

Ten Years of Intervention

External Evaluation of *Oportunidades* 2008

in Rural Areas (1997-2007)



Volume I

Impacts of *Oportunidades* After 10 Years
of Operation in Rural Mexico

External Evaluation of *Oportunidades* 2008.
1997-2007: 10 Years of Intervention in Rural Areas

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**Impacts of *Oportunidades* After
10 Years of Operation in Rural Mexico**

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Introduction

Oportunidades, 10 years later

The Human Development Program Oportunidades represents a major achievement in Mexican social policy because of its ability to modify the relationship between the State and marginalized development sectors, as well as for its use of rigorous evaluation methods.

Towards the end of the 1990's, the previous Education, Health and Nutrition Program [Programa de Educación, Salud y Alimentación (Progresa)] began implementing a large-scale initiative that provided incentives to low-income citizens for invest in the human capital of their children in the hopes of breaking the intergeneration transmission of poverty. Through the cash transfers, which are linked to the completion of the co-responsibilities of beneficiaries (school attendance and preventative health services, among others), and in the context of the concrete actions associated with the strategic components of the Program, Mexico began to shift from traditionalist policies focused on the present to focusing more on the future -- with less emphasis on actual poverty and instead focusing more on capacity building for future generations. It was not easily accomplished, nor was it easy to implement.

Oportunidades has received significant media and social attention given its magnitude and precedent. This media attention, however, has not always been positive. Oportunidades has been criticized for about its implementation, its design, and its conceptual framework. However, the emphasis the Program continually placed on evaluation has allowed it to generate evidence that addresses the concerns raised in the criticisms. Further, the evidence that socioeconomic status persists between generations supports the need for the development of strategies to break the poverty transmission cycle, supporting the idea that strengthening human capital for children today will allow them to have more opportunities as adults.

The effective translation of the investments made into increased human capital, which should translate into a greater expected permanent income, is the central aspect of the evaluation, and should show if this mechanism operates effectively in practice.

The Program's openness to evaluation was based on the importance of being able to provide clear evidence of the Program's results. The confidence in the proposed model made the designers promote its continuation over a six-year period. This gamble paid off, and the positive results of the Program have not only been a central element for its continuation, but have also provided the motivation for its significant expansion in 2002

Designed for a rural context in 1997, Oportunidades was expanded to urban zones in 2001, and by 2004 was operating in every county in the country, serving 5 million families with cash transfers for nutrition, a health services package (including education for self-care) and school scholarships for third graders up to seniors in High School.

After a decade of operation, the achievements of Oportunidades have been well documented in scientific literature, both in the form of evaluation reports and in academic journal articles and books, such as doctoral theses. Oportunidades has served as a model or starting point for similar efforts in a variety of countries, and the evaluation results have become a public good, informing the implementation of future efforts.

THE REMAINING CHALLENGES OF THE PROGRAM AND ITS EVALUATION AGENDA

It is clear that Oportunidades still has challenges to overcome. In an analysis conducted by Yaschine, Urquieta and Hernández, they identified a series of challenges grouped into three different dimensions: analytical, methodological, and institutional.*

From the analytical point of view and after ten years of programming, the principle challenge of Oportunidades is the identification of the long-term effects that verify that Oportunidades is in route to achieving its ultimate goal of contributing to the interruption of the transmission of poverty. Also, they identified the need to evaluate the quality of services offered to the beneficiary population, since the Program's effects are measured by the concrete actions in health centers and schools. Therefore, it is critical to know the structural and process quality of the services by inquiring about the characteristics, practices, mechanisms, and dynamics of the services in order to explore if these things can lead to different effects. On the other hand, they highlighted the need to analyze the possible heterogeneous effects in distinct groups of the population, in particular, to focus on what happens to people from distinct ethnic groups who experience greater social exclusion.

In the methodological dimension, they identified the need to integrate the analytical approaches – quantitative and qualitative – in a more effective way in order to generate more useful results and recommendations for the Program's decision-making, and thus enhance its effects on the populations it serves. It was also noted the desirability of designing the tools to estimate effects in the absence of an experimental design.

Regarding international aspects, they suggested the need to frame the work of the external evaluation within the guidelines of the National Council of Social Development Policy Evaluation (CONEVAL, Consejo Nacional de Evaluación de la Política de Desarrollo Social), and with the new regulations that have strengthened the presences of evaluation in institutional life in Mexico.

THE EXTERNAL EVALUATION 2007-2008: THE MAIN APPROACH TO ADDRESSING THE CHALLENGES

The activities implemented for the qualitative, quantitative, impact, and process evaluations of Oportunidades between 2007 and 2008 sought to identify the Program's shortcomings and to generate evidence of its results ten years after its initiation by examining the evidence from varying viewpoints, seeking to deepen the heterogeneities and by addressing service quality issues.

The 2007-2008 evaluation is part of a context in which a large proportion of rural youth have migrated from their hometowns, presenting significant challenges to the evaluation work. Qualitative study approaches could have been more successfully used to interview migrants who are temporarily located outside of their hometowns. In the quantitative studies, by the very nature of the Encel 2007, the absences of these youth was a major limitation. The analysis will be supplemented later with follow up data with young migrants towards the end of 2008.

The analysis presented in this series of books offers the first answers to the identified challenges and are the product of extensive work by a large, multidisciplinary and inter-institutional group of experts that we have had the fortune to coordinate.

Our interest in showing, understanding, and explaining the gender and ethnic differences in the use and impact of Oportunidades is part of the diachronic and process analysis. That is, we are interested in knowing the changes that have been generated and consolidated over time that can be attributed to Oportunidades, taking into account such changes are part of dynamic and changing social scenario. The changes that happen throughout the life of individuals and their families have been part of our thinking process and represent important analytical challenges to research that seeks to appraise the complex relationship between individual time, family time, and social or historical time.

* Iliana Yaschine, José Urquieta y Bernardo Hernández. Agenda de evaluación integral del Programa Oportunidades 2007- 2008 Versión final. 2008. Mimeo.

Each book comprises of a group of documents with a common thread. Volume I presents the education and work related results for young beneficiaries and ex- beneficiaries, both indigenous and non, such as education, nutrition, and cognitive and scholastic development of young children that joined the program 10 years ago. Additionally, this volume provides an analysis of risk behaviors and how these behaviors affect the results of the education, work, and health indicators. The documents in this volume track the past ten years of *Oportunidades* from different and complementary perspectives, and are addressed in a comprehensive manner.

Volume II groups the documents related to health and nutrition. This volume addresses service quality, service utilization by *Oportunidades* beneficiaries, and the impact results for health and nutrition. The section on health service quality presents a picture of the structural and process quality of health services and the potential implications. It also offers an analysis of the therapeutic and reproductive routes through the system where the reader can clearly see the relationship between familiar, institutional, and community factors in seeking health care.

Volume III addresses the challenge of quality education services showing first, the analysis of the gaps that exist in the academic outcomes of the *Oportunidades* beneficiary population, and second, the analysis of the problems of schools in rural Mexican communities

Finally, Volume IV addresses the operation and process of the Program, illustrating the challenges that the Mexican heterogeneity imposes on the implementation of such a large and complicated program like *Oportunidades*. Also, this volume includes an analysis of the new energy component.

The authors of the 14 documents willingly submitted the documents to a rigorous peer review process with the academic rigor a program of this magnitude warrants. This process also included the presentation of the analyses in a seminar attended by the authors, reviewers, and other key stakeholders whose opinions helped to strengthen and clarify the analysis and interpretations made. The four volumes provide a set of analysis that stem from the need to know, describe, and explain the changes that the Program over the past ten years has sought to generate in poor households in the country.

This collective effort hopes to strengthen the *Oportunidades* Program through the study of its different components and mechanism, its results, and the identification of areas where it can and should improve. Like all evidence, the fruits of our collective effort are contained within these volumes as a public good available to everyone.

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Chapter III

Life After *Oportunidades*: Rural Program Impact After 10 Years of Implementation

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Executive Summary

Questions and Objectives

The main objective of this technical paper is to determine what impact the *Oportunidades* Program had on the integration of former program grant holders into the workforce and the types of occupations undertaken, as well as, its effect on fertility patterns. 'Impact' is understood here as any modification to the living conditions of the domestic groups that benefited from being either directly or indirectly associated with the program. The main hypothesis that guided our research was that the *Oportunidades* Program has had a direct impact on the school trajectories of former beneficiaries, prolonging their exposure to formal education. Given that there is a clear correlation between the level of an individual's education and the range of employment opportunities available to them (both within and outside the micro-regions studied), not to mention the effect education has on marriage and fertility patterns, which, as a result, tend to be markedly different from those of previous generations, if the analyzed data supports the hypothesis, we can assert that the *Oportunidades* Program is contributing to the achievement of its ultimate objective to break the cycle of intergenerational poverty. The transmission of poverty from one generation to another is characterized by various factors, such as children leaving school prematurely; child labor; low-waged, insecure employment; and a general scarcity of opportunities to fulfill basic needs, combined with the tendency to have children and form domestic unions (married or otherwise) at an early age – elements that lead to the creation of households or family units with the same profile as their households of origin.

Therefore, this analysis has three main aims: 1) To understand the strategies and processes designed and implemented by *Oportunidades*, determining how they affected job prospects and the integration of present and former program grant holders into the workforce, focusing on those beneficiaries who had the longest exposure to the program and those who were in third or fourth grade of primary school when their households were selected as beneficiaries. It is of particular interest to ascertain if the lives of current and former grant holders are characterized by extended schooling, delayed conjugal unions, lower fertility rates, and access to less traditional and better-paid employment when compared to their non-beneficiary counterparts (who come from similar households in 1998, when the program beneficiaries were first enrolled in the program). 2) To reflect upon the connection between improved health services and education for the "pioneer" population of *Oportunidades* and their resulting impact. This study expands upon the results of the ethnographic research into the quality of the program's services, as outlined in the regional analytical documents (previously delivered to *Oportunidades* as preliminary input), taking the analysis to a different level, and addresses the impact of the services (over a lifetime) on the observed capabilities of individuals (their fitness for work, for example). 3) To describe and explain the heterogeneous impact of the program on the indigenous and non-indigenous population under study with regard to their level of schooling, work achievements, and the deferment of cohabitation or marriage and childbearing.

Methodology

Twelve ethnically diverse, rural micro-regions were selected from four Mexican states (two in the northwest, Sonora and Chihuahua, and two in the south, Oaxaca and Chiapas). The intention was to study indigenous and

non-indigenous or *mestizo** beneficiary households that had been exposed to the program for long periods of time (those who had been incorporated during the first phase of the *Oportunidades* Program, then known as PROGRESA) and similar households that had never been incorporated (non-beneficiaries).

Ethnographic fieldwork was carried out in each of the twelve micro-regions (three in each state), and included first-hand observations of the service-providing centers (clinics, health centers, schools), workplaces, public events (meetings where aid was provided, town assemblies, market days) and the households themselves. We interviewed the heads of the registration and care centers, the *Oportunidades* representatives, members of the program, doctors and nurses, teachers and school principals, and local authorities and leaders. An analytical sample was designed, focusing on four types of households: indigenous beneficiaries, *mestizo* beneficiaries, indigenous non-beneficiaries and *mestizo* non-beneficiaries, to obtain data on 16 domestic groups in each micro-region (four of each of the subtypes), resulting in 48 domestic groups for each scenario (formed by the three micro-regions in each state). This sample distribution would give a total of 192 case studies comprising all of the different sub-types. To form the analytical sample, case studies were composed of a number of open and structured interviews with members of each household (not only one interview), participant observation, and other cross-reference data collection techniques throughout the fieldwork period (14 weeks). The theoretical analytical sample was formed in the following way:

Theoretical analytical household sample:

TABLE 1
Theoretical analytical
household sample

<i>OPORTUNIDADES</i> STATUS	ETHNICITY	CHIAPAS	CHIHUAHUA	OAXACA	SONORA	TOTAL
Beneficiaries	Indigenous	12	12	12	12	48
Beneficiaries	Mestizo	12	12	12	12	48
Non-beneficiaries	Indigenous	12	12	12	12	48
Non-beneficiaries	Mestizo	12	12	12	12	48
TOTAL		48	48	48	48	192

Beneficiary households and non-beneficiary households were selected according to an important criterion that aimed to provide case studies for both individuals who had been exposed to the program for a long time (households that had at least one child in either third or fourth grade of primary school when incorporated in 1998) and their peers – of the same age and socio-economic conditions – who had never been program beneficiaries. We also selected households that were at different stages of their domestic cycle, so that half of the households in each sub-type had first-born children in third or fourth grade at the time of their initial inclusion in the program while the other half had last-born children of the same age. This division had the purpose of testing our hypothesis by comparing the privileges provided to children who had been born last with those of first-borns, who frequently drop out of school to work. The goal was to examine households in the ethnographic present that had distinct socio-demographic characteristics that would permit the observation of different domestic routines, “therapeutic itineraries” and self-care practices employed by households to cope with the various health and practical issues associated with their particular stage of the domestic cycle (chronic-degenerative ailments in households with elderly members, prenatal and childcare in the case of younger households).

Although the studied micro-regions demonstrate ethnically diverse scenarios, indigenous families and *mestizo* families exist in apparent equality of conditions with respect to their potential access to services.

The theoretical analytical sample provided a fundamental guide in the selection of the household case studies and was actually fully implemented in the Chihuahua and Sonora micro-regions (less so fully implemented in the

* Though variations exist, the word “*mestizo*” is used in Mexico to refer to the non-indigenous population in indigenous areas. This text uses it in this sense.

latter); however, it had to be adapted in Oaxaca and Chiapas because, in some of the micro-regions in these states, the existing non-indigenous population is formed by teachers and families of a different socio-economic profile to the one required for comparison (not poor). In these cases, given the important role of the mother in the socialization of the offspring, non-indigenous households were chosen in which the mother was non-indigenous (though married to a native of the micro-region). Likewise, there were problems finding non-beneficiary households that corresponded to the socio-economic profile necessary (poor non-beneficiary cases were not found) owing to the wide coverage of the program. In such cases, the quota of non-beneficiary households was not fulfilled, and so we maximized the difference in the *exposure-to-the-program* variable by selecting beneficiary households that were incorporated at the end of 2007 and had only received benefits for two months at the time of the fieldwork.

Final composition of the household analytical sample:

OPORTUNIDADES STATUS	ETHNICITY	CHIAPAS	CHIHUAHUA	OAXACA	SONORA	TOTAL
Beneficiaries	Indigenous	24	12	11	13	60
Beneficiaries	Mestizo	8	12	10	14	44
Non-beneficiaries	Indigenous	7	12	14	11	44
Non-beneficiaries	Mestizo	6	12	7	10	35
TOTAL		45	48	42	48	183

TABLE 2
Final composition of
the household analytical
sample:

As mentioned previously, the studied micro-regions in Oaxaca and Chiapas presented the greatest difficulty in finding suitable households for our analytical sample owing to two factors: the high concentration of the indigenous population (these communities are more *purely indigenous* than those of the north) and the wide coverage of the *Oportunidades* Program.

A database was built with the data from all the beneficiary and non-beneficiary household case studies from the twelve micro-regions in the four states. Priority was given to the analysis of non-grant holders and children from beneficiary households who were grant holders or former grant holders of both sexes between the ages of 15 and 25, because these are the groups of most interest to the study in the long term (the ones with more exposure to the program as grant holders and children of main beneficiaries)

Results

OPPORTUNITY STRUCTURE

The ethnographic research on which this analysis was based provided ample evidence to establish that rural areas whose population has a high proportion of indigenous inhabitants, exhibit characteristics that hinder the operation of the *Oportunidades* Program. These regions are generally remote areas with poor infrastructure where almost no outside professionals would want to live out of choice and practice their profession. Health and education services, therefore, are rendered by doctors and teachers who deem their stay in these poor communities as temporary, something they must endure to obtain a better position in other regions that will offer more comfort and prestige. Our analysis also revealed that indigenous people experience more difficulties than *mestizos* in maintaining their status as beneficiaries within the *Oportunidades* Program, and that the quality of health and education services they receive are far from optimum and undoubtedly inadequate.¹⁻⁴ Despite this reality and even considering the coverage problems we detected among the *Rarámuri* and *Pima* communities in the Sierra Tarahumara, which contrasts with the adequate and very broad coverage found in the Sonora, Oaxaca and Chiapas micro-regions, the presence and

operation of the *Oportunidades* Program in rural Mexico represents a milestone in the history of these areas, and the lives of families and youths who have received benefits through grants or scholarships.

The impact a social program such as *Oportunidades* has on the welfare, skills and capabilities of its beneficiaries to perform in the labor market cannot be measured if the dynamics of the opportunity structures (understood as the set of options or employment opportunities, goods and services to which people have access) are not taken into account. A brief overview of the opportunity structures of the regions in the study is provided below, offering a simulated description that gives priority to the jobs that can be found inside the micro-regions, and the health and education services that the inhabitants – including former *Oportunidades* grant holders – can access. The most important resource poor families have is the labor of their family members, and the transformation of such a resource into a real asset for their own welfare depends on both the labor markets to which they have access and the skills they have gained throughout their lifetime in terms of health and access to health services (it is necessary to be healthy to be able to work), education and vocational training. Thus, any changes to a household's economy and the potential of individuals to enjoy good health and have access to education and employment options are shaped by the social, economic and political environment that structures their opportunities (to get a job, to have a good or bad crop, to be seen and cured by a doctor in the case of sickness, and so forth). Opportunity structures are taken into account because the real and viable options that individuals have to obtain services and perform economic activities (to earn a living) are not randomly distributed; on the contrary, they are established and defined by a series of social, economic and political factors;⁵⁻⁸ for example, the integral relationship that exists between access to employment within the public sector and certain goods and services (of a certain quality). On the other hand, there is a link between informal employment in urban areas and (non) access to public health services, while the subsistence economies of indigenous peasant households are benefited by the access they have to *Unidades Médicas Rurales* (Rural Medical Units) and community schools or indigenous education institutions, such as the ones described in the ethnographic regional analytical documents.¹⁻⁴ The privileged access of some individuals to services of quality, in comparison to others who have no choice other than to attend schools and clinics of poor performance, does not happen by chance but is part of our society's development, which continues to be affected (and possibly increasingly so) by the inequalities fostered and reconsolidated by society itself.

Besides the labor market, the State plays an important role in structuring opportunities. The *Oportunidades* Program has intervened in the relationship between individuals (and families) and the structure of opportunities, not only by increasing the monetary resources available to beneficiary families, enabling them to have access to a broader range of goods and facilities, but also by promoting an unprecedented increase in their demand of public services through the implementation of conditional cash transfers and benefits that encourage the (regular) use of health clinics and educational facilities. In theory, as beneficiaries, households that are part of the *Oportunidades* Program have access to regular and frequent healthcare and education; however, even after 10 years, neither the schools nor the health systems in place have been able to adapt and offer quality services in response to such increases in demand.

The micro-regions studied are different from each other in many ways. The local employment opportunities are relatively more abundant in the northern micro-regions (especially in Sonora), excluding activities linked to drug trafficking (a subject we did not evaluate in the research). Both Sonora and its neighboring state, Sinaloa, offer employment in commercial agriculture; however, in the state of Sonora, the *Guarijía* micro-region shares many of the characteristics of the Sierra Tarahumara; among others, these characteristics include the relative social isolation that the mountainous environment creates, the subsistence farming of land unsuitable for agriculture, producing limited quantities of poor quality crops, and above all, the narrow range of paid employment options. On the other hand, we found the *Yaqui* and *Mayo* micro-regions in Sonora offered employment in the *maquila* industry (manufacture and assembly of imported components usually for export), services linked to agriculture, and the construction industry in the state capital and other up-and-coming cities. The *Rarámuri* are faced with very few employment opportunities, and many inhabitants migrate to the state capital of Chihuahua to work in the construction industry (the men) or in domestic service (the women). The southern micro-regions exhibit a far more precarious outlook than the Sonora

(*Mayo* and *Yaqui*) micro-regions with respect to employment. We believe this employment issue is related to the low levels of emigration in the Sonora region contrasted with the heavy migration to alternative national destinies and the United States experienced by the regions under study from the states of Chiapas and Oaxaca.

In all four research scenarios, we found that subsistence farming is an activity in clear decline. The analysis performed by *el Consejo Nacional de Evaluación de la Política de Desarrollo Social* (The National Council for the Evaluation of Social Policy), CONEVAL, proposes that the changes observed in the income of rural households is owing to the increasing frequency of paid employment and to the cash transfers of the *Oportunidades* Program. The ethnographic material we have gathered also supports this position. In contexts characterized by a crisis in subsistence farming, the benefits of the *Oportunidades* Program and paid employment (such as agricultural day laborers or “urban” jobs within or outside of the country - remittances) become the pillars of survival, buttressing the subsistence of the poor indigenous and *mestizo* inhabitants of rural areas.

Within this context, it is not surprising that young former grant holders and non-grant holders who have continued their schooling to a higher level – senior high school (*Educación Media Superior*, EMS) or at least completed junior high school (secondary) – have to leave these regions to find suitable employment, a necessity that is even more evident among the indigenous population. For a large percentage of young *mestizos*, access to small businesses owned by family members or acquaintances is an option, while the only choice for indigenous job seekers is to migrate permanently or to return to their communities, or similar ones, as teachers, educational and health representatives, or agricultural developers. The few that remain in their home communities understandably show little career progression; they return to traditional activities such as subsistence farming and agricultural day labor.

In the studied micro-regions, young people with higher levels of schooling, especially in Chiapas and Oaxaca, join the ranks of migrant workers. Former grant-holders, as well as non-beneficiaries who were unable to continue their education, tend to remain in their towns and villages or origin. Typically, the “better-educated” ones leave to live and work in the United States, followed by those who migrate to the cities and areas that attract tourism in other states. The less-schooled youths (those who abandoned the education system during primary school or in the early years of junior high school) are the ones who remain in their home communities to live and work. The routes undertaken, the destinations and the occupations of those youths who do leave clearly follow well-established patterns, as described in literature on human migration. For example, it is usually family members, primarily, or some mentor, charity institution or other acquaintance that have encouraged these youths to emigrate, provided lodging, and helped them get a job in their new surroundings. Therefore, pre-existent networks determine the destinations of migrants. It is important to note that, in many ways, these youths are *new* migrants (with a different profile to preceding ones). Therefore, the existing networks do not necessarily respond to the characteristics of the new influx of migrants who have a different range of skills, education and experiences than those who went before them. For instance, many relatively successful migrants from Oaxaca work with their relatives in informal or family businesses in Mexico City and the United States. Even though their school-acquired skills are welcomed, these are not jobs that can provide the benefits that correspond to their level of schooling. Although the national employment dynamic is not good, we harbor some optimism that a number of these “pioneer” migrant workers with high-school or college qualifications (some of whom already have better jobs) will pave the way, building new bridges and networks, for other young people to follow in their footsteps. However, this process remains to be seen.

In addition to the grim outlook of the labor market, the supply (and quality) of health and education services is an issue. The list of schools and health centers included in the overview of the opportunity structures suggests there is relative coverage. However, there are serious deficiencies in the provision of these services in all of the studied micro-regions, and, although there are differences among the regions, the outlook revealed by our ethnographic research is one of severe inadequacy and lack of quality. The inhabitants of our twelve micro-regions in the four states examined have access to schools at all the basic levels (from pre-school to junior high school, although to a lesser extent in the *Pima* and *Guarijía* micro-regions) and to senior high schools in the larger towns or cities. In addition, although these micro-regions are covered by ‘first-level’ clinics that provide basic healthcare, similarly to what happens with the coverage of senior high schools, the ‘second-level’ hospitals are in small cities that are usu-

ally even further away than the towns with EMS schools. Services are scarcer in some micro-regions than others, as is the case of the *Pima* micro-region in the border territory between Chihuahua and Sonora, and the *Guarijia* in the Sonora. However, coverage of services is relatively adequate in the other micro-regions. Adequate coverage does not mean, however, that they are quality services.

The completed ethnographic reports, which include what we have called the *ethnography of the classroom* and the *ethnography of the clinics*, plus interviews with teachers, doctors and nurses, and the examination of the case studies of different types of households, produced evidence of the problems that affect the quality of healthcare and the provision of education: insufficient or damaged infrastructure, lack of personnel, doctor and teacher absenteeism, and insufficient materials in schools, clinics and health centers. There are many places, especially in the *Pima* and *Tarahumara* micro-regions, which do not have schools or health centers. As we know, having access to health and educational services is a requirement of the *Oportunidades* Program, so that beneficiaries can comply with their co-responsibilities. For this reason, we only conducted fieldwork in places that met these prerequisites and not in more isolated regions where schools or clinics were not relatively close by. However, even in places that enjoy the privilege of having schools and healthcare centers, the type of service provided does not guarantee that education and healthcare needs are being met.*

This report and other evaluations of the *Oportunidades* Program show that its greatest impact (educational achievements of children and youths, household income, capacity to improve housing, and other changes in the condition of the family units' well-being) occurs in domestic scenarios where advantageous factors meet: the capacity of parents to generate income to which the monetary aid of the program is added, good health of family members (breadwinner(s), children and teenagers are not prone to sickness), remittances from family members who have emigrated, close proximity to health and education service providers, among others. We have called these domestic situations *accumulation of advantages scenarios*, where health is an indispensable pre-requisite to be able to work and study. On the contrary, bouts of sickness erode the family economy owing to the expenses incurred when searching for private healthcare (as a consequence of the limitations of the public clinics and health centers) and because illness frequently incapacitates the very individuals that usually work.⁸⁻¹⁰ Consequently, we suggest that the scenarios most conducive to the accumulation of advantages also include extra-domestic factors (besides others of a domestic and familial nature), among which, the capacity of health centers to resolve health issues and the provision of quality education services are central.

Analysis

We compared the educational achievements of young grant holders and former grant holders (beneficiary children) with those of their parents and non-beneficiary peers. We also compared the occupational achievements of beneficiaries, both male and female, with youths from the same generation who never received the program's benefits (their peers). The database includes variables for the parents, as well as for the children and other family members who were between 15 and 25 years old when the study began. These variables are: state, region, town, number of household members, sex, first name, age, kinship (if father or mother, son or daughter or someone from the same generation of youths), program status, ethnicity, language, place of residence, marital status, schooling (in years, corresponding to the maximum achieved: 0=illiterate or never attended school, 1= first year of primary school, 6=completed primary school; 9=junior high school (7th - 9th grade); 12=senior high school, etc.), primary occupation, secondary occupation, detailed description of occupations; age at the birth of first child (females only). The database for the analytical sample, based on the group of youths for whom the program's potential impact on education and occupation was deemed to be greater, consists of 793 individuals (498 indigenous and 295 *mestizo*; 469 beneficiaries and 324 non-beneficiaries) who belong to 183 households, with an average of 4.33 members

* The technical health and education documents offer a detailed analysis on the quality of these services.^{2,9}

per household. This database does not include data on all the household members; it only includes the parents and the children (or other members of the children's generation) who were aged between 15 and 25 years old in 1998, when the study began. Their older and younger siblings and other people living in the household who do not belong to the cohort under analysis were excluded from the database.

DATA BASE: NUMBER OF INDIVIDUALS WHO WERE INCLUDED

ETHNICITY	STATE	BENEFICIARY	NON-BENEFICIARY	TOTAL
Indigenous	Chiapas	110	51	161
	Chihuahua	50	55	105
	Oaxaca	54	56	110
	Sonora	70	52	122
		284	214	498
Mestizo	Chiapas	33	25	58
	Chihuahua	46	15	61
	Oaxaca	47	25	72
	Sonora	59	45	104
Total		185	110	295
Final total		469	324	793

TABLE 3

Data Base: Number of individuals who were included

RESULTS OF IMPACT

The results of the impact, shown here in numbers (averages), are derived from the careful analysis of the entire database; that is to say, they are averages calculated for all the states and micro-regions under evaluation. Although this analysis conceals the differences that exist, not only between states but from one micro-region to another, it constitutes a worthy exercise as a means of obtaining a more general overview of the *Oportunidades* Program's impact on the micro-regions under study here, which are characterized by the coexistence of different rural ethnic groups with a high degree of social disadvantages and a beneficiary population that has had a long exposure to the *Oportunidades* Program.

IMPACT ON EDUCATION

The analysis shows a remarkable impact on the schooling of grant holders exposed to the *Oportunidades* Program. The greatest increase has occurred among indigenous beneficiaries, especially among girls. Young indigenous females who are or were grant holders are among those individuals who continued to attend school and completed higher levels of education. The generational gap in schooling has increased in all cases, but the most important impact occurs among the indigenous population, with the greatest impact among mothers and daughters. Since the initial implementation of the *Oportunidades* Program in marginalized rural communities, the intergenerational schooling mobility has increased by two years. That is, advancement went from three years to five years. Intergenerational schooling mobility represents an increase or rise in the schooling levels of the children when compared to their parents.

According to the analysis of the parents' generation, two types of inequalities were evident: ethnicity and gender. In the children's generation, the gender gap has reversed, and the ethnic gap has almost closed in the case of the men (although it still slightly favors *mestizo* men over indigenous men) but reversed in favor of indigenous females (indigenous beneficiary daughters reach higher schooling levels than *mestizo* daughters). These developments reflect the work of the *Oportunidades* Program in its aim to decrease gender and ethnic inequality.

