

# Economic Irrationality of Migration: Inequality, Development, Income Earned Abroad

Anna Meomutli

Woods College of Advancing Studies – Boston College

Graduate Program in Applied Economics

## Introduction

The field of economics has started to tackle an issue of the movement of human capital due to globalization. Recent research in immigration has shown the benefits of the host economies from the immigrant inflow.

Yet there are almost no studies showing what makes people move, what is the deciding economic factor of emigration? Logically thinking, we all have answers to that question - rising levels of inequality, seeking higher income, safety, overall betterment of their life conditions - however, does the data back up these claims?

In fact, after using measurement of inequality, net income earned abroad and emigration outflows, the main conclusion is that immigration is a very economically irrational decision. Immigrants, especially from less developed economies, tend to actually lose income and sacrifice much more than get in return from moving.

What makes people still pursue the dangerous journey of immigration if there is a big likelihood that they will be much worse off to begin with?

According to my preliminary research, out of 131 countries, only 35 countries' immigrants will actually have an income increase upon moving. However, 40% of these immigrants' home countries are categorized as developed, top-tier world economies.

Immigration is presented as a win-win situation, yet in reality, it is a sacrifice of immigrants to build a stronger host economy with much less in return.

This makes immigration to be a not a question of seeking better economic outcome, but one of purely human factors, and income inequality is not one of them.

	Gini_Index	Earned_Abroad_pc
Kazakhstan	0.275	-2702.966125
Mongolia	0.323	-1591.793821
Uruguay	0.395	-1264.846003
Poland	0.297	-1240.494234
Lithuania	0.373	-1219.741532
Dominican Republic	0.422	-795.332586
Portugal	0.338	-780.209965
Georgia	0.379	-669.707392
Greece	0.344	-653.796633
North Macedonia	0.342	-619.894210
Eswatini	0.546	-568.454272
Bulgaria	0.404	-525.564363
Mexico	0.463	-515.905008

Figure 1

## Data Analysis

As it could possibly be guessed, the process of finding reliable and full was a difficult one. I have ended up using several reports from the World Bank's databases. I have found *Net Migration Rate*, *Gini Coefficient*, *GNI PPP per capita*, *GDP PPP per capita*, and *population* all for 2017. Additionally, I have used UNHD report on *Human Development Index* from 2017 as well.

Initially, the amount of countries was at 231 as reported by World Bank, however, Gini Coefficient and Net Migration Rate were missing >20% of the data, thus, resulting in omissions of certain countries. Eventually, the sample became of around 75 countries.

I have also created two new variables that allowed me for a better analysis – *Ratio* and *Income Earned Abroad per capita*. Ratio represents what percentage of population has left the country in 2017, while Income Earned Abroad represents the difference between GNI PPP and GDP PPP per capita for 2017. In economics, it is possible to refer to a national income per capita as a per capita share of the GDP, meaning that by calculating the difference between GDP and GNI (gross national income) the difference in income will be obtained once individual earns not within the physical borders of the country.

Due to the fact that many of the variables are intertwined with each other, the initial analysis showed very high rates of correlation. Thus, I have decided to delete certain variables (Population and Emigration Flow) and after complete a Principal Component Analysis to further reduce multicollinearity.

Analysis has shown that majority of the emigrants, in fact, lose income (Income Earned Abroad per capita is negative) and if they earn more income, it is not a much more sustainable sum to undergo the hardships of migration (refer to Figure 1 and 2).

## Modeling + Results

After extensive data cleaning and analysis, I have decided to run five separate models with two different response variables – Ratio and Emigration Rate.

First two models were general linear regression models where I have decided to determine the relationship between Ratio/Emigration Rates and the control variables. The significant finding is that none of the explanatory variables showed any kind of relation with the response variable.

Second round of regression analysis involved a Poisson model and a Binomial model. Poisson model is used with Emigration Rate as the response term since it is a count type of variable. The finding in a Poisson model is that Gini Coefficient has a negative effect on the emigration rates and HDI has a positive one, which contradicts our logic. Binomial model with Ratio as response revealed absolutely no correlation that inequality and development level of the country affect the emigration.

The last model was a Principal Component Regression, where I analyzed which components have a high rate of variation and eventually using the outcomes of PCR I predicted new ratio of emigration rates which proved that once again, the inequality and human development do not affect the emigration rate.

	Gini_Index	Earned_Abroad_pc
Kiribati	0.370	2042.663591
Timor-Leste	0.287	1324.519409
Philippines	0.444	899.157691
West Bank and Gaza	0.337	848.259109
Moldova	0.259	668.682545
Armenia	0.336	424.942991
Montenegro	0.390	404.887019
Lesotho	0.449	366.884336
Bangladesh	0.324	178.910287
Central African Republic	0.562	47.197948
Albania	0.332	38.240564
Iran, Islamic Rep.	0.408	24.137774
Comoros	0.453	17.745318
Haiti	0.411	9.039144
Guinea-Bissau	0.507	4.762263
Togo	0.431	3.473954

Figure 2

## Discussion

The results of extensive data analysis have proven that there is no relation between the inequality, human development level in the country and emigration rates. Since these are two factors that provide the most economic incentive to move from logical perspective, I believe that absence of palpable and strong relation between these, show that reasons for emigration are not exactly economically incentivized.

## Conclusion

Human factors that fuel the need of migration cannot be yet looked at from the economic perspective due to the subjectivity and inability to quantify those.

Immigration is undeniably one of the most important contributors to innovation, economic progress and enhancement of standard of living worldwide. We need to encourage more research and attention to the topic of what exactly makes people move from the economics' perspective as we can see that the world is benefitting from it.

## Limitations

As any research, the more experimental it is, the more limitations there are. In my work I have faced many challenges that I believe can be addressed by students and knowledgeable participants of academic society.

One of the biggest issues is missing and estimated data. In order to create a more robust and inclusive model, we need to look at the actual emigration outflows rather than the Net Migration Rate as it skews the data into more undeveloped areas being on the top of the list.

Another issue is the complexity of the analysis – with incomplete and estimated data it is hard to reduce the dimensionality and tune the modeling so as to be the most correct representation of the actual relationship between the response and control.

I will continue to study this matter as I am deeply passionate about the research of immigration topic and how it affects the world development.