Occupation of young people in Mexico between 1992 and 2018: Studying, working, both or neither

*Ocupación de jóvenes en México entre 1992 y
2018: Estudiar, trabajar, ambos o ninguno*

Rodrigo Carrillo
Universidad Iberoamericana Mexico City
roca1811@hotmail.com

Thibaut Plassot
Universidad Iberoamericana Mexico City
thiiplass@gmail.com

Abstract

We analyze the occupation of young people in Mexico between 1992 and 2018. A decrease in the disconnection rate is observed, with an exception during the 2008-2010 crisis. Probabilistic models for the year 2018 highlight inequalities between sex, household structure or territory. The main determinants of occupational pathways are the education level of the parents, having a child, and sex. Women are less represented in the labor market than men, and having children decreases the likelihood of them working, while, for men, this rate increases. Young people who grow up under more favorable circumstances are less likely to combine work and studies. For women, living in an urban area or a wealthier household is synonymous with labor insertion and lower disconnection. For men, these characteristics are associated at a young age with a higher level of disconnection rather than work. Our results reaffirm the importance of early intervention in improving opportunities and avoiding adverse outcomes during times of economic crisis.

Keywords: youth, NEET, occupation, gender, territory

Resumen

Analizamos la ocupación de jóvenes mexicanos entre 1992 y 2018. Se observa una disminución de la tasa de desconexión, con excepción durante el período de crisis 2008-2010. Los modelos probabilísticos para el año 2018 subrayan las desigualdades entre sexo, estructuras familiares o territorios. Los principales determinantes de las trayectorias ocupacionales son la educación de los padres, tener hijos y el sexo. Las mujeres están menos representadas en el mercado laboral a comparación con los hombres, y tener hijos disminuye su probabilidad de trabajar, mientras que para los hombres aumenta esta probabilidad. Los jóvenes que crecen con circunstancias más favorables tienen menos probabilidades de combinar el trabajo y los estudios. Para las mujeres, vivir en una zona urbana o en un hogar más rico es sinónimo de mayor inserción laboral y menor desconexión. Para los hombres, estas características se asocian a una edad temprana con una mayor desconexión en lugar de trabajar. Nuestros resultados reafirman la importancia de la intervención temprana para mejorar las oportunidades y evitar resultados adversos durante las crisis económicas.

Palabras claves: juventud, NiNis, ocupación, género, territorio.

JEL: I30, J13, J16.

Fecha de recepción: 2 de agosto de 2021

Fecha de aceptación: 15 de septiembre de 2021.

1. Introduction

This study analyzes the occupation of young people between the ages of 12 and 29 in Mexico, i.e., if they study, work, both, or neither. The importance of this issue lies in the fact that early education plays a decisive role on future life-cycle trajectories (Gutiérrez-García et al., 2017; Cavero and Ruiz, 2016; Organization for Economic Co-operation and Development [OECD], 2017). For example, a World Bank study shows how the situation of not studying, not working, nor being enrolled in a training program (herein referred to as “disconnected”) is extremely persistent and is transmitted across generations (Baron et al., 2016). Furthermore, young people who leave school between the ages of 15 and 18 are less likely to return to school. While some of them leave the school system in order to work, most of the jobs in which they are employed are precarious in terms of flexibility, protection, or income (Aguayo Téllez and Mancha Torres, 2017). As a result, many young people find themselves in a situation of disconnection when they lose their jobs.

Young people in transitional or developing countries suffer from a higher rate of informality than adults (International Labor Organization [ILO], 2020). It is estimated that one-fifth of the youth population in Latin America works in the informal sector, while another fifth is disconnected - both of these situations are more frequently observed among the most vulnerable socio-economic groups (OECD/ United Nations Economic Commission for Latin America and the Caribbean [ECLAC]/ Development Bank of Latin America [CAF], 2016). Around 237 million people between the ages of 10 and 24 live in the Americas - this is equivalent to a quarter of its population (Pan American Health Organization [PAHO], 2018). The population structure is characterized by a significant number of young people who join adult life in such a way that drives down the child-age dependency ratio while increasing the old-age dependency ratio. However, in net terms, the total dependency ratio decreases. Although Latin American countries are already in advanced stages of demographic transitions, they generally have several more decades to take advantage of their demographic bonds (De Hoyos et al., 2016; International Fund for Agricultural Development [IFAD], 2019). In Mexico, for example, it is estimated that the demographic advantage can be extended for one more decade (Saad et al., 2009). In this context, it is important to pay attention to how current human capital is developing, which will play a decisive role in the country's development.

Our study departs is based on the following research questions: *i)* What were the occupational trends of youth between 1992 and 2018? *ii)* What differences

are observed between genders and territories in terms of access to education, the labor market or disconnection, and how these have changed over the period in question? *iii)* Which other factors are decisive for young men and women in terms of their personal trajectories? In order to address these concerns, we use data from the National Household Income and Expenditure Survey (ENIGH) for the period comprising 1992-2018. This survey was chosen because its temporality and periodicity are greater than other projects.²

Based on the results, it was found that, for the period studied, there was a decrease in the disconnection rate, while there is a growing number of young people who are studying up until the age of 20, in addition to a higher employment rate between the ages of 21 and 29. However, during the 2008-2010 economic crisis, the opposite is observed. Furthermore, the rate of disconnection among men has remained stable and low, while for women it has declined sharply; however, there are still significant gender gaps in the rate of labor participation and disconnection. It was found that the main determinants of school attendance are the educational level of parents, town size, and region. For males in younger age groups of school dropouts, it was found that a higher level of education among parents and living in an urban area are associated with a higher probability of disconnection rather than working. Meanwhile, for women, these two characteristics are linked to a higher likelihood of job insertion. Likewise, having children means a greater likelihood of working — or studying and working — for men, while, for women, it means a greater propensity for disconnection. As a result of the territorial analysis, school attendance rate increases alongside town size, with a higher rate in the capital and in the central and northern regions. Southern and central-western states are characterized by strong labor participation and a high rate of young people combining studies with work. For those above the age of 23, in the central region there is a higher rate of young people studying and/or working, in addition to a low likelihood of disconnection. Meanwhile, young people from the north and Mexico City are more likely to be disconnected once they leave school.

The remainder of the paper is organized into five sections. In Section Two, we present a brief literature review. In Section Three, we outline the methodology and data used. Later, in Section Four, we present descriptive statistics and the results

² ENIGH is carried out every two years, it allows make a shorter-term analysis compared to Population Census. In addition, the temporality is broader in relation to the National Occupation and Employment Survey (ENOE), which first round was in 2005.

of econometric models. Finally, in Section Five, we address the discussion of these results.

2. Literature Review

There is wide-ranging literature on youth occupation in Latin America focusing in particular on the disconnected population. De Hoyos et al. (2016) estimate that, in 2015, around 20 million people between the ages of 15 and 24 were out of school or work, representing approximately 20% of the cohort. Furthermore, the authors state that two out of three disconnected young people in the region come from households in poverty. It has been documented that women are more disconnected than men, who are more embedded in the labor market; however, in recent years, the disconnection rate between males has been on the rise (Tornarolli, 2016). In contrast, it is estimated that approximately 40% study, but, while the average schooling level in the region remains low, they have high aspirations (Cazzuffi, 2018; Novella, 2018). By leaving school, young people who find work do so mostly in informal, precarious, flexible, and high-turnover work (OECD/ECLAC/CAF, 2016; Novel, 2018).

For Mexico in particular, the issue of young people who neither study nor work takes on a relevant role between 2010 and 2015. The literature covering this period suggests that around 7 million people were in a situation like this, of which, 8 out of 10 were women (Bermúdez-Lobera, 2014). A potential response to this unequal distribution is that women are mostly engaged in household activities. The term *disconnected* is relatively new in the Mexican context. In the international context, some studies use it to refer to unemployed young people, while others use it in a broader sense for young people who neither study nor work, a population also known as *Ninis*.³ This article adheres to this second group but uses the term *disconnected* as the term *Ninis* is seen as depreciatory (Sanchez-Soto and Bautista, 2018) and seems to imply that young people in this situation have no occupation, when they may, in reality, be engaged in unpaid activities such as caring for other people or housework (Negrete and Leyva, 2013; Aguila et al., 2015). The population in search of employment is also included in this group, as it is of interest to identify the population that works, studies, both, or neither.

Arceo and Campos (2011) provide a detailed analysis of the disconnected population profile in Mexico between 1990 and 2010 with a disaggregation at a local

³ Acronym for “Neither Studies, Nor Works”, which corresponds to an adaptation of the English acronym NEET (“Not in Education, Employment or Training”).

level. They highlight the decrease in the proportion of disconnected young people, particularly among women, and point out one of the reasons for reduced female employment participation is the lack of availability of childcare services. The literature also indicates the leading determinants of school attendance in Mexico, specifically sex and family circumstances (Pederzini, 2000; Raccanello et al., 2009; Mancha Torres et al., 2020), in addition to the effect of school performance, failing courses, or lack of interest (April Valdez et al., 2008). Dropping out is one of the most important determinants of disconnection as many young people leave the school system to start working.

With regard to the influence of territorial environment, Arceo and Campos (2011) find that in municipalities with a higher employment rate – as a proxy of the employment opportunities available to the population – the incidence of disconnection is lower. Finally, other studies that have addressed a territorial approach identify a higher likelihood of non-attendance in rural areas compared to urban ones (Escoto and Navarrete, 2018) and find young residents of marginalized neighborhoods are more prone to disconnection (Aguayo Téllez and Mancha Torres, 2017).

3. Methodology and data

The concept of *young* is complex and there are various official definitions (IFAD, 2019). Most of these are based on the criterion of age. For example, the United Nations defines it as people between the ages of 15 and 24. This study considers young population as people from the ages of 12 to 29 according to the Mexican Youth Institute Law. Another methodological approach we have taken is to consider the young population that works,⁴ attends an educational institution, both, or neither. In the latter group (disconnected), we include those who seek work, are engaged in housework, and people with some physical or mental limitation that prevents them from working at all. The input used for the quantitative analysis is the ENIGH — a survey conducted every two years — between 1992 and 2018. This survey was chosen because of its periodicity and representativeness for the research.⁵

⁴ However, this includes young people who worked during the last month but are currently on vacation or leave, who have an illness, who have changed activity due a lack of vehicles, raw materials, natural phenomena, end of the season, strike or work stoppage, or those who may start a new job or business soon.

⁵ On the initiative of the National Council for the Evaluation of Social Development Policy (CONEVAL) in 2008 an additional statistical project was included: the Socio-

Occupation of young people in Mexico between 1992 and 2018:
Studying, working, both or neither

Table 1: Sample size and young population, 1992- 2018

Year	Number of young in the sample	Young population (millions)	Young people in the total population (%)	Year	Number of young in the sample	Young population (millions)	Young people in the total population (%)
1992	18,217	31.5	36.0	2006	27,477	35.9	33.1
1994	21,381	32.3	35.8	2008	76,642	36.4	32.6
1996	22,983	33.0	35.4	2010	75,339	36.4	31.8
1998	16,540	33.2	34.7	2012	67,415	37.1	31.6
2000	14,270	33.3	33.7	2014	67,098	37.1	30.9
2002	24,329	34.2	33.7	2016	79,215	37.5	30.6
2004	29,934	33.9	32.9	2018	82,285	38.2	30.6

Source: Tables created by authors with data from Household Income and Expenditure Surveys (INEGI).

Table 1 presents the number of observations (young people) in each year between 1992 and 2018. Table 2 summarizes the characteristics of the 2018 sample, the year for which the analysis becomes more focused. The population between the ages of 12 and 29 is close to 38 million in 2018, with a slight concentration between the ages of 12 and 20.⁶ Approximately 20% of young people live with only their father or mother, while 52% with both parents, 18% live alone or in a union, and 11% live with another relative (Table 2). Based on the classification of the Espinosa Yglesias Study Center (CEEY),⁷ we estimate that 7% of young people live in the country's capital, 31% in the central region, 23% in the south, 18% in the north, 14% in the central-west and 7% in the north west.

economic Conditions Module (mcs). When combined, the MCS and the ENIGH allow us to obtain poverty measures and other indicators at a state level.