It should be noted, however, that these results underestimate the full impact of the program on schooling because a significant proportion of the current and former scholarship beneficiaries are still studying (26.6% of indigenous men, 28% of indigenous females, 22.9% of *mestizo* men, and almost 33% of *mestizo* females); therefore, the average achievements in schooling will be higher on average than those reported here.

It is necessary to clarify that educational achievement refers to the schooling levels or grades completed by an individual, that is, years and grades actually studied rather than knowledge accumulated as part of learning processes and the development of human capital. Even though the *Oportunidades* Program reduces the ethnic gap with respect to schooling levels by encouraging full and continued attendance in school (which results in the decline, and in some cases a *reversal*, of the ethnic and gender gap in terms of schooling levels), it does not have an impact on the quality of the education grant holders receive. For example, there are great disparities between unitary and bilingual primary schools and so-called *telesecundarias* (high school teaching delivered by satellite TV) to which children and youths have access in the micro-regions (characterized by serious deficiencies in infrastructure and teaching quality, and teacher absenteeism), and the non-bilingual primary schools and the technical high schools found in the municipal capitals or larger towns. A school's failure to fulfil the requirements of the study programs and to meet their obligations and duties restricts the potential contribution of the *Oportunidades* Program to help young people foster an increasingly more essential portfolio of skills and abilities by increasing the length of time children spend in formal education.¹¹

The impact on schooling of prolonged exposure to the *Oportunidades* Program is shaped by a number of factors, among which the following stand out: 1) the coverage of the educational services (close proximity to schools of different educational levels has a positive effect on prolonged schooling, especially for females); 2) the cultural quality and relevance of the education provided; 3) parents' capacity to act as economic providers and income generators (death of the father or the main provider is a factor that can negatively affect the schooling of beneficiaries); 4) the existence of productive assets and financial income (for example, remittances from older siblings who have emigrated) eases the payment of transportation, particularly in the case of young senior high school students who frequently have to commute long distances to attend schools; 5) the birth order of individuals in the household (being the last-born of the household is a factor that leads to greater attendance and attainment at school); 6) good health (no illnesses); and 7) sex of the individual (being a woman, given the different obligations of men and females in the household economy and the fact that teenage females are not seen as household income generators, is a factor that favors schooling attainment).

IMPACT ON REPRODUCTIVE PATTERNS

It is not possible to discuss with any exactitude the changes in the age at which females bear their first child because the majority of daughters have yet to become mothers. The analysis shows that more than a quarter (26.3%) of indigenous daughters who are former program beneficiaries have already had their first child; however, 73.7% have not. Among indigenous non-beneficiary females, the percentage of those who are already mothers is higher (32.4%) than that of beneficiary females. Additionally, the proportion of those who have not yet started their reproductive cycle is lower among non-beneficiaries when compared with their indigenous, beneficiary female peers (67.6%). In contrast, daughters of *mestizo* beneficiaries and non-beneficiaries who have already started their reproductive cycle represent a greater percentage when compared with indigenous females in the same situation. However, in the case of *mestizo* females, the proportion of those who have already started their reproductive cycle is greater among beneficiaries (42.3%) than among those who were not beneficiaries (35.7%). Thus, 57.7% of *mestizo* beneficiaries are not yet mothers, while the percentage increases to 64.3% among *mestizo* non-beneficiaries.

The analysis shows a logical pattern. The impact on fertility is greater among indigenous females than among *mestizo* females, which coincides with the greater impact of education among the former. Therefore, longer school careers affect (or are associated with) the deferment of the start of the reproductive cycle.

In the Tarahumara (and, generally, in rural contexts with a high percentage of indigenous population), adolescence is a very short phase in the lifecycle of *mestizos*, as well as indigenous inhabitants; and only in areas where the schooling of children and youths has become more widespread and institutionalized has it been extended. It is also important to note that early domestic unions or premature marriages (following a model that is firmly rooted in tradition and culture) and the start of the reproductive cycle do not necessarily constitute obstacles to the continuation of an individual's school career.¹ Some women in the database of this generation (three) have continued their studies despite being mothers and having had their first union. These women are joined by others (although, undoubtedly very few) who were not included in the database but were included in the ethnographic study of the Sierra Tarahumara. Despite having had a child, and thanks to their parents' support, they have resorted to different strategies to continue with their education. In other words, the age at which they bore their first child does not necessarily indicate that they are imitating their mothers' pattern. A significant percentage of former female beneficiaries in all of the regions studied, typically those with less schooling, are undoubtedly already in traditional unions with peasant farmers, day workers and other men of their own or neighboring towns. However, the great number of young women who had not had children at the time of the study makes it possible to conclude that the average age when beneficiaries will have their first child will be considerably higher than that of their mothers' generation (who on average had their first child at the age of 19).

There are other factors that explain pregnancy at an early age. One of them, which we consider crucial, is the relatively little success that birth control policies have had on adolescent females, in contrast with the widespread use of a range of birth control methods by women aged between 30 and 40 years old. Research into the reproductive patterns of the females in our analytical sample prove that practically none of the women of reproductive age (whether in the mothers' generation or the daughters') undergo birth control practices before having their first child. It is common practice to space out the periods between births but not to delay the first pregnancy. Moreover, the workshops provided for young people as part of the New Healthcare Model do not provide sufficient accurate and effective information on the advantages and steps that need to be taken to avoid early pregnancy (or HIV-AIDS transmission). Rather, these youth groups become meeting grounds that often lead to the creation of new couples and handle erroneous information about birth control and HIV transmission.

IMPACT ON OCCUPATION

One of the most remarkable impacts of the *Oportunidades* Program is that members of the children's generation declare studying as their main occupation. One of the goals of the program has been precisely to help delay the age of entrance into the labor market through the extension of educational trajectories. *Oportunidades* does not want 15 year-old youths to be employed or working on productive activities on family land. In view of this aim, we refer to the high percentage of sons and daughters (current and former beneficiaries) stating that studying is their main occupation as an impact worthy of consideration, so the program continues focusing its efforts on these achievements to extend both this and other objectives. Among young people of both sexes exposed to the program, there is a significant percentage of beneficiaries who are continuing their educational trajectory beyond basic and middle levels of school, particularly indigenous males (26.6%) and females (28%), and *mestizo* females (32.7%). It is surprising yet pleasing to note that of this group of youths, particularly indigenous and *mestizo* females, between the ages of 15 and 25, who are still in education, a number are currently enrolled in college courses. Out of a total of 205 former beneficiaries (not counting the current beneficiaries), 15.6% are still in school, and 8.29% of them are currently taking college courses. A small proportion of former beneficiaries (2%) are instructors for the National Council on Education Development, CONAFE (having completed high school), and it is likely that they will join the college cohort in the near future. Even though college students are still few in number when considering the high number of former beneficiaries of the program, this small number is still encouraging. The great majority, nevertheless, do not progress beyond secondary or senior high school, though it is still significant that these young people remain in school, even without the *Oportunidades* benefits.

To analyze the occupational achievements of former beneficiary children with those of individuals who were never beneficiaries, a hierarchy or occupational scale was built according to the jobs they currently hold. Classification is based on occupation data, regularity of the occupation, benefits (in the case of urban businesses), and the type of business. Fundamentally, the hierarchy focuses on qualifications, which is what the *Oportunidades* Program seeks to foster through its actions. However, the classification we assigned to each job varies according to how secure the employment is, and the formality or informality of the sector in which the job takes place. The classification is intentionally “detailed” at the lower and middle levels of the occupational scale to discern small differences between current and former beneficiaries who come from poor, peasant farming or day laboring families. Its intention is to describe the value interviewees assign to their occupations. As the following graphic demonstrates, the occupational hierarchy consists of eight levels: 1) farmhands or agricultural day workers, in which we have included “pickers”; 2) builders’ assistants, workers who spray fertilizers and pesticides, fumigators and agricultural laborers working in irrigation who have greater recognition, are better paid, and require at least basic literacy to be able to understand instructions for the handling of chemical materials and machinery; domestic female help (maids); 3) employees at market stands, kitchen helpers at restaurants, gardeners in family businesses in the United States, seamstresses, employees at tortilla-making shops, nannies, unqualified workers, and farmhands who are included a step above fertilizer sprayers because their job is more regular; 4) peasant farmers who own land (they own their own means of production);* informal commerce employees with a salary, people who sell home-made food, home-store owners, door-to-door cosmetic salesgirls, tree cutters and butchers; 5) tradesmen (masons, mechanics, jewelers), skilled workers, and commercial and formal services employees with benefits; 6) master masons and foremen on construction sites, plumbers and other service contractors, supervisors of commercial establishments with employees and overseers; these jobs require skill, the ability to manage the work of others, and basic bookkeeping; 7) established small businesses owners and people performing technical professions (teachers); and 8) professionals.

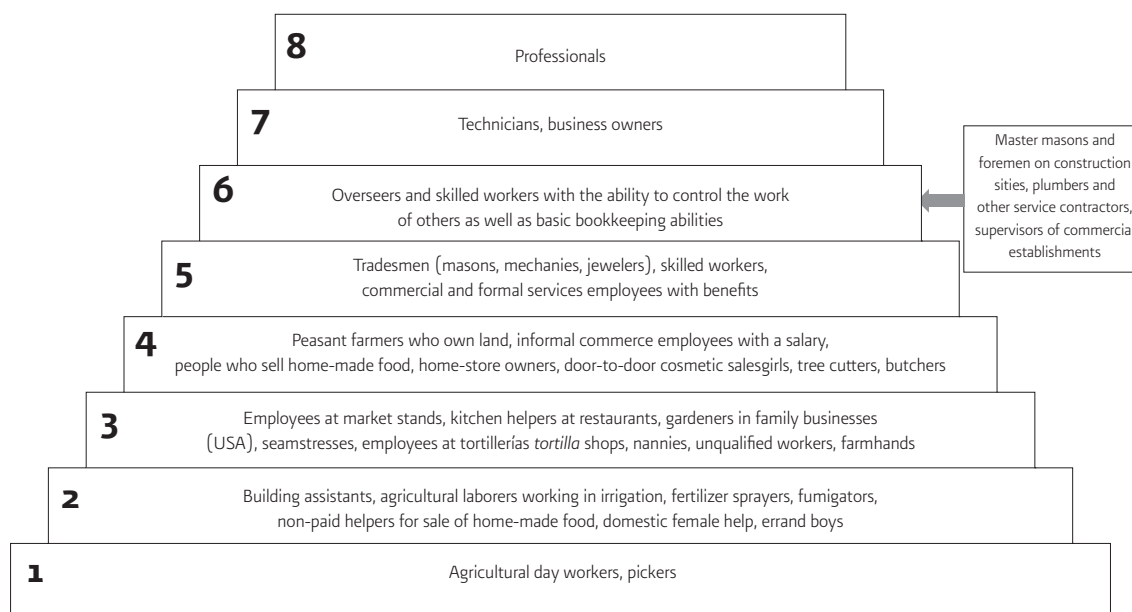
OCCUPATIONAL HIERARCHY

Occupational tiers were constructed using these classifications. Categories from 1 to 3 formed the first tier or the lowest occupational step; categories 4 and 5 formed the middle layer; and categories 6 and 7 were added to the pyramid subsequently. This last addition responded to the need to facilitate the analysis of a database, which, despite having over 700 individuals (huge in terms of anthropological samples), is still a very small database for statistical analysis purposes.

THE ANALYSIS

The analysis provided the following results: The occupations of the indigenous population of this generation of sons and daughters who were not exposed to the *Oportunidades* Program are concentrated in the lowest tier of the occupational hierarchy, with a noteworthy presence of non-beneficiary males (83.6% of indigenous non-beneficiary males and 80.7% of indigenous non-beneficiary females fall within this occupational tier). While the majority of the indigenous population exposed to the program also fall within the same tier, there are, however, a lot fewer, especially in the case of beneficiary females (51.7% and 46.4% of indigenous beneficiary males and females, respectively). It is possible that the most notable occupational variation is concentrated in the middle layer (categories 4 and 5), with a significant presence of indigenous beneficiary males, and, in particular, indigenous beneficiary females (35.8% and 39.2% of beneficiary males and females, in contrast to 14% and 15.4% of the non-beneficiary males and females, respectively). Finally, it is also the indigenous beneficiary females who have the greatest representation in

* Given the impoverishment of the land and the ever more frequent droughts, floods and other types of *natural* disasters (actually, caused by man), agricultural production is increasingly less profitable.



the top layer (categories 6 and 7), a little over 14 out of every 100 beneficiary females (and a little over 7 of every 100 beneficiary males, in contrast to just 3.8% and 2.3% of non-beneficiary females and males, respectively). By itself, this phenomenon could appear to be a very small presence, but when comparing beneficiary females with their non-beneficiary peers, a significant increase in the presence of the former can be appreciated.

Mestizo children exhibit a different and less obvious pattern. Regardless of their status, and being amongst those who have the highest levels of schooling, *mestizo* beneficiary males are concentrated in the lowest rung. However, the proportion of beneficiary females in levels two and three are remarkable, albeit not the same for their male counterparts. We may conclude that, in the case of *mestizo* males, schooling has less influence on their occupational achievement than in the case of females.

Despite the efforts of the *Oportunidades* Program, the expected impact on labor has not occurred, given the scarce employment options and the very limited local opportunity structure. In regions that already have a history of international migration, former beneficiaries are looking for employment alternatives in the United States. However, candidates planning to immigrate to the United States delay their departure for some years as a result of their extended stay in school.

The factors associated with the favorable modifications to the occupational hierarchy are similar to those of achievements in schooling (there are obvious connections), although their order of importance is not the same. For example, as young adults, it is no longer decisive to have a healthy father and mother who are economic providers, despite this being a major factor that influences the path of individuals throughout their school careers. Among the factors associated with occupational change or achievements, the importance of birth order (first-born versus last-born) stands out. While the first-born usually starts to work from a very early age in the economy of peasant families (work in the corn field), the latter-born siblings often delay the beginning of their work life. In other words, the productive participation of individuals, especially males, and the age at which economic obligations are adopted are strongly shaped by their position in the family's domestic cycle. Younger siblings usually start their working life at a later age, attending school and thus increasing their schooling level, and potential qualifications. Early involvement in the economy of a peasant family is not usually a temporary occupation that will provide unhindered access to other occupational categories later in life. Rather, those students who drop out of school at the age of 14 (or

before) to become economic providers or co-providers of their parental household through the investment of their labor in subsistence work or as paid agricultural day workers, remain in that category, do not re-enter school, and tend to marry at an early age, acquiring economic responsibilities early on in life to support the households where they grew up.

Furthermore, family networks often play a major role in young people's access to occupations other than those normally found in their hometowns, as family members, experienced in other types of employment, usually through migration to other regions and cities, or the United States, aid their younger kin to find work. For instance, the young men who have migrated to Mexico City from the *Mazateco* region are supported by the networks established by fellow villagers and relatives who immigrated years before; the same happens with young *Chiapanecos* who want to move to Playa del Carmen and other tourist centers or regions, or with young *Rarámuri* of both sexes who have moved to Chihuahua City as college students and undertake remunerated activities at the same time as their studies. Once in the city, these young people work in the service industry, in commerce and in manufacturing, not only using their social networks but also the skills acquired in school. Even though the quality of the education received in schools is often not as one would expect from the different scholarly levels and grades, the reality is that simply knowing how to read and write, basic arithmetic and being familiar with computers (no matter how basic) represent skills that have opened doors for former beneficiaries, especially those who have completed the higher levels of schooling. These skills help them to gain access to occupations that they would not have found in their home communities nor have been able to perform without the afore-mentioned skills.

Discussion, Conclusions and Recommendations

After 10 years of operation, it is evident that the *Oportunidades* Program has had a remarkable impact on 1) educational achievements, 2) reproduction patterns, and 3) the integration of most former beneficiaries (when compared with non-beneficiaries) into the middle and higher tiers of the occupational hierarchy, especially in the case of indigenous men and women, and *mestizo* women. The levels of schooling attained by beneficiaries, and the fact that more than a quarter of the sons and daughters in our database declared that studying was their main occupation are, by themselves, extremely positive results that need to be taken into account, to ensure that the federal government continues to channel resources and energy into the *Oportunidades* Program to allow it to carry on with such practices.

The *Oportunidades* Program has contributed to the modification of two social processes of extraordinary value for a society such as Mexico's: The analysis of the data, gathered with extreme care by four teams of anthropologists in four states in the country through the application of ethnographic techniques and guided by a strict methodological strategy, shows that the program has stimulated a decrease in ethnic and gender inequality, at least regarding access to education and relatively high (or intermediate) levels of the occupational hierarchy.

The gender gap in terms of schooling has been reversed among the generation of sons and daughters of indigenous populations, with females exhibiting a differential in their favor. The ethnic schooling gap in favor of *mestizos* or non-indigenous individuals, with its origins in Mexican history that dates back to the Spanish conquest, has finally been significantly narrowed, almost to the point of imperceptibility, among the male population exposed to the *Oportunidades* Program, and it has been reversed in the case of indigenous females. These changes are not observed among the non-beneficiary population. For those who have never been exposed to the program, ethnic inequality (indigenous males versus *mestizo* males; indigenous females versus *mestizo* females, in favor of *mestizos*) and, to a lesser extent, gender inequality, still exist (among *mestizo* males and females) in terms of the levels of schooling achieved.

The main conclusion is that the *Oportunidades* Program has many reasons to continue its activities in support of Mexico's poor families. The analysis presented here shows very positive results regarding the achievements accomplished.

Nevertheless, there is still a long way to go. The program must improve its operative mechanisms to provide better service and care for the indigenous population, reduce the number of suspensions due to bureaucratic reasons, and ensure that children and young people attending schools (fulfilling their co-responsibility) continue to receive their scholarships. There are many stories of youths who lost their grants for reasons they or their parents never understood. The transition from junior high school to senior high school is now even more complicated, and many of the most successful cases in the program would not be considering a college or university career if not for the support of family networks or other programs (CONAFE and other scholarship programs). For this reason, we suggest that *Jóvenes con Oportunidades*, PJO/JO (Youths with *Oportunidades*) be turned into a real incentive and valuable tool to ease that step.

The main threat to the attainment of the central objective of the *Oportunidades* Program (to break the cycle of intergenerational transmission of poverty) is the shortage of jobs in the studied micro-regions owing to underdeveloped and less dynamic labor markets. As we have mentioned, it is not surprising that young former beneficiaries and non-beneficiaries who have attained unprecedented levels of schooling have already left these regions. In contrast, those youths who remain in their hometowns have very little job success, which is understandable given the poor local employment opportunities. They work in traditional occupations, in subsistence farming and as day laborers. In all four studied micro-regions, the parents' generation is a local one, while the children's generation is characterized by their *exodus*. At least half of the young former beneficiaries in the micro-regions of Chiapas and Oaxaca are no longer in their home communities. Relatives or other members of the family network provide lodging and assist the newcomers in finding a job. Even though many are employed in informal businesses, often family ones, the skills acquired in school (reading, writing and basic arithmetic) have certainly helped them.

The achievements presented here would be magnified if the efforts of the *Oportunidades* Program were complemented and thus augmented by social and political commitment: if the sectors of the government responsible for health and education matched the efforts of the program. If the quality of teaching and learning in state schools were to improve, the benefits for millions of children would be much greater, and the level of schooling achieved by beneficiaries (current and former) would be of even greater value. If we were able to augment the number of current and former beneficiaries who successfully complete higher schooling levels and were to reduce the number of failed participants who drop out because of an illness at home (which remained unresolved because of the poor service capacity of government-run rural medical centers) we would really have a highly successful social policy. At this time, however, we limit ourselves to stating that the *Oportunidades* Program has achieved an unexpected and positive impact on the rural community in general, and on the indigenous rural population in particular.

Even though the *Oportunidades* Program has contributed to the processes that are necessary to break the intergenerational transmission of poverty, to which this analysis bears witness, this objective will only become a reality if the relevant institutions in the public sector take the necessary measures to create more and better jobs, and to provide better quality health and education services.

SWOT Analysis

SUBJECT	STRENGTHS AND OPPORTUNITIES/WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS AND OPPORTUNITIES		
Education	The analysis shows a remarkable impact on the schooling levels of individuals exposed to the Oportunidades Program as scholarship holders.	The program must insure that its actions will allow the impact to be sustained or improved. It is suggested that the (JO) Jóvenes con Oportunidades component be expedited to encourage all current grant holders. There is still much misinformation regarding JO, and requirements are so complicated that only a few can access the benefits.
Education	The greatest increase has been among indigenous beneficiaries, especially indigenous females	The same recommendation applies in this case, but in addition, it is important to point out that differential grants have been a crucial component in the current assessment (by the parents) of girls and youths. Maintain the differential and try to ensure that JO benefits are equally accessible to young people of both sexes.
Education - Intergenerational Schooling Mobility	Since the Oportunidades Program began in marginalized rural communities, the intergenerational schooling mobility increased by two more years. In other words, advancement increased from three to five years.	
Decrease of Ethnic and Gender Inequality	For the children's generation, the gender gap has reversed, and the ethnic gap has closed in the case of males (still slightly in favor of mestizo males versus indigenous males); it has reversed in favor of the indigenous population (indigenous beneficiary daughters have attained higher schooling levels than those of mestizo daughters). This data means that the Oportunidades program has contributed to the decrease of gender and ethnic inequality.	
Student boarding hostels and School Transportation	The distance between the schools and the households is a factor that particularly affects female attendance and longevity in school (when the distance is short). In Sonora, there are some positive local council initiatives to provide buses to transport students from villages to their nearest school (often in a large town or municipal capital). Student hostels have provided a solution (a factor in favor of schooling) that, without "bringing the school close to home," in fact "brings the home (hostel) closer to the school."	These initiatives, such as local councils providing transportation for students, particularly those attending junior high school and senior high school, (schooling levels with the least coverage), should multiply because they enable children and young people, especially females, to study. Student hostels and boarding houses for indigenous students must remain (even more should be opened) especially in regions characterized by disperse population settlements.
PRONABES and CONAFE Scholarships	Programs and scholarships such as PRONABES (National Program for Higher Education Grants) and CONAFE appear in the trajectory of the most successful youths (with longer schooling trajectories and wishing to undertake college and university courses). For these young people from poor households, these scholarships are very valuable.	Continue and expand programs like PRONABES and CONAFE.
THREATS		
Quality of Education	In order to build a portfolio of skills and credentials of any value, it is necessary to have better-quality education services (with fewer infrastructure deficiencies and teacher absences, better trained teachers, and a curriculum or syllabus adapted for the indigenous environment). The provision of education in its current form in these micro-regions means that the development of skills and knowledge is limited.	Government bodies responsible for education (SEP and state institutions) should take urgent steps to improve teacher training and the educational content of the teaching curriculum (and the way in which these are provided and delivered). It is also imperative to turn teacher absenteeism into daily and responsible attendance with the aim of educating subsequent generations.

Coverage of Education Services	One of the factors explaining the longer school careers of the Oportunidades beneficiaries is the short distance between schools and homes (it greatly facilitates attendance in general, especially for females). While primary school coverage is widespread, it starts to decrease as the schooling level increases, so there is a shortage of junior high schools and above all, senior high schools.	Government bodies responsible for education (SEP and state institutions) should use the infrastructure of empty primary schools as junior high and senior high schools, providing them with teachers and teaching materials that correspond to the aforementioned school levels. Alternatively, if the above were not desirable or possible, provide a wider coverage of junior high and senior high school services through the implementation of new schools.
Transition from School to College and University	The transition from senior high school to college is extremely complicated (a "bottleneck") owing to room and boarding costs in cities where universities and colleges are located, transportation from the hometowns to the city, cost of urban transportation, cost of materials, admission exam, etc. Were it not for family support and in many cases, the support from CONAFE and other scholarship programs, many of those who are now the program's most successful cases would not be pursuing a university career. Current evidence shows that the PJO component, now known as JO, has not been very effective. There are more young people who cannot access their Oportunidades funds than those who can.	We suggest that the Jóvenes con Oportunidades component be transformed into an effective stimulus and means of easing the transition.
Health and Sickness: Impact on Schooling	Illness in poor households, affecting either the father, mother or, of course, the child or the young student, is a reality that works against the success of the program's objectives (regarding the development of skills: illness of the main breadwinner or mother, added to the poor services offered by health centers, often leads to school desertion).	Government bodies responsible for education (SEP and state institutions) should increase the number of doctors in rural clinics; stop rural clinics from losing doctors for long or short periods; continue with prevention policies; improve supply of medicines and patient diagnostic equipment (sphygmomanometers, blood sugar measurement equipment); and design and promote diets adapted to the products that can be obtained by the local rural population and launch a massive campaign against the consumption of unhealthy, non-nutritional foods (not only tobacco and alcohol, but junk food as well).

SUBJECT	STRENGTHS AND OPPORTUNITIES/ WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS AND OPPORTUNITIES		
Reproductive patterns	The majority of daughters have yet to become mothers. However, the analysis shows that an important proportion (26.3%) of indigenous former beneficiary women have already had their first child, but the percentage of those indigenous beneficiaries who have not yet had children is higher (73.7%).	n/a
Reproductive patterns	The available evidence, especially regarding the Sierra Tarahumara, shows that for young indigenous females, the birth of their first child does not imply the abandonment of their studies, possibly to keep the scholarship granted by the Oportunidades Program (given the importance that such income has on the household's economy).	Even though we did not find schools in the Sierra Tarahumara that do not allow attendance of pregnant students (it has happened within the context of previous assessments, although not the current one), the practice of continuing to study (despite motherhood) should be promoted; so it is a very positive sign that schools have a flexible policy (admitting pregnant students) because bearing a child does not incapacitate women continue with their schooling.
WEAKNESSES		
Reproductive patterns	Mestizo beneficiary and non-beneficiary females of the daughters' generation who have already started their reproductive cycle represent a greater percentage when compared to indigenous females in the same situation. However, in the case of mestizo females, the number of those who have already started their reproductive cycle is higher among beneficiaries than for non-beneficiaries: 42.3% of mestizo beneficiaries females are already mothers, while among mestizo non-beneficiary females the percentage of mothers is 35.7% (57.7% of mestizo beneficiary females are not yet mothers, while the percentage increases to 64.3% among mestizo non-beneficiary females).	Promote the advantages of postponing the start of the reproductive cycle in self-healthcare workshops. The workshops should be provided by trained personnel who can give ample and precise information about the implications of parenthood at an early age and birth control methods (without leaving information loopholes, and presenting adequate and accurate information so that young people do not "learn by experience"). Promote, in conjunction government bodies responsible for health, the provision of birth control methods for the general population and young people in particular.
Reproductive Patterns	The workshops being provided for young people as part of the New Healthcare Model do not provide enough, accurate or efficient information about the precautions that young people should take to avoid early pregnancy or transmission of HIV-AIDS or other sexually transmitted diseases. The leaders of the workshops' are often absent (or do not show up), leaving young people alone, forcing them to teach themselves. The result is inadequate handling of information, which proliferates inaccurate assumptions about illnesses, their transmission and their preventive care.	The workshops should be provided by trained personnel who can give ample and accurate information about the implications of parenthood at an early age and birth control methods (without leaving gaps of information, and presenting adequate and precise advice so that young people do not have to teach themselves. Promote, alongside government bodies responsible for health, the provision of birth control methods for the general population and young people in particular.

THREATS		
Reproductive Patterns	The use of birth control among adolescents does not exist. It is never used before the birth of the first child.	It is necessary that the government bodies responsible for health make a greater effort (including effective strategies) to promote the use of birth control among young people. Birth control is used by adult women when they no longer wish to have any more children but not by young people and never before having the first child.
Reproductive Patterns	The birth order of individuals influences the deferment of domestic unions and marriages and the individual's own reproductive cycle (procreation household). The evidence in Chiapas demonstrated that last-born current and former beneficiaries who enjoy the privilege of not having to bear or help bear the burden of the household's economy, remain in school the longest and postpone unions and the start of their reproductive cycles more than first-borns. Older siblings often abandon their schooling prematurely to begin their role as economic providers at an early age, which is associated with the pattern of forming early unions.	
SUBJECT	STRENGTHS AND OPPORTUNITIES/WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS		
Occupation	One of the most remarkable strengths of the Oportunidades Program is the number of individuals in the children's generations who declare studying to be their main occupation: over a quarter of young people between the age of 15 and 25 years old study as their main occupation, especially mestizo females and indigenous males and females. As a consequence, the impact of the Oportunidades Program on the levels of schooling achieved will soon be higher than the ones seen here. It is also probable that, with such school certifications/qualifications, they will be able to access better occupations than those they would have been able to if they had not stayed-on at school.	N/a
Occupation	The occupations of indigenous non-beneficiary sons and daughters are concentrated in the lowest tiers of the occupational hierarchy, with a notable presence of non-beneficiary males, while a smaller percentage of the indigenous population who had been exposed to the program are found in this same tier. This differential is especially prominent in the case of beneficiary women.	
Occupation	The intermediate occupational tier (categories 4 and 5) has a significant presence of indigenous beneficiary males and females, particularly females. Indigenous beneficiary females also have the greatest presence in the highest layer (categories 6 and 7; a little over 14% of all beneficiary females). By itself, this data could appear to represent a rather small presence, but when comparing beneficiary women with their non-beneficiary peers, a significant difference in favor of the former can be appreciated.	

