

# The Socioeconomic Burden of Migraine in Latin America: A Hidden Brake on Economic Growth?

## AUTHORS

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## BACKGROUND

Migraine is a leading cause of disability worldwide, with a particularly high prevalence among working-age individuals and women. Migraine has a detrimental impact on productivity, leading to a reduction in the labor supply and, consequently, in economic growth. In Latin America, migraine is more prevalent than in other regions, yet its impact is often underestimated and excluded from discussions on economic development.

## OBJECTIVE

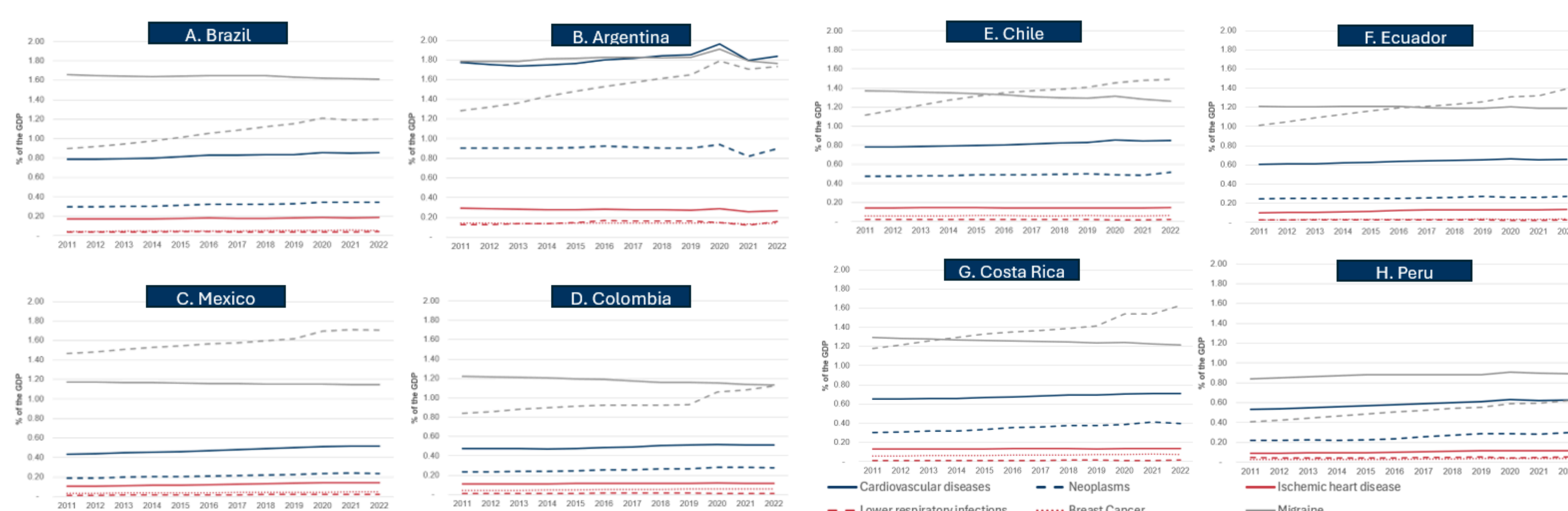
This study aims to quantify the monetary value of the socioeconomic (SoC) burden (i.e., the reduction in labor force contributions) resulting from migraine in eight Latin American countries, i.e. Brazil, Argentina, Mexico, Colombia, Chile, Ecuador, Costa Rica and Peru.

## METHODS

A novel method was employed, combining input-output analysis and health economics. The improvement of population health yields direct benefits, spillover effects in adjacent sectors, and induced effects along value chains, related to paid work. It was assumed that years lost due to disability (YLDs) are nonproductive and that the economic losses incurred in paid and unpaid work should be addressed. The burden of migraines was compared to that of other diseases (i.e., cardiovascular, neoplasms, ischemic heart disease, lower respiratory infections, breast cancer, and type 2 diabetes) using YLDs and Years of Life Lost (YLLs) for mortality. These data were derived from the Institute for the Health Metrics and Evaluation (IHME) Database. YLLs are evaluated using two methods: Human Capital Approach (HCA), which views premature death as loss of productivity, and Friction Cost Approach (FCA), which assumes redistribution within a year. We also used World Bank data to assess SoC burden as economic losses, valuing work hours using GVA.