⁶ In order to address a more detailed descriptive analysis, age groups for this purpose were classified in six three-year groups (12-14, 15-17, 18-20, 21-23, 24-26, 27-29). While, for statistically consistent results, only three age groups (12-17, 18-23, 24-29) are handled using econometric estimations.

⁷ The regional classification of the ESRU-EMOVI Social Mobility Survey 2017 is as follows: Mexico City; Central Region: Guanajuato, Hidalgo, Mexico, Morelos, Puebla, Queretaro, Tlaxcala; North-West Region: Baja California Sur, Durango, Nayarit, Sinaloa, Zacatecas; Northern Region: Baja California, Coahuila, Chihuahua, Nuevo León, Sonora, Tamaulipas; South Region: Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Yucatán; Central-West Region: Aguascalientes, Colima, Jalisco, Michoacán, San Luis Potosí. We opt for this classification because it includes different groups, allowing us to achieve a timelier analysis geographically, and particularly because it separates Mexico City from other states, recognizing that the capital can have differentiated social, economic and demographic dynamics.

Table 2: Sample characteristics in 2018

	Disconnected	Only Work	Only Study	Study and Work	Total
Number of Young people	14,147	32,134	28,110	7,894	82,285
Total population (thousands)	6,263	14,602	13,660	3,700	38,225
Woman	80%	38%	52%	41%	50%
Men	20%	62%	48%	59%	50%
Average age	22	23	16	18	20
12 to 14 years old	4%	1%	42%	18%	18%
15 to 17 years old	13%	7%	31%	26%	18%
18 to 20 years old	20%	17%	16%	24%	18%
21 to 23 years old	20%	21%	8%	18%	16%
24 to 26 years old	22%	26%	2%	9%	15%
27 to 29 years old	20%	28%	1%	5%	15%
Live alone	32%	29%	2%	6%	18%
Live with family members	18%	13%	6%	8%	11%
Live with a parent	15%	18%	23%	24%	20%
Live with both parents	35%	40%	69%	62%	52%
Central	31%	32%	32%	28%	31%
North-West	7%	7%	7%	7%	7%
North	18%	17%	20%	16%	18%
South	24%	23%	21%	28%	23%
Central-West	14%	15%	12%	18%	14%
Mexico City	6%	6%	9%	4%	7%
Parent Education Level 1 (Low) ⁸	18%	19%	5%	8%	11%
Parent Education Level 2	23%	23%	12%	17%	17%
Parent Education Level 3	38%	38%	40%	43%	40%
Parent Education Level 4	13%	12%	24%	20%	19%
Parent Education Level 5 (High)	8%	8%	19%	12%	14%
Indigenous language speaker at home	11%	12%	8%	12%	10%

Source: Table created by authors with data from the Household Income and Expenditure Surveys (INEGI).

⁸ The educational level is divided into five categories: 1 Incomplete Primary education or less, 2 Complete Primary education or incomplete Junior High School, 3 Complete Junior High School or incomplete High School, 4 Complete High School, 5 Professional, Master, or Doctorate. For those who lives with both parents, the schooling of the parent with the highest grade will be taken as a reference.

To answer the first and second research questions, in addition to providing contextual for the historical evolution of occupation among young people, a brief descriptive analysis is presented for the period 1992-2018, disaggregated by sex, locality size, state, and region.⁹ To answer the second and third research questions, as well as identifying circumstances that are determinants in the trajectory of young people, some econometric models disaggregated by sex and household structure (i.e. if they live alone, with relatives, or with one or two parents) are estimated for 2018. These calculations are made for three age groups, but the model for young people living alone from 12 to 17 years is not presented due to a very small number of observations. The baseline model from which we start is defined as:

$$y_i^* = \beta_1 \cdot C_i + \beta_2 \cdot P_i + \beta_3 \cdot T_i + e_i \quad (1)$$

Where y_i^* is a categorical variable that indicates the condition of occupation of young people, explained by family (C), personal (P), and territorial (T) characteristics. Within family circumstances, the structure of the household is considered, in addition to whether the household has speakers of some indigenous language and the parents' highest educational level. Within personal characteristics, we considered whether the young person has a child, his or her sex, and completed education. Within the territorial dimension, we included the region and whether the person surveyed lives in an urban (localities of 15,000 inhabitants and more) or rural area. It is important to clarify that the regressors used differ depending on the disaggregation by household structure, which, in turn, is subject to the availability of information. In the results section, only marginal effects of each estimation are presented.

We estimated three models in order to firstly analyze the influence of circumstances on the different possible occupational options (disconnection, work, study), then on the options available to young people who have left the school system (work or disconnection), and, finally, on the options available to young students (study and work, or just study). The variable that identifies the sex of the individual is included to measure the gender gaps in the probabilities of each occupation, while, at another time, the models are disaggregated by sex. Table

⁹ Due to the data representativeness, disaggregation by region is done only from 2008 to 2018.

3 lists the regressors used in each model, of which some particularities are specified below:

- Model 1: It identifies the elements that make people opt for one path or the other, if they are considered as a set of options. Based on this, an ordered probit model is estimated, where y_i^* can take the following values: 0 Disconnected; 1 Works; 2 Studies (includes the population studying and working).
- Model 2: It seeks to identify the characteristics that lead young people to study or to study and work simultaneously. Therefore, we only focus on young people attending school. So y_i^* can take the values: 0 Study; 1 Study and work.
- Model 3: In addition to Model 2, it analyzes the occupational situation of those who have left school. In this last case, y_i^* can take the values: 0 Disconnected; 1 Work.

Occupation of young people in Mexico between 1992 and 2018:
Studying, working, both or neither

Table 3: Variables used in probit and ordered probit models

		<i>C_i</i>			<i>P_i</i>			<i>T_i</i>	
Household Structure	Age Group	Single parent	Indigenous speaker at home	Parent education level	Age	Sex	With children	Educational level of young	Urban Region
Model 1	Lives with one or two parents	12 - 17							
		18 - 23							
		24 - 29							
	Lives alone	18 - 23							
		24 - 29							
	Lives with family members	12 - 17							
		18 - 23							
		24 - 29							
	Lives with one or two parents	12 - 17							
		18 - 23							
		24 - 29							
	Lives alone	18 - 23							
		24 - 29							
Model 2	Lives with family members	12 - 17							
		18 - 23							
		24 - 29							
	Lives with one or two parents	12 - 17							
		18 - 23							
		24 - 29							
	Lives alone	18 - 23							
		24 - 29							
	Lives with family members	12 - 17							
		18 - 23							
		24 - 29							
	Lives with one or two parents	12 - 17							
		18 - 23							
		24 - 29							
Model 3	Lives alone	18 - 23							
		24 - 29							
	Lives with family members	12 - 17							
		18 - 23							
		24 - 29							
	Lives with family members	12 - 17							

Source: Table created by authors.

NB: The variables used in each model are presented. The first model (1) is an ordered probit where y_i^* can take the following values: 0 Disconnected; 1 Work; 2 Study (includes the population that studies and works); the second model (2) is a probit where y_i^* can take the values: 0 Study; 1 Study and work; the third model (3) is a probit where y_i^* can take the values: 0 Disconnected; 1 Work.

4. Results

i. Evolution from 1992-2018 (descriptive statistics by gender and geographical location)

In analyzing the evolution in the 1992-2018 period regarding the occupational situation of young people from the ages of 12 to 29, we can state that there was a downward trend in the disconnection rate for all age groups (Figure 1). For example, it decreased from 11% in 1992 to 4% in 2018 for the age group of 12- to 14-year-olds, from 29% to 19% for the 18-20 age group, and 35% to 22% for the 27-29 age group. However, if we consider the percentage of disconnection within those who left school, there is a slight increase between 1992 and 2018 for all age groups, and the increase after the age of 20 is close to 10 percentage points (Table 4).

For the 12-14 age group, the increase in the percentage of young people who only study is small - from 79% in 1992 to 83% in 2018. However, the percentage of those who study and work at the same time changed from 3% to 10%. For the older age groups, the increase is much more pronounced (e.g., 46% to 61% for people aged between 15 and 17 who only study, and 23% to 32% for those between the ages of 18 and 23). This result shows that the trend at basic level education has moved towards universalization. In 1993, junior high school became mandatory, and it is worthwhile mentioning the efforts to boost enrollment in marginalized and rural areas, develop intercultural and bilingual models, and care for young people with disabilities and outstanding skills (Mendoza Rojas, 2018). While the expansion of secondary and tertiary education levels has been significant since 1992, the rate of young people having access to this education is still very limited. For tertiary education, there is also a strong concentration of enrollment in Mexico City (Mendoza Rojas, 2018). High-school became mandatory in 2012 and a number of strategies have been implemented to promote the incorporation of young people from different backgrounds through scholarships or incentives.

For the 24-29 age group, the percentage of young people devoted exclusively to study is very low (5% or less) and has remained at a similar level over time. Meanwhile, for this same age group, more than half of those studying do so at the same time as working. For all age groups, there is an increase in the percentage of people studying and working simultaneously (Figures 3 and 4). For example, for the 15-20 age group this increase has been from about 5% to 14%. If we now calculate the proportion of students who also have a job, we see that

Occupation of young people in Mexico between 1992 and 2018: Studying, working, both or neither

Figure 1:
Percentage of young people disconnected
by age group, 1992-2018

Figure 2:
Percentage of young people who only work
by age group, 1992-2018

Figure 3:
Percentage of young people who only study
by age group, 1992-2018

Figure 4:
Percentage of young people who work and study
by age group, 1992-2018

Source: Figures created by authors with data from the Household Income and Expenditure Surveys (INEGI).

this number has risen among the 12-17 age group, but it has remained stable for other age groups (Table 5). This indicator shows two additional findings: the proportion of students who also work increases strongly with age (from 11% among young people aged between 12 and 14 to 57% among 27- and 29-year-olds in 2018), and the proportion of students who also work is high, particularly after the age of 20.

The percentage of young people from the ages of 12 to 20 who leave the education system in order to work has decreased (Figure 2). Among those who have left school, the percentage of young people entering the labor market has not increased – in fact, it has decreased for those aged between 20 and 29 years old (Table 4).

For the period comprising 2007-2010, we identify that the effect of the crisis originated in the USA. Comparing results between 2006 and 2010, we can observe an increase in the disconnection rate for all age groups, while there is a decrease for the working population after the age of 18, and, above all, the proportion of young people who work and study at the same time decreases. Moreover, the percentage of those who only study remains stable, which may reflect that young people who study and work simultaneously left school or both activities and joined the disconnected group. Furthermore, many young people lost their jobs. By analyzing the results for the following period, i.e. between 2010 and 2018, we can see some post-crisis recovery, as the percentage of those disconnected has decreased again, particularly for groups over the age of 18. In these same groups, there was also an increase in the percentage of young people working.