OPPORTUNITIES		
Work	There is a wide array of subsidies and support packages for agriculture (up to 120,000 million pesos). Agricultural producers from these regions neither know about nor benefit from most of these subsidies. Only el Programa de Apoyos Directos al Campo (Programme for Direct Countryside Support), PROCAMPO, has some limited coverage. La Comisión Nacional para el Desarrollo de los Pueblos Indígenas (The National Council for the Development of Indigenous Villages), CDI, has also provided some productive programs. These resources and direct affiliation to such social programs (with more expedite processing of prerequisites, monitoring of resources, and program evaluations) could complement and help to increase the impact of the Oportunidades Program on employment and the integration of former beneficiaries into the labor market.	It is the responsibility of public policy as a whole to: publicize and promote the existence and availability of resources and productive programs to the general population; publicize the procedures involved in becoming affiliated in a clear and open way (making sure that the publicity reaches rural communities like those studied here); expedite and facilitate the application process; evaluate the impact of these programs to improve their design and operation.
Work, Economic Development	When considering the development of the country as a whole, we must draw attention to the way in which the labor potential represented by thousands of indigenous youths and peasants – most of whom are bilingual, know these communities well, have raised their schooling level thanks to the Oportunidades benefits – has been overlooked and poorly capitalized. Indigenous job seekers must leave their hometowns to be able to make something worthwhile out of their lives. The Oportunidades Program, but more so, the federal government, has the opportunity to convert them into development agents, if a larger share of the subsidies that already exist are channeled into projects focused on the economic improvement of communities that show promise.	Incorporate young, bilingual, former beneficiaries with detailed knowledge of their region and a higher level of schooling into productive projects and programs; turn them into development agents, channeling a larger share of the already existing subsidies towards projects of economic improvement for these peasant regions.
THREATS		
Employment	Labor markets are not very dynamic and offer very few employment opportunities to young people graduating from the program, causing them to leave their hometowns and regions as migrant workers.	

References

1. Sariego J, *et al.* Documento analítico: Estudio etnográfico en Chihuahua, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
2. Agudo A. Documento analítico del estudio etnográfico de Chiapas, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
3. Haro A, *et al.* Documento analítico del estudio etnográfico de Sonora, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
4. González de la Rocha M, Paredes P, Sánchez López G. Documento analítico del estudio etnográfico de Oaxaca, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
5. Moser C. *Confronting Crisis: A Comparative Study of Household Responses to Poverty and Vulnerability in Four Poor Urban Communities*, Environmentally Sustainable Development Studies and Monographs Series No. 8. Washington, DC: World Bank, 1996.
6. Ksztman R, coord. Activos y Estructuras de Oportunidades. Estudios sobre las raíces de la vulnerabilidad social en Uruguay. Montevideo: ECLAC/UNPD, 1999.
7. González de la Rocha M. Private Adjustments: household responses to the erosion of work, United Nations Development Programme (UNDP), UNDP Conference paper series, Volume 6, 2000.
8. González de la Rocha M, coord. Procesos domésticos y vulnerabilidad: perspectivas antropológicas de los hogares con Oportunidades, Mexico City: Publicaciones de la Casa Chata, 2006.
9. Sánchez López G. Salud. In: González de la Rocha M, Paredes P, Sánchez López G. Documento analítico del estudio etnográfico de Oaxaca, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
10. Sánchez López G. Documento técnico sobre salud, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 10. México: CIESAS, 2008.
11. Agudo A. Documento técnico sobre educación, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 11. México: CIESAS, 2008.

Life after *Oportunidades*: Rural Program Impact After 10 Years of Implementation

I. Introduction

This technical document on the subject of employment emphasizes the impact of the *Oportunidades* Program on the trajectories of former and current beneficiaries and their integration into the labor market. By impact we mean: "...any modification to the living conditions of the domestic beneficiary groups which might be directly or indirectly associated with the program".¹ According to our hypotheses, the modifications to the living conditions of the beneficiary households are not homogeneous and depend on a set of factors (domestic, socio-demographic and communal). Among these factors, ethnic identity and long-term exposure to the *Oportunidades* Program are the most relevant for this analysis. The longer the domestic beneficiary groups have been exposed to the program the greater potential there is to experience its positive impacts (greater education, health, nutrition), so it is possible to talk about an impact *gradient* or scale. This hypothesis was formulated in the following manner:

The impact of the *Oportunidades* Program approaches the highest levels of the scale in households with the longest periods of exposure. Therefore, the impact is more moderate in households incorporated more recently. In the former, we can expect a significant increase in their domestic income according to the sum of cash transfers...a greater capacity to improve their daily nutritional diet and use of health services (taking into account the limitations of health centers) and, in third place, the extension of the schooling trajectories of children and young people. The accumulative nature of incorporation into the program is demonstrated by the changes that occur in households, changes that are sought explicitly and directly by the program (education, health and nutrition), as well as in other areas of domestic life (purchasing power and maintenance of social relations).²

In theory, the greatest impact on the scale is the achievement of the main objective of the program: to break the intergenerational transmission of poverty (that children and young people remain in school, so they can reach adulthood in good health with sufficient credentials and skills to obtain from their work a different and satisfying life, working in occupations distinct from those of their parents and grandparents). This scenario is in stark contrast to circumstances found at the opposite end of the scale, in which cash transfers are used to buttress survival strategies, and the risk of abandoning school in order to engage in productive work at an early age is a reality for children and young people who are also susceptible, along with their families, to being suspended from the program at any moment for not fulfilling their co-responsibilities.

One of the objectives of the qualitative assessment was to ascertain if the program has indeed affected the lives and work performance capacity of indigenous and non-indigenous former beneficiaries in comparison to non-beneficiaries of a similar background who did not receive *Oportunidades* benefits. According to our initial hypotheses, the major impact in terms of “occupational achievement” (understood as the transition to the higher levels of the occupational hierarchy with respect to non-beneficiaries) is found among the *mestizo* population with longer exposure to the program, and the least impact is found among indigenous non-beneficiaries. To understand occupational achievement, however, it is necessary to begin by analyzing the effect of the different levels of schooling attained, because the highest levels of schooling will theoretically enable individuals to perform non-manual occupations and obtain higher paid jobs with better social benefits, compared with traditional occupations in the rural or agricultural sector (subsistence farming or paid work as agricultural day laborers). It is necessary to clarify that educational achievement is to be understood as any improvement to the maximum level of schooling attained by beneficiary individuals in comparison to their parents and their non-beneficiary peers.* In addition, we will reflect upon changes in reproductive patterns, and finally, the analysis of occupational achievement will be presented.†

The analysis contained in this document is part of a broader research project within the framework of the qualitative assessments of the long-term impact of the *Oportunidades* Program on rural communities, whose results can be found in the analytical documents completed in collaboration with the *Oportunidades* Program.⁴⁻⁷ The evaluation integrated questions, objectives and hypotheses specific to the topics regarding the program’s coverage, operation and long-term impacts on the education, health and employment of former grant holders. For the purposes of our research, we started from the hypothesis that, in rural contexts where populations of different ethnic identities coincide (multi-ethnic contexts), the *Oportunidades* Program has less impact among indigenous households and domestic groups than among *mestizo* or non-indigenous households regarding its aim to break the cycle of intergenerational transmission of poverty. This differential effect, according to our initial analytical suppositions, is related to a series of factors: uneven program coverage, low quality and reduced access to health and education services, lack of compatibility or cultural relevance of services, and their poor adaptation to the forms and patterns of the indigenous communities’ social organization. Finally, as a factor that may explain the differential impact, we proposed that the uncertainty and instability of the labor markets, besides affecting the non-indigenous population as well, has had a more negative effect on the indigenous population who have suffered greater exclusion from the labor markets, being marginalized, and who have almost disappeared from the processes of social and occupational mobility. The disparities that exist between the indigenous and non-indigenous populations in terms of health in-

* The level of schooling achieved by individuals will be compared – males and females of both generations – to find out if sons and daughters have improved upon the schooling levels of their fathers and mothers respectively, and if it varies depending on their exposure to the *Oportunidades* Program. Thus, the analysis will reveal if generational changes have occurred (in terms of educational achievements), as well as, differential changes according to ethnic identity and according to the status of individuals in the *Oportunidades* Program (beneficiaries and non-beneficiaries). In the case of the occupational achievements’ analysis we limited ourselves to comparing the occupations of the children’s generation only – male and female, beneficiary and non-beneficiary. Therefore, an intergenerational comparison of occupations will not be made.

† Socio-demographic analyses have shown that changes in fertility patterns are the product of multiple, interrelated factors, among which schooling and paid work feature heavily. Urban women are leading the most notorious changes regarding fertility. As schooling levels rise and female participation in the labor market increases, fertility rates decrease (the first birth is postponed and periods between births are lengthened). Delaying the reproductive cycle has a great influence on the occupational performance of women.³

dicators (epidemiological profiles and mother-child mortality), education (teaching quality differentials, ENLACE testing (similar to SATs), efficiency of registration, abandonment of school), and the socio-economic indicators (lower income levels, fewer employment opportunities, premature unions, and longer reproductive cycles among indigenous females) are amply documented in the specialized bibliography and reports from various development agencies and international organizations. The analytical documentation of our ethnographic studies and the diagnostic that preceded the fieldwork discuss the contextual differences, inter-ethnic relations, program coverage, and quality of the services, explaining the gulf that still exists between indigenous populations and *mestizos*.⁴⁻¹¹ In general, these disparities highlight how indigenous populations are more vulnerable to the risks that contexts of poverty, typical of rural backgrounds, impose upon inhabitants.

Our ethnographic research has acknowledged and accounted for the heterogeneity and diversity of the scenarios under analysis from four different states of Mexico (Chihuahua and Sonora in the northwest of the country and Chiapas and Oaxaca in the south), not only with respect to the geographical conditions and different types of social conflict but above all, in relation to the economic environment, access to employment and migration options. However, all scenarios in our study share a common factor: the aid or conditional cash transfers of the *Oportunidades* Program have not just become another additional source of income for their domestic rural economies, but is the most important one, even for those households that can count on national or international remittances from family members who have migrated, which are more irregular than the program transfers. The regularity of the program stipends provides security and certainty for families that live in impoverished agricultural contexts that offer very few options for sustenance.

Our findings regarding *coverage* provide a heterogeneous outlook. While Sariago and his team found some coverage problems in the Sierra Tarahumara, which occurred in 'underdeveloped' communities with a very high degree of social and governmental negligence; communities that had never had the benefits of the program; or in communities in which coverage is insufficient,⁷ the research teams in Chiapas and Oaxaca showed that the program has an extremely broad coverage, so broad that it was hard to find enough cases of non-beneficiary poor households in the studied micro-regions that could be included in our analytic sample.^{4,5} On the other hand, we found many parallels and similarities among the scenarios studied in the four states in terms of the program's operation. We should emphasize here the work overload that Care and Registration Centers (CARs – *Centros de Atención y Registro*), and consequently, the representatives and RECCOs (Officials in Charge of Training Community Development Committees – *Responsables de Capacitación a Comités de Promoción Comunitaria*), face, which leaves these representatives with little time for routine chores such as dissemination and *in situ* problem solving. Furthermore, the registration process when reporting a death, migration, birth or addition of beneficiaries to a domestic group is extremely complicated (as are simply understanding what the JO – *Jóvenes con Oportunidades* – benefits are, the recertification process, the *Differentiated Aid Scheme* (EDA – *Esquema Diferenciado de Apoyos*), etc.). If this process is difficult for *mestizo* beneficiary females it is especially difficult for indigenous females, particularly those who only speak an indigenous language or who can barely speak Spanish. The results of the comparative analysis of coverage and operation in the four states in the study can be found in the technical document written by Sariago.¹²

The analyses of the material gathered from the four research areas regarding the quality of health services found structural factors that help explain the epidemiological profiles and the lack of therapeutic adherence that is common in rural contexts, especially among indigenous communities. In other words, there are structural factors that hinder the impact the *Oportunidades* Program could have on the health of beneficiaries, and these factors are related to the structural organization of services and the actions of the government bodies that are responsible for health. Problems associated with the poor provision of medical supplies, the shortage of doctors and nurses (as these professionals prefer to search for better working conditions) and the poor infrastructure of the *Rural Medical Units*, among other problems (which are described in the aforementioned technical documents), affect the daily operations of healthcare centers. In the Sierra Tarahumara, Sariago and his team had the opportunity of comparing the public healthcare centers with some private/religious ones that were devoted to solving health issues that public medical services cannot solve efficiently; they found that the latter have a consultations and appointments model that is more relevant

and compatible with the local population's way of life (and mountain epidemiology).^{*} Moreover, the authors of the various other analytical documents (this one included), also agree with this observation, that medical consultations at the rural state clinics within this inter-ethnic context are, with a few exceptions, too short and often do not include an examination or an explanation of the diagnosis or treatment recommended and, furthermore, in many of the documented observations, the procedures do not even meet the minimum standards required to be deemed an adequate medical consultation. The frequent shortage of instruments (stethoscopes, sphygmomanometers, or reactive strips for blood sugar level measurement) and the limited service personnel turn medical consultations into bureaucratic procedures that do not heal or adequately treat the sick because of the way services are delivered. Besides, in many cases the medical personnel at health centers (and health teams visiting their *hinterland*)[†] assume patronizing attitudes towards patients, and are often disrespectful towards local practices and beliefs, and even racist and discriminating. In terms of disease prevention and the *New Healthcare Model*, we also found a correlation with Sariego's findings: even though the new model is currently being implemented (the intention is to offer workshops instead of health talks, which will promote the participation and interaction of female beneficiaries; in addition, the female beneficiaries will occasionally be divided into age-based groups to deal with age-specific topics), in practice, those in charge of executing this model lack training in the appropriate methodologies, as well as, sensitivity towards local cultures (which requires greater respect towards local *wisdom* and practices, in other words, towards the user's culture). The analysis of the reproductive trajectories and "therapeutic itineraries" from the ethnographic study of Oaxaca showed that the treatment of the health problems of indigenous and *mestizos* inhabitants often goes beyond the local ambit and frequently involves the use of public and private healthcare services that are found in small, mid-size and even large cities (like Mexico City), not without considerable cost to the economy of these poor families. Often such solutions to health issues, which involve traveling beyond the local community, rely on social and migratory networks, to which many rural inhabitants belong, although this has obvious implications for after-care and follow-up consultations, not to mention the recording and certification of beneficiaries' compliance with the *Oportunidades*' medical co-responsibilities, as there are no procedures in place to help keep patients' medical notes on a shared central filing system. In addition, lab tests, x-rays, and other analyses performed in order to reach a diagnosis; trips in search of healthcare, travel and food expenses, and the cost of medicines result in expenditure that poor families cannot handle without incurring debts, loss of capital or assets (loss of land, livestock, farming tools, etc), or obtaining the economic support of children or other relatives; this is especially true for those patients and families that have to move to cities where medical attention is available. These and other matters fundamental to the quality of healthcare services and the impact of the program's health components on the life of indigenous beneficiaries were addressed in the analytical document of the ethnographic study in Oaxaca^{5,13} and constitute the central subject of the comparative analysis (including material from the four ethnographic studies) of the technical document written by Sánchez López.¹⁴

The quality of education services was also the focus of our research and we found similar patterns here. Firstly, we can assert that the *Oportunidades* Program has significantly extended the educational trajectories of all beneficiaries, both indigenous and *mestizo*. In addition, and this is no easy feat, a greater appreciation of female schooling (and education, in general) has been achieved. Indigenous and non-indigenous fathers and mothers are seriously considering the notion that school is important for young women and girls as a tool that provides independence ("we do not know what kind of man they will end up with") and prepares them to access occupations that are different to the ones to which they would have been traditionally destined. There is evidence to support the notion that parents' appreciation of female education is *new* (mothers usually compare their position with that of their

^{*} Two of the studied scenarios in the Sierra Tarahumara are cases that, to a certain extent, are atypical because of the presence of reputed private hospitals: in Nogorachi, a well-equipped hospital managed by a Catholic religious order, and in Samachique, a hospital with general practitioners and doctors with different specialties, which is also managed by a religious order, Protestant, in this case.

[†] *Hinterland* means the territory under the influence of a center; in this case, it refers to the communities under the jurisdiction of a health center that are visited by health teams in tasks generally aimed at basic sanitation, vaccination, etc., which are the responsibility of such a health center.

own parents, who could not see a reason to *invest* in the schooling of girls and young women because they would eventually end up married)* and that it represents, to a great extent, the impact of the program's differential scholarships in favor of females. The number of indigenous former beneficiary females who are still studying is pleasantly surprising (with respect to our hypothesis) and very positive (with respect to the program's objectives).[‡] In Chiapas and Oaxaca, there are more indigenous females still studying than *mestizo* females in the same situation. However, to increase or reinforce students' capacity to develop a range of beneficial skills and knowledge, we maintain that the impact would be greater if the education provided at primary schools and junior high schools had more cultural and regional relevance, and most of all, if the educational content and teaching and learning practices were of higher quality (that is, the number of days that teachers actually teach classes, adequate school infrastructure, supply of teaching material, teacher training, etc.).[§] The technical education document offers a comparative analysis of the quality of educational services and the factors that are associated with their greater or lesser impacts.¹⁵

The last topic pertains to the main questions of this technical document; what impact does the *Oportunidades* Program have on employment, the type of jobs its former beneficiaries perform, and the changes in fertility patterns (considering the age at which females have their first child). The main hypothesis guiding our research is that *Oportunidades* directly affects the extension of educational trajectories and that this occurs in a differentiated manner among indigenous and non-indigenous populations.

Greater schooling achievements are related to a relatively wider range of work options (inside and outside the studied micro-regions), and marriage and fertility patterns are also different from those of previous generations. If our analysis of what actually takes place in reality supports this hypothesis, we will be able to assert that the program is breaking the intergenerational transmission of poverty and that such impact is greater among the non-indigenous population with longer exposure to the program. The process of intergenerational transmission of poverty is characterized by premature school desertion, early entry into the labor market and undertaking subsistence activities or low-paid jobs, and few opportunities to access basic-needs. This process also includes early domestic unions or marriages and pregnancy, and all of these elements lead to the creation of households and domestic-family groups of the same profile as the parental households. The long-term exposure to the program (as opposed to no exposure) and ethnic adscription (indigenous or non-indigenous) constitute the two variables of interest in this analysis.

There are three objectives for this analysis:

- To understand the processes that bring about the desired impact of the program, by focusing on grant holders with the greatest exposure to the program, in particular the young people who started as beneficiaries at the beginning of the program in 1998 when they were in third or fourth grade.[#] These youths are considered the one *Oportunidades* group that, today, should show the greatest impact because of their long exposure to the program: longer school careers, later unions, delayed reproduction, and better occupations over a 10-year period.

* It is possible, of course, to continue to entertain the notion that the expense of a daughter's schooling will not bring any type of reward, financial or otherwise, because women are destined to end up married. However, these notions, still harbored by some parents, are quickly becoming obsolete in my opinion. It is more common to hear from parents that their daughters have to study to be able to be somewhat more independent – in case they get married to some irresponsible drunk and as a protection strategy for the future – and to obtain better economic and employment rewards than their mothers enjoyed.

‡ Twenty-eight percent of indigenous former beneficiaries are still studying; a similar proportion, although lower, (26.6%) of indigenous males are still students.

§ In the four states and all the studied micro-regions, we found that senior high schools compare very positively with primary schools and junior high school, and are less deficient in infrastructure and materials, have better-qualified teachers, and, most importantly, have teachers who attend their classes regularly and responsibly, for reasons that may be related to the fact that they are not union members.

At least in theory, the group with the greatest potential impact is not the one being analyzed here, as they would be the individuals born in a household already incorporated into *Oportunidades*, whose mothers received prenatal care; thus, these individuals benefitted, even as an embryo, from the whole package of program benefits (healthcare for their pregnant mothers, postnatal care, early stimulation, food and nutritional supplements, scholarships throughout their entire schooling, etc.). However, to find out about the full potential impact, it will be necessary to wait at least ten more years. For this assessment, we decided to analyze children who began receiving the program scholarships in 1997-1998, when they were in third or fourth grade of primary school because the objective is to find out the impact of schooling on work performance.

- To reflect upon the relationship between the quality of services to the “pioneer” population of *Oportunidades* and the impacts that these services have. The analytical documents of the ethnographic studies described and analyzed the quality of the services, and two technical documents deal with the quality of health and education services. Thus, here we have limited the analysis of our ethnographic studies to the exploration of the impact that the quality of services (accumulated throughout a lifetime) has had on the observable abilities and skills of the individuals under study during their “adult” life (relatively speaking because they are still very young) with respect to their work practices and the patterns they establish in their new or former households as a consequence of their experiences (for example, there are cases of young former beneficiaries who, having received poor medical treatment owing to badly diagnosed health problems, are now not able to perform to full capacity in the workforce, or, on the contrary, there are others who have enjoyed continued good health and are currently benefiting from their physical abilities to carry out any manner of work).
- To describe and explain the heterogeneous impacts on the indigenous and non-indigenous population with respect to their educational attainments, the postponement of marriage or consensual union and the birth of their first child, and their occupational achievements.

II. The analytical sample and methodological explanations

The research questions led us to design a methodological strategy that will be concisely described here. Three ethnically diverse micro-regions were selected in each of the states under study in order to examine indigenous, as well as non-indigenous or *mestizo*, rural households* (in communities with less than 2,500 inhabitants) who were incorporated into *Oportunidades* Program during the first phase of the program (households with the longest exposure). We also had to locate households that were in 1997-98 as poor as those of beneficiaries but who had never been included in the program. In total, the ethnographic fieldwork was performed in twelve micro-regions in the four states of Chihuahua, Sonora, Chiapas and Oaxaca.

We gave priority to the ethnographic fieldwork and included firsthand observations, undertaken at the service-providing centers (health centers, village clinics and community centers, schools), work places, public events (during the distribution of aid, communal and municipal assemblies, market days) and in homes. We interviewed officials in charge of CAR and *Oportunidades* representatives, beneficiaries of the program, doctors and nurses, teachers and school principals, local authorities and leaders. An analytical sample was designed from the four types of households, indigenous and *mestizo* beneficiaries and indigenous and *mestizo* non-beneficiaries, to obtain data regarding 16 domestic groups in each micro-region (four of each sub-type); in this way, we have 48 domestic groups in each scenario (formed by the three micro-regions in each state), which would give us a total of 192 case studies of households covering all the different sub-types. To form this analytic sample, case studies were composed of a series of open and structured interviews with members of every household (not only one interview), participant observa-

* Ethnicity is a relational concept that refers to the combination of several features: Self-identification as indigenous with respect to others and being identified as indigenous by those non-indigenous is one of crucial importance. The use of Mesoamerican indigenous languages, customs, a way of life with a strong ceremonial content at its core and with regard to social relations; and, though in decline, the type of clothing, are the elements that define indigenous identity. For statistical purposes, the National Institute of Statistics, Geography and Informatics (INEGI) uses language as the defining criterion that defines ethnicity. Indigenous-language speakers are considered indigenous, and those households inhabited by indigenous-language speakers are considered indigenous households. For the selection of the micro-regions to be studied, we consulted the 2005 Census, which shows the ideal places to find indigenous as well as non-indigenous households. The analytical sample that guided the household selection, as will be seen, is formed by indigenous and non-indigenous, beneficiary and non-beneficiary households. Indigenous households were selected according to a set of criteria including language but, most importantly, self-identification as indigenous. Therefore, indigenous households in the sample are those with indigenous-language speaking members who also consider themselves as members of one of the studied ethnic groups (Tarahumara, Pima, Yaqui, Guarijío, Mayo, Chol, Tojolabal, Tzotzil, Mazateco, Mixe, Chinanteco or Mixteco). It is worth pointing out that in the case of the Pima, whose language is undergoing a process of extinction, being a speaker or non-speaker of the language could not be considered a selection criterion. However, the Pima have a deeply rooted ethnic identity. Therefore, in the Pima micro-region, the indigenous households were selected on the criterion of self-identification as an indigenous member or non-member of that ethnic group.

tion, and other cross-referenced collection techniques, implemented during the period of fieldwork (14 weeks). The theoretical analytic sample was made up in the following way:

Theoretical analytical household sample:

OPORTUNIDADES STATUS	ETHNICITY	CHIAPAS	CHIHUAHUA	OAXACA	SONORA	TOTAL
Beneficiaries	Indigenous	12	12	12	12	48
Beneficiaries	Mestizo	12	12	12	12	48
Non-beneficiaries	Indigenous	12	12	12	12	48
Non-beneficiaries	Mestizo	12	12	12	12	48
TOTAL		48	48	48	48	192

TABLE 1
Theoretical analytical
household sample:

Beneficiary households were selected according to strict criteria:

- 1) The selected households must have been incorporated during the first incorporation phase of *Oportunidades* (when it was known as PROGRESA).
- 2) In order to ensure that the sample contained children who had been exposed to the program for a long time, we selected households that had at least one child in the third or fourth grade of primary school in 1998, when the households were first incorporated into the program.
- 3) Indigenous households should form half of the beneficiary case studies, and the other 50 percent should be made up of *mestizo* or non-indigenous households.
- 4) We selected households that were at a different stage of their domestic cycle when they were incorporated; half of the households of each sub-type had only a first-born child attending third or fourth grade of primary school, and the other half had last-born children of the same age. This selection was carried out with the purpose of testing our hypothesis regarding the privileges that last-born children have with respect to first-borns, who frequently abandon school to start work, and with the intention of including households with different socio-demographic characteristics, making it possible to observe a variety of "therapeutic itineraries", coping strategies and self-care practices employed by households to manage the various health and practical issues associated with their particular stage of the domestic cycle (chronic-degenerative ailments in households with elderly members, prenatal and child care in case of the youngest households).

In order to be able to make comparisons with beneficiaries, non-beneficiary households were selected as per the following strict criteria:

- 1) Non-incorporation was prioritized. In other words, households selected as non-beneficiaries must have never been incorporated into the *Oportunidades* Program. In areas where this selection criterion was not possible, households that had been recently incorporated (2007 as a maximum) or were beneficiaries for a very short time (dropped from the program within a year and a half of their incorporation) were selected.
- 2) The characteristics of non-beneficiary households should match those of their beneficiary peers; in other words, cases as similar as possible to the selected beneficiaries at the moment in which the beneficiary households were incorporated into the program (in 1998) were sought. The peer technique led us to consider non-beneficiary households according to their ethnic identity, their residence (whether they lived in the municipal capital or surrounding villages as their beneficiary peers), their socio-economic situation (access to land and levels of schooling of the household heads in 1998, as similar as possible to the selected beneficiaries in 1998), household size (matching the size of selected beneficiary households in 1998), and finally, half of the households should have had (in 1998) a first-born child in the school grades of interest, and the other half, a last-born child in those school-grades.

Thus, in the ethnographic present, the sample compares young people with a lengthy exposure to the program with their peers of the same age and socio-economic situation who had never received its benefits. It is worth mentioning that as the economic and social backgrounds of both groups are similar, any current differences in schooling, reproductive patterns and occupation can therefore be deduced as part of the impact of the *Oportunidades* Program.

The methodological strategy used was designed to fully address the research questions and hypotheses we had formulated in response to our accumulated knowledge and understanding of the ways in which the *Oportunidades* Program can effectuate an impact on well-being (and vulnerability) within rural inter-ethnic contexts. The analytic sample guarantees the inclusion of different types of case studies as a means of understanding the possible variations of the program's impact, and proposing general connections between certain factors and processes. Together, the selection of case studies covers the maximum range of scenarios (specifically with respect to ethnicity and exposure to the *Oportunidades* Program) to enable the generalization of the results regarding the population as a whole, in this case, focusing on the impact of the *Oportunidades* Program on the inter-ethnic rural community characterized by high marginalization and social disadvantages.*

The studied micro-regions are considered to be highly or very highly disadvantaged (with some exceptions that CONEVAL has classified as moderately underprivileged, as in the case of the Santiago Jamiltepec municipality in Oaxaca and two micro-regions studied in Sonora). These regions exhibit ethnically diverse scenarios where indigenous inhabitants and *mestizos* encounter equal conditions with respect to their potential access to services.

Even though the analytical sample criteria provided fundamental guidelines for the selection of the household case studies, and were fully implemented in the Chihuahua and almost fully implemented in the Sonora micro-regions, we were forced to adapt them in the states of Oaxaca and Chiapas where, in some cases, the economic and social circumstances and characteristics of non-indigenous households were not comparable with those of beneficiary households (there was a high concentration of teachers and other higher-income occupations). Such was the case of the Mazateco micro-region in the state of Oaxaca, where, given the important role of the mother in the socialization of her children, we tried to overcome this obstacle by including households with a non-indigenous mother (though married to a Mazateco).† We faced the same problem in Tumbalá, where we selected households with respect to the language variable to cover indigenous-language bilinguals as well as monolinguals. In micro-regions with very high program coverage, we had problems finding non-beneficiary poor households (we encountered this problem in the Mazateco micro-region in Oaxaca and in the three micro-regions in Chiapas).‡ In these cases, the quota of non-beneficiary households was not met (because there are no non-beneficiary poor households), so we maximized the "time-exposed-to-the-program" variable, including households that had only just been incorporated in 2007 (and had only received benefits for two months when the fieldwork was performed).

Final composition of the analytical sample of households:

* See Cortés, Escobar and González de la Rocha¹⁶ for an epistemological reflection on the possibilities of this kind of generalization as an approach to describing reality.

† Indeed, the children of mixed couples with an indigenous father and non-indigenous mother do not speak the local language, and make reference to their mother's non-indigenous town or region.