## RESULTS

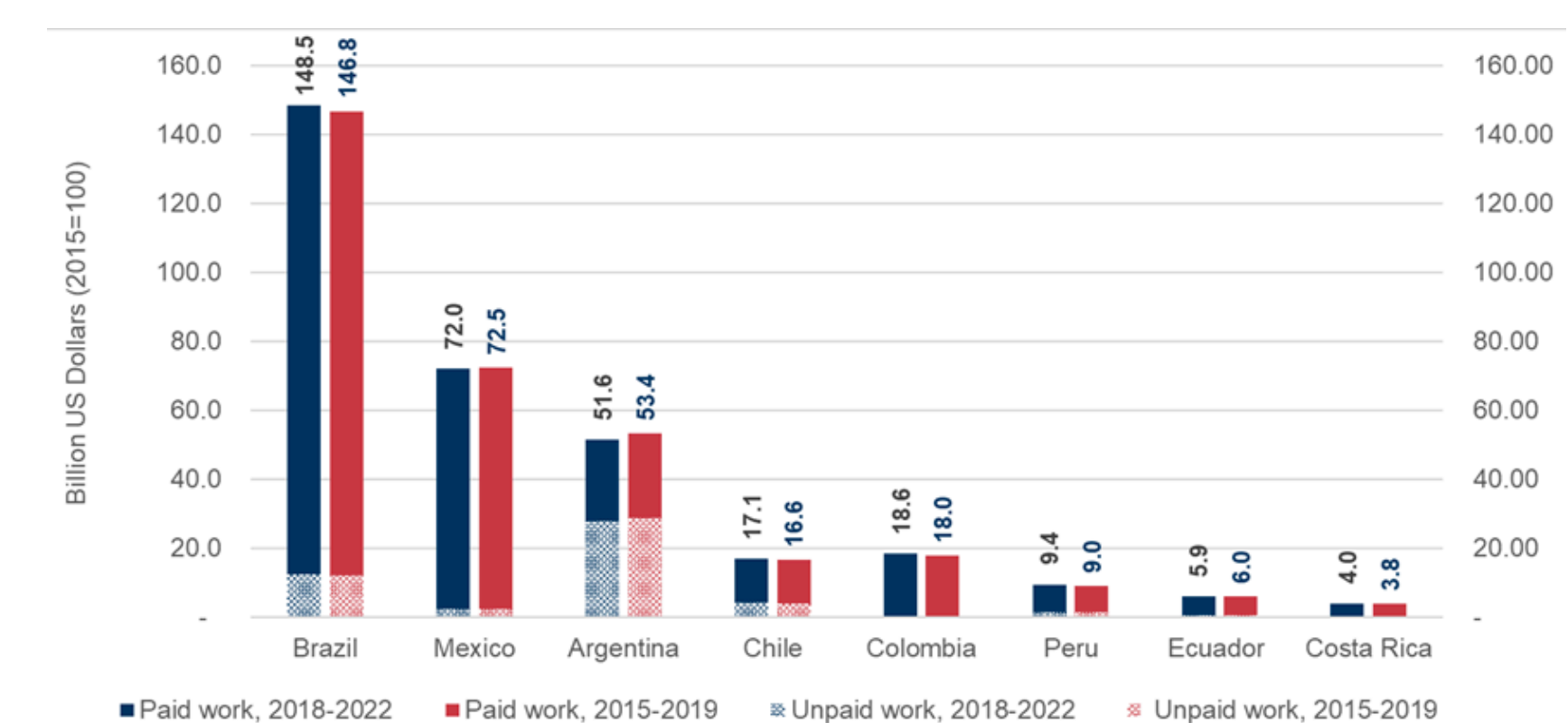
In the FCA, migraine, along with type 2 diabetes mellitus and cardiovascular diseases, had the highest SoC burden in all Latin American countries (Figure 1). During the period 2011-2022, migraine was the leading disease with the highest SoC burden compared to the other diseases in Brazil, Colombia, and Peru. During the same period, the economic burden of migraine disorders represented approximately 1.2% of gross domestic product (GDP) annually in Mexico, Chile, Colombia, Costa Rica, and Ecuador, reaching a maximum of 1.6% in Brazil and 1.8% in Argentina (Figure 1). In Argentina, the SoC burden of migraine showed an increasing trend during the pandemic outbreak, reaching a peak 1.9% of the GDP in 2020. The lowest SoC burden of migraine was observed in Peru, at 0.88% of GDP. During the pandemic period (2018 to 2022), economic losses from migraines ranged from \$4 billion (Costa Rica) to \$148.5 billion (Brazil) (Figure 2). It is notable that migraine-related losses generated significant spillover effects; direct, indirect and induced effects caused by migraine had the greatest impact on the Brazilian economy, reaching 1.5% of the GDP, in 2022 (Figure 3).



**Figure 1.** Time trends socioeconomic burden for the seven selected disease, FCA Approach - Assuming Substitution  
**Source:** WifOR elaboration.