Occupation of young people in Mexico between 1992 and 2018:
Studying, working, both or neither

Table 4: Percentage of disconnection within those who left school, by sex and age group

	Age Group	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018
Total	12 - 14	38%	37%	42%	38%	33%	36%	35%	41%	40%	35%	39%	38%	42%	41%
	15 - 17	51%	51%	56%	56%	58%	53%	50%	53%	51%	49%	51%	50%	53%	54%
	18 - 20	60%	62%	59%	64%	63%	63%	61%	62%	60%	60%	62%	61%	65%	66%
	21 - 23	59%	65%	63%	67%	63%	67%	65%	68%	66%	64%	67%	67%	70%	70%
	24 - 26	65%	65%	67%	68%	70%	70%	67%	73%	68%	67%	71%	69%	74%	73%
	27 - 29	64%	64%	66%	69%	67%	69%	71%	74%	70%	66%	70%	71%	76%	77%
Women	12 - 14	13%	14%	22%	25%	19%	17%	22%	26%	27%	22%	22%	19%	30%	25%
	15 - 17	29%	33%	36%	39%	39%	32%	31%	35%	33%	30%	32%	30%	34%	33%
	18 - 20	36%	40%	39%	44%	41%	45%	42%	45%	40%	39%	44%	43%	46%	47%
	21 - 23	33%	40%	43%	45%	40%	44%	44%	50%	47%	44%	49%	47%	51%	53%
	24 - 26	40%	41%	45%	48%	48%	50%	48%	56%	50%	50%	55%	51%	58%	57%
	27 - 29	35%	37%	42%	45%	43%	49%	51%	55%	50%	47%	52%	53%	60%	61%
Men	12 - 14	68%	61%	71%	56%	46%	57%	50%	55%	54%	47%	53%	54%	52%	53%
	15 - 17	75%	71%	74%	74%	79%	73%	72%	68%	68%	65%	68%	69%	71%	74%
	18 - 20	85%	86%	82%	87%	87%	84%	80%	82%	80%	79%	80%	79%	84%	85%
	21 - 23	90%	91%	86%	91%	91%	89%	89%	90%	87%	86%	87%	87%	90%	89%
	24 - 26	94%	93%	93%	92%	95%	93%	90%	93%	90%	88%	89%	90%	92%	91%
	27 - 29	95%	95%	96%	97%	96%	93%	93%	94%	92%	88%	90%	91%	94%	94%

Source: Table created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Table 5: Percentage of young people attending school and working by age group

Age group	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018
12-14	4%	7%	10%	11%	8%	8%	6%	9%	8%	7%	9%	7%	11%	11%
15-17	9%	9%	12%	15%	15%	15%	13%	14%	14%	11%	14%	13%	19%	18%
18-20	19%	19%	23%	26%	21%	24%	24%	25%	23%	19%	22%	23%	29%	29%
21-23	39%	28%	35%	36%	32%	35%	32%	41%	35%	30%	31%	32%	37%	38%
24-26	55%	56%	49%	50%	46%	43%	53%	55%	49%	45%	46%	43%	52%	53%
27-29	64%	57%	68%	64%	67%	71%	68%	66%	62%	58%	58%	54%	67%	57%

Source: Table created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Analysis by sex

Described results are explained better if we disaggregate them by sex (Figures 5 and 6). Firstly, gender differences in occupational status increase with age, such as: lower female participation in the labor market and a higher disconnection rate. The percentage of men who only work is 48% for the youngest age group in 2018, growing to 89% for the oldest age group. For women, these indicators are 25% and 58%, respectively, for each age group.

Gender is a social, cultural and historical construct to which values, stereotypes and prejudice are attributed (Poblete, 2011). The weight of customs and traditions have slowed women's access to education and the labor market, and the incorporation of women into these sphere has been a slow and long journey (Lechuga Montenegro et al. 2018). Our results show that, after the age of 17, the percentage of women disconnected increases sharply, from 29% between the ages of 18 and 20 to 37% for the 27-29 age group in 2018 (respectively, 46% and 63% in 1992). In turn, the percentage of disconnected men for the same age groups is 9% and 6% in 2018 (11% and 5% in 1992). This clear shows that gender inequality remains an important issue, reflecting the persistence of social paradigms that assign women to domestic and care work and men to the social and public sphere (Poblete, 2011).

Occupation of young people in Mexico between 1992 and 2018: Studying, working, both or neither

Figure 5. Occupation by sex and age group, 1992

Source: Created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Figure 6. Occupation by sex and age group, 2018

Source: Created by authors with data from the Household Income and Expenditure Surveys (INEGI).

For the studied period as a whole, the decrease in the percentage of young people who neither study nor work is due to the decrease in the number of disconnected women, given that the variation for men during the period is minimal. For example, in the group of men aged from 21 to 23, the disconnected population remains steady at around 8% between 1992 and 2018, while for women it changed from 57% in 1992 to 33% in 2018. This is accompanied by an increase in the percentage of women working, studying, or both. However, if we look at the percentage of disconnected women within the total number of women who left school, this number increased sharply between 1992 and 2018 while remaining stable for men. Finally, if in 1992 the percentage of men and women studying was quite similar until the age of 20, in 2018 there is a higher percentage of women studying than men up to the age of 23, while men mostly join the labor market after the age of 17 (more than 61% in 1992 and more than 48% in 2018).

Analysis by territory

After disaggregating results into four locality sizes (100,000 and more inhabitants, between 15,000 and 99,999 inhabitants, between 2,500 and 14,999 inhabitants, fewer than 2,500 inhabitants), in 2018 there is a relationship between a higher degree of rurality and a higher percentage of disconnection (Figures 7, 8, 9, 10). School enrollment also tends to be higher as the population in the locality is larger. The percentage of young people studying and working at the same time is higher up to the age of 18 in small towns compared to the larger localities, and, after the age of 17, it is higher in more urban areas. This could be explained by the fact that many people in rural localities have to migrate to urban areas in order to find educational and employment opportunities appropriate to their aspirations.

Between 1992 and 2018, there is a reduction in the gap between localities of different sizes, especially in more rural areas where the disconnection rate has strongly decreased while the rate of young people studying and/or working after the age of 17 has increased. For example, in localities of more than 100,000 inhabitants, the percentage of young people between the ages of 12 and 14 who only study is 90%, remaining constant between 1992 and 2018; on the other hand, in localities of fewer than 2,500 inhabitants, this number increased from 64% to 73%. This result is explained in part by the decentralization process of the education system that began in the 1970's, in addition to an increased number of social programs implemented in the mid-1990's to promote school attendance. On the one hand, enrollment, especially in higher education,

was essentially concentrated in Mexico City, but it rapidly expanded in other states (Rodríguez, 1999). On the other hand, access to the education system has also expanded to cover intermediate and rural territories (Tuirán and Muñoz, 2010).

Mexico City, alongside the State of Mexico, Hidalgo and the northern states have a higher percentage of young people studying, while in Chiapas, Quintana Roo, Guanajuato, Zacatecas, Michoacan, and Jalisco, this number is lower (Figure 11). The states with a high percentage of young people who only study are those in the northern region, alongside Mexico City and the State of Mexico (Figure 12). In these same states, there is a lower percentage of young people studying and working. This situation is most common in the southern states, especially in Chiapas, where 15% work and study simultaneously (Figure 13).

Figure 7:
Young people disconnected in localities
of 100,000 and more inhabitants
by age group, 1992-2018

Figure 8:
Young people disconnected in localities
of 2,500-14,999 inhabitants
by age group, 1992-2018

Figure 9:
Young people disconnected in localities
with up to 2,499 inhabitants
by age group, 1992-2018

Figure 10:
Young people disconnected in localities
of 15,000-99,999 inhabitants
by age group, 1992-2018

Source: Figures created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Occupation of young people in Mexico between 1992 and 2018: Studying, working, both or neither

Figure 11:
Percentage of young people disconnected
by state, 2018

Figure 12:
Percentage of young people only studying
by state, 2018

Figure 13:
Percentage of young people studying and working
by state, 2018

Figure 14:
Percentage of young people only working
by state, 2018

Source: Figures created by authors with data from the Household Income and Expenditure Surveys (INEGI).

The percentage of young people working is significant in the southern states, as well as in Jalisco, Michoacan, and the central region (Figure 14), particularly among younger ages. The spatial division in terms of young people who are disconnected, however, is less clear. The states with the highest disconnection rate are Zacatecas, Michoacan, Veracruz, Durango, San Luis Potosi, Tabasco, Guanajuato, and Coahuila (more than 17%). In contrast, the states with the lowest percentage are Yucatan, Tlaxcala, Colima, Mexico City and Hidalgo (less than 14%) (Figure 11). Finally, the states that have the largest gender gap in terms of disconnection for the 18-23 group are Chiapas, Zacatecas, Michoacan, and Oaxaca, with more than 30 percentage points difference.

Occupation of the disconnected

We now look at the occupations declared by young people aged between 12 and 29 who neither study nor work in 2018. Around 74% say they dedicate their time to housework, 15% are searching for a job, 5% report studying (despite not attending a school), and 4% neither work nor study because they have a physical or mental limitation. More than 90% of disconnected women between the ages of 27 and 29 report turning to housework (compared to only 10% of men), and this percentage stands at 74% for women between the ages of 12 and 14 (Figure 15). The percentage dedicated to household chores increases with age for women while decreasing for men - from 42% between the ages of 12 and 14 to 10% for the 27-29 age group. The proportion of men looking for employment increases with age, from 22% between the ages of 12 and 14 to 57% between the ages of 27 and 29.

Figure 15. Occupation of disconnected young people by sex, 2018

Source: Created by authors with data from the Household Income and Expenditure Surveys (INEGI).

ii. Determinants for each situation in 2018 (probabilistic models)

We now focus on 2018 to identify the main determinants for each occupational situation. In all the models, the variable of sex is significant and has an important influence on occupation (Tables 6 and 8). For this reason, each estimation is in turn disaggregated by sex. In general, women are more likely than men to be disconnected compared to working or studying, but significant differences are observed depending on the household structure. The results of the ordered probit model (Table 7) show that women are less likely than men to study after the age of 17; however, for the 12-17 age group, women living with one or two parents are more likely to study than men living under the same circumstance. In turn, for this same subpopulation, the probability of being disconnected is lower than for men. Women from 12 to 17 years old who live with other family members, alone or as a couple are less likely to study than men, and they are more likely to work or be disconnected. After the age of 17, women are more likely than men to be disconnected compared to any other situation; this difference stands at around 11 to 8 percentage points for young people living with their parents and aged between 18 and 23 and 24 to 29, respectively. Marginally speaking, this effect is much greater for women who live alone (more than 30 percentage points higher than men) or with other family members (8 percentage points between the ages of 12 and 17, increasing to 29 percentage points between the ages of 24 and 29).