‡ In the Tumbalá community in Chiapas, it was impossible to find non-indigenous, non-beneficiary households because the *mestizo* population is practically non-existent, and the coverage of the *Oportunidades* Program is greater than in Las Margaritas and San Cristóbal, where the sample criteria was adhered to 100% and 82%, respectively (of the 16 households in Las Margaritas sample half were indigenous and half were *mestizo*, with a balanced number of beneficiary and non-beneficiary households).

OPORTUNIDADES STATUS	ETHNICITY	CHIAPAS	CHIHUAHUA	OAXACA	SONORA	TOTAL
Beneficiaries	Indigenous	24	12	11	13	60
Beneficiaries	Mestizo	8	12	10	14	44
Non-beneficiaries	Indigenous	7	12	14	11	44
Non-beneficiaries	Mestizo	6	12	7	10	35
TOTAL		45	48	42	48	183

TABLE 2
Final composition of
the analytical sample
of households:

We had the greatest difficulties in finding suitable households for the study in the southern states of Oaxaca and Chiapas, fundamentally owing to two factors: the high concentration of indigenous population (these are more *purely indigenous* communities than in the north) and the wide coverage of the *Oportunidades* Program.

Database for Impact Analysis

A database was constructed with the data from all the beneficiary and non-beneficiary households case studies from the twelve micro-regions studied in the four states. Priority was given to the analysis of non-grant holders and children from beneficiary households who were grant holders or former grant holders of both sexes between the ages of 15 and 25, because these are the groups of most interest to the study in the long term (the ones with more exposure to the program as grant holders and children that were raised in beneficiary households). This analysis compares the educational achievements of young grant holders and former grant holders (children) with those of their parents and their non-beneficiary peers (whether it is because their households have never been included in the program or because they were never granted the PROGRESA-*Oportunidades* scholarship even though the households to which they belong are beneficiaries). Likewise, the occupational achievements of young grant holders and former grant holders are compared with those of their non-beneficiary counterparts of the same ages and socio-economic background.

The database includes the following variables for both parents, and children and other household members who were, at the time of the study, aged between 15 and 25 years old: state, region, town, number of household members, sex, first name, age, kinship (whether father or mother, son or daughter or other), status in the program, ethnicity, mother tongue, place of residence, civil status, schooling,* primary occupation, secondary occupation, and age at the birth of first child (the latter for females only).

The database for the analytical sample, based on the group of youths for whom the program's potential impact on education and occupation was deemed to be greater, consists of 793 individuals (498 indigenous and 298 *Mestizo*) who belong to 192 households with an average of 4.13 members per household, not counting children or other family members who are not the parents and who are younger than 15 or older than 25 years old. This database only includes data on the parents and the children (or other members of the children's generation) who, at the moment of the study, were aged between 15 and 25 years old and, therefore, were between 5 and 15 years old in 1998. Data regarding older and younger siblings and other people residing in the household were not included in the database.†

* Schooling data was registered in years, corresponding to the maximum level of schooling reached: 0 = illiterate or never attended school, 1 = first year of primary, 6 = completed primary; 9 = junior high school; 12 = senior high school, etc.

† The case studies of indigenous and *mestizo* households, beneficiary and non-beneficiary (half of each type with one first-born child attending third or fourth grade in 1998 and the other half with a younger child, preferably the last-born, in the same school grades that year) contain detailed information about all household members, independent of their age (elderly grandparents, fathers, mothers, sons and daughters of all ages and other members (relatives or not)). However, for the purpose of this analysis, the database contains only the data related to those household members – youths, children or other members – from the aforementioned age range, so that it may be compared to the data (also included in the database) of their parents.

TABLE 3
Data Base: Number of
individuals who were
included

DATA BASE: CASE STUDIES				
ETHNICITY	STATE	BENEFICIARY	NON-BENEFICIARY	TOTAL
Indigenous	Chiapas	110	51	161
	Chihuahua	50	55	105
	Oaxaca	54	56	110
	Sonora	68	52	120
Total		282	214	496
Mestizo	Chiapas	33	25	58
	Chihuahua	46	15	61
	Oaxaca	47	25	72
	Sonora	59	45	104
Total		185	110	295
Final total		467	324	791
KINSHIP				
	Parents of both Sexes	193	121	314
	Sons and daughters	256	192	448
	Others	18	11	29
	Total	467	324	791

Using this database, an analysis was performed (descriptive statistics) to determine the schooling levels attained by all of the individuals (fathers, mothers, sons, daughters) and thus identifying gaps or disparities by generation, gender, ethnicity and program status.* Likewise, the same database was used to compare the occupational achievements of grant holders and former beneficiaries with those students who had never received a grant, as well as the differences in the fertility rate of beneficiary daughters as opposed to their non-beneficiary peers. The results are detailed in the next section, following a description of the opportunity structures in which the communities under examination are immersed.

* It is necessary to point out the following: the beneficiary category (sons and daughters) includes current grant holders as well as former grant holders. In the non-beneficiary category, we included sons and daughters who have never had an *Oportunidades* scholarship, independently of whether their mothers were beneficiaries or not. This analysis considers program status as a variable that is related to the individual's personal history and not to the household's because, as we have confirmed in this and other evaluations, at least in the field of schooling, it is the recipients of the grants who are directly stimulated, with pressure from parents, to attend and remain in school. Sariago *et al.*⁷ state that in some cases in the Tarahumara the scholarships provided to last-born siblings in fact constitute a support mechanism through which first-born children see themselves released somewhat from the burden of contributing to their family's economy and can, therefore, continue their own educational careers. There is no doubt that more specific analyses, with additional information and larger databases will enable us to calculate the full extent of the program's benefits, and the relation health and nutrition have to schooling and work. For the purpose of analyzing the program's impact on schooling, fertility and occupation, we consider beneficiaries as those who received scholarships from *Oportunidades* (current and former beneficiaries) while their siblings who never received scholarships, as well as youths from non-beneficiary households, are considered as "non-beneficiaries", even though this description poses some technical and theoretical difficulties. In most cases, the incidences of young people from beneficiary families who never had a scholarship are down to the fact that their position in the domestic cycle did not favor their inclusion in the program; for example, they had already left school when the household was incorporated, or some of their younger siblings were scholarship recipients. Likewise, there are also a few cases in the category of beneficiary children who come from a household not incorporated into the program. These cases correspond to individuals who were *Oportunidades* grant holders during the time, for example, that they lived with their grandmothers – who were beneficiaries, unlike their mothers – or another relative, and who later returned to their parents' household. It could be said that non-grant holders living in beneficiary households (whose mothers receive the program's stipends and whose siblings are scholarship recipients) indirectly receive the benefits of being part of a beneficiary household. The full consequences of such a domino effect cannot be fully fathomed using only the data available (it did not form part of this research's objectives); and besides, to group non-grant holders from beneficiary families together with grant holders and former grant holders would still not offer a satisfactory solution to this theoretical and methodological problem. Additionally, the analysis of the program's impact as determined by the number of years a student has benefited from an educational grant is still pending. In this analysis, all of the students who at any one time were scholarship holders, in the short- or long-term, are grouped in the same category as beneficiaries (the fact that households would have remained as beneficiaries for 10 years does not guarantee that the children would have enjoyed their grants for the same period of time; in fact, we do not know of any such case).

III. Results

OPPORTUNITY STRUCTURES

The analytical reports documenting the findings of the four ethnographic investigations revealed that rural regions inhabited by a high concentration of indigenous population constitute scenarios whose characteristics hinder the operation of the *Oportunidades* Program. Although not without significant differences, communities with high numbers of indigenous inhabitants are generally in remote, isolated areas with very poor infrastructure, where very few outside professionals want to live and work. Therefore, health and education services are rendered by doctors and teachers who look upon their stay in these poor communities as a temporary matter that they must endure to obtain a better position in other regions that offer more comfort and prestige. In addition, the analyses of the analytical documents revealed that indigenous populations face many more hardships than *mestizo* ones in maintaining their status as beneficiaries within the *Oportunidades* Program; additionally, the quality of health and education services is evidently poor in these communities.⁴⁻⁷

Despite the aforementioned disadvantages, and even considering the program coverage problems we encountered in the Sierra Tarahumara among the *Rarámuri* and *Pima* communities, which contrasts with the adequate and very broad coverage found in the Sonora, Oaxaca and Chiapas micro-regions, it is clear that the presence and operation of the *Oportunidades* Program in rural Mexico has constituted a milestone in the history of the communities affected and the lives of the families and young people who have received its benefits through scholarships.

From 1992 to 2006, the net income of rural households throughout the country as a whole, like the ones examined here, underwent an increase in real terms, even though this process is barely evident to the ethnographic eye. This 14-year period is of importance when analyzing the impact of *Oportunidades* because it was during this time that the program was first implemented in 1997 (under the name of PROGRESA). In other words, nine of the fourteen years that coincide with this phenomenon correspond to the arrival and expansion of the *Oportunidades* Program in rural Mexico. According to CONEVAL, the increase in rural household income (despite a decline in income gained from subsistence farming and self-employment) results from a number of factors: 1) higher wages / net salaries; 2) an increase in government stipends and benefits (where *Oportunidades* plays a central role); 3) the increase in remittances (and emigration) is substantial, although their absolute contribution is minimal, despite some households depending greatly upon them.¹⁷ Higher wages / net salaries, in turn, are a product of a greater number of hours worked by household members (predominantly women) and a small increase in remuneration in real terms. The latter may be related to the rise of agricultural production nationally, which requires a large workforce, as well as to migration from the countryside, which reduces the number of available workers. Nevertheless, we assume that these higher salaries and job opportunities are unequally distributed across the nation and that the more marginalized communities in the country (such as the ones studied here) do not benefit from them. Other analyses show that over an even shorter period (2000-2006), the increase in net salaries is even greater than the increase in stipends and cash transfers from any source;¹⁸ although this is surely a consequence of the fact that by 2000 a large proportion of poor rural households already received PROGRESA and PROCAMPO, so the more recent increases in these transfers becomes less significant statistically.

A brief overview of the opportunity structures is offered here, which will focus, in the main, on the labor markets to which residents of the micro-regions have access. The range and quality of health and education services offered are the subject of the analyses performed by Agudo⁴ and Sánchez López,¹³ who were responsible for the technical documents on education and health, respectively. This description of the opportunity structures is founded on the concept that the most important resource of poor families is the labor potential of its members, and that turning this resource into a real asset for well-being depends on both the labor markets to which households have access and the abilities and skills acquired throughout a lifetime, in terms of health (it is necessary to be in good health to be able to work) and occupational training. Developing such skills and capabilities (in terms of health or otherwise)

TABLE 4
Real net change of
rural household income
1992 - 2006
(percentiles 1-28)

SOURCE	RELATIVE CHANGE (%)	ABSOLUTE CHANGE (\$)
1 Paid work	54.5	65.86
2 Self-employment income	-24.4	-22.43
3 Transfers	335.7	75.65
3.1 Remittances*	405.5	17.12
3.2 Other transfers	319.6	58.53
3.2.1 Oportunidades	---	47.58
3.2.2 Procampo	---	8.45
3.2.3 Others	13.6	2.50
4 Self-production	-71.4	-38.35
5 Payment in kind	-74.6	-1.72
6 Applied rent	16.2	8.79
7 Gifts	195.3	-4.85
Total, net, per capita	24.2	82.96

Source: calculation CONEVAL, ENIGH

is a process that is sensitive to the effects of the domestic cycle: access to resources (for food, healthcare and education) is affected by the position of individuals in the birth order (being the first-born or second-born child contrasts unfavorably with the opportunities of younger siblings). In other words, any changes to a household's economy and the potential of individuals to enjoy good health and have access to education and employment options are shaped by the domestic, social, economic and political environment that structures their opportunities (to get a job, to have a good or bad crop, to be seen and cured by a doctor in case of illness, to remain in school, and so forth). Opportunity structures should be taken into account because the real and viable options that individuals have to obtain services and engage in economic activities (to earn a living) are not distributed haphazardly but, on the contrary, are established and defined by a series of social, economic and political factors;^{2,19,20} for example, the integral relationship that exists between access to employment within the public sector and certain goods and services (of a certain quality). On the other hand, there is a link between informal employment in urban areas and (non) access to public health services, while the subsistence economies of indigenous peasant households are benefited by the access they have to *Unidades Médicas Rurales* (Rural Medical Units) and community schools or indigenous education institutions, such as the ones described in the ethnographic regional analytical documents. The privileged access of some individuals to services of quality, in comparison to others who have no choice other than to attend schools and clinics of poor performance, does not happen by chance but is part of the historical development of our society and reflects a social structure that continues to be affected (and possibly increasingly so) by the inequalities fostered and reconsolidated by society itself.

In addition to the State, the labor market plays an important role in structuring opportunities. The *Oportunidades* Program has intervened in the relationship between individuals (and families) and the structure of opportunities, not only by increasing the monetary resources available to beneficiary families, but also by promoting an unprecedented increase in their demand of public services through the implementation of conditional cash transfers and benefits that encourage the (regular) use of health clinics and educational institutions. In theory, families that are included in the *Oportunidades* Program as beneficiaries have regular and frequent access to health and education services; however, even after 10 years of operation, neither the schools nor the health centers have been able to adapt and provide quality services in response to such increases in demand.

A description of the labor markets from the studied micro-regions shall be presented briefly in the following table, summarizing the characteristics of each studied micro-region and simultaneously including annotations regarding

the range of health and education services. The sources for this information are Sariego *et al.*,⁷ Haro *et al.*,⁶ Agudo⁴ and González de la Rocha, Paredes and Sánchez,⁵ documents which have been presented to the *Oportunidades* Program. At the end of this overview of the labor markets, we reflect upon the comparative analysis regarding the opportunity structure of the studied micro-regions.

Employment opportunities are relatively more abundant in two of Sonora's micro-regions, even without taking into account activities connected to drug trafficking, which are widespread in this area and the neighboring state of Chihuahua.* There are employment opportunities in commercial agriculture, particularly in the Yaqui and Mayo micro-regions in Sonora, as well as in the neighboring state of Sinaloa, in the *maquila* industry,[†] and services linked to agriculture and the construction industry in the state capital and other developing cities. On the other hand, the Guarijía micro-region (Sonora), the Pima, the Tarahumara and the micro-regions of the southern states are poorer in terms of employment. In fact, the exodus of workers from the micro-regions in the southern states of Chiapas and Oaxaca, inhabitants who have left their homes in search of work in other national destinations, as well as in the United States, stands testimony to this and forms a stark contrast to the limited numbers migrating out of Sonora (and to a certain extent Chihuahua).

Subsistence agriculture is, in general, an activity in clear decline. In the Sierra Tarahumara, it is evident that excessive deforestation and continuous droughts have eroded the soil. The layer of topsoil in this territory is so thin and poor it produces corn cobs only 15 centimeters long, in quantities that are not enough for the yearly consumption of a family. The mountains of the Mazateca, where one of the studied micro-regions in Oaxaca is located, also suffer from advanced erosion, combined with the unpredictable rainy season each year. Credit shortages, high dependence on expensive fertilizers, and the general neglect into which peasant agricultural production has fallen have made paid jobs a source of income ever more important for the household economies of these regions. The changes that have occurred to rural household income in general seems to be caused by the move away from subsistence farming towards paid labor and the presence of cash transfers from programs such as *Oportunidades*.

In contexts characterized by a crisis in subsistence farming, the benefits of *Oportunidades* and paid employment (such as agricultural day laboring or through "urban" employment within or outside of the country – remittances) constitute the pillars upon which rests the survival of the rural poor, both indigenous and *mestizo*. In all of the studied micro-regions, although mainly in Chiapas and Oaxaca, young people who have achieved higher levels of education are joining the waves of migrant workers. However, youths, both non-beneficiaries as well as former beneficiaries who did not manage to extend their schooling trajectories, are the ones we find more frequently in their towns and villages of origin. As a matter of fact, the ethnographic follow-up carried out by the research team, which revisited all former beneficiaries (according to the *Oportunidades* register) in the two communities studied in Santiago Jamiltepec (Santa Elena Comaltepec and El Charco Nduayoo), showed that those students who were better schooled are the ones leaving to live and work in the United States, followed by those migrating to cities in other states within the country (Oaxaca, Mexico City, Monterey). The least schooled – those who interrupted their schooling during primary school or in the early years of junior high school – are those who live and work in their hometowns.⁵

Regarding services, the list of schools and healthcare centers available in the micro-regions suggests there is moderate yet disproportionate coverage. Some micro-regions have greater shortages of services than others, as in the case of the Pima region located in the border territory between Chihuahua and Sonora; otherwise, the service coverage is relatively adequate. The inhabitants of the twelve micro-regions in the four states of the country indeed have access to schools of all the basic levels (from preschool to junior high school) and to senior high schools and

* The widespread cultivation and selling of marijuana (and other illegal products) constitutes a real option for waged-labor in the northern micro-regions and provides occupations about which, for obvious reasons, we will not give details. Suffice it to say that the resources stemming from these activities are considerable and feed the local economy in general, from businesses in the service industry (hotels, gas stations, restaurants, car dealerships) to recreational and educational activities (school festivals, local dances, music groups, etc.).

† Factories or plants that manufacture or assemble imported components, usually for export.

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
<p>Yepachi (Temósachi, Chihuahua) and Maycoba (Yécora, Sonora)</p> <p>PIMA</p>	<p>Basic cultivation of grains (corn, beans) and potatoes. Generalized backyard horticulture augmented by cattle breeding for family consumption. Small-scale apple growing.</p> <p>Forest exploitation: there are three sawmills that employ approximately 20 people whose jobs require on-the-job training.</p> <p>The family run farm constitutes a production unit, and participation of all household members is seen as an obligation; children and young people in this peasant economy work alongside the adults: "...it is to be thought as the place that safeguards family security" (Arellano, 2008: 2).</p> <p>Five coal deposits attended to by whole families (child labor is frequently employed here).</p> <p>Labor emigration (owing to the scarcity of local options) of men and women who leave to pick tomatoes, grapes, apples, cherries, chilies and nuts in Chihuahua, Sonora and Sinaloa.</p>	<p>Yepachi: Kindergarten One federal primary school One boarding primary school for indigenous children One tele junior high school (junior high school lessons delivered via satellite TV) One tele bachillerato (satellite TV senior high school) A boarding school for senior high school students who come from nearby communities (including Maycoba)</p> <p>Maycoba: Two preschools (one exclusively for Pima children) Two primary schools One junior high school</p>	<p>Yepachi: A Rural Medical Unit (IMSS/state funded) without a full-time doctor; occasionally manned by medical student interns who stay from between a week to a month and there are long periods without professional medical attention.</p> <p>Maycoba: A health center that is dependent on the Sonora state government, attended by a local health assistant. Every other year, a medical intern arrives to work for a year, so at his or her departure, another year goes by without the presence of a health professional. Since June 2007, there has been no doctor; responsibility for health issues therefore falls on the health assistant. The drinking water shortage clearly affects the local epidemiology because inhabitants take supplies from a fountain lacking in both supervision and maintenance and is sourced by contaminated water from filthy rivers. In 2007, two Pima children from Maycoba died from infections derived from drinking water The population in the micro-region is cared for by health assistants who have to concentrate their efforts on the pathologies that state authorities consider a priority (EDA, IRA, diabetes, hypertension, vaccination campaigns) ignoring a whole group of ailments registered in the therapeutic itineraries of the studied households: multiple cases of tuberculosis, shingles, malnutrition, alcoholism, drug addiction, chicken pox, smallpox, measles, accidents, fractures and wounds.</p>
<p>Samachique (Cuachochi, Chihuahua)</p> <p>RARÁMURI</p>	<p>The economies of the micro-regions revolve around forest exploitation; this is the only waged source of income. There is a communal sawmill that runs only during dry spells, January-February and August-September. It employs 110 men of the 500 ejidatarios (cooperative members who are the official owners of the mill). Salaries range from 80 to 110 pesos per day depending on the position (see a detailed description of these activities in the preliminary version of this same text). Meager profits are shared by the 500 ejidatarios once a year.</p> <p>Commerce: self-employed families, mainly mestizo, give occasional employment to children and young people as load bearers and helpers. Commerce is an activity that has benefited from the closeness of this community to the road that crosses the Sierra Tarahumara.</p> <p>Temporary employment in road construction and other public infrastructure work, with salaries ranging from 75 to 110 pesos per day. Maids or nannies (indigenous women in mestizo households) or laundry women (other people's laundry)</p> <p>Some families sell firewood or some members offer their services for hire as agricultural day-laborers.</p> <p>Unlike the Pima micro-region, there is no migration to find work in Samachique.</p> <p>Subsistence agriculture for domestic purposes</p>	<p>Two preschools (one indigenous and another mestizo) One primary school One junior high school One senior high school (The Chihuahua State Science and Technological Center; this center also provides primary school service and open junior high school). One CDI boarding school for 53 primary school children and 4 preschool children. One student hostel for junior high school students, in operation since 2001, financed by the Chihuahua Business Entrepreneurs Foundation. Both hostels offer room and board for boys and girls of indigenous communities located far from Samachique that do not have a school.</p>	<p>IMSS-Oportunidades clinic providing basic healthcare; run by a medical intern, an assistant nurse and a substitute. It has four "rural assistants" who function as voluntary health officers and 17 health representatives who visit the surrounding communities. Shortage of medical supplies is a permanent issue, and the medical intern is frequently absent. Therefore, healthcare is left in the hands of the nurses, who are forced to channel complicated cases to the Misión Tarahumara Hospital or other hospitals (in Creel or Guachochi). There is no interpreter between the medical personnel and the indigenous patients.</p> <p>Misión Tarahumara Hospital, in operation since 2000. Managed by Baptist missionary personnel and funds. Hospital infrastructure: laboratory, operating room, three wards, pediatric service, dental care, pharmacy, air ambulance, and a hostel that lodges relatives of the indigenous patients. The indigenous population receives free healthcare; the mestizo population has to pay. The working model seeks to adapt to the cultural conditions of the region: there is a Rarámuri interpreter and a midwife, also Rarámuri, who attends to women who do not want to give birth in the delivery room or be attended by a non-Rarámuri male doctor.</p>

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
<p>Norogachi (Cuachochi, Chihuahua)</p> <p>RARÁMURI</p>	<p>Striking shortage of employment (as in the other two micro-regions). Subsistence agriculture (corn, bean, oats, potatoes, grass for fodder, pumpkin, peas). Families with access to water also grow vegetables (and also raise a couple of cows or goats and pigs, chickens and turkeys) in their backyards.</p> <p>There is a communal sawmill that operates in a similar manner as those of the other micro-regions, but forest exploitation is less important here because forests have diminished considerably owing to excessive exploitation. This sawmill only offers some temporary jobs among ejidatarios (cooperative members).</p> <p>Commerce is more limited than in Samachique because Norogachi is farther away from the main road.</p> <p>Labor migration to apple or walnut picking regions or to the construction industry in Cuauhtémoc, Chihuahua or other cities. Women also migrate to these cities as maids.</p> <p>To a lesser extent, labor emigration to the United States.</p>	<p>One preschool</p> <p>One federal primary school</p> <p>One boarding school (CDI)</p> <p>One educational complex administered by the Catholic Mission, which has support from business foundations.</p> <p>This complex offers primary education and boarding for boys and girls (mostly indigenous) of the region).</p> <p>One junior high school</p> <p>One tele senior high school</p>	<p>An IMSS-Oportunidades Rural Medical Unit in Norogachi, attended by a medical intern, who is frequently absent, and two assistants.</p> <p>One IMSS-Oportunidades Rural Medical Unit at the Ciénega de Norogachi community, which has been manned by a graduate medical doctor for seven years and a medical assistant. Both units promote practices aimed at sanitation (construction and use of latrines, trash burning, de-junking, promoting the consumption of boiled water), identification of malnutrition cases, and monitoring of the nutritional state of children under five years old, pregnant women and the elderly. These units deal with malnutrition cases, tuberculosis and birth complications. The Norogachi intern is not responsible for the latter because he does not have the necessary surgical equipment. Shortage of medical supplies.</p> <p>The San Carlos Clinic (in operation for 47 years) in Norogachi, administered by Catholic nuns with external funds from a foundation in the city of Chihuahua. Hospital infrastructure: beds, laboratory, X-rays, ambulance and two female doctors who coordinate 18 members of staff, who include the hospital-care personnel, lab attendant, x-ray technician, ambulance driver, Rarámuri interpreter, cleaning staff, and kitchen manager. It offers consultations and hospitalization, a pharmacy, pediatric wards and delivery rooms. A health visitor and a network of clinics in the area.</p> <p>Recently inaugurated Nutritional Recovery Center and Maternity Home as part of the State DIF and State Health Service.</p>
<p>Huinivis (Guaymas, Sonora)</p> <p>YAQUI</p>	<p>Rent of communal agricultural land (ejido land) to private businessmen (yoris or mestizo). In exchange, the ejidatarios receive between 2,500 and 3,000 pesos per hectare per year. This system is the result of poor access to credit, the high cost of agricultural production, problems related to the sale of products, water shortage, and the high cost of installing the infrastructure needed for adequate irrigation (it is almost desert land).</p> <p>Employment in maquilas (for both men and women), as field hands and in packing plants in Empalme, Guaymas and the Yaqui valley.</p> <p>Beef cattle, goats and sheep.</p> <p>Fishing (to a lesser extent)</p> <p>Handcraft manufacturing (although only a few people engage in this activity)</p> <p>Coal and firewood production</p> <p>Masonry and adobe (mud brick) production.</p> <p>Home production of tortillas and other food for sale (women).</p> <p>Embroidery and dressmaking (women)</p> <p>Growing and sale of nopales (cactus)</p> <p>Sale of beer in home stores</p>	<p>One preschool</p> <p>Primary school</p> <p>Junior high school</p> <p>One CBTA school in Vicam, offering technical careers</p> <p>One CECYTEC, in Potam</p> <p>The primary school and junior high school are characterized by a shortage of staff and absenteeism of the teachers (the local primary school has only two teachers, and one of them is constantly absent).</p>	<p>Casa de salud - a very small clinic/unit attended by a health representative (no electricity, but it has one bed, an examination table, a set of scales, a sphygmomanometer and a stethoscope). Administered medicines are limited to painkillers, while patients are referred to the Potam unit (10 kilometers away). Limited care and treatment in both the casa de salud and the Rural Medical Unit in Potam.</p> <p>The inhabitants of Huinivis prefer to go to the Vicam Health Center because they perceive that they are better cared for there. It is common for people to complain that medicines are not available, and they have to buy them at the Farmacias Similares (a private chain of drugstores).</p> <p>There is no effective referral system or record keeping, even internally.</p>

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
La Bocana (Etchojoa, Sonora) MAYO	Rent of communal agricultural land to businessmen. Ejidatarios work as agricultural day laborers when renting their own lands. Vegetable growing in home gardens. Animal husbandry (pigs, horses, goats and sheep) as part of the "backyard economy". Employment outside agriculture is scarce and not diverse (five jobs in garbage collection, some other young people sell tortillas) Sale of homemade food on the weekends (women).	One preschool A primary school One tele junior high school Young people wishing to attend senior high school have to go to Huatabampo (where there is a CONALEP and COBACH school). Etchojoa (COBACH), or to Basconrobe o Cúitvaro (where there is a CBTA). Teacher absenteeism	One health center (SSA) attended by a medical intern and two experienced nurses (one of them with 29 years of service as a nurse; speaks the local language and acts as interpreter). The health center has a nebulizer and basic consultation instruments (stethoscope, sphygmomanometer and blood sugar measurement material). Sufficient medicines for hypertension, cholesterol and diabetes problems. The doctor uses his own car to get medical supplies. The population complains of the doctor's absenteeism and arrogance of the nurses. When patients require more specialized services, they are referred to Navojoa (second-level medical attention)
San Bernardo (Alamos, Sonora) GUARIJÓ	Main (legal) economic activity: cattle farming on ranches with between 30 and 200 heads. Within this activity, the most profitable is calf breeding for exporting to the United States. Commercial jobs (six stores, three of them supermarkets) that offer some jobs. Employment in service industry: two beauty parlors, one stationery store, a car repair garage and carwash, a tire shop, a butcher shop and a hotel with restaurant service.	Three primary schools (two of them with only a few students); one of them with only one teacher In the municipality as a whole there are three preschools (although none of them in San Bernardo) and only one technical junior high school (which is also not in San Bernardo); therefore this region is characterized by a very poor coverage of education services.	Health Center (SSA-Sonora) attended by a medical intern, a nurse, and a janitor whose payment is not covered by the SS but with contributions from the Oportunidades beneficiaries. In the municipal capital, there is SSA-Sonora General Hospital and an IMSS Family Medical Unit. Owing to the poor track record of these units to satisfactorily treat patients, many inhabitants of this region seek medical attention in Navojoa, Obregón and Hermosillo.
Different communities in Mazatlán Villa de Flores, Oaxaca (Cabeceira, Aguacatitla, San Simón, El Progreso, El Corral) MAZATECA	Privately owned land; the majority of households have arable land, on average between one or two hectares. The few families that do not own agricultural land work the land of a relative. Subsistence farming (corn, beans and, in the lower regions, sugarcane for producing whole sugar and piloncillo (small blocks or bricks of unrefined solid cane sugar)). Agricultural work (day laborers); pay is 50 pesos per day (30 less than in the northern micro-regions) Construction industry jobs in private or public projects, with pay between 70 and 100 pesos per day; this is the best-paid work activity in the micro-region Employment and self-employment in the service industry: a small hotel; rooms for rent, targeting visiting teachers; diners and small restaurants; laundry and ironing services; nannies (who take care of teacher's children) and maids. Women employed in these services get a daily wage of between 30 and 80 pesos. Counter clerks in the under-developed commercial sector (drugstore, internet coffee shops, stationery stores, phone booths). There are generally very few options besides agriculture. Large numbers immigrate mainly to Mexico City and to a lesser extent to the United States.	Two indigenous community primary schools 16 federal indigenous primary schools 30 regular federal primary schools 11 tele junior high schools One technical/industrial junior high school (in the municipal capital) One senior high school (for the entire municipality) in El Corral and one tele senior high school in La Iguala. Teacher absenteeism, mainly because of strikes and protests obliged by the unions in Oaxaca and other cities and towns in Oaxaca state.	There are eight first-level health centers throughout the different communities in the region; four of them are RMUs that depend on IMSS-Oportunidades funding, two of which are in the communities under study and two are in others communities. The remaining four depend on the SSA: one is located in the municipal capital and the other three are in other communities (that were not studied). IMSS-Oportunidades Field Hospital No. 43, in Huautla de Jiménez (two hours from the municipal capital of Mazatlán Villa de Flores) provides second-level healthcare. A casa de salud (very small and basic health clinic/units) in each of the communities of the region, attended to by a health assistant, whose service, in strict terms, is not effective. Micro-region inhabitants seek medical attention outside of the municipality, particularly in Mexico City, taking advantage of contacts and networks of relatives and acquaintances who have emigrated for work.