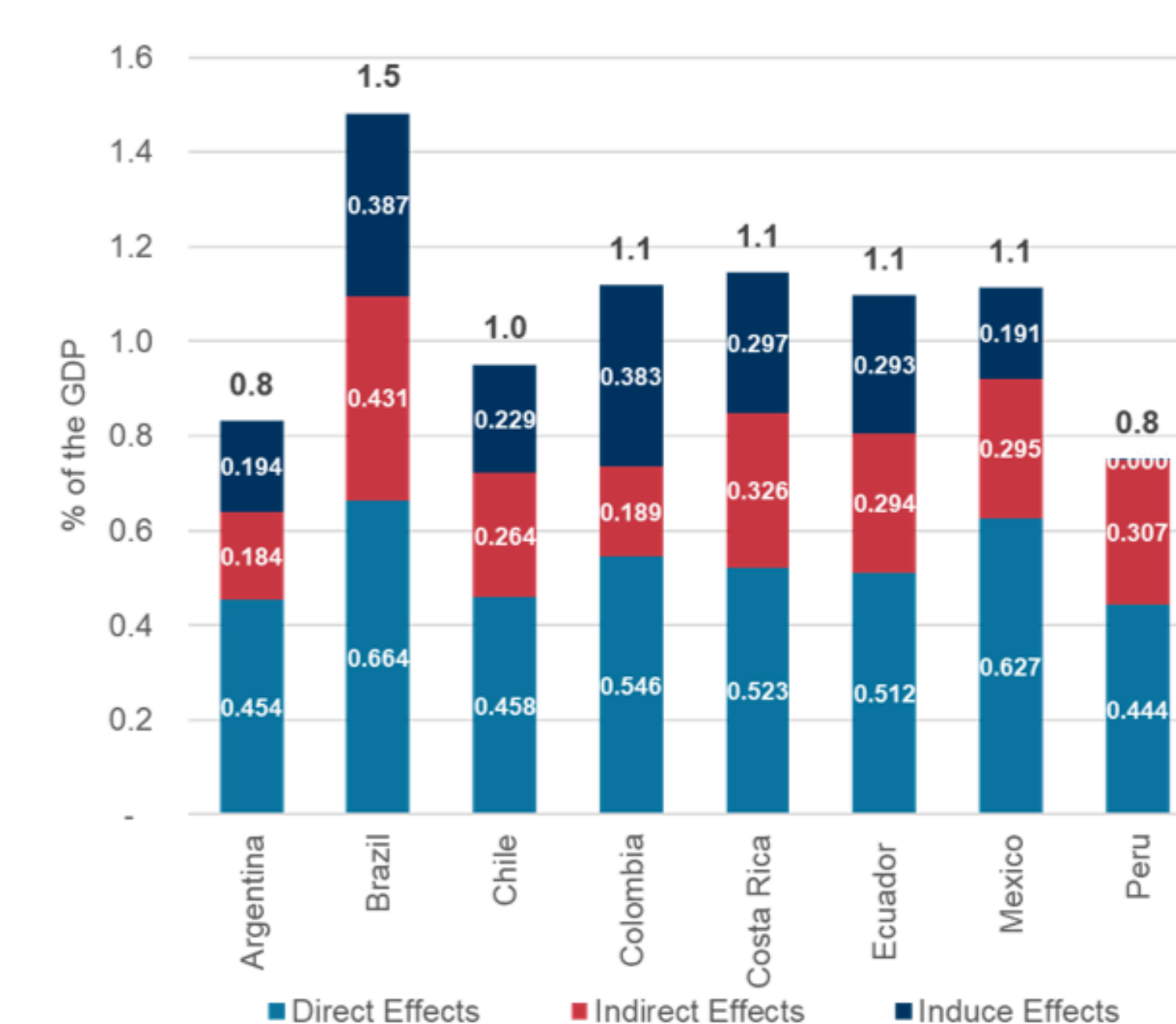
## CONCLUSION

Migraine has a considerable impact on the labor supply in Latin America, yet it is frequently disregarded in national and healthcare resource allocation discussions. It is imperative to enhance awareness of its influence on productivity to ascertain the economic value of investing in enhanced migraine health outcomes, which will prove beneficial for economic development.



**Figure 2.** Five years SoC Burden migraine, Comparison five years before COVID pandemic (2015-2019) with the most recent five-year data available (2018-2022)

\*Monetary data is comprehensively accounted for and presented at the 2015 price levels to be consistent with the constant values supplied by the World Bank.  
**Source:** WifOR elaboration



**Figure 3.** Total SoC burden related to paid work activities - 2022: Spillover effects related to migraine in the eight Latin American countries  
**Source:** WifOR elaboration

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