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Articles

Educational aspirations of the border youth: the case of Tijuana

Las aspiraciones educativas de la juventud fronteriza: el caso de Tijuana

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Abstract

This article aims to shed light on the impact of the cross-border context on educational aspirations of middle and high school students living in Tijuana, Baja California. For this purpose, qualitative response regression models are estimated considering variables of a demographic and socio-educational nature, of the migratory field and related to commitment, self-motivation, and family support. Data was collected by the Mexican Migration Field Research Program is used. We found that expectations are not very sensitive to migratory and cross-border circumstances. On the other hand, the educational level of the parents, dedication to study, have family members at the university and speak English, does seem relevant in the formation of expectations. We concluded that demographic and socio-educational factors, as well as their own effort, and family support determine to a greater extent the aspirations of the youth.

Keywords: youth, cross-border communities, Tijuana, academic aspirations, high school, higher education.

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Resumen

El presente artículo pretende identificar la influencia del contexto transfronterizo en las aspiraciones educativas de los estudiantes de educación media superior que radican en Tijuana, Baja California. Para este objetivo se estiman modelos de regresión de respuesta cualitativa que consideran variables de índole demográfica y socioeducativa, del ámbito migratorio, y relacionadas con el empeño, la motivación propia y el apoyo familiar. Se utilizan datos recopilados por el Mexican Migration Field Research Program. Se encontró que las expectativas son poco sensibles a las circunstancias migratorias y transfronterizas. En cambio, el nivel

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educativo de los padres, la dedicación al estudio, tener familiares cercanos estudiando y saber inglés son variables que sí parecen relevantes en la formación de las expectativas. Se concluye que los aspectos demográficos y socioeducativos, así como la dedicación propia y el apoyo familiar, determinan en mayor medida las aspiraciones de los jóvenes.

Palabras clave: jóvenes, comunidades transfronterizas, Tijuana, aspiraciones académicas, educación media superior, educación superior.

Introduction

Although people's education depends largely on their socioeconomic characteristics (Espitia Carrascal & Montes Rotela, 2009), one would expect that family and work dynamics influence the concept of professional development and, with it, the value of academics (Orraca et al., 2017). Taking into account that the families along the border between Mexico and the United States (USA) live in multicultural environments associated with labor asymmetries, separations and family reunions and experiences that produce changes in the social behavior of the population, in recent decades, the study of the effects, both positive and negative, that the migratory and cross-border phenomenon between these two countries can have on the educational aspirations of young people and their influence on individual decisions regarding education has intensified.

Among the positive effects found in the literature are those of an economic nature resulting from the promotion of productive activities in the destination community[1] (Lindstrom, 1996; Massey & Parrado, 1998) but also in the community of origin through the sending of remittances (Giorguli & Serratos, 2009). This type of effect could also reflect greater investment in human capital in the medium term (mainly in education and health). Cross-border work, furthermore, allows for better salaries in relative terms. Finally, there is always the possibility that return migrants[2] become agents of change and diffusers of novel ideas that can be implemented in the places of origin, thus favoring the productive and social organization of the community (Goldscheider, 1987; Mendoza Cota, 2013).

Among the negative effects are the social and emotional costs of a potentially disrupted coexistence or the separation of families. In this regard, Antman (2011) indicates that minors are less dedicated to study and participate in school activities when there is a cross-border separation of parents. In addition, remittances themselves could become a cause of school dropout and delays in the development of communities of origin (Giorguli & Serratos, 2009) by promoting nonself-sustainable local production systems, which undermine school-age or working-age human resources and slow changes in productive structures (Fischer et al., 1997).

[1] According to McConnell et al. (2007), labor migration improves the functioning of labor markets by promoting allocative efficiency.

[2] Return migrants are those individuals who return to their country of origin, voluntarily or forced, and remain there after having settled in another nation (Izquierdo Escribano, 2011).

In the geographic area comprising the border between Mexico and the United States, there is a confluence of diverse and heterogeneous social groups that interact to carry out work, tourism, artistic and medical activities, among others. For many years, these activities have boosted the border economy by increasing employment and, consequently, attracting the immigrant population from the south. However, the labor market in this region has been losing absorption capacity, and there has been an overdemand for public infrastructure, which manifests, for example, as job insecurity (Cruz Piñeiro, 2012) and educational lags.[3]

In relation to the latter, studies such as those by Coubès and González Ramírez (2011) and Vargas-Valle (2012) document low education levels in border cities, compared to those in the rest of the country, due to high internal migration and the dynamics of the border labor market. According to Kandel and Massey (2002), minors who see international labor migration as a natural process are up to five times more likely to emigrate than those who are unaware of such migration. Likewise, in some areas of Mexico, students in high school are twice more likely to seek work in the United States than to continue their academic training. The above realities could have consequences for educational equity in regions such as border areas.