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
Communities of San Juan Cotzocón: Nuevo Cerro Mojarra and Jaltepec de Candayoc MIXES, MAZATECOS, and CHINANTECOS	<p>Main activities: agriculture and cattle farming Jaltepec, Small-scale coffee and citrus production; both for sale. Beef cattle raising (few families engage in the latter activity) Subsistence peasant farming: corn and bean growing for family consumption, fruit picking and non-commercial backyard activities. Cerro Mojarra, Besides the abovementioned activities, lemon production is performed on a larger scale, and there is a lemon-packing facility that gives temporary employment to youths and adults packing lemon for exportation. There is also watermelon and orange production. Contrary to Jaltepec, in Cerro Mojarra, dairy cattle are the second source of income for families in the community. They sell the milk to Nestlé (four pesos per liter). In both communities, local commerce (groceries, drugstores and telephone services) offer limited work. Temporary jobs such as agricultural day-laboring (men) and domestic help in teacher's homes. Migration for work purposes is significant, mainly to Monterrey, Oaxaca, Cancún, Mexico City, Mérida, and the United States (Illinois, Indiana, Wisconsin, Virginia and to a lesser extent, New York), from Jaltepec where at least one member of every family has emigrated. From Cerro Mojarra, there is a constant flow of emigration to the United States, especially to Indianapolis.</p>	<p>Jaltepec: Preschool Primary school Junior high school An integrated community senior high school (coordinated by the Colegio Superior para la Educación Integral and The Instituto Estatal de la Educación Pública de Oaxaca – The College for Integrated Education and The Oaxaca State Institute of Public Education). 92% are Jaltepec students 8% are from surrounding communities Community student hostel (CDI) Universidad Indígena Intercultural (Intercultural Indigenous University), which offers two bachelor's degrees (management and sustainable development and communication for social development), both eight semesters long. It has 47 students from several communities in the region. The university is supported by the Sistema Jesuita Universitario Jesuit University System.</p>	<p>Jaltepec: A basic health unit (SSA) manned by a professional doctor but with no nurse. Insufficient personnel and medical supplies (people interviewed said they have to buy medicines from private pharmacies) Cerro Mojarra: Only one casa de salud run by a rural health officer. People have to go to: The San Felipe Zihualtepec clinic which has a professional doctor and a nurse; in case of the need for more specialized medical attention, they are referred to the general hospital in María Lombardo de Caso (as are the people of Jaltepec). The hospital is located approximately 10 minutes away by private transportation (taxi, car), but because public transportation is not efficient, the trip may take up to an hour and a half.</p>

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
<p>Communities of Santiago Jamiltepec, Oaxaca: Santa Elena Comaltepec (mixteca) and El Charco Nduayoo (Mestizo and Afro-Mestizo)</p>	<p>Agricultural and cattle production for commercial purposes (small-scale) and for self-consumption. Corn, bean and cattle forage are the most important crops.</p> <p>Waged work as agricultural day laborers (men and women) especially on tropical fruit plantations (papaya, sesame seed and lemon). Daily pay varies between 100 and 120 pesos.</p> <p>In El Charco Nduayoo, fishing is also an activity.</p> <p>In both communities: raising backyard animals (pigs and fowl).</p> <p>Participation of children in subsistence and paid work has decreased considerably owing to crises in the agricultural plantations caused by hurricane Paulina, and at the insistence of the Oportunidades Program (and the influence of scholarships for school attendance).</p> <p>Emigration for work, both national and international, is a family-wide phenomenon for the inhabitants of this municipality. From Comaltepec, they migrate mainly to Oaxaca, Acapulco and Mexico City. Women are employed mostly in domestic service with low wages and receive insignificant remittances. From El Charco Nduayoo, they migrate to Guerrero, Pinotepa Nacional, and above all, to the United States. Men who immigrate to the neighboring country get jobs as gardeners, construction workers, dishwashers and kitchen hands. Women participating in international migration are employed in factories and as nannies. Remittances in El Charco are very significant in the economies of households.</p>	<p>Comaltepec: Preschool Bilingual primary school (created 30 years ago) Technical junior high school Teachers frequently stop teaching because of their union obligations and activities.</p> <p>El Charco Nduayoo: Preschool Elementary school Federal public primary school (formal education). A unit of the San José Río Verde Technical Junior high school implemented three years ago.</p> <p>Youths in both communities who want to attend the senior high school must commute to the municipal capital where two types of school are available: a technological college (CECYTE) and a cooperative senior high school named after Martín Luther King.</p> <p>The municipal capital also has two technical junior high schools, which represent a better alternative to the basic junior high schools existing in the communities, but very few families are willing to assume the transportation costs. For students to attend senior high school there is no choice but to spend 20 pesos every day to commute between their homes and the municipal capital.</p> <p>The Universidad Pedagógica Nacional (National Pedagogical University) is located in the municipal capital.</p> <p>In Pinotepa Nacional (40 minutes away by car), there is a private university center and some technical and commercial study options are available (chosen by some youths in El Charco Nduayoo).</p> <p>To study at the Universidad Pública, young people must go to Oaxaca City, 10 hours away from both communities, and thus depends on the existence of family networks to provide lodging and resources and/or scholarships to pay for expenses.</p>	<p>Comaltepec: Casa de Salud (dilapidated and wanting medicines and medical supplies) attended by a health officer who only knows how to administer painkillers and is lacking even the most basic training.</p> <p>El Charco Nduayoo: Casa de Salud with a better supply of medicines and attended by a health officer who is trained and experienced.</p> <p>In both communities: The population is served by the IMSS-Oportunidades Rural Hospital (no. 45), which provides first- and second-level medical attention; in cases that require more specialized healthcare, patients are often referred to health institutions in Pinotepa Nacional. Saturation of services and burdensome workloads were observed. Patients have to wait many hours to be attended.</p> <p>The mobile health units visit both communities, in theory providing several medical services (dental care, nutrition and reproductive health); in practice, visits are mostly supervisory of community sanitation activities and activities having to do with the implementation of health talks or workshops.</p> <p>There are two private clinics and several private doctors' surgeries in the municipal capital that provide services to the population of the micro-regions (who attend because of unresolved ailments).</p> <p>Evidence of discriminatory practices and bad treatment towards patients.</p>

MICRO-REGION	ECONOMY AND LABOR MARKETS	EDUCATION SERVICES	HEALTH SERVICES
San Cristóbal de las Casas, Chiapas El Aguaje, Corazón de María, and San Isidro TOTZIL	Subsistence agriculture Small-scale commercial cultivation of fruit, vegetables and sheep Very little emigration to the United States. The municipal capital is an important service-providing center driven by tourism and the concentration of the area's population, so nearby communities find employment opportunities there in masonry, hotels, restaurants, clerk jobs in stores or as domestic hands. The majority of commercial transactions also take place in the municipal capital.	Greater coverage of education services than in the micro-regions in the north of the country, which is part of the reason for the high number of girls and young women attending schools. Primary schools Junior high schools in the indigenous communities, while in the mestizo community there is only one primary school (with only one teacher). Young mestizos must attend the tele-junior high school in Corazón de María.	El Aguaje (Totzil community): A health center (SSA) better equipped than the Casa de Salud located in the mestizo community; has a gynecological examination table and scales. San Isidro (mestizo community): Casa de Salud that is nothing but a wooden hut originally intended for the storage of materials; it is used for medical consultations every 10 or 15 days, and gynecological examinations are performed at the primary school. Corazón de María: Is a sanitization zone.
Communities of Las Margaritas, Chiapas; Saltillo (Tojolabal indigenous) and Bello Paisaje (Mestizo) TOJOLABAL	Subsistence agriculture on communal land (ejidos). No source of paid work unless through migration. Strong migratory flow to the United States, mainly to Florida, and more recently national destinations such as Playa del Carmen and Cancún (in Quintana Roo). In the United States, they work as agricultural day laborers, and, in Quintana Roo, they work in the construction sector and or service industry. In rural mestizo communities close to the municipal capital and Comitán, there are some employment options in mechanical workshops and department stores.	Saltillo: Bilingual primary school Technical junior high school (also attended by students from the local mestizo community, Bello Paisaje) Bello Paisaje: Federal rural primary school (there is no junior high school: mestizo families in this community send their children to the junior high school in Las Margaritas, perceived as being a mostly mestizo community; some enroll in the junior high school in Saltillo but have to pay a 100-peso enrollment fee, a payment from which Saltillo inhabitants are exempt).	Saltillo: IMSS-Oportunidades Clinic (founded in 1991) Bello Paisaje Does not have a health center, so its inhabitants are eligible to attend the IMSS-Oportunidades clinic in Saltillo even though they prefer to go to the municipal capital (Las Margaritas) or the city of Comitán in case of emergency.
Communities of Tumbalá: Alvaro Obregón Loma, Alvaro Obregón Planada, El Porvenir, and Emiliano Zapata, (all indigenous) CHOL	Poor quality subsistence agriculture (corn growing) owing to the conditions of the soil and the climate. Coffee growing for sale Regional work migration to Cancún (Quintana Roo), Campeche, Tabasco and Yucatán, where men work in construction or services connected with tourism.	Bilingual primary school in Zapata In Alvaro Obregón Planada (better connected with the municipal capital), there is a primary school, a junior high school and a senior high school.	In El Porvenir, an IMSS clinic provides services to the Alvaro Obregón population. It has a shortage of medicines and no doctor. Because of these problems, the inhabitants prefer to go to Tumbalá to get private medical attention (clinic personnel at the municipal capital refuse to attend to people from Alvaro Obregón because they are outside their jurisdiction) In Emiliano Zapata, there is an IMSS-Oportunidades health center with no doctor, manned by only one nurse and a nurse assistant who is doing her social service.

higher education institutions in the larger towns or cities. Moreover, although these micro-regions are covered by 'first level' clinics that provide basic healthcare, similarly to what happens with the coverage of senior high schools, the 'second-level' hospitals are located in larger towns or the municipal center, which are usually even further away than the towns with high schools, and do not necessarily provide a quality service.* The analytical documents for each of the ethnographic investigations under examination here identified the problems that erode the quality of service: poor and inadequate infrastructure, shortage of personnel, teacher and doctor absenteeism, and limited materials, equipment and resources in schools, clinics and healthcare centers. We found serious deficiencies in all of the studied micro-regions with respect to the quality of services provided. Although it is possible to find instances of clinics and schools that deviate from this trend, the ethnographies present a rather bleak outlook, one of acute deficiencies and flaws in quality.⁴⁻⁷

There are many communities, especially in the Tarahumara and the Pima micro-regions that have neither schools nor healthcare centers. As we know, access to health and education services is a requirement of the *Oportunidades* Program, so that beneficiaries can fulfill their co-responsibilities. Consequently, we only conducted fieldwork in communities that met these prerequisites and not in remote regions where schools or clinics were not relatively close by. However, even in the communities that enjoy the privilege of having schools or medical centers, the quality and type of service offered does not guarantee that education and healthcare needs were being satisfied.[‡]

This analysis, alongside the other analyses conducted, has identified that the greatest impact of the program (with respect, at least, to the schooling attainment of children and young people, and also in terms of household income, the capacity for home improvements and changes to the household's general state of well-being) occurs in domestic scenarios where there is a confluence of favorable factors such as the following: capacity of the parents (father and mother) to generate income to which the monetary aid of the program is added, good family health or at least the absence of illness amongst the household's main breadwinners and children of school age, remittances from members who have emigrated, and close proximity to education- and healthcare-providing centers. We have called these domestic contexts accumulation of advantages scenarios, in which health constitutes an essential component enabling household members to work and study. Episodes of illness erode a family's economy because expenses are incurred while seeking private healthcare (owing to the poor service and resources of the public clinics' and healthcare centers) and because illnesses frequently keep individuals away from work.^{2,13,14} We suggest that the scenarios most conducive to the accumulation of advantages also include extra-domestic factors (besides others of a domestic and familial nature) among which the improved service capacity of healthcare centers and the existence of schools that provide quality services and that are culturally and linguistically adequate are central.⁵

* We previously mentioned that Norogachi and Samachique, in the Tarahumara, constitute atypical cases owing to the presence of private hospitals endowed with excellent infrastructure and trained personnel who speak the *Rarámuri* language, which positively affects patient relations.

‡ The health and education technical documents provide analysis and reflections on the quality of the services.^{4,13}

⁵ It may be daring and even risky to mention here the contrasting cases of, on the one hand, the young people in Norogachi and Samachique, and on the other, those of the Pima micro-region in Yapachi-Maycoba. The former are more successful regarding their schooling attainment (there are students who have completed college/university and senior high school). In other words, the "successful" cases come from communities of the Guachochi municipality that are to a certain extent atypical because they have private hospitals, which are better adapted to local contexts and conditions (cultural, linguistic) than the Medical Rural Units and other public health care centers; have a better infrastructure; better trained personnel (with specialized doctors, lab and X-ray technicians); and provide 24-hour, 365-day, year-round medical attention. In contrast, in the Pima micro-region, where healthcare centers do not have a doctor and lack sufficient and appropriate medicines and supplies, we did not find young people with such encouraging profiles. Without actually going as far as to suggest that there is a direct and unequivocal relation between living in a community that enjoys decent healthcare services with good resolution capacity and education attainment, the impact of accessible and quality medical services does affect the general well-being and health of individuals, thus decreasing the amount of income lost, or absences from school, because of sickness, increasing the capacity of families to assign resources to the formal education of their children.

IMPACT OF THE OPORTUNIDADES PROGRAM

This section provides a general overview of the schooling levels attained and types of employment undertaken in the studied micro-regions. The occupations, work placement and the age of female former beneficiaries when they bear their first child are compared to their non-beneficiary counterparts (siblings who did not receive the program's benefits or children of non-beneficiary households). The questions guiding the analysis are as follows: 1) Does the prolonged exposure of children from households that were incorporated during the initial implementation of the program affect the employment trajectories of those young beneficiaries and former beneficiaries or do they continue, regardless, to perform *traditional* occupations (agricultural day laborers, peasants)? Although we have not analyzed the action itself of choosing between one occupation or another, it is assumed that if beneficiaries and former beneficiaries perform occupations that are different to those commonly undertaken by men and women in their community who have not been exposed to *Oportunidades*, we can attribute that difference to a broader range of employment options at their disposal. 2) Is the age at which beneficiaries and former beneficiaries form domestic unions or get married older than their non-beneficiary counterparts and their parents? Do they delay this process when compared to their non-beneficiary peers?

In accordance with the hypotheses presented at the beginning of this report, and based on the findings from this investigation as well as those from the regional analyses (in the analytical documents of the ethnographic evaluations in Chiapas, Chihuahua, Oaxaca and Sonora), we expect to prove that the *Oportunidades* Program has extended the school careers of former beneficiaries, postponing their entrance into the labor market, and has delayed their first domestic union and the birth of their first child. In addition, we expect to find that young people who are not exposed to *Oportunidades* tend to repeat the traditional patterns of their parents' generation and that the program's impact is more reduced among the indigenous population. Based on the opportunity structures of the micro-regions, we anticipate that both former beneficiaries and many of the job seekers who have never received program benefits look for work alternatives outside their communities, in cities within their states, in other regions in the country, or in the United States, owing to the scarcity of local economic options.

It is of interest to recognize and understand the factors that hinder the impact of *Oportunidades* benefits on the lives of former beneficiaries in terms of education, work and reproduction patterns/formation of new households. As a hypothesis, the qualitative evaluations of the program indicated that consolidated and aging households with significant health problems (diabetes, hypertension and other chronic-degenerative ailments) constitute scenarios that lead (to a larger extent than in other domestic situations) to the participation of children and youths in the household economy (domestic labor and agricultural work), interrupting the schooling trajectories of the minors. We also consider social networks to be an important factor in determining the education potential and the occupational opportunities available to young people whose homes were incorporated into the *Oportunidades* Program in 1998 (help from relatives and godfathers, access to information about jobs locally or migration contacts, presence of schools beyond primary level, or proximity to urban centers where these schools are located). Moreover, we propose that the availability of personal resources and assets (income through paid-work or through remittances from relatives who have emigrated, existence of crops or cattle, etc.) enables young people to be supported through junior and senior high school, even if and when program benefits cease for a particular grant holder or household.

IMPACT ON EDUCATION

The analysis shows that the children exposed to the *Oportunidades* Program as grant holders exhibit remarkable attainments in their individual schooling.* Contradicting our hypothesis, the greatest increase in school attainment occurred among the indigenous population. Moreover, indigenous daughters demonstrated the greatest gains (lon-

* School grades completed.

ger schooling trajectories and higher schooling levels). Therefore, this means that the greatest impact in terms of widening the generation gap occurs among indigenous students, and that such an impact is even greater when we compare mothers and daughters. The implication is that the *Oportunidades* Program has contributed to the decrease in gender and ethnic inequality with respect to schooling.

First, let us look at the schooling levels attained by children (sons and daughters) compared to that of their parents.

TABLE 6
Attainment levels and
years of schooling for
both generations:
Beneficiaries and non-
beneficiaries

**ATTAINMENT LEVELS AND YEARS OF SCHOOLING FOR BOTH GENERATIONS:
BENEFICIARIES AND NON-BENEFICIARIES**

GENERATIONS	BENEFICIARIES	NON-BENEFICIARIES
Parents (both sexes)	4.35 (193)	4.12 (121)
Children (both sexes)	9.58 (256)	7.34 (192)
Others (adopted and other members of the children's generation)	8.0 (18)	7.73 (11)

A review of the analytical sample, which includes all twelve micro-regions and is focused on the group with the greatest potential impact from the *Oportunidades* Program, shows that:

In the country's more rural and marginal communities with a strong indigenous presence where there is a primary school and some type of access to healthcare, the increase in intergenerational schooling mobility (the difference between the number of years a child attends school in comparison to their parents) is three years in one generation without the *Oportunidades* Program's support. This increase, of course, excludes those communities where there is no such access to education and healthcare, and the less rural and urban communities where these services have existed for years and the schooling levels of the parents were already higher.* The long-term operation of the *Oportunidades* Program in marginalized rural communities like those studied here, has increased intergenerational schooling mobility by two years. In other words, advancement was increased from three to five years.

Nevertheless, this result underestimates the full impact of the *Oportunidades* Program on schooling, because a considerable number of former beneficiaries are still studying, and their schooling achievements will, therefore, be greater on average (see below). Also, a not so insignificant proportion of former beneficiaries (8.29%) are currently attending university (anthropology, engineering, law, dentistry, among other careers).

The objective of this evaluation, however, is to analyze the impact of the program with regard to schooling on men and women and on indigenous and non-indigenous groups, to specify if the impact is differential and to identify the factors and mechanisms, programs and services that affect the result. The following table refers to the levels of schooling achieved by parents and children, distinguished by gender.

TABLE 7
Schooling levels by
sex: parents and chil-
dren, beneficiaries and
non-beneficiaries

SCHOOLING LEVELS BY SEX: PARENTS AND CHILDREN, BENEFICIARIES AND NON-BENEFICIARIES

GENERATION	BENEFICIARIES	NON-BENEFICIARIES
Fathers	4.45 (94)	4.04 (49)
Mothers	4.26 (99)	4.17 (72)
Sons	9.78 (128)	7.38 (96)
Daughters	9.40 (127)	7.31 (96)

* Primary schools in the regions of Oaxaca and Chiapas were created at least thirty years ago (in the seventies); the junior high schools and senior high schools are more recent (especially the former; in fact, the lowest coverage occurs for the higher levels of *bachillerato* or senior high school). In large cities or towns, primary schools, junior high schools and senior high schools have existed for a longer time.

The schooling averages, according to this table, are practically the same for men and women. In other words, if the variable ethnicity is not controlled, the impact of the program on schooling among men and women is the same. However, as the next table illustrates, indigenous fathers show an average level of schooling that is clearly inferior to that of *mestizo* or non-indigenous fathers.

SCHOOLING LEVELS BY ETHNICITY: ETHNIC GAP IN THE GENERATION OF FATHERS AND MOTHERS

	INDIGENOUS FATHERS	MESTIZO FATHERS	INDIGENOUS MOTHERS	MESTIZO MOTHERS
Beneficiaries	3.77 (60)	5.67 (34)	3.39 (56)	5.40 (43)
Non-beneficiaries	3.51 (35)	5.36 (14)	3.84 (43)	4.67 (29)

TABLE 8

Schooling levels by ethnicity: Ethnic gap in the generation of fathers and mothers

The ethnic gap decreases for male children who were exposed to the *Oportunidades* Program. While there is a difference in schooling of almost two years in favor of *mestizo* fathers and almost a year and a half in favor of *mestizo* mothers when compared, respectively, with indigenous men and women, this gap has disappeared for beneficiary children. There is only 0.41 years difference in favor of *mestizos* (it remains firm among non-beneficiary children with 2.26 years in favor of *mestizo* males, which means that the ethnic gap has increased among the male non-beneficiary population). In the case of females from the children's generation, the ethnic gap reverses in favor of indigenous daughters when they have been exposed to *Oportunidades*: 0.82 years in favor of indigenous beneficiary women, while the ethnic gap remains firm among daughters who have not received the benefits of the program (though slightly less so than in the mothers' generation), with a difference of 1.68 years in favor of *mestizo* women.

SCHOOLING BY ETHNICITY: THE OPORTUNIDADES PROGRAM CLOSES THE ETHNIC GAP IN THE CHILDREN'S GENERATION FOR BENEFICIARY HOUSEHOLDS

	INDIGENOUS SONS	MESTIZO SONS	INDIGENOUS DAUGHTERS	MESTIZO DAUGHTERS
Beneficiaries	9.63 (80)	10.04 (48)	9.73 (75)	8.91 (52)
Non-beneficiaries	6.48 (58)	8.74 (38)	6.82 (68)	8.50 (28)

TABLE 9

Schooling by ethnicity: The *Oportunidades* Program closes the ethnic gap in the children's generation for beneficiary households

With respect to the gender gap in the children's generation among those who have been exposed to the program, it has reversed in favor of indigenous women by a slight but noticeable difference, while it is still remarkable in the case of the *mestizo* population with higher schooling in the case of *mestizo male children* when compared to *mestizo female children*. Among the non-beneficiary population of this generation, it is significant that the traditional gender gap (in favor of men) also reverses slightly among indigenous non-beneficiaries and decreases notably among *mestizos*. As stated by a *titular* beneficiary* *mestizo* woman of San Bernardo (Alamos, Sonora), the mother of a young senior high school student, "There are many men...who say that there won't be any more women for the home because nowadays all young girls want to go to school, that's why now men have to get more money because if they don't, the girls won't want them. I say it's alright that they get the money. These days there are many young women studying... long ago we didn't go to school; not because we didn't want to but because our parents didn't want to send us. They said to us: What for, if you're going to get married? You better get in the kitchen now."[†]

* Mothers who are responsible and accountable for administering the *Oportunidades* cash transfers for their families and who ensure that the family's co-responsibilities are met.

† Case study of a *mestizo*, non-beneficiary household, San Bernardo (Alamos, Sonora), Guarijía area, carried out by María del Carmen Bojórquez.

When referring to schooling level and educational achievements in this text, we are talking about the number of years and the levels/grades studied. However, we do not necessarily mean that the number of years or the levels completed by beneficiaries, former beneficiaries or non-beneficiaries equates to the accumulation of knowledge as part of a process of learning and the development of human capital. Agudo¹⁵ has shown that even though the *Oportunidades* Program closes the ethnic gap with respect to encouraging full and continued attendance in school (which results in the decline, and in some cases a reversal of the ethnic gap in schooling levels), the differences among educational centers in terms of quality still remain. For example, rural unitary and bilingual primary schools, and the *tele* junior high schools are all characterized by greater and more serious deficiencies (with respect to infrastructure, teaching quality and teacher absenteeism) than the non-bilingual primary schools and the technical junior high schools in the municipal capitals or larger towns. The results of the analysis presented in the *Technical Document on Education* led its author to assert that schools' failures to fulfil the requirements of the study programs, and to meet their obligations and duties, restricts the potential contribution of the *Oportunidades* Program to help young people foster an effective portfolio of skills and abilities by increasing the length of time children spend in formal education.¹⁵

This analysis of the impact of *Oportunidades* Program on the schooling of beneficiaries with a long exposure to the program comprises a variety of different scenarios. Firstly, the states have distinct characteristics and are different from each other, and so are the micro-regions within the states themselves. The greatest schooling achievements, including the narrowing and reversing of the ethnic and gender gap, occur in Oaxaca and Chiapas, where the program has a wider and better coverage within contexts that enjoy greater access to education services. Growing up in a community that has a junior and senior high school is an extremely important factor for lengthening schooling trajectories. The tables constructed from the registration data of the former beneficiaries in the studied micro-regions in Oaxaca, which correspond respectively to the different cohorts of beneficiaries depending on their length of exposure to the program (organized according to the school year or grade they were attending when they first started to receive *Oportunidades* benefits), clearly show that young people of both sexes in Jaltepec de Candayoc (Mixe region), but especially females, attain higher schooling levels as beneficiaries, something that did not occur to the same degree in other communities of the same or other municipalities (see annex 3). Jaltepec, we must remember, is a special case; although it is not a municipal capital, it has educational services from pre-school to university level (the *Ayuuk* Study Center of the Intercultural Indigenous University, which uses the Jesuit University System). Similarly, although on a much more moderate scale, Norogachi and Samachique, in the Guachochi municipality in the Tarahumara, have schools from preschool to senior high; many young *Rarámuri* currently attending university come from this area. On the other hand, the *Pima* micro-region, which suffers from greater shortages in education (and health) services, has the shortest schooling trajectories out of the three regions studied in Chihuahua. In Sonora, we also found relatively high rates of indigenous college students, the majority of which are young people from the Mayo and Guarijía micro-region, who studied senior high school outside their communities but within the micro-region and then migrated to the cities of Hermosillo or Ciudad Obregón to attend university. Not all of these youths manage to finish their college studies. Martín, a young Yaqui ex-scholarship holder from Huirivis, for example, finished senior high school and went to Obregón to study for a bachelor's degree in Biology. However, he only studied one semester and left school to start working since *it became too hard because it was too far away and he felt sorry for his mother because she was supporting the household alone; he preferred working to help his mother*. Transportation between Huirivis and the school cost him fifty pesos per day.

The cases studies and profiles of children and young people forced to abandon their education (still the majority) help us to understand the factors that contribute to low levels of schooling, early school desertion and the repetition of such patterns, often in favor of seeking employment in *traditional* jobs, all of which contribute to and define the intergenerational transmission of poverty. The case study of Emilio, a former beneficiary from a *Mazateco* community, sheds light on some of the factors that explain this process. At age 19, Emilio had been a beneficiary of the *Oportunidades* Program for almost four years (since fourth grade in 1999, he had been identified by researchers as one of the participants with most potential for long exposure). During his first year of junior high school, when he

was eight years old, he dropped out of school and began working as a day laborer on a farm (his family had never owned land). Although he is the penultimate child in terms of birth order he never had the benefits usually associated with not being the first-born because he was the only male left after both his older brother died prematurely of an illness that the local doctors never identified and his father died of alcoholism. He had to assume economic responsibility for the family using his only asset: his labor, which he sells for “whatever comes up,” sometimes as a day laborer picking coffee, other times as a construction worker in his village or in nearby towns. Several factors converge in this case (accumulation of disadvantages): the absence of productive assets; alcoholism and premature death of the father and breadwinner; alcoholism of the mother, who works whether inebriated or sober, picking coffee in exchange for 80 pesos per day; the mother’s monolingualism and illiteracy, which kept her from recovering a lost scholarship for a daughter who was still studying; and finally, the disappointment Emilio faced when he had to leave school of his own free will. It is interesting, though, that Emilio’s sisters, who come from the same background, managed to stay in school and break from this accumulation of disadvantages scenario after finishing junior high school, despite one of them losing her scholarship (which they could never recover). The eldest sister finished senior high school in Mexico City with the support of an uncle (economic support and contacts), where she still lives and works as a quality-control supervisor in a sewing workshop that provide her with social security and legal benefits, which enabled her to get a mortgage and buy the house she now shares with her boyfriend in Chimalhuacán. The other sister, who is the youngest of the siblings in the family and is a beneficiary, is currently in her first year of junior high school and is considering finishing senior high school and getting a job in the city. It is the females, much more so than the males, who are able to take advantage of the benefits and opportunities of the program, and to experiment with changes in their life conditions. At least in the case of the older sister, her gender, combined with the resource and emotional support from her uncle, mitigated the disadvantages or the effect of being the first-born.

