Policy brief
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Trade on the Move: How Business Travel Powers Global Trade

Increasing migration restrictions is being debated in many countries, but the importance of business travel for international trade is often overlooked. Visas, for example, are often used to restrict migration, but they also have a significant impact on business travel, which has been shown to be essential for promoting international trade.

Söderlund (2023) demonstrated that face-to-face business meetings are essential for promoting international trade and that stricter travel restrictions can significantly reduce trade flows. Using

the 1985 liberalization of Soviet airspace as a natural experiment, he showed that shorter flight times largely mitigated distance-related barriers, markedly boosting trade between Europe and East Asia. As shown by Keller and Hovhannisyan (2015), in-person business travel is likewise critical for transferring tacit knowledge and fostering innovation: their analysis of US business trips reveals that higher travel volumes correlate with increased patenting in recipient countries, even when controlling for trade and foreign direct investment.

The COVID-19 pandemic highlighted also the importance of business travel in a surprising way. When strict travel restrictions were introduced worldwide, business trips were among the first to resume as economies began to recover. Governments quickly recognized that enabling business travel would help restart economic activities, particularly in sectors that depend on international trade. For example, Japan reopened its borders to business travelers before it did for tourism, emphasizing the priority placed on business-driven interactions.

FTAs and Business People Mobility

Free Trade Agreements (FTAs) play a critical role in supporting international trade by removing various barriers that limit the movement of goods, services, and capital.

Over the last few decades, as global trade has become increasingly interconnected, FTAs have also expanded to cover issues beyond basic trade. Among these new

provisions, a growing number of FTAs include measures to support short-term business travel. NAFTA for example, was one of the first FTAs to include provisions for business visitors,

setting precise conditions for entry of business travelers from one member country to another and forbidding limits on the number of business visas issued.

In general, the provisions often include in FTAs relate to simplified paperwork for visa applications, reduced fees, and clearer, more transparent requirements for business visitors' entry. In some agreements, these policies

are backed by legally binding enforcement mechanisms, which means they are included in the agreement's dispute settlement chapters, making them more reliable and enforceable.

## A Machine Learning Approach

To explore how these provisions impact international trade, we developed a specialized algorithm that combines machine learning and text analysis to examine FTAs. This algorithm identifies which agreements contain clauses on business visitor mobility and whether those clauses are enforceable. Through this automated approach, we analyzed very large volumes of FTA texts more quickly and systematically than can be done manually. The algorithm

scans for key terms related to business travel and categorizes provisions as either related to business travel or not. It then checks through a Naive Bayes Classifier—a machine learning model designed for text classification—whether these provisions are enforceable by analyzing their inclusion in the FTA's dispute settlement mechanisms.

Using this method, we created a dataset covering hundreds of trade agreements, identifying

those with business visitor provisions and whether these provisions are included in dispute settlement mechanisms. To test the accuracy of our algorithm's results, we compared them with human-coded data. The algorithm achieved an 80% match rate with human coding done by World Bank experts on a number of different topics, showing that it could provide reliable, reproducible results at a fraction of the time and cost incurred for manual analysis.

Figure 1.
Comparison of World Bank's hand-coded database and our algorithm results for various topics
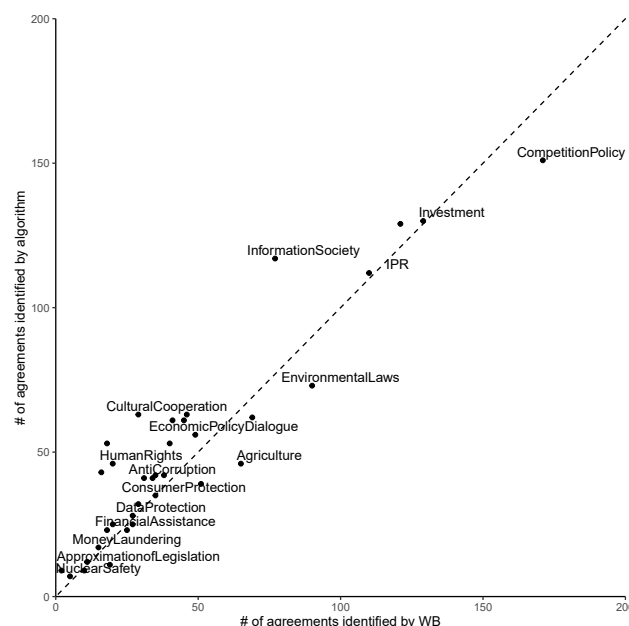
The new algorithm offers an efficient, scalable alternative to traditional, manual coding of FTA or other international agreements. Traditionally, trade experts and legal analysts manually review trade agreements to identify provisions of interest, a process that is time-consuming and resource-intensive. With the algorithm, researchers can process large numbers of FTAs rapidly, achieving results that are both reproducible and reliable. Unlike general large language models, which do not offer reproducible results, this algorithm is tailored specifically for FTAs, which allows it to deliver consistent and clear outputs. This tool is particularly valuable for researchers and policymakers who need to understand rapidly the broader impact of trade policies and provisions without the limitations of traditional analysis. Freely access the algorithm and related data.

The impact of business visitors' provisions on trade flows

To evaluate whether provisions in FTAs that facilitate the entry of business visitors impact trade flows between countries, we apply an econometric model grounded in the gravity equation. Our results show that FTAs with business visitor provisions significantly boost trade flows. Interestingly, while including these provisions in dispute settlement mechanisms might suggest they are more enforceable, we find that this does not have a statistically significant additional effect on trade flows, suggesting that simply having business visitor provisions in an FTA is enough to foster trade, regardless of formal enforcement mechanisms.

We further test the robustness of our findings through alternative model setups and specifications, all of which consistently support the initial results, showing a positive effect of business visitor provisions on trade flows. For example, in additional models, we incorporate different measures of FTA depth, such as the length of the FTA text and the number of topics covered, to account for the possibility that FTAs with business visitor provisions might also address a broader range of trade-promoting topics. Even with these extra controls, the positive impact of business visitor provisions on trade remains statistically significant.

To further verify the causal relationship, we conducted two types of falsification tests. In one test, we randomly assign the "Entry of Business Visitors" variable to different country pairs that do not actually have these provisions and then re-estimate the model. This exercise is repeated 1,000 times to create a distribution of the estimated coefficients. The findings show that these random assignments yield coefficients close to zero, confirming that the positive effect in our main results is not due to pure chance. In a second falsification test, we include a false business visitors provisions dummies for the years one and two prior to the implementation of the FTA. The results show that these pre-FTA proxies are not statistically significant at the 10% level, while the actual "Entry of Business Visitors" dummy retains its significance at the same confidence level of the main model. The observed effect is thus genuinely linked to business visitor provisions rather than other coincidental factors.

These findings have practical implications for policymakers and trade negotiators. Including provisions for business visitors in FTAs can make trade more accessible and effective, particularly for small and medium-sized enterprises (SMEs) that may struggle with the complexities of cross-border operations. While hand-coding remains the gold standard for detailed analysis, tools like our algorithm

offer a valuable complement, enabling faster and more comprehensive reviews of FTAs on a large scale. For countries negotiating new trade deals, these findings suggest that including specific, enforceable business travel provisions could help boost trade by reducing the fixed costs of entering new markets.

References

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