Education is a way of revaluing knowledge and obtaining training and experiences that allow one to be more professionally productive (Münch, 2005) and have access to better job opportunities and higher salaries (Leyva López & Cárdenas Almagro, 2002). Expenditures on education and training are investments in human capital, but so are those made in the field of health, knowledge about the labor market and raising children (McConnell et al., 2007). For Becker (1964), education increases the earnings of people as long as the environment in which they work is less developed.

Although in Mexico higher education is understood as the main factor of social transformation[4] (Marmolejo & León, 2000), two-thirds of the young adult population of Tijuana is an employee or worker. The high concentration in this occupational category is linked to the presence of the maquiladora industry in the region. Young people are the most involved population segment in this form of industrial work (González Galbán, 2011). The ease of finding low-skilled salaried work, together with the roots of the culture of migration, could make these alternatives more attractive for achieving social mobility or for achieving the desired standard of living than dedication to studies (Meza González & Pederzini Villarreal, 2009). According to data from the National Institute of Statistics and Geography (Inegi, 2015), 52% of young people in Tijuana are part of the economically active population, four percentage points above the national average.

The present work aims to shed light on the effect that exposure to the demographic and socioeducational dynamics of the border, the migratory environment and professional desires and family support have on the educational and professional aspirations of high school students residing on the Mexican side of the border between

[3] According to 2015 data from the National Institute for Adult Education in http://www.inea.gob.mx/transparencia/pdf/rez_censo_edos/rez_ei15_mun_ur_02.pdf

[4] Unlike what happens in the USA, where educational services are often considered consumer goods.

Tijuana in Baja California and San Diego in California, which has been described as one of the most dynamic areas in the world (Ojeda, 2009). Based on the vulnerabilities that educational levels present, the following hypothesis is proposed: the aspirations of the young people are more sensitive to exposure to the migratory environment than to the commitment, motivation and support received by the family, and the association between these aspirations and exposure to the migratory environment is negative.

Referential framework

The migratory and cross-border context of Tijuana

The border dynamics between Mexico and the USA cannot be fully understood without taking into account the phenomenon of migration. Currently, the flow of Mexican migrants to the USA is very different from that of a few decades ago, when it was mainly composed of young men looking for agricultural work. In recent years, many other groups have migrated for various purposes, making migration a much more complex phenomenon than in the past.

There are two demographic-migratory processes—contemporary and temporary—that are related to the northern Mexican border and that must be considered because they shape the cultural identity of the societies that experience them. The first is associated with the increase in the number of international immigrants who have returned to border municipalities of Mexico since 2017 (Inegi, 2020; Masferrer & Roberts, 2012). The border has ceased to be only the magnet of internal migration; it has also become a magnet of return migration from the second half of this century (Canales, 2012; Vargas Valle, 2015), due in part to the real estate bubble, which burst in 2008 in the U.S., leading to a global financial crisis,[5] and reinforced by the emergence of an anti-immigrant climate in that country during the administration of President Donald Trump.

The second process involves immigration to Tijuana from other parts of the country, in addition to immigration to Central America, South America and the Caribbean, through which the historical growth of the city is explained, to a large extent, and by which it enjoys high multiculturalism. In this regard, the migration crisis that occurred in 2016, when nearly 3 000 Haitians arrived in Tijuana, and during 2018, when more than 6 000 Central American immigrants arrived seeking asylum in the USA[6] (El Colegio de la Frontera Norte, 2019), stand out. In this regard, data from the Inegi intercensal survey (Inegi, 2015) indicate that 47% of the population of Tijuana in 2015 was nonnative.

[5] The economic imbalance that occurred in the U.S. since 2008 brought with it an increase in unemployment to levels not observed since the 1980s. For Calderón et al. (2010), this increase in unemployment increased poverty, inequality, informality and disorderly agglomeration at the border.

[6] Although many times, for various reasons, these migrants end up settling in the city.

Kandel and Massey (2002) argue that in some parts of Mexico, migration to the USA is seen as a step toward maturity; the action is socially approved, and whoever does it is recognized as a responsible and visionary person. This desire spreads through the social environment and by observing the role played by those who have done it, who, upon returning, usually show a change in their economic circumstances, thus strengthening the perception in young people that investment in education is not as profitable as migration due to the lack of being qualified for the positions they are likely to fill, causing young people to reduce their academic effort. The authors find that parents' desires for their children to live in the USA is generally not related to educational continuity; they also find that the intention to work beyond the border of high school students is the opposite of their desire to continue to study in Mexico.

The actions through which migrants forge and maintain simultaneous social relations between their society of origin and that of settlement (Glick Schiller et al., 1995) are a manifestation of "transnationality"[7] (Zúñiga & Reyes, 2006). Many times, these migrants settle in areas close to the border, either to not lose emotional ties with the country of origin or because they already have family or friends in those areas or, in many cases, due to budgetary limitations.[8] When the daily lives of these families or communities depend on constant interconnections across an international border and their members are incorporated into the economy, daily life patterns and political institutions of both countries mark their public identity (Glick Schiller et al., 1992) with what is facing cross-border families or communities.