Table 6: Ordered probit models results

		Age	Sex (female=1)	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North- West	4: Central- West	5: Central	6: Mexico City	
Living with parents	12-17 years old (Obs. 28,053)	Study	-0.048***	0.021***	0.001	-0.209***	0.004	0.062***	0.147***	0.260***	0.342***	0.020***	-0.038***	-0.019***	-0.038***	-0.036***	-0.014
			(0.001)	(0.004)	(0.005)	(0.016)	(0.006)	(0.006)	(0.006)	(0.008)	(0.013)	(0.004)	(0.006)	(0.007)	(0.007)	(0.006)	(0.015)
		Only work	0.020***	-0.009***	-0.000	0.089***	-0.002	-0.027***	-0.063***	-0.111***	-0.145***	-0.008***	0.016***	0.008***	0.016***	0.015***	0.006
			(0.001)	(0.002)	(0.002)	(0.007)	(0.003)	(0.003)	(0.003)	(0.004)	(0.006)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.006)
		Disconnected	0.028***	-0.012***	-0.001	0.120***	-0.003	-0.036***	-0.085***	-0.150***	-0.197***	-0.011***	0.022***	0.011***	0.022***	0.021***	0.008
			(0.001)	(0.002)	(0.003)	(0.009)	(0.004)	(0.003)	(0.003)	(0.005)	(0.008)	(0.002)	(0.004)	(0.004)	(0.004)	(0.003)	(0.009)
	18-23 years old (Obs. 19,515)	Study	-0.024***	-0.017***	0.010	-0.169***	0.002	0.057***	0.143***	0.285***	0.433***	0.077***	-0.028***	-0.024**	-0.037***	-0.017*	-0.007
			(0.002)	(0.006)	(0.007)	(0.007)	(0.010)	(0.009)	(0.009)	(0.011)	(0.014)	(0.006)	(0.010)	(0.011)	(0.010)	(0.009)	(0.021)
		Only work	0.009***	0.007***	-0.004	0.066***	-0.001	-0.022***	-0.056***	-0.111***	-0.169***	-0.030***	0.011***	0.009**	0.014***	0.006*	0.003
			(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)	(0.008)
		Disconnected	0.015***	0.010***	-0.006	0.103***	-0.001	-0.035***	-0.087***	-0.174***	-0.264***	-0.047***	0.017***	0.015**	0.022***	0.010*	0.004
			(0.001)	(0.004)	(0.004)	(0.004)	(0.006)	(0.006)	(0.005)	(0.007)	(0.009)	(0.004)	(0.006)	(0.007)	(0.006)	(0.005)	(0.013)
	24-29 years old (Obs. 10,420)	Study	-0.007***	-0.057***	0.011**	-0.028***	0.006	0.008	0.027***	0.060***	0.074***	0.038***	-0.014**	-0.009	-0.008	0.007	0.030**
			(0.001)	(0.004)	(0.005)	(0.003)	(0.007)	(0.006)	(0.006)	(0.008)	(0.009)	(0.005)	(0.007)	(0.008)	(0.007)	(0.006)	(0.013)
		Only work	-0.003***	-0.024***	0.005**	-0.012***	0.002	0.003	0.012***	0.025***	0.031***	0.016***	-0.006**	-0.004	-0.003	0.003	0.013**
			(0.001)	(0.003)	(0.002)	(0.001)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.006)
		Disconnected	0.010***	0.081***	-0.016**	0.039***	-0.008	-0.011	-0.039***	-0.085***	-0.105***	-0.053***	0.020**	0.012	0.011	-0.010	-0.043**
			(0.002)	(0.006)	(0.006)	(0.003)	(0.009)	(0.008)	(0.008)	(0.011)	(0.013)	(0.006)	(0.010)	(0.011)	(0.010)	(0.009)	(0.019)
Living alone	18-23 years old (Obs. 4,068)	Study	0.003	-0.146***		-0.052***	0.013				0.065***	-0.027***	0.006	-0.004	-0.012	0.006	
			(0.002)	(0.005)		(0.004)	(0.008)				(0.006)	(0.008)	(0.009)	(0.009)	(0.008)	(0.023)	
		Only work	0.003	-0.164***		-0.059***	0.015					0.073***	-0.030***	0.007	-0.004	-0.013	0.006
			(0.002)	(0.009)		(0.004)	(0.009)				(0.006)	(0.009)	(0.010)	(0.010)	(0.009)	(0.026)	
		Disconnected	-0.006	0.310***		0.111***	-0.028					-0.139***	0.056***	-0.013	0.008	0.024	-0.012
			(0.004)	(0.011)		(0.007)	(0.018)				(0.011)	(0.017)	(0.019)	(0.020)	(0.017)	(0.049)	
	24-29 years old (Obs. 10,907)	Study	0.003***	-0.098***		-0.014***	0.010***				0.020***	-0.008**	-0.008**	-0.004	-0.011***	-0.001	
			(0.001)	(0.003)		(0.001)	(0.003)				(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.007)	
		Only work	0.007***	-0.250***		-0.035***	0.026***				0.052***	-0.020**	-0.020**	-0.010	-0.028***	-0.002	
			(0.002)	(0.008)		(0.002)	(0.008)				(0.005)	(0.008)	(0.008)	(0.008)	(0.008)	(0.019)	
		Disconnected	-0.010***	0.348***		0.049***	-0.037***				-0.072***	0.027**	0.028**	0.014	0.040***	0.002	
			(0.002)	(0.008)		(0.003)	(0.012)				(0.007)	(0.011)	(0.012)	(0.012)	(0.011)	(0.026)	

Table 6: Ordered probit models results (cont.)

		Age	Sex (female=1)	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North- West	4: Central- West	5: Central	6: Mexico City
Living with relatives	12-17 years old (Obs. 2,212)	Study	-0.093*** (0.005)	-0.126*** (0.016)	-0.270*** (0.028)	-0.014 (0.025)					0.035** (0.017)	0.002 (0.025)	0.010 (0.028)	-0.048* (0.026)	-0.020 (0.026)	0.066 (0.085)
		Only work	0.023*** (0.002)	0.031*** (0.004)	0.067*** (0.009)	0.003 (0.006)					-0.009** (0.004)	-0.000 (0.006)	-0.003 (0.007)	0.012* (0.007)	0.005 (0.006)	-0.016 (0.021)
		Disconnected	0.070*** (0.004)	0.095*** (0.013)	0.203*** (0.021)	0.011 (0.019)					-0.026** (0.013)	-0.001 (0.019)	-0.008 (0.021)	0.036* (0.020)	0.015 (0.019)	-0.049 (0.064)
	18-23 years old (Obs. 4,021)	Study	-0.003 (0.003)	-0.154*** (0.008)	-0.117*** (0.007)	-0.028** (0.013)					0.093*** (0.009)	-0.038** (0.015)	-0.006 (0.016)	-0.009 (0.016)	-0.028* (0.014)	0.047 (0.033)
		Only work	-0.001 (0.001)	-0.034*** (0.005)	-0.026*** (0.003)	-0.006** (0.003)					0.021*** (0.003)	-0.008** (0.003)	-0.001 (0.003)	-0.002 (0.004)	-0.006* (0.003)	0.010 (0.008)
		Disconnected	0.004 (0.003)	0.189*** (0.011)	0.143*** (0.008)	0.035** (0.015)					-0.114*** (0.011)	0.046** (0.018)	0.007 (0.019)	0.011 (0.020)	0.034* (0.018)	-0.057 (0.041)
	24-29 years old (Obs. 2,889)	Study	-0.001 (0.001)	-0.103*** (0.006)	-0.022*** (0.003)	0.007 (0.007)					0.027*** (0.005)	-0.008 (0.008)	0.007 (0.008)	-0.003 (0.008)	0.009 (0.008)	0.021 (0.016)
		Only work	-0.001 (0.002)	-0.180*** (0.012)	-0.039*** (0.004)	0.013 (0.013)					0.048*** (0.008)	-0.014 (0.013)	0.013 (0.014)	-0.005 (0.014)	0.015 (0.013)	0.037 (0.028)
		Disconnected	0.001 (0.004)	0.282*** (0.014)	0.061*** (0.006)	-0.020 (0.020)					-0.075*** (0.013)	0.022 (0.021)	-0.020 (0.022)	0.008 (0.023)	-0.024 (0.021)	-0.059 (0.044)

NB: Standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. Source: Tables created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Table 7: Ordered probit models results by sex

		Men															
		Age	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North-West	4: Central-West	5: Central	6: Mexico City		
Living with parents	12-17 years old (Obs. 14,477)	Study	-0.056*** (0.002)	-0.009 (0.007)	-0.144*** (0.029)	-0.003 (0.009)	0.060*** (0.009)	0.152*** (0.008)	0.283*** (0.012)	0.388*** (0.019)	0.017*** (0.006)	-0.052*** (0.009)	-0.049*** (0.010)	-0.058*** (0.009)	-0.053*** (0.008)	-0.014 (0.023)	
		Only work	0.031*** (0.001)	0.005 (0.004)	0.079*** (0.016)	0.002 (0.005)	-0.033*** (0.005)	-0.083*** (0.005)	-0.155*** (0.007)	-0.213*** (0.011)	-0.009*** (0.003)	0.028*** (0.005)	0.027*** (0.006)	0.032*** (0.005)	0.029*** (0.005)	0.008 (0.013)	
		Disconnected	0.025*** (0.001)	0.004 (0.003)	0.065*** (0.013)	0.001 (0.004)	-0.027*** (0.004)	-0.069*** (0.004)	-0.128*** (0.006)	-0.175*** (0.010)	-0.008*** (0.003)	0.023*** (0.004)	0.022*** (0.005)	0.026*** (0.004)	0.024*** (0.004)	0.007 (0.011)	
		Study	-0.027*** (0.002)	0.013 (0.009)	-0.067*** (0.007)	0.012 (0.012)	0.050*** (0.012)	0.133*** (0.011)	0.304*** (0.015)	0.453*** (0.019)	0.065*** (0.009)	-0.057*** (0.013)	-0.056*** (0.014)	-0.046*** (0.013)	-0.035*** (0.012)	-0.005 (0.030)	
		Only work	0.015*** (0.001)	-0.007 (0.005)	0.036*** (0.004)	-0.007 (0.007)	-0.027*** (0.006)	-0.071*** (0.006)	-0.162*** (0.009)	-0.242*** (0.011)	-0.035*** (0.005)	0.030*** (0.007)	0.030*** (0.008)	0.025*** (0.007)	0.019*** (0.006)	0.003 (0.016)	
		Disconnected	0.013*** (0.001)	-0.006 (0.004)	0.031*** (0.003)	-0.006 (0.006)	-0.023*** (0.005)	-0.062*** (0.005)	-0.141*** (0.007)	-0.210*** (0.010)	-0.030*** (0.004)	0.026*** (0.006)	0.026*** (0.007)	0.021*** (0.006)	0.016*** (0.006)	0.003 (0.014)	
	24-29 years old (Obs. 5,565)	Study	-0.013*** (0.002)	0.009 (0.007)	0.001 (0.003)	-0.001 (0.009)	0.007 (0.008)	0.025*** (0.008)	0.061*** (0.012)	0.058*** (0.014)	0.032*** (0.007)	-0.025** (0.010)	-0.016 (0.011)	-0.014 (0.011)	0.002 (0.009)	0.019 (0.021)	
		Only work	0.000 (0.001)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.001 (0.001)	-0.002 (0.003)	-0.002 (0.002)	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	-0.000 (0.000)	-0.001 (0.001)	
		Disconnected	0.012*** (0.002)	-0.009 (0.007)	-0.001 (0.003)	0.001 (0.009)	-0.007 (0.008)	-0.024*** (0.008)	-0.059*** (0.011)	-0.056*** (0.013)	-0.031*** (0.007)	0.024** (0.010)	0.016 (0.011)	0.013 (0.010)	-0.002 (0.009)	-0.018 (0.020)	
		Study	-0.005 (0.005)		-0.063*** (0.010)	-0.001 (0.021)						0.098*** (0.016)	-0.041** (0.021)	-0.002 (0.023)	0.041* (0.022)	-0.005 (0.021)	-0.015 (0.059)
		Only work	0.004 (0.004)		0.046*** (0.009)	0.001 (0.015)						-0.072*** (0.013)	0.030** (0.015)	0.002 (0.017)	-0.030* (0.016)	0.004 (0.016)	0.011 (0.043)
		Disconnected	0.001 (0.001)		0.017*** (0.003)	0.000 (0.006)						-0.026*** (0.005)	0.011** (0.006)	0.001 (0.006)	-0.011* (0.006)	0.001 (0.006)	0.004 (0.016)
Living alone	24-29 years old (Obs. 4,716)	Study	-0.001 (0.001)		-0.009*** (0.002)	0.001 (0.006)					0.013*** (0.004)	0.003 (0.006)	-0.000 (0.007)	0.011 (0.007)	0.003 (0.006)	0.016 (0.013)	
		Only work	0.000 (0.001)		0.003*** (0.001)	-0.000 (0.002)					-0.005** (0.002)	-0.001 (0.003)	0.000 (0.003)	-0.005 (0.003)	-0.001 (0.003)	-0.006 (0.005)	
		Disconnected	0.001 (0.001)		0.005*** (0.001)	-0.000 (0.003)					-0.008*** (0.003)	-0.002 (0.004)	0.000 (0.004)	-0.007 (0.004)	-0.002 (0.004)	-0.009 (0.008)	
		Study	-0.001 (0.001)		-0.009*** (0.002)	0.001 (0.006)					0.013*** (0.004)	0.003 (0.006)	-0.000 (0.007)	0.011 (0.007)	0.003 (0.006)	0.016 (0.013)	
		Only work	0.000 (0.001)		0.003*** (0.001)	-0.000 (0.002)					-0.005** (0.002)	-0.001 (0.003)	0.000 (0.003)	-0.005 (0.003)	-0.001 (0.003)	-0.006 (0.005)	
		Disconnected	0.001 (0.001)		0.005*** (0.001)	-0.000 (0.003)					-0.008*** (0.003)	-0.002 (0.004)	0.000 (0.004)	-0.007 (0.004)	-0.002 (0.004)	-0.009 (0.008)	

Table 7: Ordered probit models results by sex (cont.)

