



Determinants of Mexican Migration and Return Migration

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Regional macroeconomic determinants of Mexican migration to the US

- Main migration sending states in 2000:
- **Guanajuato**
- **San Luis Potosi**
- **Oaxaca**
- **Michoacan,**
- **Zacatecas**

The economic structure in Mexico is relevant for studying the migration of Mexican workers to the USA.

Recent performance of the Mexican economy:

- TLCAN
- FDI
- Exports
- Manufacturing (Maquiladora)

Mexican migration from a regional perspective

States that send the most migrant workers to the USA:

Zacatecas, Michoacan and Oaxaca have lower per capita income.

The state of Mexico and the state of Jalisco showed comparatively higher levels of income.

Income per capita cannot explain the whole process.

Macroeconomic structure and Mexican states with higher emigration intensity, 2000									
States	State GDP/Total GDP (2000)	State per capita income (2000)	Number of <i>municipios</i> with higher migration intensity	Total households	% average households that receive remittances	% average of households with emigrants in the last five-year period	% average of households with circular migrants in the last five-year period	% average of households with return migrants in the last five-year period	Average of the emigration intensity index
Mexico		\$7,495		312,613	4.4	4.1	0.9	0.8	
Guanajuato	3.60%	\$5,376	6	66,394	26.39	21.73	6.81	40.96	2.91
Jalisco	6.40%	\$7,412	26	72,280	26.31	18.88	4.38	5.19	2.39
Michoacán	2.30%	\$4,785	29	115,531	23.28	20.25	5.91	5.4	2.54
San Luis Potosi	1.70%	\$5,699	8	26,885	29.71	22.95	4.22	5.33	2.71
Zacatecas	0.80%	\$4,210	24	83,401	23.8	18.92	5.52	4.87	2.37
State of Mexico	10.50%	\$5,672	1	7,849	13.43	19.3	8.03	3.62	2.04
Oaxaca	1.50%	\$3,489	19	6,667	25.19	24.3	5.09	4.58	2.57

Source: Estimations of CONAPO based on the General Census of Population, 2000 and Banco de Informacion Economica, (INEGI) and National Survey of Occupation and Employment (ENOE).

Employment and migration

Regional demographics and rates of unemployment need to be incorporated.

- 14.5 million people in the state of Mexico, 6.09 million in Jalisco and 5 million for Guanajuato.
- They had the largest open unemployment rates of the seven main migrant states, 5%, 3.2% and 3.2% respectively.
- Empirical information: demographic pressure and the rates of unemployment seem to be related to migration.

Mexico: labor conditions in the highest emigration states (2007)

State	Total Population	active population (labor force) %	Remunerated workers ¹	Workers earning wages ²	Rate of unemployment %	unemployment and partial employment %	Rate of general pressure %
Guanajuato	5,005,150	40.20%	66.80%	58.70%	3.20%	10.40%	7.60%
Jalisco	6,925,021	45.30%	66.00%	60.60%	3.20%	11.00%	5.50%
Michoacán	3,986,293	41.00%	57.30%	50.40%	2.30%	12.00%	3.60%
San Luis Potosí	2,466,293	41.60%	57.90%	53.60%	2.50%	13.10%	5.50%
Zacatecas	1,382,244	41.40%	51.80%	49.30%	3.60%	14.70%	8.50%
Estado de Mexico	14,512,464	41.80%	69.10%	64.00%	5.00%	9.70%	8.00%
Oaxaca	3,552,901	40.80%	38.70%	36.20%	2.00%	10.80%	4.40%

Source: National Survey of Occupation and Employment (ENOE) INEGI. Economically Active Population (PEA): people of more than 14 years that in the period of reference had an economic activity (labor force) or were looking for a job (unemployed). Rate of Partial Employment and Unemployment (TOPD1): proportion of the PEA who is unemployed or employed but only work less than 15 hours a week in the period of reference. Rate of General Pressure (TPRG): proportion of employed and unemployed population with respect to PEA that is looking for a job. 1. People with a job characterized by responding to a superior management and receiving monetary compensation for the work realized. 2. Workers earning wages: includes all the forms of subordinated employment, which is remunerated.