Migration and education: some theoretical and empirical results

For Vargas Valle (2015), there are forces found in the relationship between migration and education whose joint effect on the younger population is still uncertain. On the one hand, migration could generate economic gains that make the exclusive dedication to studies possible (Taylor, 1987), but on the other hand, it could bring social capital within the household to a threshold below that which guarantees academic success (Booth, 1995). Likewise, it is possible that the phenomenon has a negative effect on the educational aspirations of young people; when at home, the economic and cultural benefits of working in the USA are overestimated (Kandel & Massey, 2002). For Vargas-Valle and Glick (2021), the educational and migratory aspirations of high school students in Tijuana are sensitive to the cross-border experience and to the level of social capital that the connection with the United States represents in terms of citizenship, family, and mastery of English or cultural identification. Additionally,

[7] In this regard, transnational families have a simultaneous presence in two countries through the international migratory flow (generally alternating) of their members. These families, unlike cross-border families, can be subject to very different social conditions depending on their location and the migratory status of their members, given that they are not necessarily located in adjacent communities (Ojeda, 2009). In this sense, the cross-border nexus could be considered a form of transnationality.

[8] The condition of migrants does not imply the manifestation of transnationality, although transnationalism is based on some type of migratory experience. In any case, being born in the U.S. and residing in Mexico is not sufficient to be considered a migrant.

students with an education and other cross-border ties, under certain circumstances, are more likely than others to aspire to a university degree but also to migrate or get a job on the other side of the border.[9]

In border cities such as Tijuana, considered receptors of tourism and migratory flows, the educational structure evolves alongside with geopolitical and economic phenomena. In 2008, the proportion of students in basic, high school and higher education was 47%, 38% and 15%, respectively (Inegi, 2010), and by 2018, these indicators had changed to 69%, 17% and 14%, respectively (Sistema Educativo Estatal de Baja California [SEEBC], 2018); by 2021, they were 71%, 15% and 14%.[10] Although this does not allow establishing for certain that high school education is the most sensitive to the environment, it is an indication that this educational level presents the greatest challenge, with a goal of increasing retention in the coming years, not only because of the current magnitude of the issue and its significant decline in recent years but also because of the degree of change from the previous level, which continued to decrease in 2021.

Studies such as those by Hanson and Woodruff (2003) and Borraz (2005) suggest a potential positive effect of migration on the education of the youngest in cases where the mother's education is low and on households where remittances are received; however, their results are focused on rural communities. In this regard, for Nobles (2011), ties with migrant parents are positively correlated with school performance, which mitigates the educational costs of family separation. For his part, Antman (2011) finds that minors who have a migrant father spend less time on schoolwork in the absence of a male behavior pattern. This is because the aspirations of the minor end up being related to labor migration or a perceived lack of support, which generates psychological costs. The author concludes that the negative effects of paternal migration could be greater than the benefits that can be achieved through remittances.

McKenzie and Rapoport (2011) find that migration negatively affects the academic achievement of adolescents in rural areas and could reduce the chances of completing secondary education by up to 22%; however, this effect is mitigated with remittances that relax restrictions on investment in education. In this sense, Kandel and Kao (2000) find that remittances sufficiently relax the economic pressures of the households that receive them and that minors have a greater dedication to study; however, this effect occurs only until these people acquire autonomy in decision-making during adolescence, which is when they can be most strongly influenced by the occupational and educational activity of their relatives and acquaintances. Their results also show that young people with better qualifications and those whose parents have a professional occupation have less interest in looking for work outside the country; however, for students who have repeated a school grade, interest increases.

[9] In many of these cases, the person (usually called a transmigrant or commuter) works in the U.S. but lives on the Mexican side.

[10] Data taken from the educational statistics of Baja California for the 2020-2021 school year published by the Ministry of Public Education in https://planeacion.sep.gob.mx/Doc/estadistica_e_indicadores/estadistica_e_indicadores_entidad_federativa/estadistica_e_indicadores_educativos_02BC.pdf

Coubès and González Ramírez (2011) study the interrelation between school and work for the young population of Tijuana and find that those born outside the state of Baja California, in a greater proportion than the locals, combine studying with working or work exclusively. Additionally, they identify that only 48% of those who complete basic education reach the high school level. The authors state that the labor market of Tijuana's youth is more accessible than that of the rest of Mexico but also of lower skill.

Vargas Valle (2015) analyzes the educational continuity of young people in urban areas of the northern border of Mexico, and the participants had the following two characteristics: born in the USA and share a home with people living in Mexico who work in the USA. The author finds that the country of birth is more associated with level of education than having relatives who live in Mexico and work in the USA. Additionally, young people who live with someone with this cross-border activity could have advantages regarding completing basic and high school education but not a college education.

Students living in Mexico but who were born and study in the USA increase their human capital—specific to the USA—and, with it, the probability of being able to find a well-paid job north of the border (Orraca et al., 2017). Another type of cross-border tie occurs for those who, even having been born in Mexico, frequently cross the international border for tourism, business or health purposes, supported by their high levels of income and constituted to a large extent by what Sarabia (2015) calls cosmopolitans of the Global South, i.e., a privileged and mobile class composed of members of the middle and upper classes. These characteristics mean that households with cross-border ties are not entirely comparable to those of immigrants (Orraca et al., 2017).

