

19-21 de Octubre 2022 | Granada

INTERNATIONAL CONFERENCE ON REGIONAL SCIENCE

Challenges, policies and governance of the territories in the post-covid era

Desafíos, políticas y gobernanza de los territorios en la era post-covid

XLVII REUNIÓN DE ESTUDIOS REGIONALES

XIV CONGRESO AACR



EXTENDED ABSTRACT

Title: Factors that hinder Rural depopulation in Mexico

Authors and e-mail of all:

Antonio Álvarez Pinilla, Department of Economics, University of Oviedo,
alvarez@uniovi.es

Rafael Garduño Rivera, INARBE, UPNA, rafael.garduno@unavarra.es

Héctor M. Nuñez Amórtégui, Department of Economics, CIDE, hector.nunez@cide.edu

Subject area:

S05 - Desigualdades espaciales y territorios en riesgo de despoblación

Abstract:

The literature has confirmed trade openness's advantages to countries participating in international markets. Statistical evidence shows that those countries that open their economies to international markets benefit from their competitive advantages. Their economic growth increases exponentially, and GDP per capita rises, giving their population a better standard of living (Yanikkaya, 2003). Mexico is a good example of this. After signing NAFTA, Mexican economic growth has increased dramatically in the last three decades. In 1986, eight years before NAFTA, the GDP was 136 billion USD, and GDP per capita was 1.73K USD. In 2014 (20 years after NAFTA), the GDP and GDP per capita reached a record high: 1.32 Trillion USD and 10.9K USD, respectively¹.

However, not all the regions, sectors and social groups have benefited from trade openness in Mexico. The rural population is one of the social groups that did not benefit from trade openness and was even hindered by it in some regions (Flores et al., 2013). Mexico has the largest indigenous population in all the Americas, with almost a 17million

¹ Data Commons-World Bank. Accessed April 9, 2020

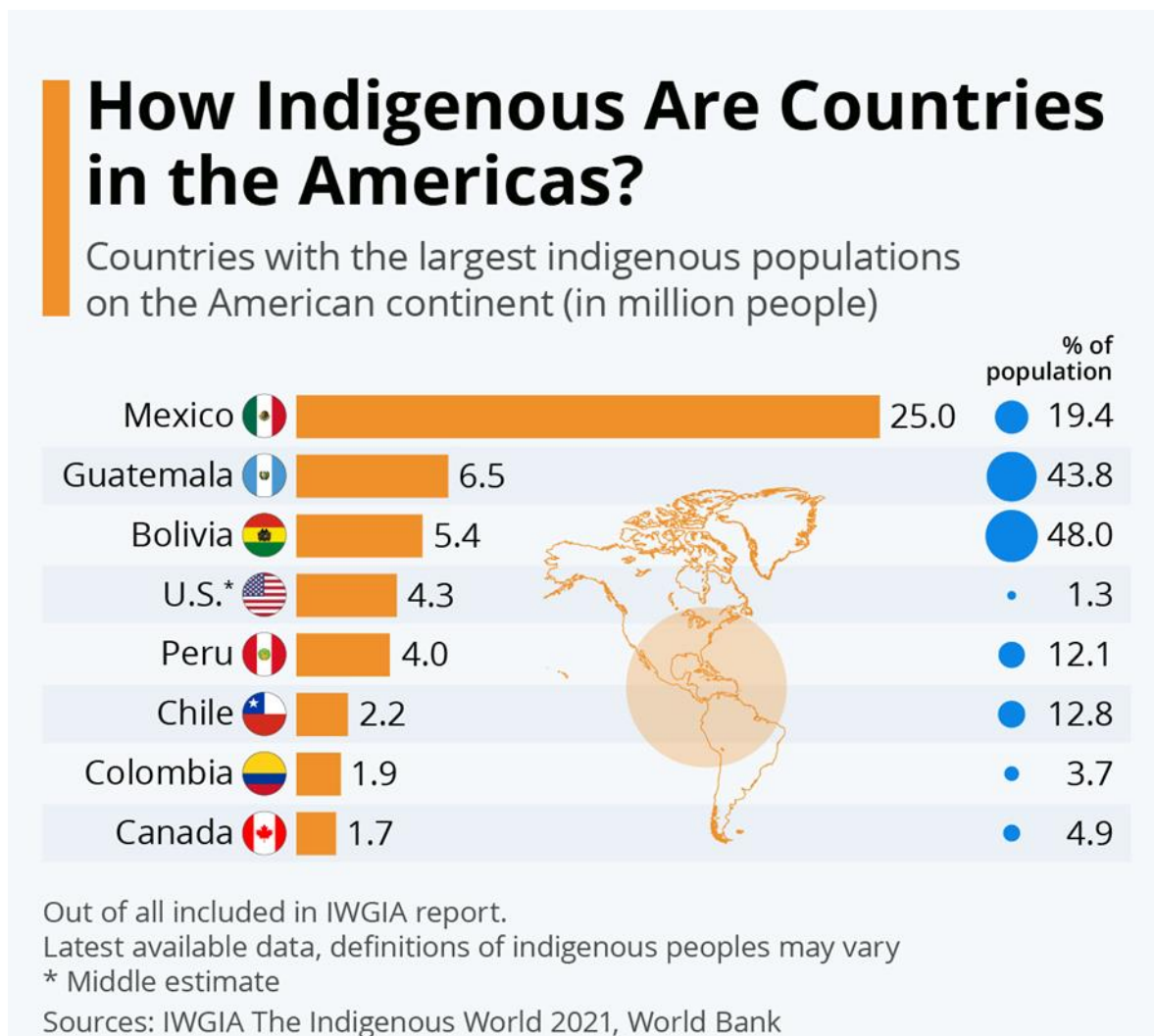
https://datacommons.org/place/country/MEX?utm_medium=explore&mprop=amount&popt=Economic Activity&cpv=activitySource%2CGrossDomesticProduction&hl=en