Gender still clearly affects the importance parents place on schooling (and whether they give their daughters *permission* to study junior and senior high school). However, as daughters are *less valuable* as workers/income providers for the family, they are able to continue studying. Consequently, there is a higher presence of girls and young females in schools and a lower presence of males. The latter are indeed seen as valuable economic providers from an early age (the integration of boys and young men into the labor market can start from as early as the age of thirteen, and most of them engage in economic activities similar to those of adults) because they can receive the pay of an adult day laborer. The only more or less equivalent occupation for girls would be employment as maids; however, this type of work is less frequently available. Although there is often a fall in the numbers of girls attending school after finishing primary education (owing to the perceived dangers or risks associated with attending a school that is further away – pregnancy amongst others), adolescent girls seem to recover lost ground during high school (not to mention the fact that the phenomenon of removing girls from school after primary school is on the decline).

After reviewing the case studies of all four research areas (twelve micro-regions) we can deduce, with little room for doubt, that there are a set of factors which encourage educational achievement: 1) being a beneficiary (having an *Oportunidades* grant); 2) the presence of schools in the local community; 3) being the last-born of the siblings in the household; 4) absence of illness in the household; 5) capacity of parents to act as economic providers (death of the father or of the main provider is an highly unfavorable factor); 6) existence of household assets and resources that enable payment of education costs (transportation, photocopies, Internet access and rent of computers, etc.); 7) robust social networks (relatives who can provide economic support and information about schools in other communities, including cities, and who can help with lodging); and 8) being a woman. The difference between first-born and last-born children, which we have found in other investigations, is still valid. From an early age in their life, first-borns have to assume economic responsibilities (more so if the family has not yet been incorporated to the program). The eldest children do not reach the same schooling levels as their younger siblings. In the cases where a parent becomes ill, especially if they become incapacitated and can no longer work, grants are not enough to stop children abandoning their schooling in order to support their household, more so if the parent who became ill was the main breadwinner.

IMPACT ON REPRODUCTIVE PATTERNS

One of the aims of the *Oportunidades* Program is to delay the union or marriage of young people as a means of affecting the reproductive patterns that will reduce fertility, extend schooling and eliminate the tendency to view children as potential income providers. It is not possible to discuss changes in the average age at which women are having their first child because most daughters in the study (currently between 15 and 25 years old) have not yet entered motherhood. The analysis shows that a good proportion (26.3%) of indigenous daughters who were former beneficiaries have already had their first child, but the majority of indigenous beneficiaries have not yet had any children (73.7%). Among indigenous non-beneficiary females, the percentage of those who are already mothers is higher (32.4%) than that of beneficiaries; thus, the percentage of those who have not yet started their reproductive cycle is lower when compared to indigenous beneficiary women (67.6%). Moreover, *mestizo* beneficiary and non-beneficiary women of the same generation who have already started their reproductive cycle represent a higher percentage of the sample population when compared to indigenous women in the same situation. However, in the case of *mestizo* beneficiary females, the number of those who are already mothers is higher, when compared to the *mestizo* women who have never received the benefits of the program: 42.3% of *mestizo* beneficiary women are already mothers, while the percentage of non-beneficiary *mestizo* mothers is 35.7% (57.7% of *mestizo* beneficiary women are not yet mothers, while the percentage increases to 64.3% among *mestizo* non-beneficiary women). The analysis shows, then, that the impact on fertility is greater on indigenous women than on *mestizo* women. While exposure to the *Oportunidades* Program has quite a remarkable affect among indigenous women, this impact does not seem to exist among *mestizo* women. In fact, it seems that *mestizo* women not exposed to the program are delaying the start of their reproductive cycle longer than beneficiary women.* The analysis shows a coherent pattern. The impact on fertility is greater on indigenous women than on *mestizo* women, a fact that coincides with the program's greater influence on the education of the former. The extension of school careers affects (or is associated with) the delay in the start of the reproductive cycle.

It is also significant that the birth of the first child does not necessarily imply leaving school among indigenous women. Some women in the study (at least three in our database) have continued their formal education, despite motherhood and having entered into their first union. With their parents' support, they are resorting to various strategies to continue with their schooling careers. In other words, the age at which they had their first child does not automatically indicate that they are repeating the behavior patterns of their mothers. No doubt, an important proportion of former beneficiaries, typically the least schooled, are already in traditional unions with peasants, day laborers and other men from their towns or nearby towns. However, because there are a greater number of women who now continue their studies, with or without children, we think that they are less likely to establish unions similar to those of the previous generation. Naturally, if local economies do not improve, postponing the formation of conjugal relationships, and delaying the start of the reproduction cycle, does not mean that they will no longer be poor. Despite all of the previous concerns, a great number of young women have not had children while studying, and this makes it possible to conclude that the average age of beneficiaries and non-beneficiaries at the time when they give birth to their first child will be considerably older than the corresponding age of their mothers' generation.†

There are factors and processes that are related to pregnancy at an early age. In the Tarahumara, Sariego and his collaborators concluded that "In the mountain regions, adolescence is very short among *mestizos* as well as indigenous inhabitants, and only in areas where the schooling of children and youths has become more widespread

* This anomalous behavior of *mestizo* women will have to be tested by further statistical studies with databases that include a greater number of *mestizo* women who were exposed and not exposed to the *Oportunidades* Program.

† The average age at which women in the mothers' generation had their first child was around the age of 19 (18.98), with a very small variation between the different regions (or states) studied: mothers from Oaxaca are the most precocious (18.47 years old at the moment of the first childbirth), and those from Chiapas delayed the birth of their first child for the longest (19.64 years old). Women of the mothers' generation in Chihuahua and Sonora started their reproductive cycle practically at the same age (18.95 and 18.93 years old, respectively).

PERCENTAGE OF WOMEN BETWEEN 15 AND 25 YEARS OLD WHO ARE STILL NOT MOTHERS, BY PROGRAM STATUS.

PROGRAM STATUS	ETHNICITY	PERCENTAGE
Beneficiary	Indigenous	73.7
Non-beneficiary	Indigenous	67.6
Beneficiary	Mestizo	57.7
Non-beneficiary	Mestizo	64.3

TABLE 10
Percentage of women between 15 and 25 years old who are still not mothers, by program status.

and institutionalized has it been extended. To various degrees, this change has occurred in the three zones under study, largely owing to the relatively diverse range of educational options that are on offer there (more so than in other parts of the Tarahumara), ranging from pre-school to senior high school.⁷ At the same time, Sariego and his team warn that marriage practices of the Tarahumara population as a whole are not changing in a significant way for several reasons. Firstly, the majority of this population lives on ranches and in villages – distinct from those of the micro-regions studied – where there is no access to schooling. In addition, in this cultural context, an early union or premature marriage (following a model that is firmly rooted in tradition and custom) and the start of the reproductive cycle do not constitute obstacles to schooling.

Others factors are involved in determining why many women still become mothers at an early age. A crucial factor here is the relatively little success that birth control policies have had on this age group (adolescent women), in contrast with the widespread use of a range of birth control methods by women between 30 and 40 years old. For example, research by the Oaxaca team into the reproductive patterns of the women in our analytical sample prove that practically no women of a reproductive age (in the mothers or daughters generation) undergoes birth control practices before they have had their first child. The use of birth control occurs only to prolong the periods between childbirths, but not to delay the first pregnancy. As confirmed by the research performed in many of the locations in this study, the workshops being provided for young people as part of the New Health Care Model do not provide enough nor accurate information, nor in an efficient way, about the care young people should take to avoid an early pregnancy (or HIV-AIDS). Furthermore, the workshops simply become meeting places for young people and, more often than not, lead to the creation of new couples. Many of the mothers in the communities under study, not without certain irony and with an air of mischief, comment that the groups formed by the Rural Youth Attention Centers (CARA – *Centro de Atención Rural al Adolescente*) achieve exactly the opposite of what they seek to prevent and end up advancing early union and pregnancy.*

The position of individuals in the birth order of siblings also has an effect. In Chiapas and Oaxaca, those children who are more likely, and to a greater degree, to break from their traditional cultural patterns are current and former last-born beneficiaries who, as we have seen, enjoy the privilege of not having to bear, or help to bear, the burden of supporting the family. The eldest siblings usually abandon their education so they can embark on their roles as economic providers at an early age, which is also associated with forming early unions. Therefore, the combined success of a long school career and delayed union/marriage and first pregnancy occurs within communities and domestic scenarios which, as proposed by Agudo,⁴ allow for a certain combination of resources and capacities: the wish to study junior and senior high school (expectations and mindset); the existence of schools (particularly high school level) in or in close proximity to the community; the existence of social networks; help or additional income

* It should be noted that the position of the current writer does not necessarily agree with these comments. In fact, my point of view is that these workshops should be promoted, but they should be turned into gatherings where comprehensive and adequate information is provided. The workshops observed in Oaxaca are not attended or led by health professionals; they are places where youths train themselves with the information that they, on their own, manage to gather, leaving many information loopholes and even the handling of erroneous information (see González de la Rocha, Paredes y Sánchez,⁵ section 4.4 Health, Self-healthcare workshops, and Annex 7.5, section 7 of the said document).

to support the expenses derived from high school or higher education; being the last-born of the household. These are community and household scenarios of accumulation of advantages.² In domestic and community scenarios where the favorable concurrence or combination of these factors does not take place and where, in fact, the opposite scenario is exhibited (illness, social isolation or weak social networks, shortage of services), which we have called scenarios conducive to the accumulation of disadvantages, we observe the participation of children and youths in household economies (domestic labor and agricultural work), which interrupts the schooling trajectories of these minors and encourages early unions and pregnancy. First-born women who belong to such scenarios in the studied micro-regions in Chiapas had their first child at 18/19 years old, just like their mothers.

IMPACT ON OCCUPATION

When this evaluation was originally devised, it was suggested that the long-term occupational impact of the program would not have spectacular gains within the first 10 years of its operation (10 years after the first beneficiaries entered the program while they were in third or fourth grade of primary school), owing to the conditions of the national labor market, which, after some good years (1996 – 2000, 2004 and 2007), is still coping with the accumulated consequences of 26 years of crises, instability and slow economic growth; the result of which has seen the increase of informal and insecure jobs, mostly in the intermediate and lower tiers of the labor market.

Amongst the four states in our study, economic performance is unequal. In particular, the contribution of the southern states of Oaxaca and Chiapas to the national economy has dwindled, contributing the lowest amounts to Mexico's GNP. In Oaxaca's case, its contribution to the country's GNP fell from 1.67% in 1993 to 1.57% in 2006; in the case of Chiapas, it went from 1.79% to 1.62% over the same period (INEGI: *Banco de Información Económica*). These two states represent 7.5% of the country's total population, with an extremely small contribution to the GNP variation (0.05 in both cases). Thus, their labor market is particularly slow, causing a significant number of inhabitants from Oaxaca and Chiapas to leave their state in search of a better future.

On the other hand, while the population of Chihuahua and Sonora as a whole is more than two million people less than the total population of Oaxaca and Chiapas (the joint population of Chihuahua and Sonora is 5.4% of the national total), the GNP contribution of these northern states is significantly greater (0.22 and 0.24 respectively). Unlike our southern states, Chihuahua's contribution to the country's economy increased from 3.92% of the GNP in 1993 to 4.55% in 2006, while Sonora's contribution increased from 2.63% to 2.85%. The states that exhibit the greatest contrast appear to be Chihuahua, with an annual growth rate of 4.27% from 2005 to 2006, and Oaxaca, with very poor economic performance, and a growth rate of only 1.75% for the same period (INEGI, Mexican National Account System "Gross National Product by State"). However, this data, which provides the economic contexts for the micro-regions under study and offers a broad overview of the states, also conceals the internal differences between the micro-regions. Even so, the data gathered during fieldwork shows that labor markets in these northern states are indeed much more dynamic (especially in the Sonora micro-regions) than those in Oaxaca and Chiapas. For that same reason, there is very little out-of-state migration in the Sonora and Chihuahua micro-regions that were studied; and when migration does occur, it is related to work opportunities offered within the perimeter of regional economic dynamics (Sinaloa included).

STUDY AS THE MAIN OCCUPATION

Before introducing the analysis of the job categories of individuals included in the sample who are engaged in paid and unpaid economic activities, we wanted to mention the most notable impact of the *Oportunidades* Program: individuals of the children's generation who state that studying is their main occupation. One of the specific program objectives has been to delay the age of entrance into the labor market of young people through the lengthening of schooling trajectories.* For example, *Oportunidades* does not want 15-year-olds to be employed nor to work

* The parents and first-born children who did not receive the support of the *Oportunidades* Program left school to start working at ages ranging from 8 to 14 years old.

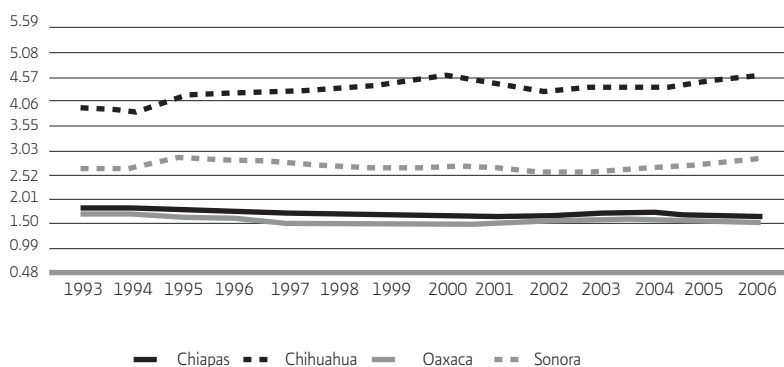


FIGURE 1
Gross Domestic Product by state. Annual figures for the period 1993-2006, at current prices. Contribution (%) of each state in terms of economic activities.

Units: Percentage of contribution

Source: INEGI. National Accounts System of Mexico

in productive activities on family land. For this reason, we consider the high percentage (see below) of sons and daughters who state that studying is their main occupation to be an impact worthy of being taken into account, so that the program continues to focus its efforts on this achievement and develops both this and other objectives. The following table shows that a much greater percentage of young people who are or have been exposed to the program are continuing their education, particularly among indigenous men and women and among *mestizo* women. It is pleasantly surprising to note that of this group of beneficiaries aged between 15 and 25 years old who are still studying, 8.29% of former beneficiaries are currently taking university and college courses, particularly indigenous and mestizo women.

YOUTHS BETWEEN 15 AND 25 YEARS OLD WHO DECLARE STUDY AS THEIR MAIN OCCUPATION, BY SEX AND PROGRAM STATUS (PERCENTAGE)

PROGRAM STATUS	SEX	ETHNICITY	PERCENTAGE
Beneficiaries	Male	Indigenous	26.6
Non-beneficiaries	Male	Indigenous	12.1
Beneficiaries	Male	Mestizo	22.9
Non-beneficiaries	Male	Mestizo	23.7
Beneficiaries	Female	Indigenous	28.0
Non-beneficiaries	Female	Indigenous	7.4
Beneficiaries	Female	Mestizo	32.7
Non-beneficiaries	Female	Mestizo	10.7

TABLE 11
Youths between 15 and 25 years old who declare study as their main occupation, by sex and program status (percentage)

CONSTRUCTION OF AN OCCUPATIONAL SCALE

We did not apply a universal or international scale to measure the jobs of young current and former beneficiaries but instead analyzed the jobs they currently hold and gradually arrived at a hierarchical classification.

The hierarchical classification is based on information about the type of occupation (based on the qualifications required to perform it), how often it is performed, benefits (in the case of urban businesses), and the type of business. A serious problem arises from the fact that some young emigrants permanently cut themselves off from their family ties. For this reason, we lack data for five emigrants from the Oaxaca micro-regions who left for the United States.*

* Fortunately, we have data for all individuals in the database – even on emigrants– from Chiapas, Chihuahua and Sonora.

The decision was made to base the classification or occupational hierarchy on qualifications because this is the aspect that the *Oportunidades* Program seeks to influence through its work. However, the classification we gave to each job is also measured by its stability: security or insecurity, and formality or informality of the sector or type of business to which the job belongs. Thus, those who help to sell food at home enter a lower classification than a waitress in an established restaurant, for example.

Classification is intentionally detailed at the lower and intermediate levels of the occupational scale, to identify the small differences that exist between former beneficiaries and former non-beneficiaries who belong to poor, peasant farming and day-laboring families. Its intention is to recreate the value that interviewees assign to these occupations.

Less qualified, traditional rural occupations are categorized in the first level: manual workers and agricultural day laborers. We place “pickers” along with manual laborers, but we identified other related occupations that require specific skills: agricultural laborers working in irrigation, fertilizer and pesticide sprayers and fumigators, who enjoy greater recognition and a higher salary (and require at least reading and writing to enable them to understand instructions for the handling of chemicals and the machinery used).

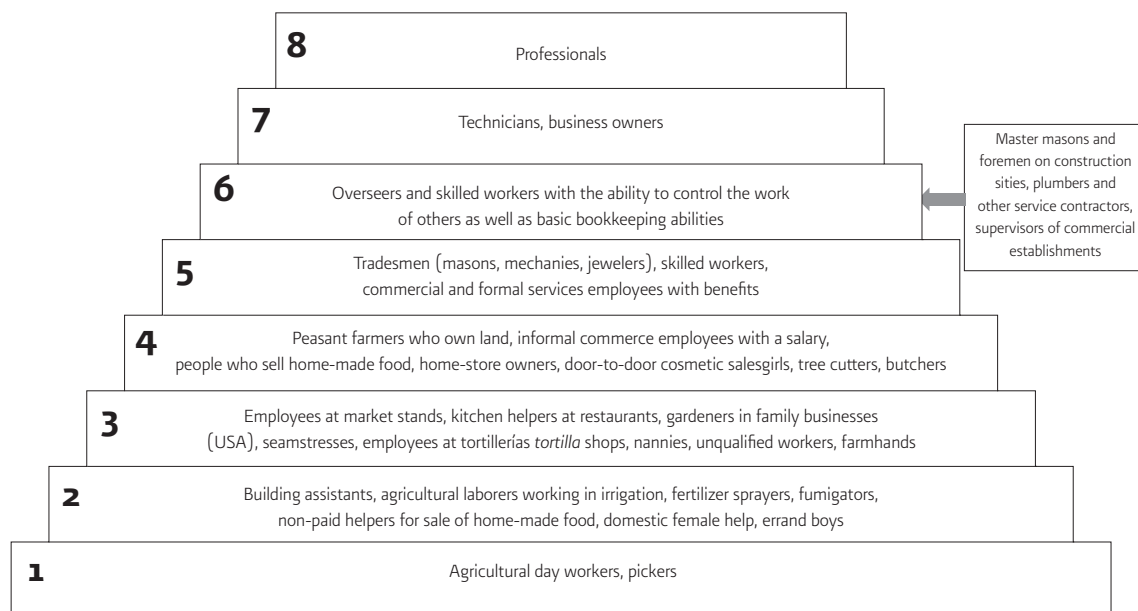
In the second level, we place masons’ assistants, the above-mentioned irrigation laborers, fertilizers and fumigators, those who help sell homemade food for no salary, maids/domestic help, and store employees who work for a few hours a day running errands (a level below other workers who perform the same function but have more stable, full-time jobs).

In the third level we categorized employees at market stalls, kitchen helpers in establishments, gardeners in family businesses (in the United States), seamstresses, employees in *tortilla* shops, nannies and unqualified workmen. Farm workers are also included here, a level up from fertilizers, because of the regularity of the job.

The core of the fourth level is formed by peasants who own land and employees in informal commerce with a salary. This level also includes people who sell homemade food, home-store owners, door-to-door cosmetic salesgirls, tree-cutters and butchers. It is worth noticing that we decided to place peasants who own land on this level because they possess their own means of production. Although, given the impoverishment of the land and frequent droughts, floods and other types of *natural* disasters (actually, caused by man), agricultural production has become increasingly less profitable.

The fifth level is formed by tradesmen (masons, mechanics and jewelers), qualified workers and commercial and formal services employees with benefits.

FIGURE 2
Occupational hierarchy



The sixth level is formed by master masons and foremen on construction sites, plumbers and other service- contractors, overseers and supervisors of commercial establishments with employees. This level takes into account the skills required to command and manage the work of others, and basic bookkeeping.

The seventh level basically consists of owners of small, established businesses and people performing technical professions (teachers).

The eighth level corresponds to professionals, who are not yet present in the workforce but who, given the attendance of former beneficiaries at universities, will be available in the near future.

There is no ninth level. As expected, there are no high-level officials or formal-business directors. It is possible that some gardening contractors placed at lower levels employ more than five people, but we do not consider these businesses as formal, even though they may be profitable in the United States.

Using the previously described categories, occupational classifications were devised. Categories 1 to 3 were combined to form the first tier or lower occupational rung. Levels 4 and 5 were joined to form the intermediate tier, and finally, levels 6 and 7 constitute the higher occupational tier.* Joining the levels together was a response to the need to simplify the analysis of the database, which, despite having over 700 individuals (huge in terms of anthropological samples), is small for statistical analysis.

At this point, it is necessary to remember, given the focus employed here, that there are two reasons why labor force is the most important resource for individuals and domestic groups: firstly, all households have it, and, on some occasions, it is the only abundant resource they have and secondly, remunerated work (from paid jobs) is the predominant or exclusive source of monetary income of the majority of households. Moreover, "...in the dynamic processes involved in asset accumulation, employment plays a strategic role in that it is closely linked to raising standards of living and 'moving forward' – through income – while at the same time it can have the opposite effect in terms of social and human capital".²¹ In other words, employment and occupations provide access to various levels of well-being, not only because different occupations and occupational levels are positioned within different pay scales or generate higher or lower levels of remuneration, but because they connect individuals, in varying degrees, to social security systems, health and education services, and other goods that contribute to well-being (like social networks).

The preceding table shows that the indigenous population of this generation (sons and daughters) not exposed

OCCUPATIONS OF INDIGENOUS SONS AND DAUGHTERS: PERCENTAGE EMPLOYED WITHIN EACH TIER

OCCUPATIONAL TIER	BENEFICIARY MEN	NON-BENEFICIARY MEN	BENEFICIARY WOMEN	NON-BENEFICIARY WOMEN
1 – 3	57.1	83.6	46.4	80.7
4 – 5	35.8	14.0	39.2	15.4
6 – 7	7.2	2.3	14.3	3.8

Note: Results only include data for those who are employed or students who have declared a regular occupation.

TABLE 12
Occupations of indigenous sons and daughters: percentage employed within each tier

to the *Oportunidades* Program is concentrated in the lower levels of the occupational hierarchy, with a notable presence of non-beneficiary men, while the percentage of beneficiaries in the same tier, although still a majority, is considerably less, especially among women. It is possible that the main occupational change is taking effect within the intermediary tier (categories 4 and 5), with a significant presence of beneficiary men and especially beneficiary women. Finally, it is also the beneficiary females who have the greatest presence in the top tier (categories 6 and 7), a little over 14%. By itself, the number may seem small, but when comparing beneficiary women with their non-beneficiary peers, the difference is very significant in favor of the former.

* As mentioned previously, the study sample did not present any cases of ninth-level occupations; therefore, it was not necessary to build a layer with that category.

TABLE 13
Occupations of mestizo sons and daughters: percentage employed within each tier

OCCUPATIONS OF MESTIZO SONS AND DAUGHTERS: PERCENTAGE EMPLOYED WITHIN EACH TIER				
OCCUPATIONAL LAYER	BENEFICIARY MEN	NON-BENEFICIARY MEN	BENEFICIARY WOMEN	NON-BENEFICIARY WOMEN
1 – 3	74.0	72.0	50.0	50.0
4 – 5	22.2	16.0	31.25	50.0
6 – 7	3.7	12.0	18.75	0

Note: Results only include data for those who are employed or students who have declared a regular occupation.

The results for *Mestizo* sons and daughters are less clear-cut. Regardless of their program status, the men concentrate in the lowest tier, but the numbers of beneficiary women in the intermediate and top tiers are noteworthy.

Despite the efforts of the *Oportunidades* Program, the occupational impact that was expected from the program has not yet occurred, given the limited work options and very poor local opportunity structures, which will not improve until regional economies are reactivated by the creation of jobs. In the regions where international emigration is already common practice, former beneficiaries look for work alternatives in the United States, although jobseekers who have been exposed to the program that do emigrate tend to delay this process for a few years because of their extended school careers.*

Even though their order of importance is not the same, the factors associated with changes in the occupational hierarchy are similar to those that affect schooling attainment, because they are both connected (although less so in the case of *mestizo* men). For example, as a young adult, it is no longer as decisive to have a healthy father or mother who is an economic provider, despite this being a major factor (alongside others mentioned earlier) that influences the path of individuals throughout their school careers. The importance of the position that individuals occupy in the reproductive cycle of the household (first-born versus last-born) stands out. While first-borns generally enter the workforce at a very early age, usually joining their families in peasant activities (work in the cornfield), the latter-born children tend to delay the start of their working life. In other words, the productive participation of individuals, especially males, and the age at which economic obligations are adopted are significantly shaped by their position in their family's domestic structure. The youngest siblings generally start their working life at an older age, attending school and thus increasing their schooling levels and potential qualifications. Early participation in the domestic economy of a peasant household is rarely a temporary occupation that offers job progression and access to the higher occupational tiers later in life. Rather, those who at 14 (or before) leave school to become economic providers or co-providers of their parental households through the investment of their labor in subsistence production or paid agricultural day work (day-laborers), remain in that first category, do not return to school, marry at an early age, and acquire economic responsibilities early on in life to support their childhood homes.

Moreover, family networks often play a major role in young people's access to occupations other than those normally found in their hometowns, as family members, experienced in other types of employment, usually through migration to other regions and cities, or the United States, aid their younger kin to find work. For instance, the young men who have migrated to Mexico City from the Mazateca area did so supported by the networks established by fellow villagers and relatives who had migrated years before. Once in the city, they engaged in occupations in the service industry, commerce and manufacturing, not only making use of their social networks but also of the skills they acquired in school. Although the quality of education they received is perhaps not what is expected according to the grade/levels attained, knowing how to read and write, do basic arithmetic, and be familiar with how to use a computer, constitute skills that have opened doors for former beneficiaries, especially those who have completed

* While parents and siblings who have never been exposed to the program leave for the United States at very early ages (around 14 or 15 years old), those former beneficiaries who have extended their educational trajectories do so later (when finishing senior high school, around 18 – 19 years old). This does not mean that all former beneficiaries delay their departure, but not all leave at an early age anymore, especially those who decide to study for longer.

the higher schooling levels. These skills help them to gain access to occupations that they would not have found in their home communities nor have been able to perform without the above said abilities.

IV. Discussion, conclusions and recommendations

FACTORS, INSTITUTIONS AND PROCESSES

Here we will concisely present the principal processes and factors that influence domestic family life and intervene in the program's impact, focusing on community structures, and regional and ethnic contexts. A reflection and discussion about the strengths, opportunities, weaknesses and threats that the *Oportunidades* Program should consider in order to advance the program further towards the attainment of its objectives will follow. We must emphasize that the strengths and the weaknesses are to be understood as the operative components and procedures of the *Oportunidades* Program (according to its operation rules and its objectives) and that the opportunities and threats are those factors that are external to the program and beyond its control, such as those that depend on the actions, operations and organization of federal, state and municipal government sectors and institutions. The only way the program is able to influence these external factors is to engage in dialogue and collaboration with the relevant bodies as a means of improving the welfare of needy families.

COMMUNITY, REGIONAL, ETHNIC AND MIGRATION CONTEXT

When the *Oportunidades* Program first began, under the name of PROGRESA, it focused its coverage on Mexico's poorest and most marginalized communities, which also happen to have high concentrations of indigenous inhabitants. In these communities, and frequently in their municipalities at large, there are no labor markets, *per se*, beyond some limited opportunities in agriculture. Small commercial enterprises, hotels and agriculture-related services provide very few job opportunities, except for the owners and their families, and they are also usually very small businesses. The shortage of job opportunities is an issue that goes beyond the influence of the *Oportunidades* Program, nor can they be solved by the government bodies responsible for health and education. For example, despite the availability of agricultural subsidies from the government, which total more than 120 billion pesos, the majority of agricultural producers in these regions do not benefit from them, nor have most even heard about them. PROCAMPO has performed some outreach work in these communities, but even this program has had a limited impact for various reasons; and a few farmers are beneficiaries of incentive programs that have been introduced by the National Commission for the Development of Indigenous Peoples (CDI), although the numbers are minor. The farmers are resistant to register with PROCAMPO: the membership process is unknown, except when there is an infrequent registration rally, and the annual administrative procedures are so slow that subsidies do not arrive when needed. There is a danger that the most dramatic change that these poor regions will experience is the reduction or complete stagnation of agricultural employment. However, it is also possible that agriculture becomes more productive and that more jobs are generated; poverty will decrease if more federal agricultural assistance is assigned and publicized.