Table 1 shows the differences in importance that young people give to higher education on both sides of the border; the differences are discussed in light of the cross-border perspective of the Mexican side.

As seen in Table 1, the percentage of young people who give high importance to university studies and who strongly agree that dedication to school is a way to achieve a better career is higher in Tijuana than in San Diego. A significant difference between the two population groups occurs with the statement that the classes taken in high school contribute to shaping the future because in San Diego, up to 35% of the students disagree or strongly disagree, and on the Mexican side, only 14% of the students disagree or strongly disagree. Additionally, there is a notable discrepancy in the opinion of students in relation to their parent's desire for them to go to college, a statement with which 61% strongly agree in Tijuana, compared to 49% in San Diego. The hierarchical ordering of the responses was similar between both locations, and there was no significant difference when they were asked about the role played by the college in achieving a good job. However, the variability in the responses (as a measure of polarization) was always greater for students in Tijuana.

Table 1. Perception of higher education among young residents of Tijuana and San Diego (percentages)[11]

Variable	Possible answers	Tijuana (%)	San Diego (%)	Statistical *p* - valor
Going to college is...	Very important	65.85	59.85	0.000
	Important	28.07	32.37	
	Not very important	6.08	7.78	
Working hard in school leads to a successful career	Strongly agree	45.50	39.57	0.002
	Agree	46.21	50.87	
	Disagree	6.08	6.81	
	Strongly disagree	2.21	2.75	
My classes prepare me for what I want to be in the future	Strongly agree	34.19	16.76	0.000
	Agree	51.42	48.74	
	Disagree	11.13	25.76	
	Strongly disagree	3.26	8.74	
My parents want me to go to college	Strongly agree	60.95	49.42	0.000
	Agree	33.32	43.04	
	Disagree	3.35	5.75	
	Strongly disagree	2.38	1.79	
Number of observations		2004	2070	

Source: Own elaboration using data from MMFRP 2015-2016 and based on Aguilar Barceló et al. (2020)
Note: The percentages correspond to the frequency of each response in relation to the total per variable

The greater importance of higher education in the perceptions of young people in Tijuana could be related to what was noted by Marmolejo and León (2000), i.e., in Mexico, this educational level is seen as the basis of a process of social transformation and self-improvement with strong components of aspirations, and in the USA, it is perceived as an investment (not accessible to all) that increases the probability of obtaining a better income in the future.

Methodology

Information sources

The data were obtained from the Mexican Migration Field Research Program (MMFRP) 2015-2016 of the University of California at San Diego in collaboration with El Colegio de la Frontera Norte and the Autonomous University of Baja California.[12] The sample consisted of 4 074 high school students between 14 and 17 years old

[11] The last columns of Table 1 and Table 3 show the results of the chi-square test of independence for each variable. In these tables, the variables that were not significant are omitted.

[12] Because it was a special survey within the program, there are no more recent comparable data.

enrolled in 63 schools in Tijuana and San Diego. Of these, 2 004 are students living in Tijuana, among whom 207 were identified as having experience with cross-border ties, i.e., having studied, lived or been born in the U.S. or having or had a nuclear relative living in the USA. The participants were selected by random sampling weighted in two stages: first by school and then by classroom. Although this study focuses on young people in Tijuana, for some indicators, brief comparisons are made with their peers in San Diego.

Among the sample in the present study, 5% of young people between 14 and 17 years old living in Tijuana had been born in the USA, increasing to 39% for the subset with transnational ties or experience. Five percent had some academic experience in the USA, and 8% had lived there for at least one month. According to Rocha Romero and Orraca Romano (2018), the majority of students who live in Mexico and study in the United States were born in the United States; this is observed for the basic educational level (85.1%), high school (74.6%) and higher education (64.8%). However, the majority of residents in Mexico born in the USA do not study on the other side of the border due to encountering some type of obstacle related to the costs of education, family income, English proficiency, academic achievement or even fatigue from continuously crossing the border.[13]

Qualitative response regression model

Models in which the dependent variable is qualitative usually aim to determine the probability that a certain event will occur. A simple linear regression model is represented as follows:

$$Y = \alpha + \beta_i X_i + u \qquad (1)$$

where Y is a categorical response variable, which, for quantification purposes, is associated with the values 0 and 1, according to the interests of the model. In addition, α is the intercept, β_i $(1, \ldots, n)$ are the estimated coefficients of the independent or explanatory variables X, which indicate the magnitude of the effect on the dependent variable, and u is the disturbance or error term. Expression 1 can be interpreted in probabilistic terms as a discrete choice model (Gujarati & Porter, 2010). However, because there is no guarantee that when obtaining $\hat{Y}$ by ordinary least squares the estimators of the probability of event Y occurring given X meet the proposed condition, it is advisable to transform the model in such a way that the predictions fall in the interval [0,1].

