations (like Australia and Canada) that have successfully increased access to and improved the quality of education available to the indigenous communities. These strategies could serve as models in the design of inclusive social programs in Guatemala.
- The implementation of all strategies for increasing opportunities and reduce poverty requires improving mechanisms for collecting, as periodically as possible, qualitative and quantitative information on the living conditions of indigenous peoples. Yet, there is not enough systematized data on the problems faced by these communities, given their different forms of social and economic organization. The data from quantitative household surveys makes it possible to compare indigenous and non-indigenous patterns of living conditions, yet there are important differences in the economic and social organization of indigenous peoples that these surveys do not capture. Specific case studies are needed to explore more details about the disadvantages faced by indigenous communities. This information will be an invaluable input into the design of programs aimed at reducing inequality based on ethnicity and increasing the economic opportunities available to indigenous peoples.

There seems to be a growing concern on the design of inclusive social policies in Guatemala. Policymakers face the major challenge of designing culturally appropriate strategies for indigenous peoples, while ensuring that they are included as an integral part of the strategy for the country as a whole.

³⁸ For a complete analysis of educational strategies in Central America, see World Bank (2005). For more policies on human development, see Hall et al (2006), and for poverty reduction strategies, see World Bank (2004a).

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Annex I: How do Indigenous and Non-indigenous Find their Job Opportunities

Annex Table 1.1: Definition of Variables in the Probability Models

Variables included in models	Definition
Dependent variables: Methods for finding jobs:	
Social contacts	Dummy=1 if this method, 0 =other
Contacts from relatives	Dummy=1 if this method, 0 =other
Contacts from friends	Dummy=1 if this method, 0 =other
Formal methods	Dummy=1 if this method, 0 =other
Control variables:	
Indigenous	Dummy=1 if indigenous, 0= non-indigenous
Ethnic groups:	
Non-indigenous (ref. category)	
Kiche	Dummy=1 if from this ethnic group, 0= other
Kaqchiquel (ref. category in regression for indigenous peoples)	Dummy=1 if from this ethnic group, 0= other
Mam	Dummy=1 if from this ethnic group, 0= other
Q'eqchi	Dummy=1 if from this ethnic group, 0= other
Garifuna	Dummy=1 if from this ethnic group, 0= other
Xinca	Dummy=1 if from this ethnic group, 0= other
Other indigenous ethnic groups	Dummy=1 if from this ethnic group, 0= other
Individual characteristics:	
Male	Dummy=1 if male, 0=female
Married	Dummy=1 if married, 0=other
Head	Dummy=1 if household head, 0=other
Age groups	
Age 15-24 (Reference category)	
Age 25-40	Dummy=1 if from this age group, 0=other
Age 41-65	Dummy=1 if from this age group, 0=other
Level of education:	
Primary incomplete (Reference category)	
Primary complete	Dummy=1 if this level of education attained, 0=other
Secondary incomplete	Dummy=1 if this level of education attained, 0=other
Secondary complete	Dummy=1 if this level of education attained, 0=other
College incomplete	Dummy=1 if this level of education attained, 0=other
College complete	Dummy=1 if this level of education attained, 0=other
Type of job:	
Private worker	Dummy=1 if private worker, 0=other

Daily worker	Dummy=1 if daily worker, 0=other
Domestic servant	Dummy=1 if domestic servant, 0=other
Self-employed	Dummy=1 if self employed, 0=other
Owner/Employer	Dummy=1 if Owner/Employer, 0=other
Unpaid worker	Dummy=1 if unpaid worker, 0=other
Informal	Dummy=1 if informal sector worker, 0=other
Agriculture	Dummy=1 if agricultural worker, 0=non-agricultural
Hourly income	Hourly income from main activity
Area:	
Urban	Dummy=1 if urban areas, 0=rural
Urban Departments controls	22 dummy variables, ref. Guatemala City*

*The departments were only defined for urban areas in the ENEI (2004). They were included to test for changes in urban areas, but there were no changes in the significance and coefficients of the dummy for the indigenous.