In the Sonora micro-regions, we found greater opportunities for employment in *maquiladoras* and large farms, where workers access social benefits like social security (ISSSTE and INFONAVIT). This scenario of relative prosperity coincides with an almost nonexistent pattern of emigration to the United States. The only known case involves two gay women who left for the US because they were looking for a place with fewer social restrictions and less pressure in relation to their sexual preference, and not because of economic reasons. Nevertheless, in the remaining micro-regions, the predominant scenario is one of job shortages because of undeveloped or slow labor markets. In this context, it is not surprising that young former beneficiaries and non-beneficiaries who have attained unprecedented schooling levels have to abandon these marginalized regions. This need is even more evident among the indigenous population. A considerable number of young *mestizos* have access to employment in existing businesses, either because family members or trusted acquaintances own them. However, the only significant alternatives for the

indigenous population are permanent emigration, or returning to their own communities or similar ones as government development agents: teachers, education and health consultants, and agricultural development agents. The few who remain in their hometowns understandably have little success finding work, and usually return to traditional occupations in subsistence farming and agricultural day laboring.

Studies based on the evaluations of the *Oportunidades Program*²²⁻²⁵ tend to show that, in its early years, the program encouraged young people not to emigrate.* However, it is possible that, after 10 years, the emigration of program “graduates” is the best option they have to turn promises that accompany a higher education into reality. It is not a coincidence that in all of the micro-regions the parents’ generation is based locally while the children’s generation is characterized by its *exodus*. At least half of the young former beneficiaries in the micro-regions in Chiapas and Oaxaca are no longer in their hometowns.

When we consider the development of Mexico as a whole, it is difficult to understand how the country cannot capitalize on the workforce potential of the hundreds of thousands of bilingual indigenous youths and peasants with experience and knowledge of their communities (and higher schooling levels amongst beneficiaries), who could aid the development of the country but instead must emigrate to make something positive out of their lives. The opportunity is there, but it is not for the *Oportunidades Program* but for the federal government to use the already existing subsidies, which could be channeled into economic improvement projects in communities that show promise, to convert these young people into development agents.

The paths taken, the destinations and the occupations of emigrants have clearly followed well-established patterns, as detailed in literature on human migration. For example, it is usually relatives, initially, and then mentors, followed by charitable organizations and other acquaintances who encourage these youths to emigrate, providing them with lodging and helping them find jobs in their new surroundings. Thus, the pre-existent networks determine the destinations of emigrants. However, it is important to point out that, in many ways, these are *new* migrants and therefore, the existing networks do not necessarily respond to the characteristics of the new influx of migrants who have a different range of skills, education and experiences than those who went before them. For instance, many relatively successful emigrants from Oaxaca work with their parents in informal or family businesses in Mexico City and the United States. Although their school-learned skills are welcome, those jobs cannot provide them with the benefits that correspond to their level of schooling. Even though the national employment dynamic is not good, we harbor some optimism in the sense that some of these “pioneer” migrants with senior high school diplomas or university qualifications (who in some cases already have better jobs) will pave the way, building new bridges and networks, for other young people to follow in their footsteps. However, this process remains to be seen.

Gender and Family

Gender continues to influence the importance parents place on schooling, though there is noticeable advancement with respect to this issue owing to the differential scholarships of *Oportunidades*. However, there are several factors that can modify the attitude and support that is given to a girl or adolescent woman to keep her in school. Firstly, there appears to be a tendency to remove girls from formal education after they finish primary school (sometimes temporarily), in reaction to the perceived risks adolescents face when their junior high school is far from home. Parents want to “protect” their daughters (mainly from teenage pregnancy and other social dangers), so it is conveniently decided that it is better she stops her studies and stays at home to work around the house. Evidence of such instances is reflected in some of the individual life histories from the case studies, although the number of such occurrences appears to be decreasing. Agudo⁴ has defined some strategies to counterattack these setbacks, the main one being that the presence of schools (of the various education levels) near the community (or at a reasonable distance) leads to a greater presence of girls and adolescent women in school.

* Studies differ regarding the emigration patterns of the parents. According to Martínez, at low subsidy levels, the program encourages their departure, and at higher levels, it encourages their permanence; according to Angelucci, the program stimulates adult emigration; according to Stecklov et al.²⁴ and Badillo,²⁵ the program clearly decreases emigration as a whole.

The second barrier to continued schooling affects adolescent boys to a greater extent than girls: it occurs at the age when boys can earn the salary of an adult day-laborer or when they start believing they can work an unskilled job in the United States. It can happen as early as 13, but more commonly occurs at 14 or 15 years old. This is precisely the step that *Oportunidades* wants to delay. Getting a badly paid full-time adult job marks the beginning of a poor economic future, a premature union/marriage and the reproduction of poverty. The only equivalent in the case of girls is employment as domestic employees or housemaids, but this happens much less frequently. Daughters are less valuable to their families at this age as economic providers, although there are exceptions in locations where commercial agriculture is performed or in communities close to cities where there is a greater demand for domestic workers. For these reasons, the evidence suggests that this work-related motivation for leaving school affects adolescent boys more than girls, allowing the number of girls attending high school to recover its majority after a fall in attendance at the start of puberty.

Some of the studies derived from our evaluations of *Oportunidades*²⁶ have shown that, in some cases, the long-term strategies of parents have been adapted to the program's schooling differential that favors girls and young women. According to Zavala, the income earned by young males helps parents during the consolidation phase* of the domestic cycle, while they invest in their daughters' schooling, so as to benefit from the girls' higher income returns when the parents begin to get old – a family strategy of “recovery by turns.” The family definitely marks the schooling opportunities of their children; and the evaluations identified at least two prominent influences: in the first place, the evaluation confirmed that first-born children attain much lower schooling levels than those of their younger siblings or last-born children, owing, in the main, to school desertion in favor of paid employment or to work on the family's plot. Older siblings reach adolescence during the most difficult time for the household's economy, when all of their younger siblings signify an economic burden; so they are compelled to drop out of school and contribute to the family's income. Secondly, the structure and composition of the household are also decisive. The presence of both parents in the household (in good health and able to work) is a factor that favors schooling. The absence of one may signify the receipt of remittances, which may improve the possibility of longer schooling, but it may also mean greater economic pressures. The absence of both parents in “doughnut” or “hourglass”[†] households is definitely a factor that works against schooling. Although grandparents usually receive remittances, they often place little importance on their grandchildren's formal education and may feel that the remittances are insecure, so they encourage their grandchildren to drop out of school so they can contribute to the household as soon as possible. Finally, the existence of older siblings who send remittances is a factor that evidently favors schooling.

SCHOOL

Access to schools is, without a doubt, a factor that is present in the trajectories of *successful* former beneficiaries, and likewise, to the contrary, in less successful ones. The proximity of schools to the home is the main factor that affects the school attendance of girls and adolescent women, for fear that something bad will happen to them on the way to school. There are municipal initiatives, such as those found in Sonora's micro-regions, where a bus transports students to school; this incentive should be replicated in other regions because, without a doubt, it enormously favors the school attendance of children and youths, especially females. Hostels and boarding houses for indigenous students have also provided a solution that favors schooling: without “bringing the school close to home, the home (hostel) is brought closer to the school.” This strategy is evident in most of the twelve studied micro-regions (particularly in the Tarahumara, which is characterized by very disperse population settlements). We also found numerous case studies detailing how the domestic group as a whole moved from one community to another to be closer to the

* The phase in the domestic cycle associated with the end of the household's reproductive period and greater equilibrium. Theoretically, at this stage of the cycle, children are ready to take an active part in the domestic economy, not only as consumers but also by contributing income.

† Households where children are cared for permanently by their grandparents while the parents are absent.

schools. In fact, there are a number of family strategies which are implemented to ensure the continuance of their children in school: use of kinship networks (including very close family friends and *compadrazgo* – godparents), sale of family assets, and other mechanisms that are implemented with the purpose of sending children to schools (and communities) where it is believed they will get better quality services.

All of the above leads us to consider that simply having physical access to schools is not sufficient, they need to be quality schools. In this respect, although we do not have enough empirical evidence,* the case studies of the most successful former beneficiaries include accounts of parents looking for schools that they consider to be of better quality or that, perhaps, are closer in distance. When speaking of the quality schools, we are referring to the factors associated with its basic operation and functional viability, so that young people (especially those in junior high school) are not discouraged from attending: teachers who are actually present to teach the classes, lessons that keep student's attentive, a curriculum or program of study that encourages student engagement, and sufficient resources (teaching materials, working computers, Internet access and teaching methods that attract rather than discourage).

The existence of programs and scholarships like PRONABES[†] and CONAFE[§] appear in the educational trajectories of successful former beneficiaries. To these youths, who come from domestic groups with very limited resources, these scholarships are extremely valuable. On the other hand, another element that features significantly is the existence of a mentor (a successful relative who the youth sees as a role model and who may provide additional economic support, or a teacher who turns into a coach).

Simply reaching senior high school level is in itself a stimulus for continuing school. The fact is so obvious that it might seem trivial, but that is not the case: In all of the research scenarios, senior high schools had more resources, better infrastructure and better-trained teachers; these factors, along with others, encourage young people to continue their education. Besides being poorly outfitted and having badly trained personnel, junior high schools deal with students who are passing through a crucial phase of adolescence, and who face a very different world to that encountered by previous generations. Rural areas are not used to this behavior, nor are they accustomed to the growing interest among young people to buy consumer goods in such a manner not seen before in the studied micro-regions.

The cases of young people who had abandoned school frequently have one element in common that we should examine. When these youngsters say *they didn't like school or they didn't like school and preferred to work*, they reflect the dissatisfaction to which Schmelkes and his collaborators¹¹ refer when they suggest that school, especially in these rural indigenous contexts, does not have the capacity to engage students' interest. It is precisely during adolescence, at the end of primary school and the start of junior high school, that this dissatisfaction with school sets in; and it is, we think, related to the schooling factors identified by Schmelkes (absence of cultural relevance, insufficient teaching materials that have been poorly adapted to indigenous cultures) and to the implications of a generation seduced by consumerism, who want to buy goods (cosmetics, clothes, music, etc.) and for whom, to satisfy those desires, working even in low-paid activities becomes more attractive and brings more benefits than attending school. Additionally, when these youths are the first-born child, the urgency to work is increased owing to the pressures of their household's economy.

The use of drugs and alcohol is also a decisive factor in the interruption of the work trajectories of men.

* Not because they haven't been searching for them, but because there is a real shortage of quality schools, especially primary and junior high schools.

[†] PRONABES (Programa Nacional de Becas de Educación Superior) is a program that supports low-income students with scholarships in order to continue their education at university level (in public universities).

[§] CONAFE (Consejo Nacional de Fomento Educativo) is a program that supports community instructors to continue school attendance at pre-university and university levels.

IMPACT

During its 10 years of operation, it is evident that the *Oportunidades* Program has had a remarkable impact on 1) educational achievement; 2) the delay of reproductive patterns; and 3) the emergent but mounting occupational achievements of the individuals who became grant holders when their homes were first incorporated into the program in 1998. The schooling levels attained by grant holders and former grant holders, and the fact that more than a quarter of the sons and daughters in our database declare study as their main occupation, are extremely positive results that should be taken into account to ensure that the government continues to channel resources and energy into the *Oportunidades* Program so it can continue to encourage this type of achievement.

The *Oportunidades* Program has contributed to at least two processes of social change of extraordinary value for a society such as Mexico's: The analysis of the data gathered by four teams of anthropologists in four different states in the country, utilizing ethnographic techniques and a rigorous methodological strategy, shows that the program has stimulated a decrease in ethnic and gender inequality in schooling levels.

The gender gap in schooling attainment has been reversed among the generation of sons and daughters of the indigenous population exposed to the program, with females exhibiting a differential in their favor. The ethnic gap, which dates back to the Spanish conquest, in favor of *mestizos* or non-indigenous individuals, has been narrowed to the point of imperceptibility among the male population exposed to the *Oportunidades* Program, and it has reversed in the case of women in favor of indigenous females; these trends are not the case among the non-beneficiary population. For those who have never been exposed to the program, ethnic inequality (in favor of *mestizos*) and, to a lesser extent, gender inequality, still exist (between *mestizo* men and women) in terms of the levels of education attained.

However, it is worth noting that the educational achievements discussed here refer only to the schooling levels attained; in other words, years and school grades attended, which do not necessarily equate to the accumulation of knowledge and the development of human capital. Although the *Oportunidades* Program has narrowed the ethnic gap and reversed the gender gap with respect to schooling levels through attendance and longevity in school, it does not affect the quality of education that beneficiaries receive. Evidence from our ethnographic studies identify the great disparities that exist between unitary and bilingual rural primary schools and the *tele* junior high schools to which children and youths in the studied micro-regions have access (characterized by serious deficiencies in infrastructure and teaching quality, and teacher absenteeism), and the non-bilingual primary schools and the technical junior high schools in the municipal capitals or larger towns. A school's failure to fulfill the requirements of the study programs and to meet their obligations and duties restricts the potential contribution of the *Oportunidades* Program to help young people foster a portfolio of skills and abilities (which are becoming ever more essential) by increasing the length of time children and young people spend in formal education.¹⁵

The impact on the schooling of beneficiaries with the longest exposure to the *Oportunidades* Program is shaped by a number of important factors: 1) the coverage of the educational services (close proximity to schools of various educational levels affects schooling positively, especially for women); 2) the quality and cultural relevance of the education provided; 3) the capacity of parents to act as economic providers and to generate income (death of the father or the main economic provider is a factor that can negatively affect the schooling of beneficiaries); 4) the existence of productive assets and financial income (remittances from older siblings who have emigrated, for example) eases the payment of transportation, particularly in the case of young senior high school students who frequently have to commute to other areas where the schools are located; 5) the birth order (being last-born or among the last-born is a factor that contributes to higher schooling attainment; 6) absence of illness; and 7) sex of the individual (because men and women have different obligations in the domestic economy, and adolescent women are not seen as income generators for the household; thus, being a woman is a factor that favors schooling attainment).

While intergenerational changes in fertility, identified here as the age at which women have their first child, have taken place both with and without the *Oportunidades* Program's influence (female former beneficiaries as

well as non-beneficiaries have delayed their reproductive cycle), it is still possible to say that the program aids such a modification. However, the government bodies responsible for health throughout the country must increase their efforts and resources to provide access to birth control methods and to encourage their use. Data collected with respect to reproduction patterns illustrates that, although women use birth control once they become mothers to space out childbirths, it is never used to delay the start of their reproductive cycle.

The analysis shows that the children who were exposed to the *Oportunidades* Program are better positioned in the occupational hierarchy than those who never benefited. In addition, these young people are more likely to be pioneers in the occupational niche or tier they occupy, so in the future, it is possible they will become role models and professional contacts for their younger siblings or friends and acquaintances from their home communities. As pioneers, they face challenges to their job mobility, because, as yet, no one from their community or family has reached the higher tiers of the occupational hierarchy because they did not have the schooling level required for the jobs (the social networks linking individuals to more formal and non-manual work, which require credentials and skills, do not yet exist). In the meantime, even though the analysis of the occupations of the sons and daughters of beneficiary and non-beneficiary households shows that young people exposed to the program perform tasks that require some mathematics, mechanical or computing skills (waitresses, store clerks, machine cleaners in the United States, worker supervisors, etc.), the great majority engage in occupations that provide little security (informal jobs). Despite the efforts of the *Oportunidades* Program, given the limited work options and very poor local opportunity structures, the expected occupational impact of the program remains to be seen. One of the most obvious threats to the program's achievement of their main objective is precisely the shortage of regular jobs that offer security to workers. In regions where national or international emigration has already been established, former beneficiaries look for employment in Mexico City, Cancún, Playa del Carmen, Oaxaca, Mérida, Chihuahua, Hermosillo or the United States; even though emigrants, whether bound for the United States or major Mexican cities, now tend to delay their departure: it is a strategy that is as imminent as it is necessary. While the micro-regions benefit from a general rise in the population's levels of schooling (because of those who have attained higher levels who do stay), they witness the departure of their most educated.

The main conclusion is that the *Oportunidades* Program has many reasons to continue supporting poor families in Mexico. The analysis documented here presents very positive results in terms of the program's achievements, and the impact it has effectuated, in particular, with regard to schooling but also with respect to changes in reproductive patterns and the integration of young people into the labor market.

Nevertheless, there is still a long road ahead. The program must improve its operation procedures to ensure that the indigenous population receive better provision and service, and are not excluded from the program for bureaucratic reasons, and so that children and young people attending school (who are complying with their co-responsibility) continue to receive their scholarships. There are many stories of students who lost their scholarship for reasons neither they nor their parents ever understood. The transition from junior to senior high school remains difficult because of economic reasons; therefore, ongoing modifications to the program's *Jóvenes con Oportunidades* (PJO/JO) component are timely, although its implementation has to be carefully supervised to be effective. The transition from senior high school to university is even more difficult, and many of the program's current successful cases would not be studying a college career if not for the support of family networks and other programs (CONAFE and other scholarship programs). For this reason, we recommend that the PJO/JO be turned into a real incentive and valuable tool to facilitate that transition.

The achievements presented here would be magnified if the efforts of the *Oportunidades* Program were complemented and thus augmented by social and political commitment: if the government bodies responsible for health and education matched the efforts of the program. If the quality of teaching and learning were to improve at the same time that students were beginning to enjoy longer school careers, then the benefits for millions of children and young people would be all the more greater. If we were able to augment the number of current and former beneficiaries who successfully complete higher schooling levels and were to reduce the number of failed participants who drop out because of an illness at home (which remained unresolved because of the poor service capacity of Rural

Medical Units) we would really have a highly successful social policy. In the meantime, however, we limit ourselves to saying that the *Oportunidades* Program has achieved unexpected and positive impacts on the indigenous rural population.

Even though the *Oportunidades* Program has contributed to processes that help to break the intergenerational transmission of poverty, this objective will only become a reality when the relevant institutions in the public sector take the necessary measures to create more and better jobs, and provide better quality health and education services.

V. SWOT Analysis

SUBJECT	STRENGTHS AND OPPORTUNITIES/WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS AND OPPORTUNITIES		
Education	The analysis shows a remarkable impact on the schooling levels of individuals exposed to the <i>Oportunidades</i> Program as scholarship holders.	The program must insure that its actions will allow the impact to be sustained or improved. It is suggested that the (JO) Jóvenes con <i>Oportunidades</i> component be expedited to encourage all current grant holders. There is still much misinformation regarding JO, and requirements are so complicated that only a few can access the benefits.
Education	The greatest increase has been among indigenous beneficiaries, especially indigenous females	The same recommendation applies in this case, but in addition, it is important to point out that differential grants have been a crucial component in the current assessment (by the parents) of girls and youths. Maintain the differential and try to ensure that JO benefits are equally accessible to young people of both sexes.
Education - Intergenerational Schooling Mobility	Since the <i>Oportunidades</i> Program began in marginalized rural communities, the intergenerational schooling mobility increased by two more years. In other words, advancement increased from three to five years.	
Decrease of Ethnic and Gender Inequality	For the children's generation, the gender gap has reversed, and the ethnic gap has closed in the case of males (still slightly in favor of mestizo males versus indigenous males); it has reversed in favor of the indigenous population (indigenous beneficiary daughters have attained higher schooling levels than those of mestizo daughters). This data means that the <i>Oportunidades</i> program has contributed to the decrease of gender and ethnic inequality.	
Student boarding hostels and School Transportation	The distance between the schools and the households is a factor that particularly affects female attendance and longevity in school (when the distance is short). In Sonora, there are some positive local council initiatives to provide buses to transport students from villages to their nearest school (often in a large town or municipal capital). Student hostels have provided a solution (a factor in favor of schooling) that, without "bringing the school close to home," in fact "brings the home (hostel) closer to the school."	These initiatives, such as local councils providing transportation for students, particularly those attending junior high school and senior high school, (schooling levels with the least coverage), should multiply because they enable children and young people, especially females, to study. Student hostels and boarding houses for indigenous students must remain (even more should be opened) especially in regions characterized by disperse population settlements.

PRONABES and CONAFE Scholarships	Programs and scholarships such as PRONABES (National Program for Higher Education Grants) and CONAFE appear in the trajectory of the most successful youths (with longer schooling trajectories and wishing to undertake college and university courses). For these young people from poor households, these scholarships are very valuable.	Continue and expand programs like PRONABES and CONAFE.
THREATS		
Quality of Education	In order to build a portfolio of skills and credentials of any value, it is necessary to have better-quality education services (with fewer infrastructure deficiencies and teacher absences, better trained teachers, and a curriculum or syllabus adapted for the indigenous environment). The provision of education in its current form in these micro-regions means that the development of skills and knowledge is limited.	Government bodies responsible for education (SEP and state institutions) should take urgent steps to improve teacher training and the educational content of the teaching curriculum (and the way in which these are provided and delivered). It is also imperative to turn teacher absenteeism into daily and responsible attendance with the aim of educating subsequent generations.
Coverage of Education Services	One of the factors explaining the longer school careers of the Oportunidades beneficiaries is the short distance between schools and homes (it greatly facilitates attendance in general, especially for females). While primary school coverage is widespread, it starts to decrease as the schooling level increases, so there is a shortage of junior high schools and above all, senior high schools.	Government bodies responsible for education (SEP and state institutions) should use the infrastructure of empty primary schools as junior high and senior high schools, providing them with teachers and teaching materials that correspond to the aforementioned school levels. Alternatively, if the above were not desirable or possible, provide a wider coverage of junior high and senior high school services through the implementation of new schools.
Transition from School to College and University	The transition from senior high school to college is extremely complicated (a "bottleneck") owing to room and boarding costs in cities where universities and colleges are located, transportation from the hometowns to the city, cost of urban transportation, cost of materials, admission exam, etc. Were it not for family support and in many cases, the support from CONAFE and other scholarship programs, many of those who are now the program's most successful cases would not be pursuing a university career. Current evidence shows that the PJO component, now known as JO, has not been very effective. There are more young people who cannot access their Oportunidades funds than those who can.	We suggest that the Jóvenes con Oportunidades component be transformed into an effective stimulus and means of easing the transition.
Health and Sickness: Impact on Schooling	Illness in poor households, affecting either the father, mother or, of course, the child or the young student, is a reality that works against the success of the program's objectives (regarding the development of skills: illness of the main breadwinner or mother, added to the poor services offered by health centers, often leads to school desertion).	Government bodies responsible for education (SEP and state institutions) should increase the number of doctors in rural clinics; stop rural clinics from losing doctors for long or short periods; continue with prevention policies; improve supply of medicines and patient diagnostic equipment (sphygmomanometers, blood sugar measurement equipment); and design and promote diets adapted to the products that can be obtained by the local rural population and launch a massive campaign against the consumption of unhealthy, non-nutritional foods (not only tobacco and alcohol, but junk food as well).

SUBJECT	STRENGTHS AND OPPORTUNITIES/ WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS AND OPPORTUNITIES		
Reproductive patterns	The majority of daughters have yet to become mothers. However, the analysis shows that an important proportion (26.3%) of indigenous former beneficiary women have already had their first child, but the percentage of those indigenous beneficiaries who have not yet had children is higher (73.7%).	n/a
Reproductive patterns	The available evidence, especially regarding the Sierra Tarahumara, shows that for young indigenous females, the birth of their first child does not imply the abandonment of their studies, possibly to keep the scholarship granted by the Oportunidades Program (given the importance that such income has on the household's economy).	Even though we did not find schools in the Sierra Tarahumara that do not allow attendance of pregnant students (it has happened within the context of previous assessments, although not the current one), the practice of continuing to study (despite motherhood) should be promoted; so it is a very positive sign that schools have a flexible policy (admitting pregnant students) because bearing a child does not incapacitate women continue with their schooling.
WEAKNESSES		
Reproductive patterns	Mestizo beneficiary and non-beneficiary females of the daughters' generation who have already started their reproductive cycle represent a greater percentage when compared to indigenous females in the same situation. However, in the case of mestizo females, the number of those who have already started their reproductive cycle is higher among beneficiaries than for non-beneficiaries: 42.3% of mestizo beneficiaries females are already mothers, while among mestizo non-beneficiary females the percentage of mothers is 35.7% (57.7% of mestizo beneficiary females are not yet mothers, while the percentage increases to 64.3% among mestizo non-beneficiary females).	Promote the advantages of postponing the start of the reproductive cycle in self-healthcare workshops. The workshops should be provided by trained personnel who can give ample and precise information about the implications of parenthood at an early age and birth control methods (without leaving information loopholes, and presenting adequate and accurate information so that young people do not "learn by experience"). Promote, in conjunction government bodies responsible for health, the provision of birth control methods for the general population and young people in particular.
Reproductive Patterns	The workshops being provided for young people as part of the New Healthcare Model do not provide enough, accurate or efficient information about the precautions that young people should take to avoid early pregnancy or transmission of HIV-AIDS or other sexually transmitted diseases. The leaders of the workshops' are often absent (or do not show up), leaving young people alone, forcing them to teach themselves. The result is inadequate handling of information, which proliferates inaccurate assumptions about illnesses, their transmission and their preventive care.	The workshops should be provided by trained personnel who can give ample and accurate information about the implications of parenthood at an early age and birth control methods (without leaving gaps of information, and presenting adequate and precise advice so that young people do not have to teach themselves. Promote, alongside government bodies responsible for health, the provision of birth control methods for the general population and young people in particular.

THREATS		
Reproductive Patterns	The use of birth control among adolescents does not exist. It is never used before the birth of the first child.	It is necessary that the government bodies responsible for health make a greater effort (including effective strategies) to promote the use of birth control among young people. Birth control is used by adult women when they no longer wish to have any more children but not by young people and never before having the first child.
Reproductive Patterns	The birth order of individuals influences the deferment of domestic unions and marriages and the individual's own reproductive cycle (procreation household). The evidence in Chiapas demonstrated that last-born current and former beneficiaries who enjoy the privilege of not having to bear or help bear the burden of the household's economy, remain in school the longest and postpone unions and the start of their reproductive cycles more than first-borns. Older siblings often abandon their schooling prematurely to begin their role as economic providers at an early age, which is associated with the pattern of forming early unions.	
SUBJECT	STRENGTHS AND OPPORTUNITIES/WEAKNESSES OR THREATS	RECOMMENDATION
STRENGTHS		
Occupation	One of the most remarkable strengths of the Oportunidades Program is the number of individuals in the children's generations who declare studying to be their main occupation: over a quarter of young people between the age of 15 and 25 years old study as their main occupation, especially mestizo females and indigenous males and females. As a consequence, the impact of the Oportunidades Program on the levels of schooling achieved will soon be higher than the ones seen here. It is also probable that, with such school certifications/qualifications, they will be able to access better occupations than those they would have been able to if they had not stayed-on at school.	N/a
Occupation	The occupations of indigenous non-beneficiary sons and daughters are concentrated in the lowest tiers of the occupational hierarchy, with a notable presence of non-beneficiary males, while a smaller percentage of the indigenous population who had been exposed to the program are found in this same tier. This differential is especially prominent in the case of beneficiary women.	
Occupation	The intermediate occupational tier (categories 4 and 5) has a significant presence of indigenous beneficiary males and females, particularly females. Indigenous beneficiary females also have the greatest presence in the highest layer (categories 6 and 7; a little over 14% of all beneficiary females). By itself, this data could appear to represent a rather small presence, but when comparing beneficiary women with their non-beneficiary peers, a significant difference in favor of the former can be appreciated.	