		Age	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North-West	4: Central-West	5: Central	6: Mexico City
Men	Living with relatives	12-17 years old (Obs. 1,020)	Study	-0.089*** (0.007)	-0.100*** (0.025)	-0.020 (0.038)				-0.001 (0.025)	-0.002 (0.037)	-0.007 (0.042)	-0.073** (0.037)	-0.006 (0.038)	0.072 (0.113)
			Only work	0.050*** (0.005)	0.056*** (0.015)	0.011 (0.021)				0.001 (0.014)	0.001 (0.021)	0.004 (0.023)	0.041** (0.021)	0.003 (0.021)	-0.040 (0.063)
			Disconnected	0.040*** (0.004)	0.044*** (0.011)	0.009 (0.017)				0.000 (0.011)	0.001 (0.017)	0.003 (0.019)	0.033** (0.016)	0.003 (0.017)	-0.032 (0.050)
		18-23 years old (Obs. 1,747)	Study	-0.017*** (0.005)	-0.063*** (0.010)	-0.051** (0.023)				0.037** (0.017)	-0.053* (0.027)	0.006 (0.029)	-0.010 (0.031)	-0.059** (0.027)	0.071 (0.055)
			Only work	0.009*** (0.003)	0.034*** (0.007)	0.027** (0.013)				-0.020** (0.009)	0.028* (0.015)	-0.003 (0.016)	0.005 (0.017)	0.031** (0.015)	-0.038 (0.029)
			Disconnected	0.008*** (0.002)	0.029*** (0.004)	0.024** (0.010)				-0.017** (0.008)	0.025* (0.013)	-0.003 (0.014)	0.005 (0.014)	0.027** (0.012)	-0.033 (0.026)
	24-29 years old (Obs. 1,428)		Study	-0.004 (0.003)	-0.004 (0.004)	0.019 (0.014)				0.009 (0.009)	-0.010 (0.014)	0.034** (0.016)	-0.003 (0.017)	0.014 (0.015)	0.024 (0.028)
			Only work	0.000 (0.001)	0.000 (0.000)	-0.000 (0.002)				-0.000 (0.001)	0.000 (0.001)	-0.001 (0.004)	0.000 (0.000)	-0.000 (0.002)	-0.000 (0.003)
			Disconnected	0.004 (0.003)	0.004 (0.004)	-0.018 (0.014)				-0.009 (0.009)	0.010 (0.014)	-0.034** (0.015)	0.003 (0.016)	-0.014 (0.014)	-0.024 (0.027)

Table 7: Ordered probit models results by sex (cont.)

		Age	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North-West	4: Central-West	5: Central	6: Mexico City		
Women	Living with parents	12-17 years old (Obs. 13,576)	Study	-0.039*** (0.002)	0.010 (0.006)	-0.196*** (0.015)	0.010 (0.008)	0.063*** (0.008)	0.140*** (0.008)	0.235*** (0.011)	0.295*** (0.016)	0.021*** (0.006)	-0.026*** (0.008)	0.010 (0.010)	-0.020** (0.009)	-0.023*** (0.008)	-0.015 (0.019)
			Only work	0.010*** (0.001)	-0.003 (0.002)	0.051*** (0.004)	-0.003 (0.002)	-0.016*** (0.002)	-0.036*** (0.002)	-0.061*** (0.004)	-0.076*** (0.005)	-0.005*** (0.002)	0.007*** (0.002)	-0.003 (0.003)	0.005** (0.002)	0.006*** (0.002)	0.004 (0.005)
		Disconnected	0.029*** (0.001)	-0.007 (0.005)	0.145*** (0.012)	-0.008 (0.006)	-0.046*** (0.006)	-0.104*** (0.006)	-0.174*** (0.009)	-0.218*** (0.013)	-0.015*** (0.004)	0.019*** (0.006)	-0.007 (0.007)	0.015** (0.007)	0.017*** (0.006)	0.011 (0.014)	
		18-23 years old (Obs. 8,985)	Study	-0.023*** (0.003)	0.014 (0.010)	-0.195*** (0.008)	-0.013 (0.015)	0.073*** (0.015)	0.162*** (0.014)	0.276*** (0.017)	0.413*** (0.020)	0.090*** (0.009)	0.003 (0.015)	0.007 (0.016)	-0.027* (0.015)	-0.000 (0.013)	-0.004 (0.028)
			Only work	0.006*** (0.001)	-0.004 (0.003)	0.051*** (0.003)	0.003 (0.004)	-0.019*** (0.004)	-0.042*** (0.004)	-0.072*** (0.005)	-0.108*** (0.006)	-0.024*** (0.003)	-0.001 (0.004)	-0.002 (0.004)	0.007* (0.004)	0.000 (0.003)	0.001 (0.007)
			Disconnected	0.017*** (0.002)	-0.010 (0.007)	0.144*** (0.006)	0.010 (0.011)	-0.054*** (0.011)	-0.120*** (0.010)	-0.204*** (0.013)	-0.305*** (0.015)	-0.067*** (0.007)	-0.003 (0.011)	-0.005 (0.012)	0.020* (0.011)	0.000 (0.010)	0.003 (0.021)
	Living alone	24-29 years old (Obs. 4,855)	Study	-0.002 (0.002)	0.013** (0.006)	-0.037*** (0.003)	0.008 (0.010)	0.008 (0.009)	0.031*** (0.008)	0.060*** (0.011)	0.086*** (0.012)	0.045*** (0.006)	-0.003 (0.009)	-0.000 (0.011)	-0.002 (0.010)	0.012 (0.009)	0.041** (0.017)
			Only work	-0.002 (0.001)	0.011** (0.005)	-0.031*** (0.003)	0.006 (0.008)	0.007 (0.007)	0.026*** (0.007)	0.050*** (0.009)	0.071*** (0.010)	0.038*** (0.005)	-0.003 (0.008)	-0.000 (0.009)	-0.001 (0.008)	0.010 (0.007)	0.034** (0.014)
			Disconnected	0.004 (0.003)	-0.025** (0.011)	0.068*** (0.006)	-0.014 (0.018)	-0.015 (0.016)	-0.056*** (0.015)	-0.109*** (0.020)	-0.157*** (0.021)	-0.083*** (0.011)	0.006 (0.017)	0.001 (0.020)	0.003 (0.018)	-0.022 (0.016)	-0.074** (0.031)
		18-23 years old (Obs. 2,609)	Study	0.005** (0.002)		-0.059*** (0.005)	0.025** (0.011)					0.067*** (0.008)	-0.031*** (0.011)	0.004 (0.012)	-0.018 (0.012)	-0.017 (0.011)	0.011 (0.029)
			Only work	0.007** (0.003)		-0.084*** (0.006)	0.036** (0.016)					0.095*** (0.010)	-0.044*** (0.015)	0.006 (0.016)	-0.026 (0.017)	-0.025 (0.015)	0.016 (0.042)
			Disconnected	-0.013** (0.006)		0.143*** (0.011)	-0.061** (0.027)					-0.162*** (0.017)	0.074*** (0.025)	-0.010 (0.028)	0.045 (0.030)	0.042 (0.026)	-0.027 (0.071)
24-29 years old (Obs. 6,191)	Study	0.004*** (0.001)		-0.017*** (0.001)	0.015*** (0.004)					0.024*** (0.003)	-0.013*** (0.004)	-0.012*** (0.004)	-0.009** (0.004)	-0.017*** (0.004)	-0.007 (0.009)		
	Only work	0.016*** (0.003)		-0.061*** (0.004)	0.056*** (0.016)					0.088*** (0.009)	-0.046*** (0.014)	-0.043*** (0.015)	-0.032** (0.015)	-0.061*** (0.014)	-0.024 (0.034)		
	Disconnected	-0.020*** (0.004)		0.078*** (0.005)	-0.072*** (0.020)					-0.112*** (0.012)	0.059*** (0.018)	0.055*** (0.019)	0.041** (0.020)	0.078*** (0.018)	0.031 (0.043)		

Table 7: Ordered probit models results by sex (cont.)

		Age	Single parent	Having children	Indigenous language	2: Elementary School	3: Junior High School	4: High School	5: College or higher	Urban	2: North	3: North-West	4: Central-West	5: Central	6: Mexico City
Women	Living with relatives	12-17 years old (Obs. 1,192)	Study	-0.099*** (0.006)	-0.315*** (0.036)	-0.006 (0.034)				0.062** (0.025)	0.001 (0.036)	0.020 (0.039)	-0.036 (0.038)	-0.025 (0.037)	0.025 (0.132)
			Only work	0.011*** (0.001)	0.034*** (0.007)	0.001 (0.004)				-0.007** (0.003)	-0.000 (0.004)	-0.002 (0.004)	0.004 (0.004)	0.003 (0.004)	-0.003 (0.014)
			Disconnected	0.088*** (0.006)	0.281*** (0.031)	0.005 (0.031)				-0.056** (0.022)	-0.001 (0.032)	-0.018 (0.035)	0.032 (0.034)	0.022 (0.033)	-0.022 (0.118)
		18-23 years old (Obs. 2,274)	Study	0.002 (0.004)	-0.140*** (0.010)	-0.008 (0.018)				0.128*** (0.013)	-0.039** (0.020)	-0.012 (0.021)	-0.008 (0.021)	-0.017 (0.019)	0.044 (0.050)
			Only work	0.001 (0.002)	-0.060*** (0.004)	-0.004 (0.008)				0.055*** (0.006)	-0.017** (0.008)	-0.005 (0.009)	-0.003 (0.009)	-0.007 (0.008)	0.019 (0.022)
			Disconnected	-0.002 (0.005)	0.200*** (0.012)	0.012 (0.026)				-0.183*** (0.018)	0.056** (0.028)	0.017 (0.030)	0.011 (0.030)	0.024 (0.027)	-0.062 (0.072)
		24-29 years old (Obs. 1,461)	Study	0.001 (0.002)	-0.028*** (0.004)	-0.001 (0.009)				0.033*** (0.007)	-0.006 (0.010)	-0.003 (0.009)	-0.002 (0.010)	0.008 (0.009)	0.015 (0.020)
			Only work	0.003 (0.005)	-0.088*** (0.009)	-0.002 (0.027)				0.103*** (0.018)	-0.018 (0.030)	-0.010 (0.029)	-0.006 (0.030)	0.026 (0.027)	0.047 (0.061)
			Disconnected	-0.005 (0.007)	0.116*** (0.011)	0.003 (0.035)				-0.136*** (0.024)	0.024 (0.040)	0.014 (0.039)	0.009 (0.039)	-0.034 (0.035)	-0.061 (0.080)

NB: Standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. Source: Tables created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Table 8: Probit models results