Annex Table 1.2: The Probability of Finding a Job through Social Contacts

Dependent variable:			
Social contacts=1, 0 other	All	Rural	Urban
Kiche	0.052 (52.81)**	0.102 (83.58)**	0.006 (3.68)**
Kaqchiquel	0.003 (2.33)*	0.075 (46.02)**	-0.065 (44.23)**
Mam	-0.039 (28.97)**	0.029 (19.55)**	-0.139 (52.62)**
Q'eqchi	0.182 (150.62)**	0.302 (214.58)**	-0.082 (35.79)**
Garifuna	-0.002 (-0.32)	-0.008 (-1.11)	-0.006 (-0.82)
Xinca	-0.023 (2.90)**	0.063 (5.84)**	0.127 (11.27)**
Others	0.157 (135.14)**	0.239 (169.82)**	0.043 (21.87)**
Male	-0.003 (4.38)**	-0.019 (17.11)**	0.008 (8.39)**
Married	-0.042 (53.11)**	-0.05 (55.83)**	-0.018 (12.66)**
Head	-0.047 (66.56)**	-0.059 (57.76)**	-0.039 (39.84)**
Age 25-40	-0.042 (57.98)**	-0.037 (36.93)**	-0.046 (45.33)**
Age 41-65	-0.012 (13.97)**	-0.001 (-0.45)	-0.025 (20.67)**

Primary complete	0.045	0.096	0.008
	(53.71)**	(83.33)**	(6.67)**
Secondary incomplete	-0.019	0.018	-0.045
	(22.40)**	(13.21)**	(37.25)**
Secondary complete	-0.136	-0.17	-0.146
	(123.74)**	(82.73)**	(102.21)**
College incomplete	-0.119	-0.121	-0.131
	(80.40)**	(28.37)**	(72.97)**
College complete	-0.117	-0.204	-0.118
	(66.02)**	(35.07)**	(55.71)**
Private worker	0.209	0.202	0.206
	(167.12)**	(81.21)**	(138.77)**
Daily worker	0.054	0.005	0.148
	(33.76)**	(2.00)*	(57.91)**
Domestic servant	0.161	0.052	0.198
	(76.49)**	(15.70)**	(74.07)**
Self-employed	-0.345	-0.329	-0.379
	(262.42)**	(140.14)**	(226.70)**
Owner/Employer	-0.312	-0.249	-0.373
	(230.63)**	(133.81)**	(194.09)**
Unpaid worker	-0.007	-0.048	0.03
	(3.47)**	(17.20)**	(9.63)**
Informal	0.025	-0.007	0.06
	(35.30)**	(6.81)**	(56.66)**
Agriculture	-0.094	-0.084	-0.079
	(111.39)**	(81.77)**	(51.78)**
Urban	0.04		
	(61.10)**		
Hourly income	0.00	0.00	-0.001
	(40.62)**	(37.97)**	(61.02)**
Expanded Number of observations	3766246	1732532	2030669

Source: Based on ENEI (2004).