In this regard, the logit model derives probabilities in terms of a logistic distribution function, as follows:

$$P_i = \frac{1}{1 + e^{-z_i}} = \frac{e^{z_i}}{1 + e^{z_i}} \qquad (2)$$

[13] In border cities such as Tijuana, Ciudad Juárez and Nogales, approximately 2.5% of the student population in general and 4% of university students cross daily to study in the U.S. (Rocha Romero & Orraca Romano, 2018).

where $Z_i = \alpha + \beta_i X_i + u$, and P_i is the probability that the event occurs; therefore, the probability that it does not occur is $1–P_i$, which can also be represented as follows:

$$1-P_i = \frac{1}{1 + e^{z_i}} \qquad (3)$$

Therefore:

$$\frac{P_i}{1 - P_i} = e^{z_i} \qquad (4)$$

The probability ratio in favor of the event occurring with respect to it not occurring is $P_i/(1–P_i)$. By taking the logarithm of the previous equation, we have

$$ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \beta_i X_i + u \qquad (5)$$

which is the model to be estimated. The logarithm of the probability ratio is linear for the parameters X and β, and X will depend on the specifications in question.

Description of variables

The explanatory variables used were selected based on Kandel and Kao (2000), Antman (2011) and Vargas Valle (2015). In total, 20 independent variables are included: six demographic and socioeducational variables (DSEV), eight migratory variables (MIVA) and six commitment, self-motivation and family support variables (CMSV). Although the DSEV, MIVA and CMSV categories are not exhaustive or mutually exclusive and the variables that compose them are only *proxies* of the theoretical dimensions they intend to measure,[14] they do make it possible to differentiate the nature of aspirations. Table 2 provides descriptions of the explanatory variables, their category and the form that the answers can take.

In this study, the dependent variable, *Y*, refers to the individual's aspiration to attend college; *Y=0* indicates that the attribute is not present, and *Y=1* indicates that the attribute is present.

[14] For example, the variables "country with which you most identify" and "country where you see yourself working at the end of school" could seem like MIVA variables, but it has been decided for that category to include only decisions and facts and the related variables, with expectations included in the CMSV variables. Additionally, the variable "has attended a school in the USA" could be linked to DSEV; however, because it constitutes a strong cross-border link, it has been included in the MIVA variables.

Table 2. Independent variables used in the study of educational aspirations

Category	Variable*	Possible answers
DSEV	Years completed	14, 15, …, 19
	Number of siblings	None, one or two, three or four, five or more
	Has siblings who attend or have gone to college	Does not have siblings or not old enough to go, no, yes
	Mother's education level	Basic incomplete, basic, high school, higher
	Father's education level	
	English proficiency	Null, low, high
MIVA	Place of birth	Mexico, USA
	Mother's place of birth	
	Father's place of birth	
	Has attended a school in the USA	No, yes
	Has lived in the USA	
	Household receives remittances	
	Close relatives in the USA	
	Parents live in the USA	Neither, either, both
CMSV	Hours of study per week outside of school	2, 3, …, 12
	Country with which you most identify	None, USA, Mexico, both
	Country where you see yourself working after school ends	USA, both, Mexico, another country
	Parents ensure school assignments are done	Strongly agree, agree, disagree, strongly disagree
	Parental agreement regarding attending college	
	Parental agreement regarding work	

Source: Own elaboration using data from MMFRP 2015-2016
* Unless otherwise indicated, the questions refer to the student

Analysis of the results

First, using deductive statistics, the population under study is described to subsequently calculate the magnitude of the effect of the independent variables on the aspirations to attend college by means of inferential statistics corresponding to the logistic model.

Descriptive statistical analysis

Table 3 shows the percentage distribution of the nonquantitative independent variables that will be used in the inferential statistical analysis as a function of the dependent variable, which characterizes the 2 004 young people in Tijuana, differentiated by educational aspirations.

Table 3. Distribution of nonquantitative independent variables with respect to the dependent variable (percentages) of young residents of Tijuana

