Assessing Frustration Towards Venezuelan Migrants in Columbia: Path Analysis on Newspaper Coded Data

Brian Llinás  
*Old Dominion University*

Guljannat Huseynli  
*Old Dominion University*

Erika Frydenlund  
*Old Dominion University*

Katherine Palacia  
*Universidad del Norte - Colombia*

Jose Padilla  
*Old Dominion University*

Follow this and additional works at: [https://digitalcommons.odu.edu/msvcapstone](https://digitalcommons.odu.edu/msvcapstone)

Part of the Computer Engineering Commons, Computer Sciences Commons, Data Science Commons, Latin American Studies Commons, and the Migration Studies Commons

**Recommended Citation**

[https://digitalcommons.odu.edu/msvcapstone/2023/datascience/6](https://digitalcommons.odu.edu/msvcapstone/2023/datascience/6)

This Paper is brought to you for free and open access by the Virginia Modeling, Analysis & Simulation Center at ODU Digital Commons. It has been accepted for inclusion in Modeling, Simulation and Visualization Student Capstone Conference by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.
ASSESSING FRUSTRATION TOWARDS VENEZUELAN MIGRANTS IN COLOMBIA: PATH ANALYSIS ON NEWSPAPER CODED DATA

Llinás, B 1, Huseynli, G 2, Frydenlund, E 3, Palacio, K 4, Padilla, J 3

1Computer Science Department, Old Dominion University
2Graduate Program of International Studies, Old Dominion University
3VMASC, Old Dominion University
4Industrial Engineering Department, Universidad del Norte, Colombia
E-mail (bllin001@odu.edu)

ABSTRACT
This study analyzes the impact of Venezuelan migrants on local frustration levels in Colombia. The study found a relationship between the influx of Venezuelan migrants and the level of frustration among locals towards migrants, infrastructure, government, and geopolitics. Additionally, we identified that frustration types have an impact on other frustrations. The study used articles from a national newspaper in Colombia from 2015 to 2020. News articles were coded during a previous study qualitatively and categorized into frustration types. The code frequencies were then used as variables in this study. We used path modeling to statistically study the relationship between dependent and independent variables through mediator variables. This paper aims to fill the research gap by contributing a unique model to the literature and insights about host community attitudes towards migrants and national migration response.

Key Words: Mixed Methods, Frustration, Migrants, Path Model, News Analysis

INTRODUCTION
Our study looks at the case of Venezuelan migrants’ reception in Colombia through the lens of regional newspapers. We rely on quantitative data derived from qualitatively coded news articles from regional newspapers in Colombia to say something about frustrations among local populations that shape how Colombian citizens experience the inflow of migrants to their communities. This is part of a larger project that looks at how host communities absorb significant, unexpected arrivals of migrants across many different aspects of life. Here, we concentrate specifically on how “frustration” can be understood across migration, infrastructure, government, and geopolitics by conducting a statistical path analysis to model the relationships between arrivals of migrants (cumulative number of arrivals) with these frustration factors. The research contributes to the body of knowledge on how perceptions about migrants, government, infrastructure, and geopolitics are interrelated and how they are influenced by the number of migrants arriving in the country.

We focus on how the arrival rate of migrants from Venezuela affects frustrations among Colombians, including through intermediary frustrations. Migrant arrivals, measured here as Cumulative Arrival of Migrants (CAM), was on the rise during data collection, so we wanted to determine if more migrants caused more frustration or if frustration existed regardless. To understand this relation, we formulated two hypotheses to test via path modeling analysis:

I. The more Venezuelan migrants arrive in Colombia (CAM), the higher the locals’ Frustration toward Infrastructure (FI), mediated through locals’ Frustration toward Migrants (FM).

II. The more Venezuelan migrants arrive in Colombia (CAM), the higher locals’ Frustration toward the Government (FGv), mediated through locals’ Frustration toward Geopolitics (FG)

MATERIALS AND METHODS
This research uses a mixed-method design. During an earlier part of the project, 1,360 articles from local/regional newspapers in Colombia were qualitatively coded using content analysis. These codes were extracted as code frequency values to convert the qualitative data into quantitative data for analysis. We use path model analysis on the coded frequencies: *Frustration towards Migrants, Infrastructure, Government, and Geopolitics*. Additionally, we consider the *Cumulative Arrival of Migrants* (CAM) data obtained from Colombian national agencies to explain the rise and fall of frustration as represented in news media.

**RESULTS AND DISCUSSION**

Using a Path Modeling approach, we find that the frequency of frustrations toward migrants, the Colombian government, and Infrastructure among locals showed a positive relationship. In other words, as the arrival of migrants increased, so did locals’ frustrations towards migrants (0.539, p-value 0.000), government (0.346, p-value 0.002), and infrastructure (0.353, p-value 0.000). The exception was locals’ frustration toward geopolitics as an inverse relationship; as migrant arrivals increased, frustration towards geopolitics decreased (-0.359, p-value 0.002). Figure 1 below visualizes the path model and statistically significant coefficients.

![Figure 1. Visualization of the frustration Path Model.](image)

We found evidence to support our hypothesis. In response to an increased number of migrants arriving in Colombia, locals became increasingly frustrated with its infrastructure. However, it did not directly increase local frustration toward migrants; locals became more frustrated with migrants because of increasing infrastructure frustration, which is an indirect effect in this case. Similarly, with the arrival of migrants, frustration over geopolitics will decrease, which will increase frustration over the government. As a result, frustration with the government will increase with every new migrant that arrives. Moreover, we found a statistically significant relationship between increasing number of migrants and frustrations over geopolitics as well as government.

**CONCLUSION**

Globally increasing migrant flow calls for novel approaches to understanding communities’ frustration over migrants’ rapid arrival. Through a qualitative assessment of news articles and quantitative analysis of code frequency, we offered a new approach to facilitate this process. Through our model, we could learn the social impact of migrants on the host society. This provides a space for further research to understand the nature of the effect among types of frustrations and test the reverse causality effect. In turn, this could be useful for interdisciplinary research focusing on social sciences.

**ACKNOWLEDGMENT**

This research is funded by grant number N000141912624 by the Office of Naval Research through the Minerva Research Initiative. This research is additionally funded by grant number P116S210003 by the US Department of Education. Liss Romero & Lia Castillo (Uninorte) and Lydia Cleveland SA & Madison Gonzalez (VMASC) created the codebooks and qualitatively coded the news articles.