	Model 2									Model 3								
	Living with parents			Living alone		Living with relatives				Living with parents			Living alone		Living with relatives			
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old		12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	
Age	0.030*** (0.001)	0.032*** (0.003)	0.028*** (0.010)	0.053*** (0.015)	0.021 (0.013)	0.030*** (0.006)	0.036*** (0.010)	0.072*** (0.025)		-0.063*** (0.005)	-0.024*** (0.002)	-0.009*** (0.002)	-0.016*** (0.004)	-0.014*** (0.002)	-0.054*** (0.015)	-0.025*** (0.005)	-0.013*** (0.004)	
Sex (female=1)	-0.094*** (0.004)	-0.088*** (0.010)	-0.062** (0.031)	-0.206*** (0.046)	-0.294*** (0.042)	-0.083*** (0.019)	-0.119*** (0.033)	-0.178*** (0.066)		0.312*** (0.012)	0.232*** (0.007)	0.178*** (0.008)	0.584*** (0.015)	0.507*** (0.008)	0.380*** (0.025)	0.443*** (0.010)	0.388*** (0.011)	
Single parent	-0.009* (0.005)	0.015 (0.012)	0.073** (0.032)							0.042*** (0.016)	-0.004 (0.009)	-0.012 (0.009)						
Having children	0.042 (0.042)	0.047* (0.024)	0.109*** (0.034)	0.052 (0.037)	-0.003 (0.023)	-0.009 (0.071)	0.050 (0.049)	0.135** (0.056)		0.109*** (0.032)	0.044*** (0.007)	0.020*** (0.005)	0.058*** (0.008)	0.023*** (0.004)	0.079** (0.037)	0.052*** (0.010)	0.035*** (0.007)	
Indigenous language	0.028*** (0.007)	0.039* (0.021)	-0.000 (0.065)	0.128 (0.106)	0.075 (0.110)	0.032 (0.027)	0.062 (0.066)	0.464*** (0.114)		-0.041* (0.021)	-0.050*** (0.013)	-0.049*** (0.014)	-0.073*** (0.022)	-0.073*** (0.013)	-0.025 (0.046)	-0.071*** (0.022)	-0.031 (0.023)	
2: Elementary School	-0.005 (0.009)	-0.014 (0.029)	0.041 (0.069)							0.046** (0.020)	-0.002 (0.013)	0.016 (0.012)						
3: Junior High School	-0.030*** (0.009)	-0.051* (0.026)	0.018 (0.061)							0.092*** (0.020)	0.012 (0.012)	0.020 (0.012)						
4: High School	-0.063*** (0.010)	-0.154*** (0.027)	-0.022 (0.065)							0.173*** (0.034)	0.037** (0.016)	0.023 (0.017)						
5: College or higher	-0.116*** (0.011)	-0.217*** (0.028)	-0.061 (0.064)							0.214*** (0.060)	0.081*** (0.023)	0.060*** (0.019)						
Urban	-0.045*** (0.005)	0.019* (0.011)	-0.003 (0.036)	0.039 (0.060)	-0.045 (0.052)	-0.076*** (0.020)	-0.001 (0.037)	0.238*** (0.086)		0.053*** (0.016)	0.017** (0.009)	-0.028*** (0.009)	-0.056*** (0.014)	-0.020*** (0.008)	-0.033 (0.034)	-0.046*** (0.015)	-0.031** (0.015)	
2: North	-0.111*** (0.007)	-0.027* (0.016)	-0.039 (0.049)	0.097 (0.076)	-0.039 (0.065)	-0.100*** (0.029)	-0.042 (0.053)	0.211* (0.118)		0.153*** (0.022)	0.027** (0.013)	0.014 (0.013)	0.054*** (0.019)	0.034*** (0.011)	0.040 (0.051)	0.024 (0.024)	0.016 (0.025)	
3: North-West	-0.052*** (0.007)	-0.049*** (0.018)	-0.080 (0.053)	0.065 (0.074)	-0.075 (0.075)	-0.051* (0.030)	-0.096* (0.053)	0.021 (0.109)		0.101*** (0.026)	0.039*** (0.014)	0.017 (0.014)	0.040* (0.022)	0.031** (0.013)	-0.001 (0.057)	0.030 (0.025)	-0.017 (0.025)	

Table 8: Probit models results (cont.)

	Model 2									Model 3								
	Living with parents			Living alone		Living with relatives				Living with parents			Living alone		Living with relatives			
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old		12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	
4: Central-West	0.011 (0.007)	0.072*** (0.018)	-0.012 (0.055)	0.127 (0.077)	-0.111 (0.072)	0.019 (0.029)	0.018 (0.056)	-0.007 (0.134)		0.009 (0.024)	-0.006 (0.014)	-0.009 (0.014)	0.041* (0.022)	0.018 (0.013)	-0.092* (0.049)	-0.001 (0.026)	-0.013 (0.026)	
5: Central	-0.035*** (0.006)	-0.041** (0.016)	-0.098** (0.047)	0.240*** (0.076)	-0.082 (0.074)	-0.058** (0.029)	0.067 (0.056)	-0.015 (0.100)		0.045** (0.021)	-0.012 (0.012)	-0.024* (0.012)	0.028 (0.020)	0.035*** (0.011)	-0.054 (0.048)	-0.008 (0.022)	-0.013 (0.022)	
6: Mexico City	-0.183*** (0.021)	-0.290*** (0.033)	-0.249*** (0.063)	0.069 (0.129)	-0.222* (0.114)	-0.001 (0.072)	-0.181* (0.099)	-0.220 (0.143)		0.143*** (0.053)	0.110*** (0.026)	0.017 (0.024)	0.061 (0.057)	0.018 (0.028)	-0.072 (0.172)	-0.005 (0.058)	0.002 (0.049)	
2: Elementary School (young)										-0.091*** (0.023)	-0.119*** (0.021)	-0.171*** (0.020)	0.060* (0.035)	0.035* (0.020)	-0.010 (0.057)	0.023 (0.041)	-0.063 (0.041)	
3: Junior High School (young)										-0.102*** (0.024)	-0.180*** (0.019)	-0.207*** (0.018)	0.045 (0.033)	0.019 (0.018)	0.088 (0.056)	0.026 (0.039)	-0.085** (0.037)	
4: High School (young)										-0.118** (0.051)	-0.171*** (0.019)	-0.244*** (0.018)	0.010 (0.035)	-0.030 (0.019)	0.104 (0.158)	0.029 (0.040)	-0.125*** (0.039)	
5: College or higher (young)											-0.152*** (0.026)	-0.262*** (0.020)	-0.115* (0.059)	-0.145*** (0.022)		-0.045 (0.065)	-0.220*** (0.042)	
Observations	23,496	7,952	1,093	399	401	1,407	809	147		4,385	11,390	9,219	3,667	10,458	737	3,112	2,653	

NB: Standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. Source: Tables created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Table 9: Probit models results by sex

Men	Model 2									Model 3						
	Living with parents			Living alone		Living with relatives			Living with parents			Living alone		Living with relatives		
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old
Age	0.039*** (0.002)	0.028*** (0.005)	0.031** (0.013)	0.052*** (0.020)	0.033** (0.015)	0.041*** (0.008)	0.019 (0.015)	0.086*** (0.032)	-0.070*** (0.007)	-0.011*** (0.003)	-0.004 (0.003)	-0.006** (0.003)	-0.001 (0.001)	-0.059** (0.023)	-0.004 (0.005)	-0.008** (0.004)
Single parent	-0.021** (0.009)	0.021 (0.017)	0.090** (0.043)						0.035* (0.020)	0.002 (0.010)	-0.008 (0.010)					
Having children	-0.036 (0.191)	0.104 (0.063)	0.392*** (0.141)	0.497*** (0.151)	0.208*** (0.069)		0.322*** (0.106)	0.134** (0.059)	-0.158** (0.079)	-0.115*** (0.019)	-0.064*** (0.011)	0.001 (0.005)	-0.005** (0.002)		-0.085*** (0.019)	-0.023*** (0.008)
Indigenous language	0.038*** (0.011)	0.015 (0.030)	0.026 (0.093)	0.178 (0.123)		0.085** (0.040)	-0.018 (0.096)		-0.029 (0.029)	-0.049*** (0.016)	-0.041** (0.017)	-0.001 (0.012)	-0.022** (0.010)	-0.074 (0.089)	-0.045* (0.024)	-0.016 (0.022)
2: Elementary School	-0.013 (0.015)	-0.118*** (0.043)	0.077 (0.101)						0.048* (0.026)	0.014 (0.015)	0.027* (0.015)					
3: Junior High School	-0.048*** (0.014)	-0.145*** (0.040)	0.077 (0.093)						0.100*** (0.026)	0.042*** (0.015)	0.043*** (0.015)					
4: High School	-0.090*** (0.016)	-0.250*** (0.041)	0.092 (0.098)						0.198*** (0.043)	0.045** (0.019)	0.057*** (0.019)					
5: College or higher	-0.141*** (0.018)	-0.341*** (0.042)	0.014 (0.097)						0.183** (0.077)	0.110*** (0.024)	0.106*** (0.020)					
Urban	-0.073*** (0.008)	-0.001 (0.017)	-0.050 (0.049)	-0.167* (0.090)	-0.088 (0.066)	-0.117*** (0.029)	0.030 (0.055)	0.354*** (0.102)	0.078*** (0.019)	0.039*** (0.009)	-0.005 (0.010)	0.004 (0.008)	0.008* (0.004)	0.018 (0.059)	0.048*** (0.016)	0.030** (0.014)
2: North	-0.144*** (0.011)	-0.039* (0.024)	-0.005 (0.065)	-0.008 (0.108)	0.008 (0.095)	-0.126*** (0.042)	-0.134 (0.082)	0.129 (0.175)	0.201*** (0.029)	0.040*** (0.014)	0.021 (0.014)	-0.001 (0.011)	-0.007 (0.006)	0.040 (0.089)	0.002 (0.024)	0.005 (0.019)
3: North-West	-0.067*** (0.012)	-0.069*** (0.026)	-0.015 (0.070)	-0.024 (0.113)	-0.065 (0.101)	-0.095** (0.045)	-0.126 (0.081)	-0.101 (0.161)	0.152*** (0.033)	0.039** (0.016)	0.012 (0.016)	-0.005 (0.012)	-0.007 (0.007)	0.041 (0.097)	0.001 (0.025)	-0.039 (0.026)
4: Central-West	0.006 (0.011)	0.067*** (0.026)	0.037 (0.072)	0.122 (0.103)	-0.072 (0.090)	-0.018 (0.045)	0.070 (0.085)	-0.190 (0.196)	0.061* (0.032)	-0.000 (0.016)	-0.011 (0.016)	-0.017 (0.015)	-0.008 (0.007)	-0.178** (0.091)	-0.005 (0.026)	0.001 (0.022)

Table 9: Probit models results by sex (cont.)

	Model 2									Model 3								
	Living with parents			Living alone		Living with relatives				Living with parents			Living alone		Living with relatives			
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old		12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	
5: Central	-0.056*** (0.010)	-0.064*** (0.023)	-0.099 (0.064)	0.300*** (0.112)	-0.137 (0.089)	-0.054 (0.042)	0.040 (0.091)	-0.164 (0.162)		0.092*** (0.028)	0.024* (0.014)	-0.015 (0.014)	-0.008 (0.013)	-0.003 (0.006)	-0.162* (0.094)	-0.029 (0.025)	-0.017 (0.021)	
6: Mexico City	-0.213*** (0.031)	-0.338*** (0.046)	-0.277*** (0.084)	0.329 (0.235)	0.024 (0.128)	-0.000 (0.099)	-0.268* (0.145)	-0.239 (0.198)		0.146** (0.071)	0.113*** (0.028)	0.030 (0.025)	0.014 (0.024)	-0.015 (0.017)	0.084 (0.295)	-0.022 (0.063)	-0.010 (0.036)	
2: Elementary School (young)										-0.091*** (0.029)	-0.100*** (0.021)	-0.136*** (0.020)	0.005 (0.021)	-0.000 (0.009)	-0.020 (0.083)	-0.041 (0.038)	-0.045* (0.026)	
3: Junior High School (young)										-0.108*** (0.031)	-0.165*** (0.019)	-0.167*** (0.017)	0.000 (0.021)	-0.008 (0.009)	0.012 (0.085)	-0.011 (0.034)	-0.081*** (0.024)	
4: High School (young)										-0.104 (0.069)	-0.130*** (0.019)	-0.187*** (0.018)	0.014 (0.022)	-0.016* (0.009)	0.192 (0.205)	0.007 (0.035)	-0.073*** (0.024)	
5: College or higher (young)											-0.077*** (0.029)	-0.173*** (0.019)		-0.024** (0.011)		0.017 (0.054)	-0.117*** (0.031)	
Observations	11,793	3,946	598	159	150	731	378	69		2,588	6,494	4,909	1,266	4,534	236	1,327	1,311	

Table 9: Probit models results by sex (cont.)