Regional model of Mexican Migration

The coefficients of partial employment rate, the ratio of the US to GDP to Mexican states GDP (proxy) and permanent migration were positive and statistically significant

The coefficient of the log of the regional per capita income and the foreign direct investment and distance by state were negative

Dependent variable: Mexican migration 1990-2000		
Weighted least squares, covariance matrix and standard errors consistent with the heterocedasticity test of White		
Variable	Coefficient	t-statistics
Intercept (C)	-0.335	-1.435
Log (state GDP pc)	-0.033***	-2.579
Log (PIBUSA/PIBMX at state level)	3158.552***	3.625
Log distance	-0.001	-0.295
Permanent migrants	0.093***	2.797
Permanent migrants (square)	-0.005***	-3.44
Log partial employment rate (less than 35 hours)	0.009***	3.979
Foreign direct investment/GDP	-0.006*	-1.812
International trade	-0.002	-0.636
Dummy1	0.030***	4.257
Weighted Statistics		
R ² adjusted	0.976	
Durbin-Watson stat	2.009	
Akaike info criterion	-6.051	
Schwarz criterion	-5.593	
F-statistic	67.877	
* Significant 10%, ** significant 5%, *** significant 1%		
1. Dummy for states with higher level of migration in the period: Jalisco, Michoacán, Guanajuato, Estado de México, Veracruz, Guerrero, Puebla, Zacatecas, San Luis Potosi and Hidalgo.		

The results corroborate previous statements about the determinants of Mexican migration such as unemployment, income and economic activity.

The regional model suggests that there is evidence of regional divergence in the flow of Mexican migration derived from local or state conditions.

Return migration

Permanent migration paradigm.

Migrant workers do not always want to settle in destination countries.

Variety of situations could affect the decision to return:

- Retired migrants who want to return to their home towns to buy a house
- Migrants who seek to apply the labor skills learned in the destination country
- Failure to integrate into the economic and labor markets of the destination country

The impact of return migration on the Mexican economy

What factors have impacted Mexican return migration?

- Return migration from the United States to Mexico is influenced by labor market conditions at home.
- The propensity to return home is conditioned as well by migrants' personal characteristics.
- A potentially important economic impact of return migration is its influence upon remittance flows.

The concept and measures of return migration

There are many patterns and return possibilities facing the potential return migrant:

- Preconceived plans to return
- Migratory decisions based on the circumstances presented over time
- Target-saving objectives with the intention to return
- Different legal conditions
- Institutional and economic infrastructure within the origin country

Determinants of return migration from the economic point of view:

- Failed migration experience that did not generate the expected income
- Migrants maximize not only their individual expected earning but the duration of their stay abroad from a household point of view (Stark 1991)
- Undocumented migrants have an incentive to return given that they are less likely to gain from their labor skills and human capital in the destination country
- Married migrants sending remittances have a higher probability of becoming return migrants

The estimation of the rate of return migration

It is difficult to determine if temporary workers coming from the USA will remain in Mexico or will migrate again to the USA.

The procedure to estimate return migration depends on the characteristics of the surveys or the Population Census.

In this study two different calculations of return migration were estimated.

Estimation of the rate of return migration based on the Mexican Population Census

Number of migrants that lived in the USA and returned to Mexico five years ago and that in the subsequent five-year period remained in Mexico.

Between 1995-2000 the share of return migration reached 17.7%.

The return migration flow was made up of 65.1% men and 34.9% women.

The largest share of return migration (47.5%) was concentrated in the traditional migration states.

The states with largest ratio of return migration were Baja California, Sonora, Colima and Chihuahua.

The highest ratios of return migration are probably related to the possibility of an easier return and the ability to use labor skills and investment savings.

Ratio of return and circular migrants to total Mexican migration to the USA 1995-2000					
State	Total migration ²	Share of state return migrants to total state migrants ¹	State	Total migration ²	Share of state return migrants to total state migrants ¹
Nacional	1,469,801	18.20%	Nayarit	24,030	28.10%
Aguascalientes	24,018	17.30%	Nuevo León	31,368	24.60%
Baja California	19,889	10.20%	Oaxaca	52,635	13.40%
Baja California Sur	2,111	34.20%	Puebla	65,376	14.90%
Campeche	2,016	24.70%	Querétaro de Arteaga	22,506	11.70%
Coahuila de Zaragoza	20,087	24.20%	Quintana Roo	2,057	26.50%
Colima	11,534	34.90%	San Luis Potosí	58,942	12.90%
Chiapas	8,803	8.00%	Sinaloa	32,714	16.00%
Chihuahua	45,497	31.10%	Sonora	12,642	54.40%
Distrito Federal	54,780	17.00%	Tabasco	3,237	15.40%
Durango	39,464	18.20%	Tamaulipas	30,049	24.10%
Guanajuato	153,607	13.50%	Tlaxcala	7,685	12.60%
Guerrero	68,351	15.00%	Veracruz-Llave	72,969	6.20%
Hidalgo	58,439	9.50%	Yucatán	5,635	23.80%
Jalisco	159,612	22.60%	Zacatecas	61,969	17.30%
México	119,171	11.40%	Average		22.50%
Michoacán de Ocampo	156,901	18.80%	Standard Deviation		17.70%
Morelos	41,707	14.70%			
1/ Population with 5 years or more born in Mexico who in 1995 lived in the USA and in 2000 resided in Mexico					
2/ Population who migrated to the USA between 1995 and 2000 and that in 2000 was living in the USA or Mexico					
Source: Estimations of the National Council of Population (CONAPO) based on data from INEGI, XII Population Census.					