OPPORTUNITIES		
Work	<p>There is a wide array of subsidies and support packages for agriculture (up to 120,000 million pesos). Agricultural producers from these regions neither know about nor benefit from most of these subsidies. Only el Programa de Apoyos Directos al Campo (Programme for Direct Countryside Support), PROCAMPO, has some limited coverage. La Comisión Nacional para el Desarrollo de los Pueblos Indígenas (The National Council for the Development of Indigenous Villages), CDI, has also provided some productive programs. These resources and direct affiliation to such social programs (with more expedite processing of prerequisites, monitoring of resources, and program evaluations) could complement and help to increase the impact of the Oportunidades Program on employment and the integration of former beneficiaries into the labor market.</p>	<p>It is the responsibility of public policy as a whole to: publicize and promote the existence and availability of resources and productive programs to the general population; publicize the procedures involved in becoming affiliated in a clear and open way (making sure that the publicity reaches rural communities like those studied here); expedite and facilitate the application process; evaluate the impact of these programs to improve their design and operation.</p>
Work, Economic Development	<p>When considering the development of the country as a whole, we must draw attention to the way in which the labor potential represented by thousands of indigenous youths and peasants – most of whom are bilingual, know these communities well, have raised their schooling level thanks to the Oportunidades benefits – has been overlooked and poorly capitalized. Indigenous job seekers must leave their hometowns to be able to make something worthwhile out of their lives. The Oportunidades Program, but more so, the federal government, has the opportunity to convert them into development agents, if a larger share of the subsidies that already exist are channeled into projects focused on the economic improvement of communities that show promise.</p>	<p>Incorporate young, bilingual, former beneficiaries with detailed knowledge of their region and a higher level of schooling into productive projects and programs; turn them into development agents, channeling a larger share of the already existing subsidies towards projects of economic improvement for these peasant regions.</p>
THREATS		
Employment	<p>Labor markets are not very dynamic and offer very few employment opportunities to young people graduating from the program, causing them to leave their hometowns and regions as migrant workers.</p>	

VI. References

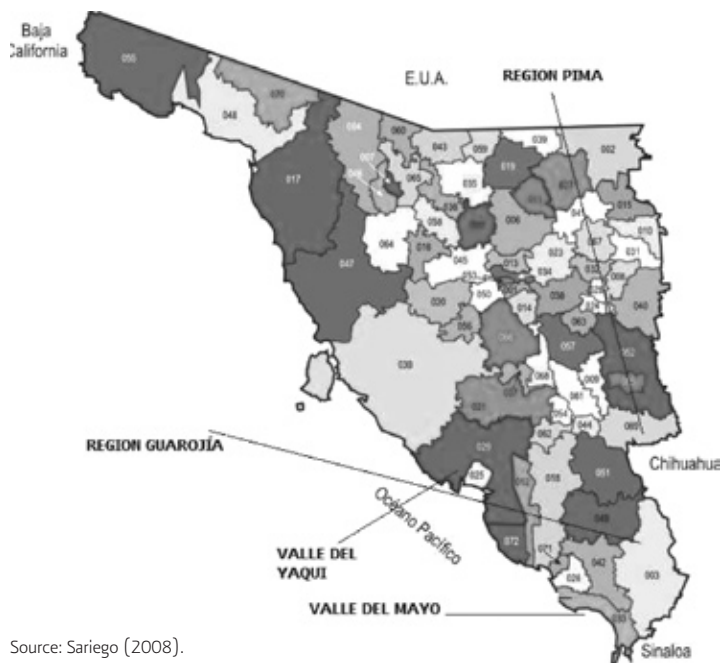
- González de la Rocha M, Agudo Sanchíz A. Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2008, research proposal. México: CIESAS, 2008.
- González de la Rocha M, coord. Procesos domésticos y vulnerabilidad: perspectivas antropológicas de los hogares con Oportunidades, Mexico City: Publicaciones de la Casa Chata, 2006.
- García B, De Oliveira O. Trabajo femenino y vida familiar en México. Mexico City: El Colegio de México, 2004.
- Agudo A. Documento analítico del estudio etnográfico de Chiapas, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
- González de la Rocha M, Paredes P, Sánchez López G. Documento analítico del estudio etnográfico de Oaxaca, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
- Haro A, et al. Documento analítico del estudio etnográfico de Sonora, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
- Sariego J, et al. Documento analítico: Estudio etnográfico en Chihuahua, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
- Embríz A, Ruiz L, Ramírez S, Ayala ML. Diagnóstico de empleo y actividades productivas desde una perspectiva multicultural, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2007-2008. México: CIESAS, 2007.

9. González de la Rocha M, Albertos A, Cajigal L. Diagnóstico sobre familias estudiadas en comunidades indígenas en las evaluaciones cualitativas 2000-2004 y sus relaciones con las instituciones, Vol. II, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2007-2008. México: CIESAS, 2007.
10. Haro A, Zepeda B, Restor M, Figueroa JL. Diagnóstico de salud desde una perspectiva multicultural, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2007-2008. México: CIESAS, 2007.
11. Schmelkes S, Aguila G, Rodríguez J, Magaña RE. Diagnóstico sobre salud desde una perspectiva multicultural, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2007-2008. México: CIESAS, 2007.
12. Sariego JL. Documento técnico: cobertura y operación de "El Programa", Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, zonas rurales 2008, Number 13. México: CIESAS, 2008.
13. Sánchez López G. Salud. In González de la Rocha M, Paredes P, Sánchez López G. Documento analítico del estudio etnográfico de Oaxaca, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 3. México: CIESAS, 2008.
14. Sánchez López G. Documento técnico sobre salud, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 10. México: CIESAS, 2008.
15. Agudo A. Documento técnico sobre educación, Evaluación cualitativa de impacto del Programa Oportunidades, Largo plazo, Zonas rurales, 2008, Number 11. México: CIESAS, 2008.
16. Cortés F, Escobar A, González de la Rocha M. Método científico y política social. A propósito de las evaluaciones cualitativas de programas sociales, Mexico City: El Colegio de México, 2008.
17. Escobar A. Can migration foster development in Mexico?, Paper prepared for the Global Forum On Migration and Development, Manila, Phillipines, October 28-30, 2008.
18. Consejo Nacional de Evaluación de la Política de Desarrollo Social. Informe de Evaluación de la Política de Desarrollo Social. México: CONEVAL, 2008.
19. Kaztman R, coord. Activos y Estructuras de Oportunidades. Estudios sobre las raíces de la vulnerabilidad social en Uruguay, Montevideo: ECLAC/UNPD, 1999.
20. González de la Rocha M. Private Adjustments: household responses to the erosion of work, United Nations Development Programme (UNDP), UNDP Conference paper series, Volume 6, 2000.
21. Filgueira C. Estructura de oportunidades, activos de los hogares y movilización de activos en Montevideo (1991-1998), in Rubén Kaztman and Guillermo Wormald (coordinators), Trabajo y ciudadanía. Los cambiantes rostros de la integración y exclusión social en cuatro áreas metropolitanas de América Latina. Montevideo: Graphic Production by CEBRA/Fernando Errandonea ed., 2002.
22. Martínez EC. Emigrar por desesperación: Progres y la migración interna e internacional. In: Logros y retos: una evaluación cualitativa de Progres y en México. In Escobar A, González de la Rocha M, coords. Progres: Más oportunidades para las familias pobres. Evaluación de resultados del programa de Educación, Salud y Alimentación. Impacto a nivel comunitario. Mexico City: Ministry of Social Development, 2000:95-116.
23. Angelucci M. Aid and Migration: An Analysis of the Impact of Progres on the Timing and Size of Labour Migration, Discussion document IZA Number 1187, Bonn: Instituto para el Estudio del Trabajo, 2004.
24. Stecklov Guy, Winters P, Stampini M, Davis B. Do Conditional Transfers Influence Migration? A Study Using Experimental Data from the Mexican Progres Program. Demography 2005;42 (4):769-790.
25. Badillo Bautista C. Evaluating the Direct and Indirect Effects of a Conditional Cash Transfer Program: The case of Progres, Ph.D. thesis, University of Essex. Ongoing.
26. Zavala Z. Sueltas y descarriadas: mujeres de aula. Consecuencias de la escolarización en las expectativas de vida de las jóvenes rurales, Master's Thesis in Social Anthropology. México: CIESAS Occidente, 2007 (presentation date: August 30, 2007).

Bibliography

- Pérez, Omar, 2008, "Breve descripción y análisis de las ocupaciones en Samachique", working paper, mimeo.
- INEGI, Second Population and Housing Count 2005 [II Censo de Población y Vivienda 2005], available at <http://www.inegi.gob.mx>. Accessed on June 15, 2008.
- González de la Rocha M. From the Resources of Poverty to the Poverty of Resources. The Erosion of a Survival Model? Latin American Perspectives 2001;28(4):72-100.
- González de la Rocha M. Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales. México, 2007, research proposal.
- Fujigaki A, Salazar DA. Trabajo, empleo y nuevas uniones, working paper: Report of occupations in Norogachi. México, 2008. Mimeo.
- Escobar A. Pobreza y migración internacional en el México rural: un enfoque antropológico. In: Escobar Latapí A, coord. Pobreza y migración internacional, Mexico City.: Publicaciones de la Casa Chata, 2008.
- Arellano A. Yepachi. Trabajo, empleo y nuevas uniones: ex – becarios, working paper: Report of occupations in Yepachi-Maycoba. México, 2008. Mimeo.
- Agudo Sanchíz A. Informe de avances de la investigación de campo en el estado de Chiapas, Evaluación cualitativa de impacto del Programa Oportunidades, Largo Plazo, Zonas Rurales, 2007-2008. México: CIESAS, 2007.

VII. Appendix 1: Geographical



Source: Sariego (2008).

MAP 1

Studied regions in the state of Sonora



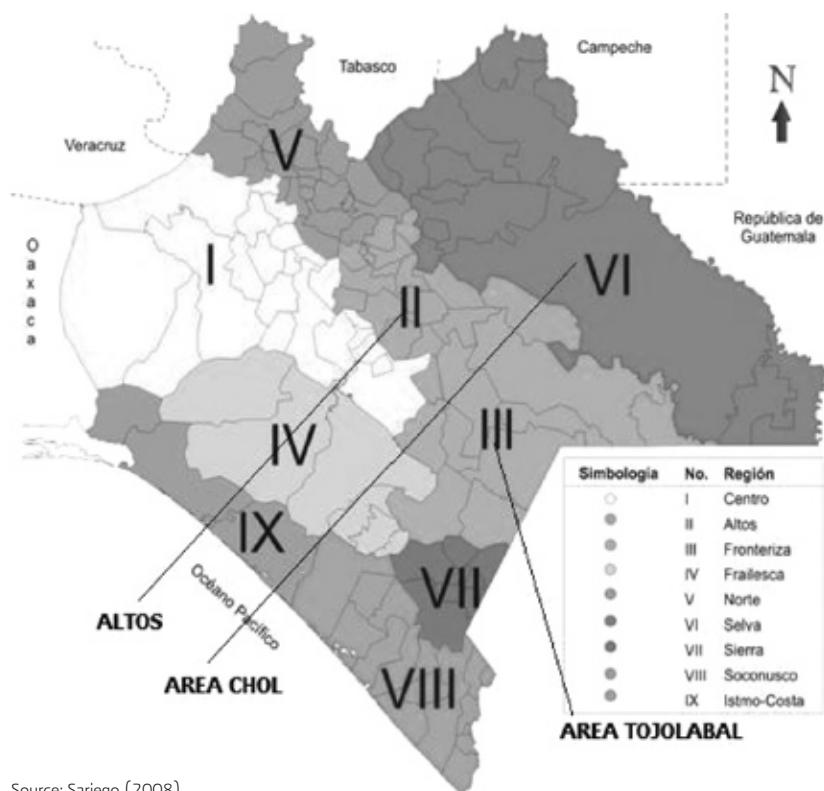
Source: Sariego (2008).

MAP 2

Studied municipalities in the Sierra Tarahumara

MAP 3

Studied regions in the state of Chiapas



Source: Sariego (2008).

MAP 4

Studied regions in the state of Oaxaca



Source: Sariego (2008).

Appendix 2: Methodology

METHODOLOGICAL STRATEGY

Selection of the research scenarios in Chihuahua, Sonora, Chiapas and Oaxaca

Firstly, we selected municipalities which, according to the 2005 population census data (*Conteo de Población 2005*), comprised both indigenous and non-indigenous inhabitants and where, according to the *Oportunidades* Program (beneficiary registrar), there were communities with beneficiaries who had been incorporated into *Oportunidades* in 1997-1998 (then known as PROGRESA). In each municipality, we studied as many households in as many communities as was necessary to complete the analytical sample (beneficiary and non-beneficiary, indigenous and non-indigenous). The groups of communities where our research was carried out were called *micro-regions*. Each state in our study included three micro-regions.

The selected micro-regions were:

Chihuahua: a) Yepachi (Temósachi, Chihuahua)/Maycoba (Yécora, Sonora); b) Samachique (Guachochi); and c) Norogachi (Guachochi).

Sonora: a) Different communities in the Guaymas municipality, in the Yaqui Valley; b) communities in Etchojoa, Valle del Mayo; and c) Guarijía micro-region in the Alamos municipality.

Chiapas: a) communities in the San Cristóbal de las Casas municipality (El Aguaje, Corazón de María and San Isidro); b) Las Margaritas municipality (Saltillo, Bello Paisaje); and c) communities in the Tumbalá municipality (Álvaro Obregón Loma, Álvaro Obregón Planada, El Porvenir and Emiliano Zapata).

Oaxaca: a) Several communities in the Mazatlán Villa de Flores municipality (the eponymous municipality capital, El Progreso, Almolonga, El Corral, San Simón Coyoltepec and Piedra Ancha); b) San Juan Cotzocón municipality, where two communities were studied, Nuevo Cerro Mojarra and Jaltepec de Candayoc; and c) the Santiago Jamiltepec municipality in the Costa Chica, with two communities, one mostly indigenous (Santa Elena Comaltepec), and the other (El Charco Nduayoo) mostly *mestizo* and *afro-mestizo*.

Theoretical analytic sample for the selection of households for study in each micro-region:

PRIMARY ANALYTIC SAMPLE (FOR EACH MICRO-REGION)	
Indigenous beneficiaries (n=4)	Non-indigenous beneficiaries (n=4)
Indigenous non-beneficiaries (n=4)	Non-indigenous beneficiaries (n=4)

TABLE B1
Theoretical analytic sample for the selection of households for study in each micro-region:

The fundamental idea behind the design of this sample is to maximize the difference between the intervening variables:

- a) Ethnicity: indigenous households (indigenous-language speakers who look and are looked upon as indigenous by others) and *mestizo* households (Spanish monolingual who look and are looked upon as non-indigenous by others).

- b) Incorporation into the *Oportunidades* Program: long-term beneficiary households (incorporated into *Oportunidades* in 1998) and non-beneficiary households (who have never benefited).

Of each of the two beneficiary household subtypes in the analytic sample in each micro-region (four indigenous beneficiaries and four non-indigenous beneficiaries), two households had to be selected that included at least one first-born boy or girl, or a child who was one of the older siblings in the household, who in 1998, the incorporation year, were in third or fourth grade at the time of their incorporation into the program. The other two households of the two beneficiary sub-types had to include children who were among the last-born siblings and who were attending the abovementioned school grades at the time of their incorporation. This division was performed to ensure that the sample included long-term beneficiary households that were at different stages of their domestic cycle at the time of their incorporation into the program (early expansion and advanced expansion stage).

TABLE B2
Beneficiary households

BENEFICIARY HOUSEHOLDS	FIRST-BORN	LAST-BORN	TOTAL
Beneficiary indigenous households	Two households with a first-born child in 3 rd or 4 th grade in 1998	Two households with a last-born child in 3 rd or 4 th grade in 1998	Total= 4 households
Non-indigenous beneficiary households	Two households with a first-born child in 3 rd or 4 th grade in 1998	Two households with a last-born child in 3 rd or 4 th grade in 1998	Total= 4 households
Total beneficiary households	4	4	8

Non-beneficiary households were selected in each municipality or micro-region according to how well they matched the characteristics of the beneficiary households in the sample with respect to their place of residence (municipal capital versus village) and their socio-economic condition (occupation, access to land and education attainment of the household heads). The same criteria regarding first-born and last-born children in third and fourth grade in 1998 was upheld in order to be able to compare the achievements of beneficiaries and non-beneficiaries. In the selection of non-beneficiary households, priority was given to those who had never been incorporated. In cases where we were unable to find such households in the communities of certain regions, we selected households that had been incorporated for only a very short time (suspended from the program within two years of being incorporated) or who had only recently become beneficiaries.

TABLE B3
Non-beneficiary households

NON-BENEFICIARY HOUSEHOLDS	FIRST-BORN	LAST-BORN	TOTAL
Non-beneficiary indigenous households	Two households with a first-born child in 3 rd or 4 th grade in 1998	Two households with a last-born child in 3 rd or 4 th grade in 1998	4 households
Non-beneficiary non-indigenous households	Two households with a first-born child in 3 rd or 4 th grade in 1998	Two households with a last-born child in 3 rd or 4 th grade in 1998	4 households
Total Non-beneficiary households	4	4	8

Final composition of the sample:

Chihuahua: The selected micro-regions in this state presented no difficulties in finding households of the required type according to the analytic sample (indigenous and *mestizos*, long-term beneficiaries and non-beneficiaries), so 48 study cases were carried out (24 indigenous and 24 *mestizo*, eight of each of these types in each micro-region). Fifty percent were beneficiaries and the other half were non-beneficiary households.

- 1) Pima micro-region: The community of Yepachi (in the Temósachi municipality in Chihuahua) and the Sonora community called Maycoba (in the Yécora municipality) were selected. The indigenous Pima territory (*ojoba*) is located in a geographical strip crossed by the Chihuahua and Sonora border, but that region operates as a cultural area.
- 2) Samachique is the municipal capital of Guachochi, located in the High Tarahumara.
- 3) Norogachi: Like Samachique, it is a *Rarámuri* municipal capital belonging to the Guachochi municipality. Considering the Sierra Tarahumara is characterized by the dispersion and the low density of its inhabitants, both are relatively atypical towns because they concentrate the majority of their inhabitants in the municipal capital.

Sonora: In general, there were no great difficulties in finding indigenous and *mestizo* households in the micro-regions where the fieldwork was performed. Some difficulties were encountered, however, especially in the Yaqui micro-region, in finding households with respect to their *long-term-exposure-to-the-Oportunidades-Program* variable.

- 1) Yaqui micro-region (*yoeme*), formed by a group of communities in the Guaymas municipality in the southern part of the state. Fieldwork was carried out in the communities of Huirivis, Rahum, Las Guásimas and Oroz, all of which provided case studies of indigenous and *mestizo* beneficiary and non-beneficiary households. The balance of indigenous and *mestizo* households (eight indigenous, eight *mestizo*) was achieved in this micro-region, but the beneficiary split was modified: five beneficiary households and three non-beneficiary. Of the three non-beneficiary households in each group, one of them corresponded to an incorporated household and one had never received scholarships for the children and young people of the household. These cases were substitutes, as the cases required by the analytic sample were not found (owing to wide program coverage) in the communities in the micro-region.
- 2) Mayo micro-region (*yoreme*): the communities of La Bocana, El Salitral and Los Viejos, in the Etchojoa municipality were selected. Seven indigenous households were studied here (four beneficiary and three non-beneficiary) and nine non-indigenous households (five beneficiary and four non-beneficiary).
- 3) Guarijía micro-region: the community of San Bernardo in the Los Alamos municipality was selected, where the necessary households for the analytic sample were found. Located here were nine indigenous households (four beneficiary and five non-beneficiary, one which had been incorporated in 1998 but had been dropped from the program in 2002) and seven *mestizo* households (four beneficiary and three non-beneficiary).

Chiapas:

- 1) No difficulty was encountered to complete the analytic sample in the micro-region in the Las Margaritas municipality because enough beneficiary and non-beneficiary, indigenous and *mestizo* households were found in the different communities within the municipality; so 16 case studies were carried out, achieving a perfect balance between the four different types.
- 2) There were some difficulties in the San Cristóbal de las Casas municipality in finding a sufficient number of non-beneficiary households, indigenous as well as *mestizo*. Thus, four case studies of indigenous beneficiary households and four cases of *mestizo* beneficiaries were used, but only five non-beneficiary cases were found (three indigenous and two *mestizos*).
- 3) The Tumbalá municipality presented the most difficulties when obtaining our analytic sample. Unlike the other municipalities, Tumbalá has no *mestizo* population or poor non-beneficiary households. Therefore, we selected a more purely indigenous scenario, the Mazatlán Villa de Flores municipality in Oaxaca, and compared it with the

rest of the municipalities, which were very inter-ethnically marked. In the different communities studied in this Chol municipality, 16 case studies of indigenous beneficiary households were completed, each with a different language trait, ranging from monolingual households to bilingual ones with a very fluid handling of Spanish.

Oaxaca:

- 1) In the Mazateca valley micro-region, we found a similar situation to that of Tumbalá in Chiapas. Owing to the very high concentration of indigenous population, the number of mestizo households was significantly reduced here; the only four *mestizo* households in the study are beneficiary (no poor *mestizo* non-beneficiary households were found). Moreover, the mestizo households were selected based on whether the mother was non-indigenous and married to Mazateco men. The quota for indigenous households was covered (eight in total, half of them beneficiary households and the other half, non-beneficiary. However, owing to the high coverage of *Oportunidades* in this region, there are almost no non-beneficiary households; two of the cases included had actually been incorporated very recently (end of 2007, during the course of the fieldwork; they had only received benefits for two months).
- 2) In the micro-region of two communities in the San Juan Cotzocón municipality, although we did not face difficulties in completing the sample, only three case studies (not four) were performed of indigenous non-beneficiaries and only four of *mestizos*, half of them beneficiaries, and the other half non-beneficiaries.*
- 3) In the Costa Chica in Oaxaca, two communities in the Santiago Jamiltepec municipality were studied, one indigenous and the other *mestizo*; so the sample was completed without any problems, to the degree where two additional cases were found in the non-beneficiary household category, one indigenous, another *mestizo*.

INSTRUMENTS EMPLOYED[‡]

Script for obtaining and processing data about domestic groups and their educational, health and occupational trajectories

The data necessary to complete the household case studies was gathered through several informal and semi-structured interviews. The script used covers the topics and areas of interest that fieldwork researchers had to investigate during these interviews, which were all related to the main focus of the qualitative assessment: the health, education and employment of the members of the household. This is not a questionnaire but a script that outlines the subject matters to be covered in each case study. It was also necessary to obtain information about the changes that occurred in all of these areas during the years the beneficiary households were exposed to the program, either beginning in 1998 or 1999. (It was also relevant to find out if non-beneficiaries had suffered any changes and if so, what type.) Finally, the interviewees were asked to evaluate their educational or work trajectories; their educational experiences and dealings with healthcare services providers; and if applicable, with the *Oportunidades* Program and its components throughout the decade. Therefore, the purpose was not only to obtain data regarding the formal aspects and services of the program but also on the social experience of its users and beneficiaries.

* The problem in this micro-region was the health of one of the researchers. During the course of the fieldwork, Alma Martínez suffered from a health problem that prevented her from working with the same efficiency as the other researchers.

‡ The tools employed to gather data relevant to the analysis in this working technical document are described here. The reader will be able to consult the regional analytic documents that describe in detail all the tools employed in the ethnographic research of each scenario.a

MICRO-REGION	ETHNICITY AND PROGRAM STATUS				
CHIAPAS	INDIGENOUS BENEFICIARIES	INDIGENOUS NON-BENEFICIARIES	MESTIZO BENEFICIARIES	MESTIZO NON-BENEFICIARIES	TOTAL
Las Margaritas (Tojolabal)	4	4	4	4	16
San Cristóbal (Tzotzil)	4	3	4	2	13
Tumbalá (Chol)	16	0	0	0	16
Total	24	7	8	6	45
Oaxaca	Indigenous Beneficiaries	Indigenous Non-Beneficiaries	Mestizo Beneficiaries	Mestizo Non-Beneficiaries	Total
Mazateca	4	4	4	0	12
Mixe	3	5	2	2	12
Costa Chica	4	5	4	5	18
Total	11	14	10	7	42
Chihuahua	Indigenous Beneficiaries	Indigenous Non-Beneficiaries	Mestizo Beneficiaries	Mestizo Non-Beneficiaries	Total
Samachique (Tarahumara)	4	4	4	4	16
Norogachi (Tarahumara)	4	4	4	4	16
Yepachi-Maycoba (Pima)	4	4	4	4	16
Total	12	12	12	12	48
Sonora	Indigenous Beneficiaries	Indigenous Non-Beneficiaries	Mestizo Beneficiaries	Mestizo Non-Beneficiaries	Total
Guaymas (Yaqui)	5	3	5	3	16
Etchojoa (Mayo)	4	3	5	4	16
Álamos (Guarijio)	4	5	4	3	16
Total	13	11	14	10	48
FINAL TOTAL	60	44	44	35	183

Table: Alejandro Agudo, taken from Agudo, 2008b

TABLE B4
Final composition of
the analytic sample

Domestic composition table

This instrument accompanied the interview script described above and was used to collect and record data about the composition and structure of every household: name of each member, sex, kinship with respect to the other members of the domestic group, date of birth, place of birth, marital status, etc. Two domestic composition tables composed for each case study: one containing the composition and structure data about the domestic group in 1998 or 1999 and a second one with details of its current composition and structure. It was also necessary to specify the mother tongue of the domestic group members (or at least of the head of the household and/or the spouse, or the main female *Oportunidades* beneficiary if the household was incorporated into the program. The table clearly identified if the studied household was an *Oportunidades* Program beneficiary and if its members identified themselves as indigenous or non-indigenous. If any anomalies or interesting details were found in the data obtained within the domestic composition tables, the former would be noted as items to raise during the interview and integrated into the household case study interview guide.

Script for follow-up with indigenous and non-indigenous former *Oportunidades* grant holders and their non-beneficiary peers

It was essential to perform a follow-up study of former *Oportunidades* grant holders to obtain information about their current educational and work situation. Identification of the relevant youths followed the logic of the analytic sample mentioned previously; that is, the former grant holders interviewed were children who in 1998–1999 were in the third and fourth grades of primary school.

The purpose of this tool, therefore, is to identify the processes that guided former beneficiaries of *Oportunidades* towards their current domestic, migratory and work trajectories; to understand the role that having been a former beneficiary might have played; and to determine if they had any advantages over non-beneficiaries in terms of schooling and their commitment to their education as a means of social advancement, increased social and cognitive abilities, improved work capacity and other advantages that they may have derived from the program. For this analysis, it was necessary to distinguish between results and processes. For example, regarding results, it is very probably that the majority of young former beneficiaries would engage in work similar to that of non-beneficiaries: peasants, day laborers, small business traders and store clerks, etc., although, it was also necessary to distinguish between occupation, position at work, (owner, self-employed, wage-earner, paid relative, unpaid relative), economic branch, size of the productive unit (number and type of workers), and all other features of the activity. However, because this was an ethnographic study, we were not only interested in the results but also the *processes* through which those results (in this case, jobs) were obtained: Did former beneficiaries have real access to more and better healthcare? Did they have real access to schools and a higher level of education that would endow them with more skills? Were the eating and hygienic habits in their homes better (having breakfast before going to school, for example)? Were their parents careful that the work they asked of their children, or allowed them to engage in, would not hinder them from fulfilling their schoolwork? Did the students have fewer absences during public festivals, sowing or harvest times or occasions when there was extra strain on the domestic workload (when younger siblings, the mother or father were ill; when there was work to be done or administrative procedures to be complied with, etc.)?

Script for interviewing education service providers

This script covers topics and matters relevant to the acquisition of information about personnel and the quality of education services, data that is essential when trying to understand the impact of *Oportunidades* on current and former grant holders. Besides interviews, careful observations were made of the school facilities, including a detailed description of the characteristics of the buildings, location, access and services they offered.

Because the assessment was a long-term one, all subjects were researched in retrospect, which meant that we had to find teachers whose length of service in the schools was long enough that they were able to provide information about the previous ten years, in the case of primary schools, and about the last eight years in the case of junior and senior high schools. They would also have to be able to comment on the important changes that have occurred in the facilities and in educational services in general over the same period.

Finally, in addition to the interviews, direct classroom observations were undertaken for several days.

Script for interviewing other relevant actors

During the fieldwork, researchers set out to find and interview, according to the items included in the script, key or important players in the life of the communities and households, whose authority and actions might affect the impact of the *Oportunidades* Program; these people include small local businessmen, employers, agricultural or other business owners, communal land and civil and religious authorities, etc. After identifying the actors to be interviewed, data was gathered through a questionnaire that focused on their role in the community and their actions and opinions with respect to the changes that had occurred during the last 10 years relative to the program. People interviewed

included priests and business owners; sawmill managers in the northern micro-regions; agricultural businessmen in the Costa Chica of Oaxaca, and other individuals whose opinion about the social development of the communities was considered of interest.

Finally, all of the data gathered with these instruments was registered in the researchers' field journals.

Appendix 3: Schooling levels attained by beneficiaries in communities with disparate education service coverage

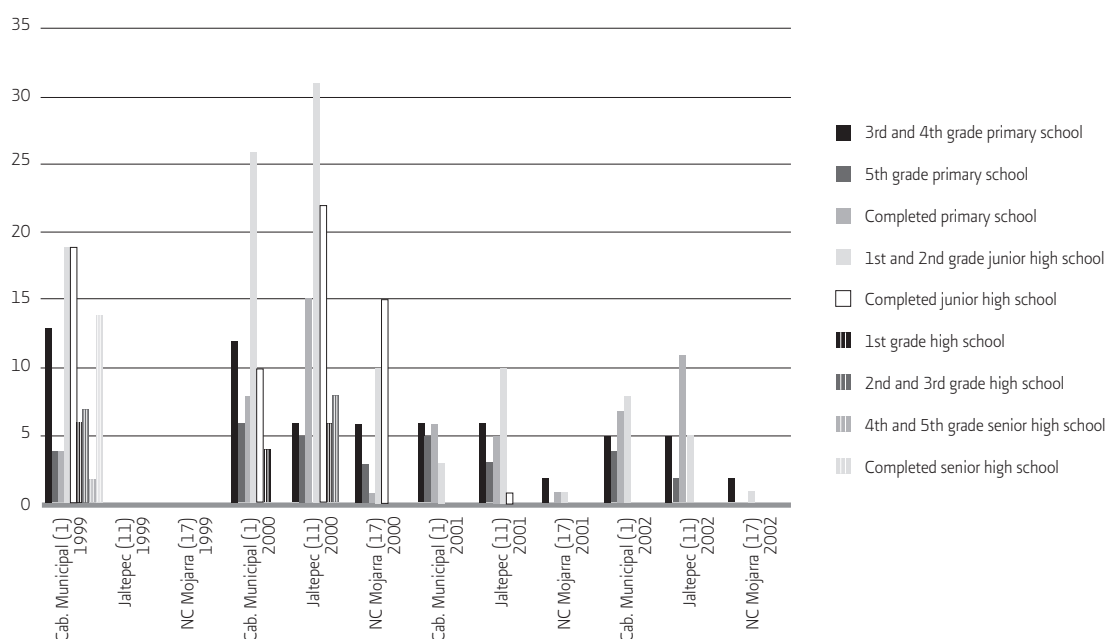


FIGURE C1
Number of former beneficiaries who entered the Oportunidades Program between the third and fourth grade of primary school in different years in the San Juan Cotzocón municipality (mixe region, Oaxaca), by schooling level attained