Women	Model 2									Model 3								
	Living with parents			Living alone		Living with relatives				Living with parents			Living alone		Living with relatives			
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old		12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	
Age	0.020*** (0.002)	0.037*** (0.004)	0.022 (0.014)	0.043** (0.021)	0.004 (0.020)	0.018** (0.007)	0.055*** (0.014)	0.096** (0.043)		-0.049*** (0.009)	-0.040*** (0.004)	-0.016*** (0.004)	-0.020*** (0.007)	-0.026*** (0.004)	-0.051*** (0.019)	-0.039*** (0.007)	-0.016** (0.008)	
Single parent	0.002 (0.006)	0.009 (0.016)	0.059 (0.048)							0.050* (0.026)	-0.022 (0.016)	-0.020 (0.015)						
Having children	0.040 (0.034)	0.036 (0.025)	0.079** (0.036)	0.028 (0.045)	-0.049 (0.032)	-0.079 (0.078)	-0.032 (0.056)	0.135 (0.095)		0.155*** (0.040)	0.113*** (0.011)	0.056*** (0.007)	0.093*** (0.012)	0.049*** (0.006)	0.133*** (0.043)	0.123*** (0.016)	0.091*** (0.013)	
Indigenous language	0.017** (0.009)	0.067** (0.030)	-0.037 (0.090)	0.049 (0.184)	0.126 (0.142)	-0.037 (0.038)	0.156* (0.084)	0.219 (0.179)		-0.054* (0.032)	-0.051** (0.023)	-0.051** (0.023)	-0.113*** (0.032)	-0.111*** (0.023)	-0.011 (0.055)	-0.103*** (0.032)	-0.024 (0.039)	
2: Elementary School	0.002 (0.011)	0.082** (0.040)	0.039 (0.095)							0.055* (0.031)	-0.029 (0.023)	0.009 (0.021)						
3: Junior High School	-0.013 (0.010)	0.036 (0.037)	-0.011 (0.081)							0.089*** (0.031)	-0.033 (0.022)	-0.003 (0.020)						
4: High School	-0.037*** (0.012)	-0.063 (0.039)	-0.133 (0.088)							0.134** (0.055)	0.021 (0.029)	-0.021 (0.028)						
5: College or higher	-0.092*** (0.014)	-0.100** (0.040)	-0.127 (0.086)							0.301*** (0.106)	0.025 (0.039)	-0.024 (0.031)						
Urban	-0.018*** (0.006)	0.040** (0.016)	0.049 (0.054)	0.129 (0.081)	-0.033 (0.075)	-0.036 (0.026)	-0.021 (0.049)	0.054 (0.158)		0.011 (0.026)	-0.023 (0.015)	-0.060*** (0.015)	-0.091*** (0.020)	-0.047*** (0.014)	-0.047 (0.043)	-0.134*** (0.023)	-0.098*** (0.027)	
2: North	-0.077*** (0.009)	-0.012 (0.023)	-0.077 (0.073)	0.174* (0.101)	-0.076 (0.090)	-0.069* (0.039)	0.011 (0.067)	0.380** (0.188)		0.100*** (0.036)	0.004 (0.023)	-0.007 (0.022)	0.086*** (0.029)	0.071*** (0.020)	0.047 (0.060)	0.052 (0.035)	0.011 (0.044)	
3: North-West	-0.036*** (0.009)	-0.026 (0.024)	-0.144* (0.078)	0.121 (0.098)	-0.100 (0.105)	-0.011 (0.038)	-0.067 (0.071)	0.179 (0.179)		0.033 (0.042)	0.036 (0.026)	0.017 (0.024)	0.065** (0.032)	0.064*** (0.021)	-0.023 (0.066)	0.055 (0.037)	0.006 (0.043)	
4: Central-West	0.016* (0.008)	0.082*** (0.025)	-0.067 (0.082)	0.195* (0.110)	-0.144 (0.106)	0.054 (0.035)	-0.040 (0.074)	0.200 (0.213)		-0.050 (0.037)	-0.014 (0.024)	-0.016 (0.024)	0.078** (0.033)	0.041* (0.021)	-0.038 (0.060)	0.001 (0.037)	-0.030 (0.044)	

Table 9: Probit models results by sex (cont.)

	Model 2									Model 3								
	Living with parents			Living alone		Living with relatives				Living with parents			Living alone		Living with relatives			
	12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old		12-17 years old	18-23 years old	24-29 years old	18-23 years old	24-29 years old	12-17 years old	18-23 years old	24-29 years old	
5: Central	-0.015** (0.008)	-0.014 (0.023)	-0.111 (0.072)	0.224** (0.104)	-0.039 (0.106)	-0.069* (0.042)	0.072 (0.069)	0.140 (0.152)		-0.007 (0.032)	-0.059*** (0.021)	-0.037* (0.021)	0.050* (0.030)	0.069*** (0.019)	-0.007 (0.058)	0.010 (0.033)	-0.022 (0.038)	
6: Mexico City	-0.155*** (0.031)	-0.237*** (0.047)	-0.216** (0.090)	-0.077 (0.180)	-0.430** (0.195)	0.000 (0.110)	-0.130 (0.139)	-0.252 (0.281)		0.152* (0.087)	0.084* (0.045)	-0.022 (0.040)	0.078 (0.082)	0.055 (0.049)	-0.060 (0.237)	0.041 (0.095)	0.031 (0.087)	
2: Elementary School (young)										-0.094** (0.040)	-0.137*** (0.043)	-0.204*** (0.043)	0.090* (0.053)	0.063* (0.034)	0.009 (0.073)	0.095 (0.068)	-0.009 (0.076)	
3: Junior High School (young)										-0.094** (0.040)	-0.203*** (0.039)	-0.261*** (0.038)	0.070 (0.050)	0.044 (0.032)	0.143* (0.073)	0.066 (0.062)	-0.020 (0.068)	
4: High School (young)										-0.133* (0.074)	-0.225*** (0.039)	-0.315*** (0.038)	0.005 (0.053)	-0.034 (0.033)	0.028 (0.195)	0.067 (0.063)	-0.101 (0.069)	
5: College or higher (young)											-0.194*** (0.047)	-0.357*** (0.039)	-0.156* (0.087)	-0.221*** (0.038)		-0.060 (0.089)	-0.231*** (0.073)	
Observations	11,703	4,006	495	240	246	674	431	65		1,797	4,896	4,310	2,368	5,924	482	1,785	1,342	

NB: Standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. Source: Tables created by authors with data from the Household Income and Expenditure Surveys (INEGI).

Furthermore, the effect of having children at an early age is important in explaining the current occupational situation. For both men and women with children, they are less likely to continue studying than the those without children. We also see differences by sex among those who have dropped out of school. On the one hand, men are more likely to work rather than be disconnected, while women are more likely to be disconnected. This result is supported no matter the type of household structure. On the other hand, young people who have children tend more to work and study rather than just study.

Probit models (Tables 8 and 9) show significant results differentiated by the household structure. For example, among those between the ages of 24 and 29 who continue to study, those living with both parents are less likely to work and study at the same time (9 percentage points less). Similarly, the 12-17 age group of those who dropped out of school and live in single-parent households are more likely (4 percentage points) to disconnect than those living with both parents. This result is significant for both sexes.

In terms of family circumstances, the education of parents in probit models reflects that higher education levels decreases the likelihood of children studying and working at the same time; however, for those who have left school, the likelihood of disconnection between the ages of 12 and 17 for both men and women increases alongside the educational level of parents. In other words, the education of parents (which is also a proxy of wealth) tends to protect young people from child labor. Sánchez-Soto and Bautista León (2018) also found that members of households with higher levels of education tend to be more disconnected compared to those with lower levels of education. The authors insist on the positive relationship between higher education and higher level of wealth, highlighting how disconnection is an option that children from relatively wealthier households can afford in order to avoid working at an early age, in addition to taking their time to find a job or an academic training option they are interested in. Conversely, children from relatively poorer households do not have this option and are encouraged to find a job quickly after leaving the school system.

For older age groups, ordered probit models show that a higher level of education of parents results in greater insertion in the job market for women. Furthermore, it has been identified that children of parents with higher levels education have better school attendance across all age groups. Differences are important: for example, of those aged between 18 and 23 who have at least one parent with a postgraduate degree or more are 43 percentage points more likely to continue

studying than those with parents who did not complete elementary school. Moreover, the education level of young people is also important. Upon reaching higher education, especially among women, the employment rate is somewhat higher compared to the disconnection rate.

Regarding the influence of growing up in a household with at least one indigenous language speaker, the primary result is that, for both men and women between the ages of 12 and 17, the likelihood of studying and working instead of only studying increases significantly. Furthermore, in most cases the likelihood of disconnection is reduced in favor of working, even among women.

Comparing urban town residents to their rural counterparts, we see a greater likelihood of studying and a lower probability of disconnection or working among men. We find the same to be true for women; however, urban dwellers are also more likely to work than their rural peers. Among young people who have dropped out of school, urban men living with their parents are more likely than their rural peers to be disconnected rather than work, while urban women between the ages of 24 and 29 living with their parents are more likely to work compared to their rural counterparts. Finally, up to the age of 18, urban men and women are less likely to work and study rather than just study than those in rural areas (7 percentage points of difference for men and a 2 percentage-point difference for women) (Table 9).

There are relevant differences among regions. For ease of reading, this analysis is only presented for young people living with one or two parents. By controlling everything else, young people aged between 12 to 23 in the south who live with one or two parents are more likely to study than in other regions (except for Mexico City) and less likely to be disconnected. For the 24-29 age group, people in Mexico City are more likely than all other regions to continue studying and/or to be active in the labor market and less likely to be disconnected. For younger people, there are no significant differences between the country's capital and the other regions. The central region has statistically significant differences compared to other regions for the 24-29 age group. For example, young people are more likely to study or work and less likely to be disconnected than in any other region, except Mexico City. If we look at the 18-23 age group, young people living in Mexico City and in the north are more likely to be disconnected instead of working than in any other region.

Probit models allow us to see that in the central west, and for almost all ages, the likelihood of combining studies with work rather than just studying is much

higher than in other regions. The south is also more likely than other regions (except the central west) to work and study rather than just study. In Mexico City and the north, in general, people are the least likely to combine work and studies compared to those from other regions. Among people who left school, those in the south and central west are much more likely to work (rather than find themselves in a disconnection situation) than in other regions (e.g., 15 percentage points difference compared to the north).

Figure 16. Estimated probabilities of occupation for different profiles

Source: Created by authors with data from the Household Income and Expenditure Surveys (INEGI).

To summarize certain differences mentioned above, in Figure 16 we present some extreme differences between two profiles of women: one living in urban areas (type 1) and another living in rural areas (type 2); one with children (type 2), another without (type 1); one living with both parents (type 1) and another living alone or with his or her partner (type 2); and, finally, one in Mexico City (type 1) and another in the south (type 2). Thus, women from type 1 have a probability of studying between the ages of 12 and 15 that varies from 77% to 86%, while for women from type 2, this number varies between 32% and 46%. The probability

of working at age 23 is 43% for young women of type 2 and at the age of 29 it decreases to 23%, while for type 1 it stands at 47% at 23 years of age and 52% at the age of 29. Finally, the differences in the probability of being disconnected are more significant; in type 1, it reaches a maximum of 29% at 29 years of age, while for type 2 this probability is 76%. These differences are important, and it should be noted that the parent education variable has not been used to differentiate the two profiles, which would further accentuate the gap.

5. Discussion

Since 2010, the issue of disconnected youth has garnered the attention of society, authorities, and academia. This work addresses an updated analysis with a broader temporality compared to existing literature. Furthermore, in order to understand the circumstances and characteristics of those who choose different paths in life, we consider more occupations than just disconnection.

Some of the results found by Arceo and Campos (2011) have been reaffirmed for the new period of study. The decreasing trend of the disconnection rate has remained over the past number of years, reaching 16% of young people aged between 12 and 29 in 2018. In particular, a downward trend of disconnection for women was identified across all age groups. In the last year covered by the analysis, despite the fact that young people have more opportunities to study and greater access to the labor market than in the past, there are still significant gender gaps. As identified by Bermúdez-Lobera (2014), 8 out of 10 disconnected people are women. Gender inequalities are coupled to those that exist among territories. For example, while urban women have a greater presence in the labor market than rural women, we see the opposite trend among men, with urban men being more likely to disconnect. Furthermore, the percentage of young people studying is higher in urban areas compared to rural ones, and we have highlighted the narrowing of the gap between locality sizes between 1992 and 2018. Regional descriptive statistics showed that southern states are characterized by a significant percentage of young people working (or studying and working), while the country's capital and the central and northern regions have a higher proportion of young people studying. Finally, some states present a larger gender gap than others in term of access to education or to the labor market.