Category	Variable	Possible answers	Does not want to go to college (%)	Wants to go to college (%)	Statistical *p* - valor
DSEV	Has siblings who attend or have gone to college	Does not have siblings or are not old enough to go	43.55	48.00	0.000
		No	34.68	18.10	
		Yes	21.77	33.90	
	Mother's education level	Incomplete basic	33.93	20.61	0.009
		Basic	40.53	33.04	
		High school	19.37	31.36	
		Higher education	6.17	14.99	
	Father's education level	Incomplete basic	27.55	16.79	0.017
		Basic	39.79	31.28	
		High school	26.02	33.50	
		Higher education	6.65	18.43	
	English proficiency	Null	50.80	51.75	0.000
		Low	44.00	33.53	
		High	5.20	14.72	
MIVA	Household receives remittances	Yes	24.88	15.95	0.007
		No	75.12	84.05	
CMSV	Country with which you most identify	None	13.55	14.00	0.044
		USA	12.26	9.56	
		Mexico	54.19	45.43	
		Both	20.00	31.01	
	Country where you see yourself working at the end of school	USA	18.06	15.93	0.029
		Both	21.29	30.18	
		Mexico	52.90	31.98	
		Other country	7.74	13.91	
	Parents ensure school assignments are done	Strongly agree	9.68	9.72	0.031
		Agree	23.87	12.07	
		Disagree	29.68	20.96	
		Strongly disagree	36.77	57.25	
	Parental agreement regarding attendance	Strongly agree	34.19	64.96	0.000
		Agree	50.97	31.27	
		Disagree	10.97	2.01	
		Strongly disagree	3.97	1.76	
	Parental agreement regarding work	Strongly agree	14.19	18.78	0.017
		Agree	54.19	61.27	
		Disagree	22.58	15.09	
		Strongly disagree	9.03	4.86	
Number of observations			257	1747	

Source: Own elaboration using data from MMFRP 2015-2016
Note: The percentages correspond to the frequency of each response in relation to the total per variable

According to Giorguli Saucedo et al. (2010), a large family can influence young people's intention to attend college. In this regard, as seen in Table 3, having more than two siblings is more frequent among students who do not aspire to go to college; however, if they have attended college, they may serve as an academic example, actually increasing interest in studying.

Additionally, it is evident that parental education level is higher among the student population intending to go to college. Among the students who wanted to pursue a bachelor's degree, up to 46% of their mothers and 52% of their fathers had at least a high school education; these percentages were 26% and 33%, respectively, among students without such aspirations. Together, the proportion of young people who have high English proficiency among those who want to go to college is more than double that among those who do not have such aspirations; in any case, the percentage does not reach 15%.

Based on the distribution of the responses, many of the migratory variables, such as whether one of the parents was born or lived in the United States, having relatives in the USA or having studied, lived or been born in the USA, *a priori*, do not distinguish between an individual's intention to achieve higher education. Overall, the population wanting to go to college has greater ties to the U.S. than do those who do not have this purpose, except in terms of receiving remittances, which is more frequent among young people who do not aspire to attend college. In fact, remittances are usually used for food, clothing, housing, health and debt payments rather than education (Fundación BBVA Bancomer, A. C. & Consejo Nacional de Población [Conapo] 2016) and are challenging to use as productive investments (Durand et al., 1996).

Those who aspire to attend college identify less with Mexico and more with both countries than do those who state that they are not interested in pursuing higher education. Additionally, among those who aspire to go to college, 32% see themselves working in Mexico, and 30% see themselves in both countries; these values are 53% and 21% for those who do not aspire to attend college. Most potential college students do not think their parents are responsible for ensuring their homework is completed. Interestingly, although there is agreement among parents with regard to supporting their children when they want to go to college, there is also agreement in the sense of supporting their work interests.

Regarding how Tijuana's youth views higher education, when distinguishing between those who have transnational ties or experience (207, equivalent to 10% of those living in Tijuana) and those who do not, there is no significant difference in the importance that both groups give to attending college (66% give great importance). However, the young population with transnational ties has more clarity regarding their intention to go to an American university,[15] i.e., 70% of this subset compared to 54% of those who do not meet these criteria. The above findings indicate the existence of a relationship between decisions regarding educational training and the degree of transnational linkage.

Regarding sense of belonging, 23% of young people with transnational ties identify more with the U.S. culture than with the Mexican culture, and 8% of those who do not have such connections identify more with the U.S. culture than with the Mexican culture. Likewise, 42% of these transnational youth identify with both countries,

[15] This had already been highlighted by authors such as Vargas Valle (2015) and Rocha Romero and Orraca Romano (2018).

compared with 27% of nontransnational youth. This is an indicator with different hierarchical ordering between the two groups. For transnationals the order is both countries, followed by Mexico, the USA and neither of the two; for nontransnationals, the order is Mexico, followed by both, neither and, the USA.

Inferential statistical analysis

With the objective of exploring the relationship between the independent and dependent variables (the higher education aspirations of young people in Tijuana), four specifications of the logit model were estimated, i.e., *sp1*, *sp2*, *sp3* and *sp4*, using scenarios with different demographic and socioeducational (DSEV) and migratory (MIVA) conditions and associated with family commitment, motivation and support (CMSV)[16] (see Table 1).

All the estimations rely on the DSEV variables to determine whether, independent of the effect of family composition and their academic background, the migratory context or the commitment, motivation and support of the family are important. *sp1* and *sp2* rely on the MIVA variables, and *sp3* and *sp4* rely significantly on the CMSV variables.

In terms of the MIVA variables, proposal *sp1* considers the origin of individuals, school attendance in the U.S., and whether or not they receive remittances and have close relatives in the U.S.; *sp2* includes school attendance in the U.S., the place where the student has lived and where his or her nuclear family lives or has lived. The proposals *sp3* and *sp4* differ in terms of the CMSV variables: *sp3* includes aspects of commitment and motivation (hours dedicated to school, the country with which one identifies and where one sees herself/himself working in the future), and *sp4* incorporates the variables related to the support of at least one of the parents with respect to the academic and professional future of their child.