Annex Table 1.3: The Probability of Finding a Job through Formal Methods

Dependent variable:			
Formal methods=1, 0 other	All	Rural	Urban
Kiche	-0.009	-0.016	0.023
	(25.97)**	(67.91)**	(27.70)**
Kaqchiquel	-0.004	-0.02	0.032
	(11.06)**	(71.79)**	(43.75)**
Mam	0.032	0.008	0.04
	(54.75)**	(23.55)**	(26.98)**
Q'eqchi	0.007	-0.017	0.131
	(15.32)**	(65.84)**	(89.21)**
Garifuna	0.008	0.017	
	(3.68)**	(5.50)**	
Xinca	-0.022	0.027	-0.047
	(7.87)**	(6.01)**	(11.74)**
Others	-0.009	-0.011	0.012
	(21.90)**	(41.20)**	(12.22)**
Male	-0.01	0.002	-0.018
	(43.07)**	(8.93)**	(47.16)**
Married	-0.009	-0.006	-0.002
	(27.69)**	(25.45)**	(2.29)*
Head	0.011	0.006	0.013
	(47.96)**	(24.53)**	(34.48)**
Age 25-40	0.016	0.008	0.023
	(64.44)**	(31.55)**	(56.02)**
Age 41-65	0.001	0.003	-0.001
	(2.41)*	(10.02)**	-1.8
Primary complete	-0.001	-0.002	-0.005
	(4.89)**	(7.30)**	(8.74)**
Secondary incomplete	0.008	0.004	0.009
	(25.88)**	(12.86)**	(17.42)**
Secondary complete	0.057	0.152	0.056
	(116.39)**	(118.42)**	(77.32)**
College incomplete	0.041	0.058	0.046
	(69.72)**	(39.23)**	(53.14)**
College complete	0.027	0.132	0.025
	(40.94)**	(45.76)**	(27.23)**
Private worker	-0.049	-0.019	-0.082
	(192.93)**	(75.16)**	(174.89)**
Daily worker	-0.043	-0.018	-0.063
	(148.31)**	(53.06)**	(126.36)**
Domestic servant	-0.04	-0.014	-0.065
	(128.99)**	(32.56)**	(123.44)**
Self-employed	-0.149	-0.104	-0.164
	(312.81)**	(157.27)**	(245.14)**

Owner/Employer	-0.05	-0.022	-0.086
	(199.43)**	(96.18)**	(87.05)**
Unpaid worker	-0.046	-0.064	
	(95.00)**	(82.68)**	
Informal	-0.067	-0.045	-0.088
	(235.69)**	(149.39)**	(188.05)**
Agriculture	-0.004	-0.004	-0.008
	(12.19)**	(15.73)**	(10.81)**
Urban	-0.001		
	(5.65)**		
Hourly income	0.000	0.000	0.000
	(62.59)**	(47.97)**	(46.05)**
Expanded observations	3766246	1665918	2030669

Source: Based on ENEI (2004).

Annex II: The Role Played by Social Networks in the Economic Decisions Indigenous versus the Non-indigenous

Annex Table 2.1: Definition of Variables in the Probability Models

Variables included in models	Definition
Dependent variables defined as: 1 if the economic decision analyzed, 0 if other	
Explanatory variables	
Definition of social network variables	
Social network variable for different models, where P changes in each model depending on the economic decision: Migration, Agriculture, self-employment, etc.	$SN_{L,j} = \ln(CA_{L,j}) \times (\bar{P}_L - \bar{P}) = \ln \left(\frac{N_{L,j}}{\frac{N_j}{\frac{N_L}{TP}}} \right) \times (\bar{P}_L - \bar{P})$
Definition of contact availability or quantity of the network	
Natural log of Contact availability	$\ln CA_{L,j} = \ln \left(\frac{N_{L,j}}{\frac{N_j}{\frac{N_L}{TP}}} \right)$
L: Language group, j area, see definitions in the text	
Other controls	
Model for adults 20-65	
Indigenous and Spanish speaker	Dummy=1 if speaks both, 0=other
Age	Age
Head of household	Dummy=1 if head, 0= other
Illiterate	Dummy=1 if illiterate, 0= other
Married	Dummy=1 if married/similar, 0=
Years of education	Years of education
Own house	Dummy=1 if own house, 0= other
Dirt floor	Dummy=1 if dirt floor, 0= other
Lack of water	Dummy=1 if lack of water, 0= other
Lack of sanitary service	Dummy=1 if lack of sanitary service,
Lack of electricity	Dummy=1 if lack of electricity, 0=
Poor cooking methods	Dummy=1 if poor cook, 0= other
Model for children 5-19	
Indigenous and Spanish speaker	Dummy=1 if speaks both, 0=other
Age	Age in years
Not a son	Dummy=1 if not a son, 0= other
Own house	Dummy=1 if own house, 0= other
Dirt floor	Dummy=1 if dirt floor, 0= other
Lack of water	Dummy=1 if lack of water, 0= other
Lack of sanitary service	Dummy=1 if lack of sanitary service,
Lack of electricity	Dummy=1 if lack of electricity, 0=
Poor cooking methods	Dummy=1 if poor cook, 0= other