Estimation of the rate of return migration based on the Migration Survey of the Border (EMIF)

For the period 1997-2004 the average rate of Mexican return migration was 16.9%

The rate of return migration increased slightly from 14.3% in 1999-2000 to 16.5% in 2002-2004

Mexican migrants: decision to migrate 1997-1998 to 2003-2004			
Year	Total migrants flows	Considering migrating again to the US (%)	Considering returning to Mexico (%)
1997-1998	1 019 131	81.4	14.8
1998-1999	1 275 002	81.5	13.7
1999-2000	1 338 129	82.7	14.3
2000-2001	1 263 712	79.6	17.5
2001-2002	1 646 696	80.3	16.4
2002-2003	1 287 017	71.3	25.4
2003-2004	965 427	81.2	16.5
Average of the period		79.7	16.9
Source: Own elaboration with data from the Northern Border Migration Survey (EMIF), El Colegio de la Frontera Norte, Consejo Nacional de Población, Secretaría del Trabajo y Previsión Social.			

43.9% of inflow migrants pointed out that they came back for personal reasons, against 57.9% of total migrants.

17% of return migrants were deported by the US Border Patrol, while only 13% of temporary return migrants were deported.

The share of return migrants that did not find a job in the USA was higher than the total inflow of migrants interviewed (8.3% vs. 2.2%).

Mexican migrants flows from the USA, 2003-2004		
Return reasons	Total migrant flow	Return migration flow
	Percent	Percent
Job is finished	3.98	3.96
Personal matters	57.46	43.86
Vacations	15.85	5.18
Send back by US Border Patrol	12.99	17
To work	2.21	8.31
Did not find a job	1.1	2.44
Other reason	4.5	18.73
Not specified	1.92	0.52
Total	100	100

Source: Own elaboration with data from the Northern Border Migration Survey (EMIF), El Colegio de la Frontera Norte, Consejo Nacional de Población, Secretaría del Trabajo y Previsión Social.

* 53.7% of the return migrants declared that they did not work in the USA

* 25.1% obtained a wage job

•14.7% worked in temporary jobs

* 0.8% worked on their own

Mexican migrants flows from the USA: type of job declared, 2003-2004		
	Total migrant flow	Return migration flow
	Percent	Percent
Did not work in the USA	27.9	53.69
Stay only hours in the USA	6.16	5.44
Wage job	46.11	25.12
Temporary work	15.73	14.65
Family work without payment	0.03	
Owner	0.75	0.03
On their own	2.51	0.78
Other	0.37	0.29
Not specified	0.43	
Total	100	100

Source: Own elaboration with data from the Northern Border Migration Survey (EMIF), El Colegio de la Frontera Norte, Consejo Nacional de Población, Secretaría del Trabajo y Previsión Social.

Higher percentage of household heads and females have the intention to permanently return to Mexico (38.5% against 29.4% of total migration).

Gender, head of household and family networks of Mexican return migration				
2003-2004	Return Migration		Circular migration	
	Female	Male	Female	Male
Gender	26.10%	73.90%	19.10%	80.90%
	Yes	No	Yes	No
Household head	38.50%	61.50%	29.40%	70.60%
Family help to get a job	Yes	No	Yes	No
	18.20%	63.40%	20.00%	58.00%
Source: Own elaboration with data from the Northern Border Migration Survey (EMIF), El Colegio de la Frontera Norte, Consejo Nacional de Población, Secretaría del Trabajo y Previsión Social.				

Labor activity:

The largest percentage is agricultural workers at 32.0%, followed by construction workers at 12.6%, and doormen and bell boys at 12.2%.