Regarding the significance of the marginal effects[17] for the DSEV variables, as seen in Table 4, age is significant and negative, indicating that the passage of time reduces the incentives to pursue higher education, perhaps due, in part, to the greater need to contribute to family income (Zúñiga et al., 2008). Additionally, having siblings in college, a father with higher education and a high command of English were significant and positive in all the estimations in which they were included, ultimately increasing the intention to pursue higher education (measured as probability) by up to 3.8%, 7.0% and 5.2%, respectively. Mother's education level was significant only in some tests and was mostly associated with high school education (especially *sp2* and *sp3*).[18] This could be the product of a patriarchal culture, which is still predominant and under which, on the one hand, fathers continue to be the main references for professional development and, on the other hand, mothers who are professionals face opportunity costs of an unpaid workload related to dedication to care and family.

[16] Due to their contribution to the argumentation, the original specifications are maintained, even when they contain nonsignificant variables.

[17] The marginal effects represent the variation in the probability when the predictor variable is increased by one unit or level and the others are maintained at average levels.

[18] The lack of significance of this variable in *sp1* could be due to a compensatory effect through variables not included in estimations.

Table 4. Logistic regression models for the study of the educational aspirations (marginal effects) of young residents of Tijuana.

Category	Variable		Coefficient (Standard error)							
			sp1		*sp2*		*sp3*		*sp4*	
DSEV	Years completed		-0.0264***	(0.009)	-		-		-	
	Number of siblings	*One or two*	0.0837	(0.059)	0.0858	(0.059)	0.0980	(0.060)	0.0837	(0.058)
		Three or four	0.0512	(0.038)	0.0504	(0. 039)	0.0595*	(0.035)	0.0494	(0.037)
		Five or more	0.0491	(0.035)	0.0482	(0.037)	0.0431	(0.035)	0.0495	(0.032)
	Siblings in college	*No*	-0.0229	(0.021)	-0.0283	(0.022)	-		-0.0258	(0.021)
		Yes	0.0383**	(0.018)	0.0376 **	(0.018)	-		0.0353**	(0.017)
	Mother's education level	*Basic*	-0.0030	(0.019)	0.0026	(0.019)	0.0041	(0.018)	0.0017	(0.019)
		High school	0.0311	(0.020)	0.0354*	(0.020)	0.0407**	(0.019)	0.0303	(0.020)
		Higher *education*	0.0307	(0.027)	0.0373	(0.026)	0.0348	(0.025)	0.0400*	(0.024)
	Father's education level	*Basic*	0.0109	(0.019)	0.0118	(0.019)	0.0222	(0.018)	0.0141	(0.018)
		High school	0.0269	(0.019)	0.0279	(0.020)	0.0360*	(0.018)	0.0280	(0.019)
		Higher education	0.0453***	(0.023)	0.0499**	(0.023)	0.0522**	(0.021)	0.0435*	(0.023)
	English proficiency	*Low*	0.0329**	(0.016)	0.0358**	(0.017)	0.0223	(0.016)	0.0336**	(0.016)
		High	0.0610***	(0.020)	0.0700***	(0.019)	0.0573***	(0.020)	0.0594***	(0.019)
MIVA	Place of birth (USA)		-0.0033	(0.051)	-		0.0005	(0.048)	-	
	Mother's place of birth (USA)		-0.0223	(0.116)	-		-		-	
	Father's place of birth (USA)		0.0322	(0.046)	-		-		-	
	Has attended a school in the U.S.		-0.0420	(0.050)	-0.0024	(0.050)	-0.053	(0.053)	-0.0418	(0.048)
	Has lived in the U.S.		-		-0.0587	(0.052)	-		-	
	Household receives remittances		-0.0618**	(0.026)	-		-		-	
	Has close relatives in the U.S.		0.0052	(0.024)	-		-		-	
	Parents live in the U.S.	*One*	-		0.0036	(0.032)	-		-	
		Both	-		-0.1564	(0.178)	-		-	
CMSV	Hours of study outside of school		-		-		0.0141***	(0.003)	-	
	Country with which you most identify	USA	-		-		-0.0324	(0.037)	-	
		Mexico	-		-		0.0021	(0.022)	-	
		Both	-		-		0.0234	(0.023)	-	
	Country in which to work at the end of school	*Both*	-		-		0.0172	(0.020)	-	
		Mexico	-		-		-0.0283	(0.019)	-	
	Parents ensure homework is done		-		-		-		0.0381**	(0.016)
	Parental agree regarding college		-		-		-		0.0622***	(0.019)
	Parental agreement regarding work		-		-		-		-0.0623**	(0.027)
Number of observations			2 004		2 004		2 004		2 004	
McFadden's R^2			0.0745		0.0613		0.0853		0.0885	
L.R. chi-square			71.69		58.94		82.02		85.11	