people, representing 15% of the total population, according to IWGIA². None of the other countries in the Americas are even close to Mexico regarding the indigenous population (**Error! Reference source not found.**). The most indigenous population is located in rural regions south of Mexico. But many of them migrate to the urban areas where they establish in the peripheral areas of the metropolis, creating new marginalized areas in the outskirts of the region, which, after some time, require public services to integrate them into the urban economy, but to a high cost. This illegal peripheralization creates many problems for the economy since these areas are poor, insecure and cost a lot to the government (Castillo et al., 2021). This exodus is depopulating many regions, mainly in the rural south of Mexico (Mojarro, 2013). To the point that some of these municipalities have been converted into ghost towns.

² Accessed on April 10, 2020

<https://www.iwgia.org/en/mexico.html#:~:text=Indigenous%20Peoples%20in%20Mexico&text=for%20364%20variants.-.There%20are%2016%2C933%2C283%20indigenous%20persons%20in%20Mexico,15.1%25%20of%20the%20total%20population>

Figure 1-Indigenous Distribution



A policy-relevant question is often raised: has the Mexican rural population benefited from the trade openness in almost 30 years. Are the benefits, if any, evenly distributed across the space? What are the factors that rural hinder depopulation? This study aims at analyzing the causes of rural depopulation³. In particular, how trade openness, and other socio-economic factors, have impacted the rural depopulation in Mexico. We focus on economic development measures like income and the degree of urbanization (and the associated internal migration phenomenon) to generate de-peripheralization of these marginal areas. Also, examine alternative economic development measures like job creation. The goal is to identify socio-economic factors and regional economic development policies that can hinder rural depopulation and improve their quality of life in Mexico.

³ See Pinilla & Sáez (2017) and Cañal-Fernández & Álvarez-Pinilla (2021) for a similar work on Spain and Asturias, respectively.

Our analysis will use the Economic and Population Census data provided by INEGI, at the municipality level, for the last 40 years (1986 to 2019⁴). To address spatial heterogeneity, data trends, and associated empirical challenges, we will use a spatial panel data set of 19,016 observations: 2,377 municipalities over eight periods. We estimate a spatial econometric model where the population is explained by a set of socio-demographic, economic and infrastructure variables as well as characteristics of the municipalities. Preliminary results show that the presence of infrastructure in households (i.e. drainage, electricity, piped water) or public services (i.e. hospitals, primary schools) helps maintain the rural population. However, places with large indigenous populations and a large income gap with urban municipalities contribute to reducing rural populations.

Keywords: *Econometrics, Municipalities, Rural depopulation, Regional Disparities, Trade Liberalization; Internal-Migration*
JEL codes: J11, O15, C23, R12; F16; R23

BIBLIOGRAPHY

- Arends-Kuenning, M., Baylis, K., & Garduño-Rivera, R. (2019). The effect of NAFTA on internal migration in Mexico: a regional economic analysis. *Applied Economics*, 51(10), 1052-1068.
- Buchholz, Katharina. 2021. How Indigenous Are Countries in the Americas? Statista. <https://www.statista.com/chart/19633/countries-by-indigenous-population-in-the-americas/>
- Cañal Fernández, V., & Álvarez Pinilla, A. (2021). Are infrastructures important to stop rural depopulation?.
- Castillo-Rivero, L., McCann, P., & Sijtsma, F. J. (2021). A multi-scale approach to rural depopulation in Mexico. *Regional Science Policy & Practice*, 13(4), 1328-1347.
- Flores, M., Zey, M., & Hoque, N. (2013). Economic liberalization and contemporary determinants of Mexico's internal migration: an application of spatial gravity models. *Spatial Economic Analysis*, 8(2), 195-214.
- Mojarro-Dávila, Octavio. *La despoblación rural de México, 1990-2010*. El Colegio de México, 2013.
- Pinilla, V., & Sáez, L. A. (2017). Rural depopulation in Spain: genesis of a problem and innovative policies. *Zaragoza: CEDDAR*.
- Yanikkaya, H. (2003). Trade openness and economic growth: a cross-country empirical investigation. *Journal of Development Economics*, 72(1), 57-89.

⁴ three periods before and five periods after NAFTA.