Return migration working activities in the USA		
2003 -2004	Circular migration	Return migration
Business administration workers	0.00%	1.20%
Agricultural workers	16.10%	32.00%
Husbandry workers	1.60%	4.30%
Food industry workers	8.90%	3.80%
Wood production workers	3.80%	2.40%
Automobile mechanics	8.90%	6.10%
Construction workers	22.20%	12.60%
Textile industry workers	0.50%	1.60%
Food industry unskilled workers	3.10%	1.00%
Textile industry unskilled workers	0.10%	0.90%
Wood production unskilled workers	1.70%	1.30%
Construction industry unskilled workers	4.40%	9.40%
Ground transportation drivers	3.60%	0.90%
Retail sales workers	2.20%	0.80%
Services workers	0.60%	1.10%
Waiters and flight attendants	4.00%	2.10%
Doormen, bell boys, concierges	9.80%	12.20%
Household workers	7.80%	5.20%
Total	100.00%	100.00%
Source: Own elaboration with data from the Northern Border Migration Survey (EMIF), El Colegio de la Frontera Norte, Consejo Nacional de Población, Secretaría del Trabajo y Previsión Social.		

Factors that affect the migrant's decision to return

Method: ML - Binary Logit (Quadratic hill climbing)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-2.275	0.444	-5.128	0
Age	0.049	0.005	9.804	0
Schooling	0.057	0.017	3.413	0.001
Sex	-0.963	0.152	-6.328	0
Marital status	-0.111	0.125	-0.891	0.373
Houshead	0.078	0.138	0.565	0.572
Income pc	0	0	-2.202	0.028
GDP share	6.158	2.253	2.733	0.006
Unemp	-0.114	0.051	-2.228	0.026
Resreturn	1.304	0.155	8.411	0
Tradejob	0.604	0.266	2.274	0.023
Reminvcon	-0.843	0.485	-1.739	0.082
Wage	-0.001	0	-4.751	0
S.D. dependent var		0.427		
Akaike info criterion		0.755		
Schwarz criterion		0.784		
Hannan-Quinn criter.		0.765		
Avg. log likelihood		-0.372		
McFadden R-squared		0.323		

Factors that increase the probability of returning:

- Age
- Higher level of education
- Female
- Married migrants
- Household
- Share of state GDP to national GDP

Factors that decrease the probability of returning:

- The coefficient of the unemployment rate
- Per capita income
- Lower wages in the US
- Remittances used for consumption

Return migration, remittances and regional economic development

Classification of the EMIF for the use of remittances.

The use of remittances is organized by states

The average use of remittances is concentrated in food and rent with 56.5% for the period 2003-2004.

The second use of remittances is to buy a house (23.4%).

Land purchases and debt payments, with 1.9% and 1.3%, respectively.

Remittances for consumption and to buy a house (return of conservatism) affect regional economic activity.

Use of remittances by region

Spending in housing

Campeche, Coahuila, Chihuahua, Durango Guanajuato, Sinaloa and Zacatecas declared that the use of the remittances that they sent to Mexico was to buy a house.

Spurt in consumption

Chiapas, DF, Guerrero, Hidalgo, Jalisco, Michoacan, Morelos, Nayarit, Oaxaca, Puebla, Sonora, Tlaxcala, Tamaulipas, Yucatan and Aguascalientes.

Data from the MMP (2000) survey shows:

20.3% of the land bought by the household of return migrants included irrigation.

25.3% of the land obtained by the household of return migrants was financed with dollars.

Household savings contributed to 84.6% of the financial resources to acquire a businesses in 2000.

Return migration agricultural and business activities	
1. Land	
Type	
Irrigated	20.29%
Dry land	79.71%
Year acquired	
1958-1974	74.40%
1979-1998	25.60%
Tenancy	
Ejido	97.10%
Private	2.90%
Hectares cultivated	
0-9	27.36%
9.5-14	72.64%
Financed with US dollars	
Yes	25.33%
No	74.67%
2. Business activities	
How acquired	
Savings	84.63%
Inheritance	9.49%
Other	5.88%
Source: Source: Own elaboration with data from the MMP118, 2007.	

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Source: Source: Own elaboration with data from the MMP118, 2007. University of Princeton and Universidad de Guadalajara.	

According to the information on Mexican return migration from the EMIF, only 11.7% of migrants received on-the-job training.

Return migration workers received significant on-the-job-training in business administration and accounting, equipment operators, metal production and vehicle repair; as well as and restaurant, store and hotel supervisors.

Occupations that received less training were agricultural workers, food, beverage and tobacco production workers, doormen and concierges and ground transportation drivers.

Remittances play an important role in improving the consumption of the households of return migrants.

Remittances in the communities of return migrants are important for reducing household risks derived from income constraints, wages and credit.

There is evidence that remittances are offsetting the lack of income at the regional level and, at a lesser extent, there is evidence of the creation of businesses.