Source: Own elaboration using data from MMFRP 2015-2016
Note: Qualitative variables were treated as dummy variables. To avoid collinearity problems, the first options of the qualitative variables (see Table 1) were taken as a basis. Marginal effects are presented instead of coefficients. Significance at * 10%, ** 5% and *** 1%

With respect to the MIVA variables, receiving remittances was significant and had negative effects on aspirations to attend college. Studies such as those by Durand et al. (1996), Giorguli and Serratos (2009), and Fundación BBVA Bancomer, A. C. & Conapo (2016) have identified that the conversion of remittances into productive investments is not automatic; these were found to discourage school continuity due to the adjusted perception of the value and cost of education when faced with the possibility of labor migration.[19]

Regarding the CMSV variables, in line with the results reported by Antman (2011), each hour of weekly academic dedication outside of school increases the aspirations to continue to university studies by 1.4%. However, the country with which the person identifies the most or the one in which he or she sees himself or herself building their profession do not seem to be significantly related to academic intentions (which contrasts with the results of the chi-square test of independence for each variable in Table 3).

Finally, the three variables related to parental support for this potential decision by young people were significant; however, they had different signs. Ensuring that homework is done[20] and agreeing with going to college had positive effects on aspirations (3.8% and 6.2%, respectively), and the effect of encouraging plans other than attending college was negative (-6.2%). These findings indicate that the commitment and support received by the family are relevant in how aspirations are shaped. Although young people with university aspirations report greater reconciliation between their vision and that of their parents, in both academic and work matters (see Table 3), there is a compensatory effect by which supporting work counteracts the effect of academic support.

When comparing the R^2 values for the regressions, the *sp4* model, which consists of mainly demographic, socioeducational and family support variables, is the one that best explains the behavior of the dependent variable. Overall, this indicator is relatively low; however, the conventional measure of goodness of fit is not usually especially high in binary regressions (Gujarati & Porter, 2010). A second measure of fit, the chi-square test, corroborates that the *sp4* model is the most appropriate (Table 4).

Conclusions

This study sought to determine whether the aspirations of young people in high school living in Tijuana, Baja California, are more sensitive to exposure to the migratory environment than to the commitment, motivation and support received by their family when taking into account their international border condition with San Diego, California.

[19] Variables such as the origin of the family members, having lived or studied in the USA or having parents or other relatives who lived in the USA are not decisive in distinguishing between the types of university aspirations.

[20] However, it is also true that those with higher education aspirations require less supervision (see Table 3).

Except for receiving remittances, the aspirations of young people were not very sensitive to many of the migratory and transnational circumstances. Additionally, the academic desires of young people depend on their previous studies, having siblings who have attended college and the education level of their parents. In addition, these aspirations are highly sensitive to family support and support from parents and to the commitment of the young person.

Although the evidence shows a negative relationship between exposure to the migratory and cross-border context (for example, the place of birth and residence of the parents or academic experience in the U.S.) and the aspirations for higher education, as it is not significant, the hypothesis proposed in this research cannot be accepted. However, the aforementioned result could be related to the size of the sample, the specificity of the age range of the population studied and a narrow definition of cross-borderism. The results also demonstrate that socioeducational characteristics, family composition and family support have important weight in education decisions by youth lining in border areas.

A notable challenge related to the progression of the city of Tijuana, generalizable to that of other cities located along the northern border of Mexico, is overcoming the educational lag of its young people.[21] The possibility of migrating in search of employment options, the high supply of low-skilled work in their country of residence, and socioeconomic problems such as inequality, marginalization and social uprooting make it difficult to build communities with solid academic projection in those age groups in which the possibility of working or migrating begins to be considered. Authorities in border areas should address the challenge of designing and implementing public policies, with affirmative actions aimed at youth with cross-border ties, in which migrant youth and youth from other regions (both in the country and abroad) are also incorporated, prioritizing the integration and settlement of their families, in such a way that educational and social lags can be counteracted and human capital and social fabric strengthened, to take advantage of this demographic incentive.

Educational institutions must incorporate into their curricula the profile of human capital that is required in the new local economy from a globalized economy perspective. The vision of young people and their families regarding the local development of the border and the neighborhood between the two countries and, consequently, of "the cross-border", should also be incorporated into the equation (Ojeda, 2009). The ideas of Ganster (1994) continue to be valid, in the sense of the importance that universities assess the future needs of the public, private, social and academic sectors and that they specify the adjustments that their study programs require so that young professionals have the necessary skills to function in this changing binational region.

Undoubtedly, given their heterogeneity both from the ideological and socioeconomic points of view, more research is required on student communities with cross-border ties to be able to establish the determinants of their expectations and decisions. For example, as Orraca et al. (2017) point out, it is not clear whether students with cross-border ties, who expressed, when in high school, aspirations to achieve professional education, effectively continued studying and in which country they did so.

[21] Associated *a priori* with family disintegration that can be generated by migration.

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