Our results reflect, on the one hand, the growing incorporation of women into the labor market in recent decades, and, on the other hand, the investments and reforms that have been made to the education system to extend its coverage and diversify its offering. During the period of study, the expansion of education in marginalized areas is significant, resulting in a decrease in the gap between relatively more urban and more rural territories, as well as between states. To achieve greater accessibility in the most isolated areas, education must also be diversified, such as, for example, through community or migrant schools, *telebachillerato* or *telesecundaria*, intercultural education, or the dissemination of open and remote education (Mendoza Rojas, 2018). However, as noted by Ducoing Watty (2018), the quality of these options must be improved in order to reduce disparities in terms of effective access to quality education.

More than 90% of disconnected women between the ages of 27 and 29 state they focus on household tasks (compared to just 10% of men). Moreover, the percentage of women over the age of 17 who leave school and engage in household and/or personal care tasks is greater than 30%. After the age of 17, about half of all disconnected men look for a job, while this percentage is around 7% for women. A study by Sánchez-Soto and Bautista León (2018) in Mexico City identified numerous reasons given by disconnected young people for their situation. Among others, they mention the difficulty of accessing certain forms of public education (mainly college), the cost of accessing quality private education, the need for financing, administrative barriers, the difficulty in combining work and study, the difficulty, especially for women, of combining work and/or study and caring for minors and/or adults at home, dissatisfaction with the quality of education, discrimination, or a lack of work experience. Finally, many disconnected young people are still awaiting a response or will soon begin working, studying or training.

As for those young people who are studying, there was a significant increase, while, among those who have left school, there is a slight increase in the disconnection rate. In other words, the rate of young people who, once they leave school, become involved in the labor market has not increased, reflecting the lack of employment opportunities for young people who have just completed their academic training. Similarly, there is a significant rise in the percentage of young people studying and working at the same time. It should be noted that for the 2007-2010 period, we can observe the effects of the financial crisis - the percentage of young people disconnected increases, and, until the age of 18 years old,

we can see a reduction in the percentage who study. This trend is similar to that experienced by the country during the 1980's, which was marked by several economic crises and a policy of structural adjustment that reduced the expansion of school enrollment during the decade (Tuirán and Muñoz, 2010; Sandoval and Tarrés, 1996). After the age of 18, the percentage of young people who work or who study and work at the same time decreased during the crisis. This result is relevant for public policy decision making in the face of recessive stages of the economic cycle.

We also sought to compile the main determinants for each occupational condition. Having a child appears as one of the main determinants associated with a situation of disconnection for women and entering the labor market for men. When young people continue to study, having a child is one of the factors associated with combining studies and work. Another determinant is the educational level of parents - the higher the education, the lower the likelihood that children will study and work at the same time. For those who have left school, it translates to more disconnection rather than working until the age of 17. At the higher end of the age spectrum, women with parents with higher levels of education are more likely to enter the labor market. A completed education is also decisive in young people's occupation, favoring job insertion over disconnection.

Household structure is an element few have taken into consideration in current literature that focuses on Mexican data, and we have highlighted the disparities identified. For example, young people who grow up in single-parent households, compared to those living with their two parents, are more likely to be disconnected, and when they continue to study, they are more likely to also have a job. People in indigenous speaking households seem to be targeting the labor market from an early age (compared to those households who do not speak an indigenous language), even when they continue to study, and are less likely to be disconnected. Regional and rural-urban differences are equally relevant, and this is a dimension that needs to be explored in greater detail in the future, without losing sight of the potential effect of migration flows between regions.

Finally, any approach should focus on the formulation and implementation of public policies aimed at reducing inequality of opportunities between men and women, as well as regional and household structure differences. In addition to efforts to reduce these disparities, it is necessary to reduce territorial inequality in terms of quality of education, budget, material, and facilities. The most vulnerable schools should have a higher budget allocation and receive the most

qualified teachers (Ducoing Watty, 2018). Efforts to maintain and increase school attendance at elementary education should be extended to cover further and higher education. Other recommendations include increasing the number of scholarships, facilitating administrative procedures, and rethinking admissions systems in order to increase the number of candidates accepted at higher levels of education. Any reform must also be carried out through a process of consultation with social partners, in addition to being impervious to political and electoral interests. In 2019, the Mexican government launched the program entitled *Jóvenes Construyendo el Futuro* (Young People Building the Future), the goal of which is to include people aged between 18 and 19 who are neither studying nor working in formal employment. To achieve this, a private economic unit should offer job training for a maximum period of one year, with the government paying a monthly scholarship to the trainee, in addition to health insurance, which includes maternity leave and occupational safety. This program focuses mainly on disadvantaged populations or those with high rates of violence. Finally, certain determinants in young people's decision to not continue their studies, such as motherhood or paternity, show how public actions can intervene by, for example, ensuring effective access to daycare and other educational services.

Future research should focus on a more detailed analysis of territorial influence, taking into account elements such as sex, locality size, and state in order to understand characteristics, trajectories and specific needs. We also recommend dynamic analysis in order to better understand the duration of episodes of disconnection, the time necessary to find a job once a young person has graduated, or his or her permanence in the same job. This will make it possible to target more efficient policy efforts for the benefit of future generations.

References

- Abril Valdez, E., Román Pérez, R., Cubillas Rodríguez, M. J., & Moreno Celaya, I. (2008). ¿Deserción o autoexclusión? Un análisis de las causas de abandono escolar en estudiantes de educación media superior en Sonora, México. *Revista electrónica de investigación educativa*, 10(1), 1-16.
- Aguayo Téllez, E., & Mancha Torres, G. (2017). El entorno de pobreza y la condición de inactividad en los jóvenes del área metropolitana de Monterrey. *EconoQuantum*, 14(2), 85-103.

- Aguila, E., Mejía, N., Pérez, F., Rivera, A., & Ramírez, E. (2015). Pobreza y vulnerabilidad en México: El caso de los jóvenes que no estudian ni trabajan. *Estudios Económicos (México, DF)*, 30(1), 3-49.
- Arceo-Gómez, E. O., & Campos-Vázquez, R. M. (2011). ¿Quiénes son los NiNis en México?. Working paper CIDE 2011-8.
- Baron, J. D., Popova, A., & Sánchez, A. (2016). *Following Mexican youth: a short-run study of time use decisions*. Policy Research Working Papers. The World Bank.
- Bermúdez-Lobera, J. (2014). Las transiciones a la adultez de los jóvenes que no estudian ni trabajan (ninis) en México, 2010. *Papeles de población*, 20(79), 243-279.
- Cavero, D., & Ruiz, C. (2016). *Do working conditions in young people's first jobs affect their employment trajectories?: The case of Peru*. ILO.
- Cazzuffi, C., Díaz, V., Fernández, J., & Torres, J. (2018). Aspiraciones de inclusión económica de los jóvenes rurales en América Latina: El papel del territorio. Working Paper 231 Programa Jóvenes Rurales, Territorios y Oportunidades: Una estrategia de diálogos de políticas. Rimisp, Santiago de Chile.
- De Hoyos Navarro, R. E., Popova, A., & Rogers, F. H. (2016). Out of school and out of work: a diagnostic of ninis in Latin America. *World Bank Policy Research Working Paper*, (7548).
- Ducoin Watty, P. (2018). La educación secundaria mexicana: Entre la búsqueda del acceso equitativo y el rezago. *Revista Educación*, 42(2), 465-494.
- Escoto, A., & Navarrete, E. L. (2018). Qué hacer para ser NiNi. Recuperando las particularidades de los jóvenes que no estudian y no trabajan en México y El Salvador. *Papeles de población*, 24(96), 217-254.
- Gutiérrez-García, R. A., Benjet, C., Borges, G., Ríos, E. M., & Medina-Mora, M. E. (2017). NEET adolescents grown up: eight-year longitudinal follow-up of education, employment and mental health from adolescence to early adulthood in Mexico City. *European child & adolescent psychiatry*, 26(12), 1459-1469.
- IFAD. (2019). *Creating opportunities for rural youth 2019*. Rural Development Report. Retrieved from: <https://www.ifad.org/ruraldevelopmentreport/>
- ILO. (2020). Global employment trends for youth 2020: Technology and the future of Jobs. Retrieved from: https://www.ilo.org/global/publications/books/WCMS_737648/lang--en/index.htm

- Lechuga Montenegro, J., Ramírez Argumosa, G., & Guerrero Tostado, M. (2018). Educación y género. El largo trayecto de la mujer hacia la modernidad en México. *Economía UNAM*, 15(43), 110-139.
- Mancha Torres, G. L., & Ayala Gaytán, E. A. (2020). El ingreso familiar como determinante de la asistencia escolar de los jóvenes en México. *Problemas del desarrollo*, 51(201), 85-110.
- Mendoza Rojas, J. (2018). Situación y retos de la cobertura del sistema educativo nacional. *Perfiles educativos*, 40 (SPE), 11-52.
- Negrete, R., & Leyva, G. (2013). Los NiNis en México: una aproximación crítica a su medición. *Realidad, datos y espacio. Revista Internacional de Estadística y Geografía*, 4(1), 90-121.
- Novella, R., Repetto, A., Robino, C., & Rucci, G. (Eds.). (2018). *Millennials en América Latina y el Caribe: ¿trabajar o estudiar?*. Inter-American Development Bank.
- OECD. (2017). *Panorama de la société 2016: Les indicateurs sociaux de l'OCDE*. OECD.
- OECD, ECLAC & CAF. (2016). *Perspectivas económicas de América Latina 2017: Juventud, competencias y emprendimiento*. OECD.
- PAHO. (2018). *La salud de los adolescentes y jóvenes en la Región de las Américas: la aplicación de la estrategia y el plan de acción regionales sobre la salud de los adolescentes y jóvenes (2010-2018)*. Retrieved from: <https://www.paho.org/informe-salud-adolescente-2018/>
- Pederzini, C. (2000). Desigualdades educativas de género en la niñez mexicana. Universidad Iberoamericana Ciudad de México. Working Paper.
- Poblete, R. (2011). Género y Educación: trayectorias de vida para ellos y ellas. *Revista Latinoamericana de Educación Inclusiva*. 5(1).
- Raccanello, K., Estrada, L. G., & López, G. D. (2009). Determinantes de la asistencia escolar en primaria: un análisis de género. *Revista Latinoamericana de Estudios Educativos (México)*, 39(3-4), 99-119.
- Rodríguez, R. (1999). Expansión del sistema educativo superior en México, 1970- 1995. In M. Fresán Orozco (Ed.), *Tres décadas de políticas de Estado en educación superior*. México, Asociación Nacional de Universidades e Instituciones de Educación Superior, pp. 167-205.
- Saad, P. M., Miller, T., & Martínez, C. (2009). Impacto de los cambios demográficos en las demandas sectoriales en América Latina. *Revista brasileira de estudos de população*, 26, 237-261.

- Sánchez-Soto, G. & Bautista León, A. (2018). En búsqueda de su camino. Características de los jóvenes que no estudian ni trabajan en la ciudad de México, in A. Corica, A. Freytes y A. Miranda (comps.) *Entre la educación y el trabajo. La construcción cotidiana de las desigualdades juveniles en América Latina*. CLACSO, pp.135-164.
- Sandoval, E., & Tarrés, M. L. (1996). Mujer y Educación en México 1980-1990. *Revista latinoamericana de estudios educativos*, 26(3), 11-42.
- Tornarolli, L. (2016). El fenómeno de los NiNis en América Latina. CAF Working Paper 2016/18. Retrieved from: <http://scioteca.caf.com:8080/xmlucaf/handle/123456789/988>
- Tuirán, R. & Muñoz, C. (2010). La política de educación superior: trayectoria reciente y escenarios futuros. In A. Arnaut and S. Giorguli (Eds.): *Los grandes problemas de México* (Vol. VII, Educación), México: El Colegio de México.